

Transport Management & Accessibility Plan

253-267 Aldington Road, Kemps Creek

3/11/2023 P1730r01



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contents

Glossary

1	Introduction	1
	1.1 Overview	1
	1.2 Mamre Road Precinct Road Network Requirements	1
	1.3 Assessment Objectives	2
	1.4 Secretary's Environmental Assessment Requirements	3
	1.5 Test of Adequacy Review	6
	1.6 Reference Documents	6
2	The Proposal	8
	2.1 Overview	8
3	The Existing Site	11
	3.1 Location	11
	3.2 Current Site Land Usage	11
	3.3 Site Access	11
	3.4 The Existing Road Network	13
4	Mamre Road Precinct Rezoning	14
	4.1 Overview	14
	4.2 Mamre Road Upgrade	16
	4.3 Mamre Road Precinct Development Control Plan	20
5	Public & Active Transport Opportunities	23
	5.1 Public Transport	23
6	Traffic Impact Assessment	29
	6.1 Assessment Methodology	29
	6.2 Proposed Traffic Generation Assessment	29
	6.3 Proposal Traffic Generation	30
	6.4 Traffic Assessment – Ultimate Road Network	31
	6.5 2026 Interim Modelling Assessment	31
7	Transport Assessment	35
	7.1 Existing Travel Patterns	35
	7.2 Measures to Reduce Private Vehicle Use	36
8	Parking Assessment	38
	8.1 Car Parking	38
	8.2 Bicycle Parking	39
9	Access Parking and Servicing Design	41
	Design Standards	41



	9.2 Access Driveways	41
	9.3 Parking Areas	42
	9.4 Service Areas	42
10	Conclusions	44
COI	ntents continued	
Fig	ures	
Figu Figu Figu Figu Figu Figu Figu Figu	ure 1: Proposed Masterplan ure 2: Proposed Site Access Intersection ure 3: Forecasted Traffic Flows at Aldington Road Intersection ure 4: Site Location & Road Hierarchy ure 5: Mamre Road Precinct Structure Plan ure 6: Mamre Road Upgrade ure 7: Abbotts Road / Mamre Road - Currently Proposed Ultimate Intersection ure 8: Abbotts Road / Mamre Road Intersection ure 9: Approved Mamre Road / Aspect Industrial Estate Intersection ure 10: MRP DCP Precinct Road Network ure 11: MRP DCP Typical Local Industrial Road ure 12: Public & Active Transport Network ure 13: Metro Western Sydney Airport Alignment ure 14: BWSEA Cycle Routes ure 15: 2026 Interim Modelling Assessment Road Network ure 16: Rear Loading Configuration ure 17: Side Loading Configuration ure 18: 2026 Development Flows AM (No SLR) ure 19: 2026 Development Flows PM (No SLR) ure 20: 2026 Base Flows AM ure 21: 2026 Base Flows PM ure 22: 2026 Base + Development PM	8 9 9 12 15 17 18 19 20 21 22 24 26 28 32 42 43 3 4 5 6 7 8
Tab	oles	
Tabl Tabl Tabl Tabl Tabl Tabl Tabl Tabl	le 1: DPE Traffic & Transport SEARs - SSD- 23480429 le 2: DPE TOA Comments – Traffic & Transport le 3: Site Description le 4: Key Road Network le 5: TfNSW Provided Trip Rates le 6: Surveyed Trip Rates – Warehouse Development le 7: Masterplan Traffic Generation le 8: LOG-E (Baseline) key intersection SIDRA results le 9: 2026 Log E (Baseline) + Development le 10: LOG-E (Baseline) key intersection SIDRA results le 11: 2026 Log E (Baseline) + Development le 12: Travel Mode Summary (Journey to Work)	3 6 11 13 29 30 30 33 33 34 34 34



37

38

38

39

41

Table 15: Car Parking Requirements & Proposed Provision

Table 14: MRP DCP Parking Rates

Table 16: Bicycle Parking Rates

Table 13: Site Travel Mode Targets & Person One-way Trips by 2026

9.1 Design Vehicles

APPENDICES	
Appendix A.	Hourly Traffic Generation
Appendix B.	Development Traffic Flows
Appendix C.	Framework Sustainable Travel Plan
Appendix D.	SIDRA Output Summaries
Appendix E.	Swept Path Analysis
Appendix F.	Prelim Construction Traffic Management Plan
Appendix G.	TfNSW Meeting Minutes
Appendix H.	269 Aldington Road Consultation
Appendix I.	TfNSW Access Strategy Consultation

Table 17: Cycle Parking Requirements

Table 19: End-of-Trip Requirements

Table 18: End-of-Trip Rates



39

40

40

Glossary

Acronym	Description
ABS	Australian Bureau of Statistics
AGRD	Austroads Guide to Road Design
AGTM	Austroads Guide to Traffic Management
BWSEA	Broader Western Sydney Employment Area
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
GFA	Gross Floor Area
JTW	Journey-to-Work
LEP	Local Environmental Plan
LGA	Local Government Area
LoS	Level of Service
MRP	Mamre Road Precinct
NHVR	National Heavy Vehicle Regulator
RMS Guide	Transport for NSW (formerly Roads and Traffic Authority), Guide to Traffic Generating Developments, 2002
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SSD	State Significant Development
TDT 2013/04a	TfNSW Technical Direction, Guide to Traffic Generating Developments – Updated traffic surveys, August 2013
TfNSW	Transport for New South Wales
TIA	Transport Impact Assessment
TMAP	Transport Management and Accessibility Plan
Veh/hr	Vehicle movements per hour (1 vehicle in & out = 2 movements)



1 Introduction

1.1 Overview

Ason Group has been engaged by RP Infrastructure, on behalf of Icon Oceania, to prepare a Transport Management and Accessibility Plan (TMAP) in relation to the State Significant Development (SSD) for the proposed industrial development (the Proposal) located at 253-267 Aldington Road, Kemps Creek (the Site).

The Site sits within (what has been termed) 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 Proposal itself relates to the provision of an industrial warehouse development, with ancillary offices, loading areas and car parking. Full details are provided in the Environmental Impact Statement (EIS) prepared by Urbis, 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 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.

A more detailed assessment of the interim road network has been undertaken, for the period prior to the realisation of the ultimate road network. This recognises that it will take time for the ultimate form to be realised, as the MRP becomes further developed. As such, the key forecast year for this assessment 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. Notably, 2 of the LOG-E SSD applications have recently been provided development consent on the basis of these proposed road upgrades. Referred to as the Land Owners Group East (LOG-E) the sites include:



- 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-9138102¹);
- Fife Kemps Creek, developing the 200 Aldington Road Estate. The Concept Masterplan and Stage development has received development consent (SSD- 10479²).
- Fraser Property Industrial, developing 2 land holdings known as Edge North (99-111 Aldington Road) and Edge South (155-217 Aldington Road).

Ason Group worked on behalf of LOG-E to deliver the modelling assessment of the interim road network, which was agreed with TfNSW. In regard to the LOG-E modelling assessment, the following documents provide the key refence points:

- Ason Group, Transport Management & Accessibility Plan, Stage 1 Westlink, Mamre Road Precinct, 59-63 Abbotts Road & 290-308 Aldington Road, Kemps Creek, version II, dated 19/10/2022 (Westlink 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).

The road upgrades proposed by LOG-E have formed the basis for approval of the Westlink Industrial Estate 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.

Importantly for the Proposal, the first warehouse buildings for each development cannot be occupied until such a time that the road upgrades are complete, with the relevant Conditions of Consent stating:

Prior to the commencement of operation of the first warehouse building, the upgrade works to the Mamre Road and Abbotts Road intersection, Abbotts Road and Aldington Road intersection, and upgrades to Abbotts Road must be completed to the satisfaction of the relevant roads authority for each component of the works.

Therefore, the LOG-E upgrades are expected to be completed in advance of any development on the Site becoming operational. As such, the road upgrades proposed by LOG-E have formed the baseline for which this Proposal has been assessed (see Section 6). A Condition of Consent similar to the above would be invited for any future development consent associated with the Site, to ensure that the road upgrades are completed in advance of occupation of the site.

Further, noting that the LOG-E modelling was agreed and accepted by TfNSW, the agreed model has been adopted for the SIDRA intersection analysis of the Proposal. All parameters of the SIDRA intersection analysis undertaken has remained entirely consistent with this approved model.

1.3 Assessment Objectives

The key objectives of this 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.

² https://www.planningportal.nsw.gov.au/major-projects/projects/200-aldington-road-industrial-estate



¹ https://www.planningportal.nsw.gov.au/major-projects/projects/westlink-industrial-estate-stage-1

- To establish that the trip generation of the Site is consistent with the assumptions within the MRP modelling assessment so that it can be appropriately accommodated by the future 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.

Secretary's Environmental Assessment Requirements

Secretary's Environmental Assessment Requirements (SEARs) were issued by the NSW Department of Planning & Environmental (DPE) in July 2021 in relation to the SSD (Application No.: SSD-23480429). Further SEARs were also issued by DPE on 25 March 2022.

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

TABLE 1: DPE TRAFFIC & TRANSPORT SEARS - SSD- 23480429

SEARs Item	Report Section / Response
Details of all traffic types and volumes likely to be generated during construction and operation, including a description of key access / haul routes. Traffic flows are to be shown diagrammatically to a level of detail sufficient for easy interpretation.	Operational traffic flows have been determined at the key intersections of Mamre Road & Abbotts Road and Abbotts Road and Aldington Road (Appendix B). Construction staging and programming typically will be typically tailored to the requirements of each site and will vary from Contractor to Contractor. Therefore, at this early stage in the approvals process, no Contractor is engaged to confirm the traffic requirements. Therefore, construction traffic flows cannot be accurately determined at this time; however, the anticipated construction vehicle mix, Site access provisions and potential haul routes have been clearly identified (Appendix F). Based on recent experience within Mamre Road, initial construction traffic generation volumes have also been provided, although these should be classed as indicative.
An assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model. This is to include the identification and consideration of approved and proposed developments/planning proposals/road upgrades in the vicinity. The assessment needs to consider the impact on Aldington Road and Mamre Road for the duration of the works due to traffic growth in this area increasing more rapidly than standard growth rates. Modelling must consider the 2026, 2031 and 2036 scenarios for the Mamre Road and Bakers Lane/Aldington Road intersection and the Mamre Road/Abbotts Road intersection.	See Section 6 The operation of the key Mamre Road & Abbotts Road intersection has been examined in detail utilising the SIDRA model. The approved LOG-E model and methodology has been adopted in assessment of the Site. It is critical to note that the broader operation of the MRP (of which the Site lies) was assessed as part of the development of the MRP DCP, which identifies the ultimate network requirements further to the development of the broader MRP.
Consideration of clause 33C of the Western Sydney Employment Area State Environmental Planning Policy, specifically integration with the Mamre Road Precinct dedicated freight corridor, including consultation with TfNSW.	It is understood that the dedicated freight network does not extend to the site itself and therefore there are no access opportunities to it.
Detailed plans of the site access and proposed layout of the internal road and pedestrian network and parking on site in accordance with the relevant	Refer to plans. A consultation meeting with Council was held on 09 September 2021. It is understood that the access intersection with Aldington Road is now at 80%



Australian Standards and Draft Mamre Road Precinct concept design and has been accounted for within the **Development Control Plan. This must include details** setbacks provided for within the Proposal. of how the proposed development will connect to adjoining sites as outlined in the Draft Mamre Road **Precinct Development Control Plan and evidence of** consultation with the neighbouring landowners regarding the design, process and timing of delivery of such roads and consultation with Council regarding site access. Details of any proposed upgrades to Aldington Road, Refer to Section 6 Abbotts Road and the Abbotts Road/Aldington Road No further road upgrades above those approved as part of intersection and the Mamre Road/Abbotts Road the LOG-E applications are required or proposed. intersection in the interim and ultimate scenarios, including evidence of consultation with Penrith City Council and TfNSW on these upgrades. Plans demonstrating how all vehicles likely to be Refer to the plan set provided. Swept path analysis is generated during construction and operation and provided as Appendix F. refer to the AT&L civil design for awaiting loading, unloading or servicing can be the internal road network. accommodated on the site to avoid queuing in the street network - swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site. Details of road upgrades, infrastructure works or new Refer to plan set and AT&L civil designs for road layout, roads or access points required for the development. which is be delivered in compliance with the MRP DCP. Details of travel demand management measures to Refer to Section 7 and the Framework Sustainable Travel minimise the impact on general traffic and bus Plan provided within Appendix C. operations, including details of a location-specific sustainable travel plan (Green Travel Plan and specific Workplace travel plan) and the provision of facilities to increase the non-car mode share for travel to and from the site. Details of the adequacy of existing public transport or Refer to Section 5 for the existing and future network any future public transport infrastructure within the connections. An assessment of travel demand has been vicinity of the site, pedestrian and bicycle networks undertaken in Section 7. and associated infrastructure to meet the likely future demand of the proposed development. Measures to integrate the development with the See Section 7 existing/future public transport network. As discussed above, the Proposal provides for full integration with the future public and active provisions expected for the MRP The ultimate road network has been identified by the finalisation of the MRP DCP. It is understood that TfNSW are working on the Concept Design for the upgrade of the Mamre Road corridor and is ultimately required to *Additional SEAR received 25 March 2022 accommodate the forecast background traffic growth. Traffic / infrastructure requirements The Site itself represents approximately 1% of the total A key consideration in the Mamre Road Precinct is 850 hectares of land within the MRP. And as such, it is the capacity of the regional and local road network considered appropriate that the relevant Special (namely Mamre Road, Aldington Road and Abbotts Infrastructure Contributions and Section 7.11 Road) to safely accommodate the number of Contributions be paid accordingly to assist in the delivery developments in the precinct and to ensure the of the required road network upgrades to accommodate functionality of the roads and associate intersections development of the MRP. are maintained at an acceptable standard and level of Section 6 provides consideration to the interim upgrades performance. Your project needs to adequately proposed by LOG-E and the impacts of the development assess and demonstrate both construction and of the network in 2026 accordingly. operational traffic, on these regional and local roads, In regard to construction traffic, as above, flows cannot be can be accommodated to ensure safety, functionality accurately determined at this time. Initial traffic flows and performance is maintained to acceptable have however been identified within the Draft CTMP. standards. On this basis, it is anticipated that the flows associated with construction would be significantly less than the operational development. However, construction traffic, along with the required staging needs to be confirmed at the relevant stage. It is envisaged this could be confirmed



via a suitable Condition of Consent, typically associated with Construction Certificate stages. Both TfNSW and Council were consulted during the preparation of the submission package. See wider EIS package for further information. *Additional SEAR received 25 March 2022 A meeting was held with TfNSW on 23 August 2021 Transport for NSW and Penrith City Council must be where the previous modelling assessment was discussed. closely consulted during preparation of the EIS on However, the LOG-E modelling assessment was agreed any interim and ultimate infrastructure upgrades with TfNSW since this time. Therefore, the SIDRA required to the road network and any traffic modelling intersection analysis has been updated on the basis of the requirements. Additionally, neighbouring landowners relevant preceding approved modelling. must be closely consulted on the design and timing This approach was discussed with TfNSW during an of delivery of precinct roads. updated consultation meeting held on 23 August 2023. Further consultation was held via email correspondence on 13 October, provided in Appendix I. *Additional SEAR received 25 March 2022 The Voluntary Planning Agreement addressing these works is currently under discussion with Council and will The development must demonstrate compliance with be progressed during the assessment of the SSDA. a design adopted by Penrith City Council for the upgraded Aldington Road and Abbotts Road. It is expected that compliance with the Aldington Road Consideration must be given to vertical alignment upgrade design could be ensured via a Suitable Condition of Consent. with the adopted design and coordination of road connections, levels and upgrade works proposed by adjoining landowners. Since provision of this SEAR, it is noted that 2 developments sites on Aldington Road have been provided development consent. The Conditions of *Additional SEAR received 25 March 2022 Consent require road upgrades to be completed prior to The subject development must demonstrate how it occupation of the Site. can be undertaken independently of any other proposed developments (yet to be determined), A similar Condition of Consent is invited which would including an assessment of road access and delivery, require the road upgrades to be delivered in advance of occupation of the Site. intersection operation and any required infrastructure upgrades. It is noted that Icon Oceania is working separately alongside the other landowners in the MRP to deliver the signalised intersection at the time of occupation.

1.4.1 TfNSW Consultation

Consultation has recently been undertaken with TfNSW in regard to the submission to discuss the most recent modelling assessment undertaken. Notably, a meeting was held on with TfNSW 28 August 2023 (minutes are provided in **Appendix G**).

Following consultation with TfNSW, the modelling assessment was updated to reflect the discussions with TfNSW (more information is detailed in Section 6.5).

During this meeting, TfNSW raised concern over the potential of vehicles turning right out of the Site, across 4 lanes of traffic under an interim access arrangement, in advance of provision of the ultimate signalised intersection (as per the MRP DCP).

As such, there will be no interim intersection proposed to facilitate the operation of the Site with the design of the final intersection to be delivered prior to the Occupation Certificate.

Separately to this submission, Icon Oceania are working with the landowner of 269 Aldington Road in planning for delivery of the signalised intersection. Appendix H provides a record of consultation held with the landowners.



For further details regarding all project consultation, refer to the Stakeholder Engagement Report prepared by Urbis.

1.5 Test of Adequacy Review

DPE has also provided comment on the EIS package submitted for the Test of Adequacy (TOA) review.

The comments received from this review relating to transport issues are outlined in **Table 2**, with the Ason Group summary response to each also provided.

TABLE 2: DPE TOA	COMMENTS	TDAFFIO O	TRANCRORT
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Item No.	Description	Response
6	It is unclear whether the roundabout intersection providing access to the site forms part of this development application.	The roundabout does not form part of the application. The roundabout was shown to demonstrate that the Site provides the relevant setbacks to allow for the roundabout at such a time that the upgrade of the intersection (by others) is warranted.
		However, it is noted that the final form of this intersection is subject to Council's final design requirements. It is understood that this is to be a signalised intersection, at this stage. The plans have been updated accordingly to show that the Proposal does not prohibit delivery of the signalised intersection.
	The TIA assumes other landowners in the Mamre Road Precinct will upgrade Aldington Road and it appears the modelling reflects such works. Additional information on these upgrades and who will be delivering them is	As above, 2 SSDs on Aldington Road now have been provided development consent, with the relevant landowners progressing the necessary approvals to deliver the road upgrades. More information is provided in Section 4.2.3.
	required. Given the development applications relied upon are still under assessment, further information is required on what contingencies are in place should these upgrades not occur. Furthermore, the worse-case scenario should be assessed whereby none of the upgrades are delivered by other landowners, Council or TfNSW.	Following acceptance of the modelling methodology for LOG-E and noting that there are conditions which require road upgrades to be complete in advance of occupation, it is considered entirely appropriate that this now forms the baseline in which the Proposal is assessed upon.

1.6 Reference Documents

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

• DPE, 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:

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

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

- AECOM Western Sydney Aerotropolis Transport Planning and Modelling Stage 2 Report, October 2020 (AECOM Report).
- Ason Group, P1815 Mamre Road Precinct LOG East Revised 2026 Modelling, P1815m03_v4 MRP_LOG East 2026 Revised Modelling, 19 September 2022 (P1815m03_v4).
- Ason Group, Transport Management & Accessibility Plan, Stage 1 Westlink, Mamre Road Precinct, 59-63 Abbotts Road & 290-308 Aldington Road, Kemps Creek, version II, dated 19/10/2022 (Westlink TMAP).



2 The Proposal

2.1 Overview

A detailed description of the SSD Proposal is included in the EIS which this TMAP accompanies. In summary, the application relates to the construction of an industrial development with a total building area of 45,530m². The following summarises key aspects of the Proposal:

- Creation of 2 development lots.
- Approval for 4 warehouses with a total building area of 45,530m², comprising:
 - 42,625m² warehouse GFA,
 - 2,905m² of ancillary office GFA,
- Internal roads and connection to Aldington Road, as per the MRP DCP.
- Provision for 261 car parking spaces; and
- Associated site landscaping.

The proposed Masterplan is reproduced at a reduce scale in Figure 1.

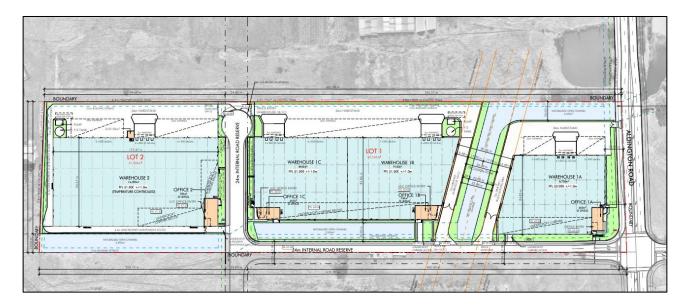


Figure 1: Proposed Masterplan

2.1.1 Proposed Access Arrangement

As per the MRP DCP, site access is required to be provided via lower order roads, as far as practicable. The future MRP internal road, as identified by the MRP DCP, is not contained wholly within the Site. As such, it is proposed to deliver half of the future road width (with a 12m width), and the portion of the Aldington Road intersection within the Site boundary to facilitate access. **Figure 2** below details the proposed intersection to be delivered prior to the occupation of the Site.



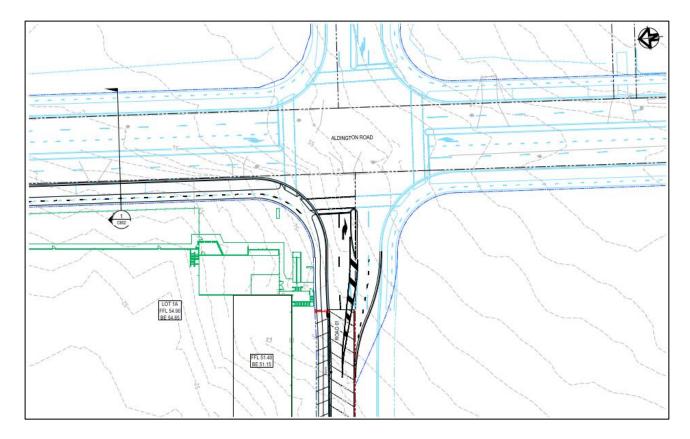


Figure 2: Proposed Site Access Intersection

Section 3.4.1 of the DCP states that provision of temporary half roads is not to *detrimentally impact on access to adjoining properties and will not impede the orderly development of adjoining properties.* In this regard the key surrounding sites to consider are:

- Site 1 155-251 & 141-153 Aldington Road Estate, Kemps Creek, to the north of the Site; and
- Site 2 269 Aldington Road, to the south of the Site

Site 1 has a lodged development application seeking approval, with the application specifically covering the northern portion of the site. Site 1 also has a dedicated access onto Aldington Road, as such the site will not be using the proposed half road. With regards to Site 2, the half road will be upgraded to a full road by the future development at 269 Aldington Road prior to operation. The half road will therefore exclusively be used by the Site and will have no impact on the neighbouring sites.

As such, **Figure 3** identifies the expected traffic flows through the proposed intersection, this includes the forecasted flows at the site located at 270 Aldington Road.

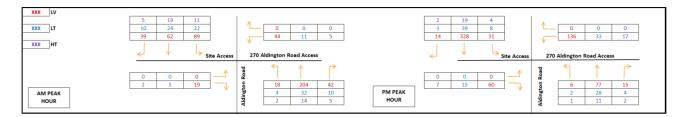


Figure 3: Forecasted Traffic Flows at Aldington Road Intersection

With reference to the above, the Site's traffic generation is expected to be low (AM peak: 76 veh/h, PM peak: 80veh/h). When considering the higher PM peak (80 veh/h), this translates to 1.33 movements generated by



the entire site per minute, the likelihood of incoming and outgoing vehicles passing each other is therefore minimal. The operation of the half road is therefore supportable on traffic grounds.

3 The Existing Site

Location 3.1

The Site is comprised of a single Lot (refer to Table 3) and is located at 253-267 Aldington Road, Kemps Creek. It is approximately 9.5km north-east of the future Western Sydney International (Nancy-Bird Walton) Airport (WSA), 15km south-east of the Penrith CBD and 39km west of the Sydney CBD.

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

TABLE 3: SITE DESCRIPTION

Address	Title	Area (Ha)
253-267 Aldington Road	Lot 9 / DP 253503	10.20

3.2 Current Site Land Usage

The Site currently provides for a number of rural residential properties, as well as for small scale agricultural businesses. The properties along the length of Aldington Road and Bakers Lane can be categorised in this manner.

Site Access 3.3

The Site currently has access points onto Aldington Road through various access. Aldington Road connects with Mamre Road, by way of Bakers Lane, to the north of the Site; and to the south via Abbotts Road. 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.



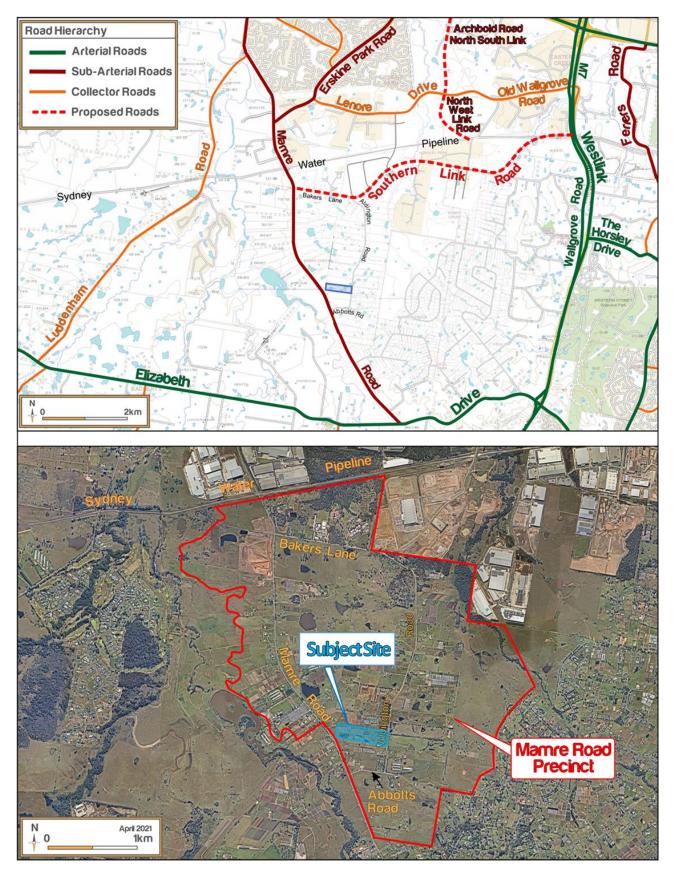


Figure 4: Site Location & Road Hierarchy

The Existing Road Network 3.4

3.4.1 Key Roads

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

TABLE 4: KEY ROAD NETWORK

TABLE 4. RET ROAD RETWORK			
Road Description		Typical Road Characteristics	
Mamre Road	An arterial road which runs north-south between the Great Western Highway / the M4, and Elizabeth Drive respectively. In the vicinity of the Site, Mamre Road has a posted speed limit of 80km/h.		
Aldington Road	A local access that runs north-south (to the east of Mamre Road) and currently provides access for a number of rural residential properties. It connects with Bakers Lane to the north and Abbots Road to the south. It provides 1 traffic lane in each direction and has a posted speed limit of 80km/h.		
Bakers Lane	A local access that runs east-west (to the east of Mamre Road) and currently provides access for a number of rural residential, educational and retirement sites. It provides 1 traffic lane in each direction and has a posted speed limit of 60km/h.		



4 Mamre Road Precinct Rezoning

4.1 Overview

The rezoning of the MRP from rural uses to IN1 General Industrial, in summary, 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 MRP Structure Plan (the MRP Structure Plan) is shown in Figure 5.



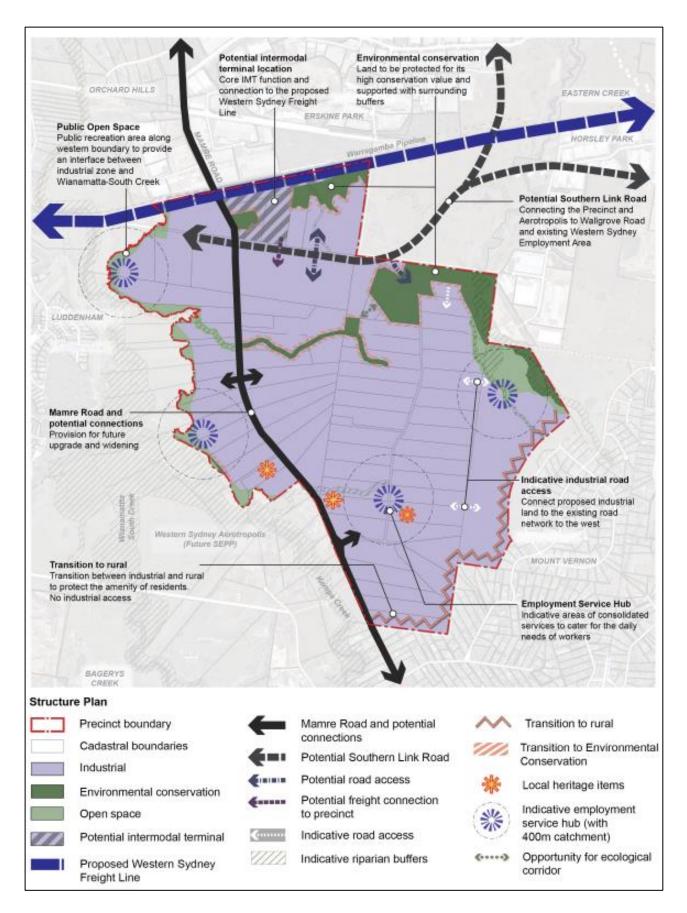


Figure 5: Mamre Road Precinct Structure Plan

Source: NSW Government

4.2 Mamre Road Upgrade

4.2.1 Overview

The MR Upgrade Report details the proposed MR Upgrade (the MR Upgrade) between the M4 Motorway and Kerrs Road (south of the Site, and north of Elizabeth Drive). The NSW Government has committed \$220 million to Stage 1 of the upgrades, between the M4 Motorway and Erskine Park Road (north of the MRP). Stage 2 of the upgrades from Erskine Park Road to Kerrs Road is subject to funding.

The objectives of the MR Upgrade, are stated as:

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

4.2.2 Mamre Road Upgrade Design Components

The MR Upgrade provides the following key infrastructure proposals:

- A typical cross section that includes:
 - 2 traffic lanes in each direction with a wide central median between the M4 Motorway and Kerrs Road:
 - Provisions for the central median to provide third traffic lane in each direction to meet growing demand; and
 - Shared bicycle and pedestrian paths to promote active transport.
- New or upgraded intersections.

The broader MR Upgrade proposal (per the MR Upgrade Report) is shown in Figure 6.



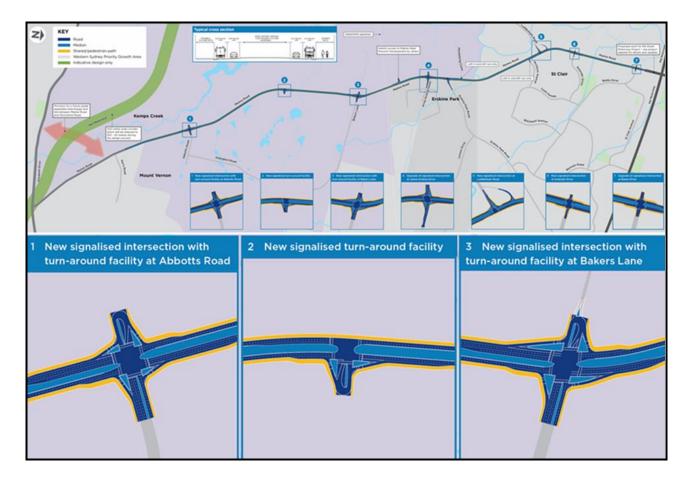


Figure 6: Mamre Road Upgrade

Source: Mamre Road Upgrade Report

4.2.3 Abbotts Road & Bakers Lane Intersection Upgrades

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

As such, the LOG-E are proposing a staged upgrade to the intersection, with the relevant VPA currently being agreed. 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 7.

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



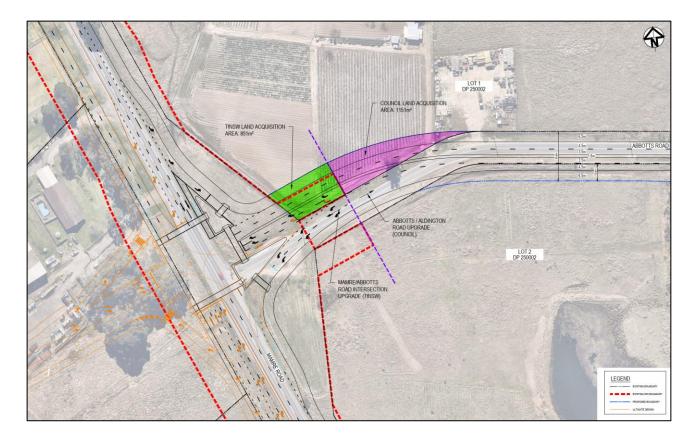


Figure 7: Abbotts Road / Mamre Road - Currently Proposed Ultimate Intersection

Further to the upgrades planned to Mamre Road / Abbotts Road, the approved development located at 657-769 Mamre Road (SSD 95223) includes a requirement to upgrade the Mamre Road / Bakers Lane intersection by 2025, in advance of the delivery of the ultimate intersection. It is noted that this will form a key intersection for the MRP, with the future SLR planned to be provided along the current alignment of Bakers Lane.

The approved intersection design, to be delivered by 2025, is reproduced in Figure 8.



³ https://www.planningportal.nsw.gov.au/major-projects/project/10376

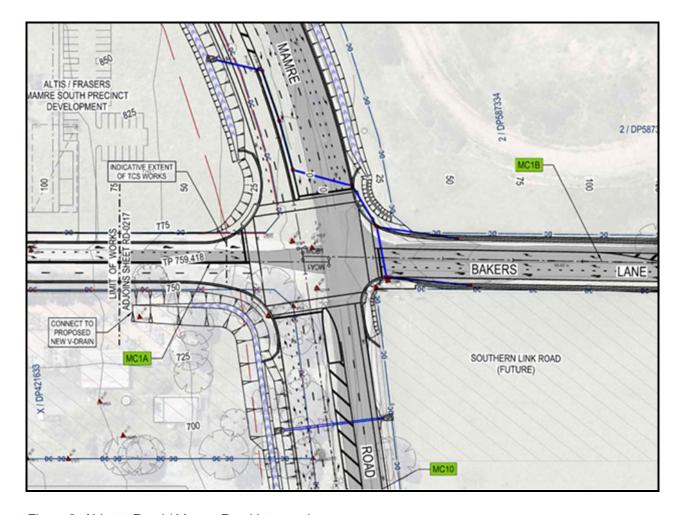


Figure 8: Abbotts Road / Mamre Road Intersection

4.2.4 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-104484 located at Lots 54 - 58 in DP 259135, on Mamre Road. The intersection relates intersection 2 of the Mamre Road Upgrade (Figure 6). The approved intersection is shown by Figure 9 and will provide a key access to the internal MRP road network.



⁴ https://www.planningportal.nsw.gov.au/major-projects/projects/aspect-industrial-estate

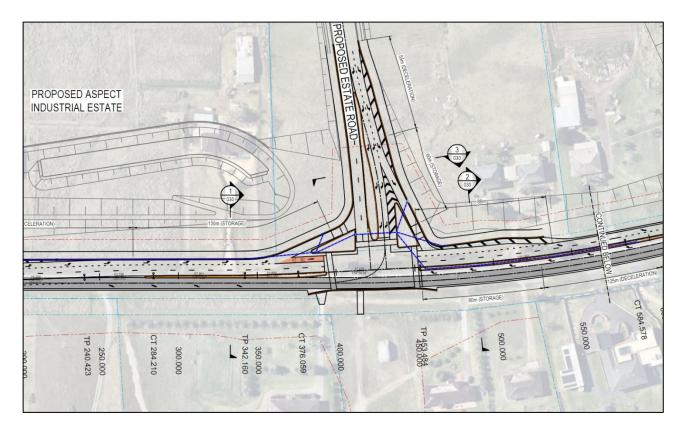


Figure 9: Approved Mamre Road / Aspect Industrial Estate Intersection

4.3 Mamre Road Precinct 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 10.

As is shown, the existing section of Abbotts Road and Aldington Road form Distributor Roads and the internal Site road would eventually form a local industrial road. The requirements for the Local Industrial Road typology, as per the MRP DCP, is shown by **Figure 11**.



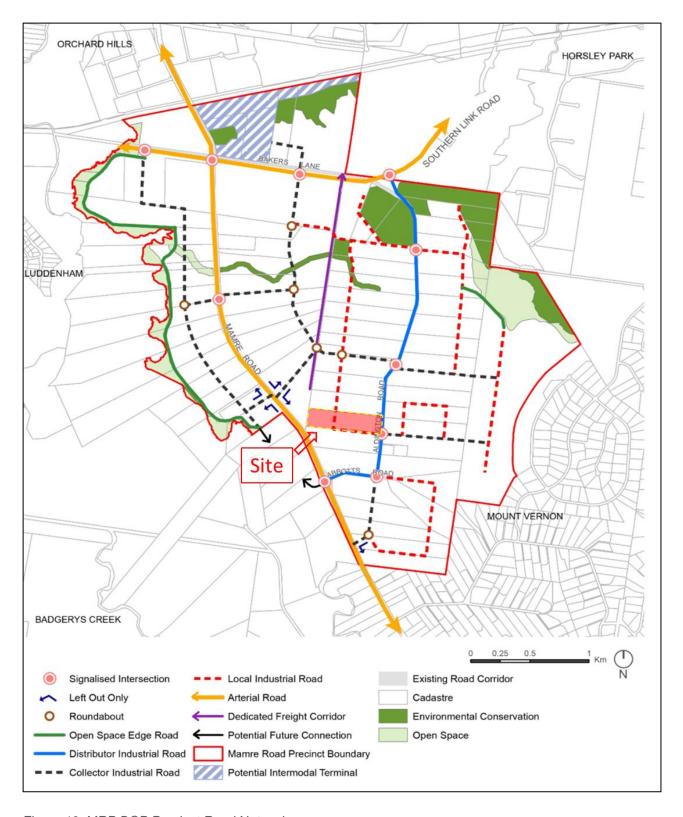


Figure 10: MRP DCP Precinct Road Network

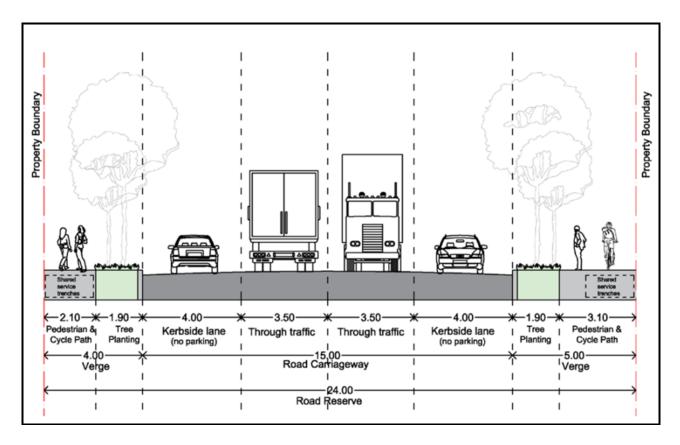


Figure 11: MRP DCP Typical Local Industrial Road

Source: Mamre Road Precinct DCP 2021

5 Public & Active Transport Opportunities

Public Transport 5.1

5.1.1 Introduction

It is evident that the Site is not directly serviced by public transport at this time (Figure 12); notwithstanding, opportunities for future connections have been identified, noting again that the MR Upgrade specifically provides for new bus stops along its entire route.

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

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

It is also the case that the establishment of public transport services as early as possible in the development stages of the 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.

The internal MRP roads would already provide greater width to accommodate heavy vehicle movements; as such, they would also therefore be bus capable. There are significant opportunities therefore to provide subregional services along Mamre Road, as well as services within the MRP itself to maximise the number of sites that lies within 400m of a viable bus service.



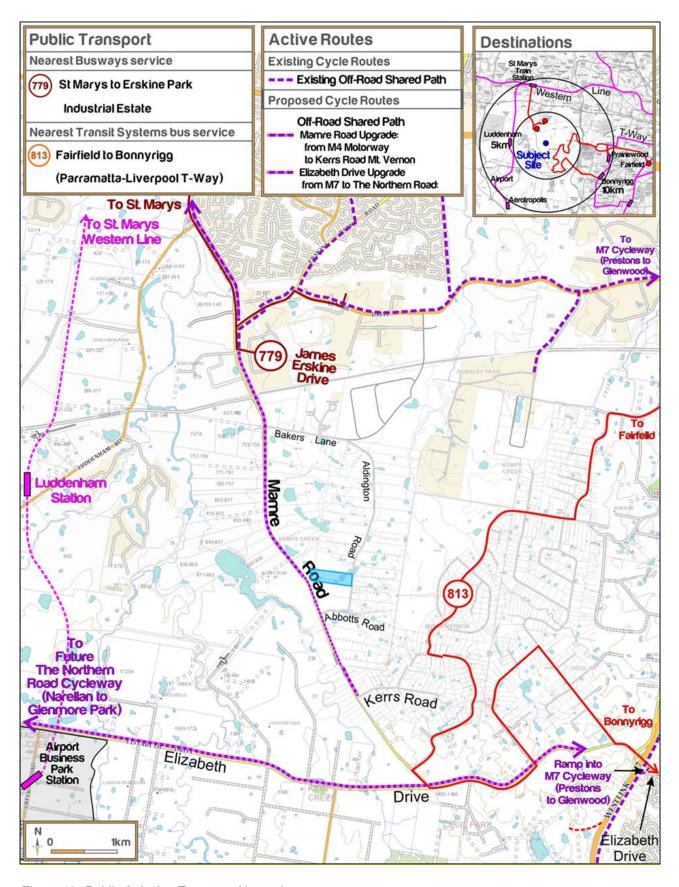


Figure 12: Public & Active Transport Network

5.1.2 Train Services – Metro Western Sydney Airport

The closest train station to the Site is currently some 10 kilometres 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.

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.



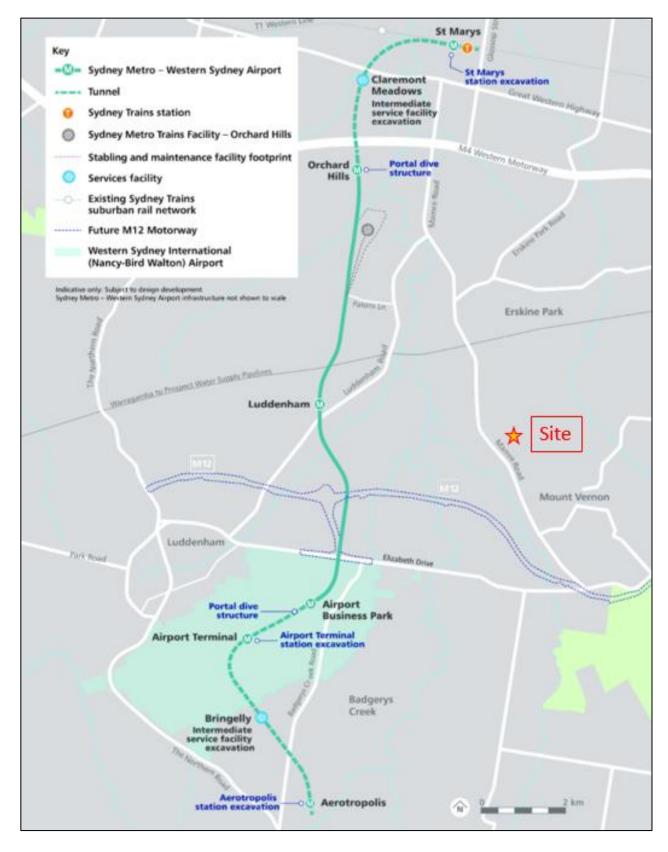


Figure 13: Metro Western Sydney Airport Alignment

5.1.4 Bicycle Network

At present, shared paths (pedestrian and cycle) are provided along Erskine Park Road and sections of Mamre Road to the north of the Site, but there is little cycling (or pedestrian) infrastructure in Mamre Road between Distribution Drive to the north and Elizabeth Drive to the south. There is no bicycling infrastructure along Aldington Road.

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.



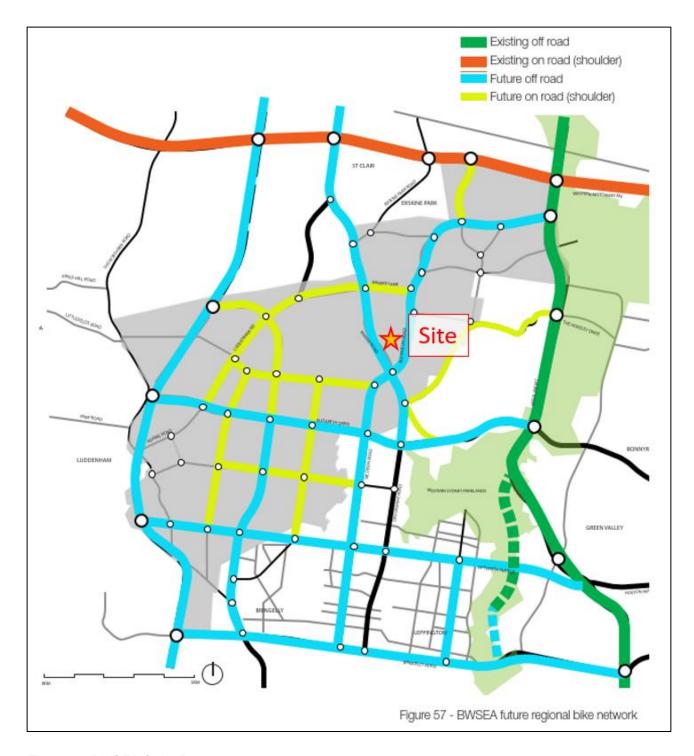


Figure 14: BWSEA Cycle Routes

Source: BWSEA Structure Plan

6 Traffic Impact Assessment

6.1 Assessment Methodology

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 operation of the road network in 2026 (i.e. the "interim" scenario") has been considered more closely for the Site, in advance of delivery of the ultimate road network.

The LOG-E modelling assessment has formed the baseline for the 2026 interim modelling assessment, with assessment of the Proposal considered over and above the LOG-E development flows. All parameters for the assessment, which was agreed with TfNSW remains consistent with the LOG-E assessment.

Proposed Traffic Generation Assessment

TfNSW MRP Trip Rates 6.2.1

For the MRP modelling assessment, TfNSW provided Ason Group with trip rates for adoption, as shown by Table 5. The purpose of these trip rates were to provide for some consideration to a range of uses that may be permissible under the current IN1 General Industrial land zoning. These are the trips rates which have been adopted for assessment of the Proposal.

TABLE 5: TFNSW PROVIDED TRIP RATES		
TARLE 5: TENSW DRAVINEN TRID RATES		

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

6.2.2 Surveyed Trip Rates

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

- Mirvac Calibre
- **Huntingwood Drive**
- Eastern Creek Drive



- Roussell Road
- First Estate: and
- Sarah Andrews Close

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

TABLE 6: SURVEYED TRIP RATES - WAREHOUSE DEVELOPMENT

Time Period	Rate per 100m ²	
Daily Trips	2.31	
Local Road AM Peak (7am – 8am)	0.17	
Local Road PM Peak (4pm – 5pm)	0.15	

While the above rates are deemed applicable to the Site based on similar operations, the approved TfNSW MRP rates have been adopted in the modelling assessment.

6.3 Proposal Traffic Generation

Further to the adoption of the above trip rates, Table 7 provides a summary of the Site's traffic generation associated with the Proposal.

A breakdown of the Site's daily traffic profile based on the TfNSW trip rate available significant survey date is shown in **Appendix A**.

TABLE 7: MASTERPLAN TRAFFIC GENERATION

Time Period	GFA	Rate per 100m ²	Trips
Daily Trips	45,530	2.91	1325
Local Road AM Peak (7am – 8am)		0.23	105
Local Road PM Peak (4pm - 5pm)		0.24	109
Site Maximum Generation Rate (All Vehicles)		0.26	118
Site Maximum Generation Rate (Heavy Vehicles)		0.07	32



6.4 Traffic Assessment – Ultimate Road Network

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

It is understood that the assumptions that underpinned this modelling assessment 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 5), included a level of conservatism to allow for more intensive uses that may be located in the MRP, which are permissible under the land use zoning.

Of particular note to the Proposal is the assumption that 55% of the Site area represented developable GFA. With a Site area of 101,453m², this equates to a GFA of 56,000m². The Proposal currently provides for a GFA of 45.530m².

Therefore, the Proposal aligns with the MRP modelling assessment. 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, on the basis of a precinct-wide cumulative assessment. As such, further assessment of the Site with consideration to the ultimate road network, is not deemed necessary.

2026 Interim Modelling Assessment

6.5.1 LOG-E Baseline

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 either currently under consideration or those which have been approved by DPE, as shown in Figure 15. Traffic generation associated with each of the sites shown by Figure 15 was considered in the LOG-E modelling. Therefore, it is evident that a cumulative study has already been conducted by the LOG-E.

Given that this modelling formed the basis for the recent approval of the Westlink Industrial Estate as well as the 200 Aldington Road Estate, and all parameters were agreed with TfNSW, the LOG-E model has been adopted as the base in which to assess the Proposal against.

As part of the LOG-E modelling methodology, TfNSW provided the following assessment parameters specific to the baseline LOG-E modelling on 4 November 2021.

- All intersections must be Level of Service C or better;
- Individual legs cannot fail;
- Degree of Saturation should not exceed 90%;
- Queue lengths should be accommodated for within lanes;
- Cycle time of 120 seconds.



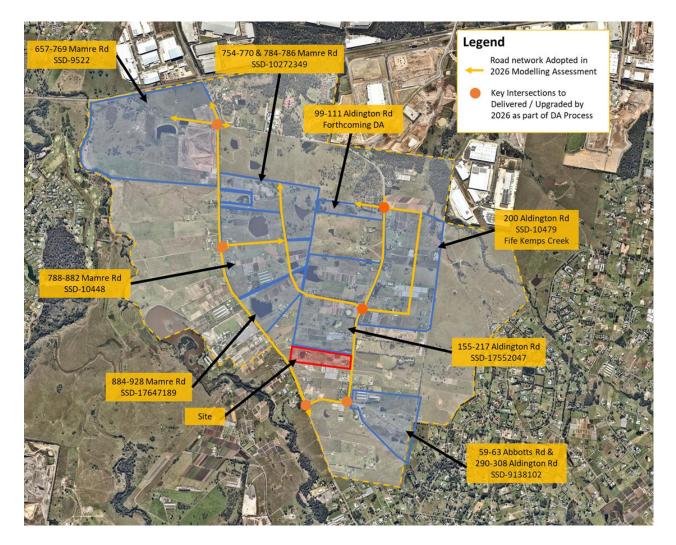


Figure 15: 2026 Interim Modelling Assessment Road Network

The LOG-E model assessed all the key intersections across the MRP. However, of reference to the Proposal, it is noted that the Conditions of Consent associated with the Westlink, and 200 Aldington Road Estates refer specifically to the following key intersections:

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

The LOG-E modelling included the following parameters:

- Approximately 990,215m² of the total GFA within the MRP;
- Trips rates as provided by TfNSW (Table 5).
- The road network as currently proposed. That is, completely consistent with either the current SSD applications, approved intersection layouts or current VPA offers.
- Internal MRP road network assumed to be delivered by 2026.



A summary of the modelling results for the key intersections, as considered relevant for this assessment, are provided in Table 8. As shown, the intersections assessed are anticipated to operate with "good" performance and spare capacity.

TABLE 8: LOG-E (BASELINE) KEY INTERSECTION SIDRA RESULTS

Intersection	Control	Period	DOS	Delay	LOS
Mamre Road / Abbotts	Signal	AM	0.39	7.2	А
Road		PM	0.63	12.6	А
Aldington Road / Abbotts	Signal	AM	0.13	14.6	В
Road		PM	0.27	15.4	В

6.5.3 LOG-E Baseline Plus Development

The traffic generation associated with the Proposal has been assessed over and above the revised LOG-E baseline. The development traffic flows at the key intersections assessed are provided as Appendix B.

The operation of the key intersections in 2026 following the addition of the development traffic stipulated above in Section 6.3 is summarised in Table 9 with full SIDRA outputs provided as Appendix D.

TABLE 9: 2026 LOG E (BASELINE) + DEVELOPMENT

Intersection	Control	Period	DOS	Delay	LOS
Mamre Road / Abbotts	Signal	AM	0.42	9.3	А
Road		PM	0.73	19.4	В
Aldington Road / Abbotts	Signal	AM	0.21	18.0	В
Road		PM	0.32	22.0	В

With reference to Table 9, the SIDRA analysis indicates that the proposed intersections can accommodate the traffic associated with the Proposal. Both intersections are anticipated to continue to operate well within the acceptable parameters set by TfNSW for 2026 intersection operations, with nominal increases in DOS and delay found.

It is therefore concluded that the 'net' traffic volumes arising from the development are of a sufficiently low order that once distributed on to the surrounding road network, the impacts of these volumes at the key intersections would be negligible.

6.5.4 LOG-E Revised Baseline Intersection performance

Following consultation, TfNSW provided commentary in regard to the endorsed LOG-E model, which included additional traffic utilising Bakers Lane. Therefore, the LOG-E model has also been reviewed and revised to ensure Bakers Lane is exclusively utilised by existing traffic.



As such, the baseline volumes were updated with the modelling results for the key intersections, as considered relevant for this assessment, provided in Table 10. As shown, the intersections assessed are anticipated to continue to operate with "good" performance and spare capacity.

TABLE 40- LOC E	/PACELINE\ I/	EY INTERSECTION	CIDDA DECILITO
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Intersection	Control	Period	DOS	Delay	LOS
Mamre Road / Abbotts	Signal	AM	0.52	24.2	В
Road		PM	0.57	16.0	В
Aldington Road / Abbotts	Signal	AM	0.28	22.2	В
Road		PM	0.29	28.2	В

6.5.5 LOG-E Revised Baseline Plus Development

The traffic generation associated with the Proposal has been assessed over and above the revised LOG-E baseline. The development traffic flows at the key intersections assessed are provided as Appendix B.

The operation of the key intersections in 2026 following the addition of the development traffic stipulated above in Section 6.3 is summarised in Table 11 with full SIDRA outputs provided as Appendix D.

TABLE 11: 2026 LOG E (BASELINE) + DEVELOPMENT

Intersection	Control	Period	DOS	Delay	LOS
Mamre Road / Abbotts	Signal	AM	0.52	31.7	С
Road		PM	0.57	17.8	В
Aldington Road / Abbotts	Signal	AM	0.32	23.8	В
Road		PM	0.34	28.3	В

With reference to Table 11, the SIDRA analysis indicates that the proposed intersections can accommodate the traffic associated with the Proposal.

It is therefore concluded that the 'net' traffic volumes arising from the development are of a sufficiently low order that once distributed on to the surrounding road network, the impacts of these volumes at the key intersections would be negligible.



7 Transport Assessment

Existing Travel Patterns 7.1

7.1.1 Journey to Work Data Analysis

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

A summary of key travel modes for those travelling to the locality for work have been reviewed with regard for the surrounding Destination Zone 115184210, within the Horsley Park – Kemps Creek statistical area. The travel modes are presented in **Table 12**.

TABLE 12: TRAVEL MODE SUMMARY (JOURNEY TO WORK)

Travel Mode	Mode Share of Employees
Car as driver	92%
Train	0%
Bus	2%
Walked only	1%
Car as passenger	3%
Motorbike/Scooter	0%
Bicycle	0%
Taxi	1%
Other Modes	1%

With reference to Table 12, it is evident that the private vehicle (car) is the overwhelming preferred mode of choice for commuters travelling to work in in the area. The data indicates that 95% travel to work by car with 92% as the driver and 3% as passenger i.e. car-pooling.

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

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



7.2 Measures to Reduce Private Vehicle Use

7.2.1 Delivering the Vision of the Aerotropolis

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

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

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

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

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

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 C). 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 C 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 13 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 10 hectares. On this basis therefore, it is assumed that the Site could accommodate approximately 200 employees.

TABLE 13: SITE TRAVEL MODE TARGETS & PERSON ONE-WAY TRIPS BY 2026

Travel Mode	Mode Share Target	Daily
Car as driver	88%	176
Car as passenger	3%	6
Train	0%	0
Bus	4%	8
Walked only	1%	2
Motorbike/Scooter	1%	2
Bicycle	1%	2
Taxi	1%	2
Other Modes	1%	2

The analysis indicates that 8 persons would use bus to access the Site 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 is recommended to try to exceed the level of bus travel to the Site; 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.



Parking Assessment

Car Parking 8.1

Precinct Parking Rates 8.1.1

The rates from the MRP DCP have been adopted to assess the parking requirements of the Proposal. The requirements are provided within Table 14.

TABLE 14: MRP DCP PARKING RATES	
Land Use	Minimum Parking Rate
Warehouse	1 space per 300m ² or 1 space per 4 employees, whichever is the greater.
Industries	1 space per 200m² of gross floor area, or 1 space per 2 employees, whichever is the greater
Office	1 space per 40m ²
Accessible Parking	To be in accordance with the Access to Premises Standards, Building Code of Australia.

8.1.2 Parking Requirements & Provision

Table 15 details the requirements for Proposal, based on the parking rates detailed in Table 14.

TABLE 15: CAR PARKING REQUIREMENTS & PROPOSED PROVISION						
Lot	Land Use	GFA (m²)	Requirement (spaces)	Currently Proposed		
1	Warehouse	26,235	88	182		
'	Office	2,065	52			
2	Warehouse	16,390	55	79		
2	Office	840	21			
Total	-	45,530	216	261		

As per Table 15, the Proposal requires 216 parking spaces and 261 parking spaces are provided, exceeding the requirements of the adopted parking rate. Therefore, the Proposal can provide full compliance with the adopted rates.

8.1.3 Accessible Parking

MRP DCP refers to accessible parking provision in line with the National Building Code of Australia (BCA). In this regard, the NCC 2019 Building Code of Australia - Volume One highlights the following requirements for buildings characterised as 5 or 7b -



1 space for every 100 carparking spaces or part thereof.

Accordingly, the proposed parking provisions indicate that the Proposal readily satisfies this requirement, with 1 accessible space being provided for each warehouse tenancy.

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.

Bicycle Parking 8.2

The MRP DCP references bicycle parking rates as outlined in Table 16. In this regard, the following requirements are relevant for the proposed Site.

TABLE 16: BICYCLE PARKING RATES	
Land Use	Requirement
Office	1 space per 600m ² of gross floor area of office and retail space (over 1200m ² gross floor area)
Warehouse	1 space per 1000m ² of gross floor area of industrial activities (over 2000m ² gross floor area)

Accordingly, bicycle parking requirements for the proposed Site are outlined in. Table 17 summarises the provisions on this basis.

TARIF 17 .	CYCLE DA	RKING REO	UIREMENTS
IADLE II.	CICLEPA	INNING KEG	CINEMENTS

Lot	Land Use	Yield (m²)	Rate	Requirement
1A	Warehouse	8,700	1 per 1,000m ²	9
	Office	660	N/A	N/A
1B	Warehouse	9,130	1 per 1,000m ²	9
	Office	750	N/A	N/A
1C	Warehouse	8,405	1 per 1,000m ²	8
	Office	655	N/A	N/A
2	Warehouse	16,390	1 per 1,000m ²	16
	Office	840	N/A	N/A
Total	-	45,530	-	42

With reference to the proposed Site, it is anticipated that the bicycle parking provision will comply with the parking requirements outlined in the MRP DCP. It is anticipated that this could be ensured via a suitable Condition of Consent.

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

TABLE 18: END-OF-TRIP RATES			
Land-Use Requirement			
Office For ancillary office and retail space with a gross floor area 2500m², at least 1 shower cubicle with ancillary change re			
Warehouse	For industrial activities with a gross floor area over 4000m², at least 1 shower cubicle with ancillary change rooms		

Having regard for the Proposal, Table 19 identifies the EoT requirements for the Site based on the rates stipulated in the MRP DCP. It is anticipated that provision of these EoT facilities could be ensured via a suitable Condition of Consent.

TABLE 19: END-OF-TRIP REQUIREMENTS

Lot	Land Use	Yield (m²)	Requirement
1A	Warehouse	8,700	1
	Office	660	N/A
1B	Warehouse	9,130	1
	Office	750	N/A
1C	Warehouse	8,405	1
	Office	655	N/A
2	Warehouse	16,390	1
	Office	840	N/A
Total	-	45,530	4

9 Access Parking and Servicing Design

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 2890.6:2009 Parking Facilities Off Street Parking for People with Disabilities (AS 2890.6); and
- NSW Department of Planning, Industry and Environment, Mamre Road Precinct Draft Development Control Plan, November 2020
- PCC Engineering Construction Specification for Civil works (Engineering Specifications);
- PCC Design Guidelines for Engineering Works for Subdivisions and Developments (Engineering Guidelines); and
- Austroads Guide to Road Design Part 3: Geometric Design (Edition 3.3, 23 April 2020)
- Fire + Rescue NSW, Fire Safety Guideline: Access for fire brigade vehicles and firefighters, Version 05, 4 October 2019 (NSW Fire Safety Guidelines)

9.1 **Design Vehicles**

The design vehicle adopted for the development is a 20m long Articulated Vehicle (as per AS 2890.2:2018) for each of the lots proposed. This is consistent with the requirements of Table 13 of the MRP DCP.

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

9.2 Access Driveways

All access driveways (to the proposed road network within the MRP) have been, and shall be, designed with reference to AS 2890.1:2004 and AS 2890.2:2018.

Truck access driveways for warehouses 1B, 1C and 2 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 Warehouse 1A access driveway shall be designed to provide for vehicles up to and including a 20.0m AV, this is in line with Table 13 of the MRP DCP for a site area between 4,000m² and 20,000m².

Car access driveways shall be designed to provide for B99 vehicles, assuming simultaneous movements in accordance with AS 2890.1:2004 and any other relevant Council Engineering Guidelines.



It is anticipated that full access driveway design compliance with AS 2890.1:2004 and AS 2890.2:2018 would form a standard Condition of Consent further to approval.

9.3 Parking Areas

All parking areas, including access aisles and parking modules shall be designed with reference to AS 2890.1:2004 and AS 2890.6:2009. It is anticipated that full parking area design compliance with AS 2890.1:2004 and AS 2890.6:2009 would form a standard Condition of Consent further to approval.

Service Areas 9.4

All service areas shall be designed with reference to AS 2890.2:2018, 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.

The following describes the service area operation for the Site, visualised in Figure 16:

- The Warehouse 1A service area can readily accommodate up to 8 x 20m Articulated Vehicles (AVs), 1 x 12.5m Heavy Rigid Vehicle (HRV) and 1 x 8.8m Medium Rigid Vehicle (MRV) in rear loading positions.
- The Warehouse 1B service area can readily accommodate up to 9 x 20m AVs and 1 x 12.5m HRV.
- The Warehouse 1C service area can readily accommodate up to 7 x 20m AVs.
- The Warehouse 2 service area can readily accommodate up to 14 x 20m Articulated Vehicles (AVs) and 1 x 12.5m Heavy Rigid Vehicle (HRV).

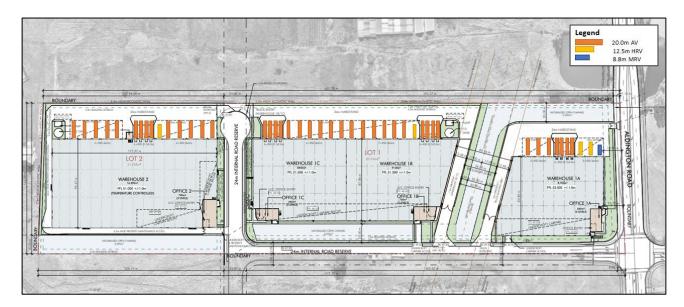


Figure 16: Rear Loading Configuration

In addition to the above, hardstand areas for warehouses 1B, 1C and 2 can accommodate 1 x 30.0m PBS Level 2 truck in side-loading positions adjacent to the RSDs, as shown in the configuration attached overleaf.



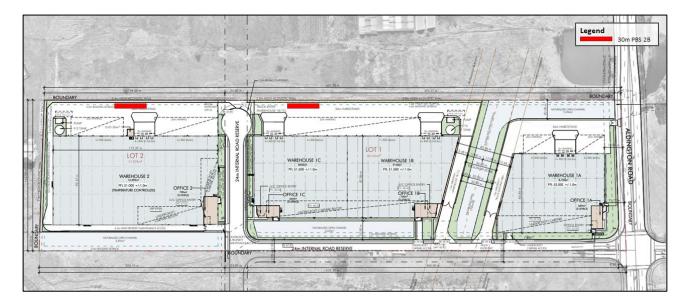


Figure 17: Side Loading Configuration

It is anticipated that service area design compliance with AS 2890.2:2018 would form a standard Condition of Consent further to approval.

Reference should be made to the swept path assessment for Site Access, internal hardstand movements and RSD access attached in Appendix E.

10 Conclusions

Ason Group has been engaged by Root Partnerships, on behalf of Icon Oceania, to prepare a Transport Management & Accessibility Plan (TMAP) in in relation to the State Significant Development (SSD) for the proposed industrial development (the Proposal) located at 253-267 Aldington 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.
- The Proposal seeks to construct internal roads, consistent with the Mamre Road Precinct road network in the Mamre Road Precinct Development Control Plan.
- The trip generation rate adopted for the assessment are consistent with the rates being adopted for the MRP background modelling, being undertaken by TfNSW.
- The key road network around the Site is planned to be upgraded as part of approved developments along Aldington Road.
- SIDRA intersection has been conducted of the upgraded road network which demonstrates, under a cumulative scenario which considers development across the MRP, the key intersections assessed would operate at acceptable levels of performance in 2026.
- With regards to the ultimate MRP DCP road network operation, the Proposal is consistent with the modelling assessment which underpinned the network for the horizon years 2031 and 2036. The traffic generation associated with the Proposal is therefore acceptable when considered in relation to the operation of the planned road network.
- All internal circulation, hardstand and parking areas within each Lot (forming part of this specific SSD) have been designed with reference to the Australian Standards and provide for vehicles up to a 30m long PBS Type 2. 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.
- The proposed parking provision exceeds the requirements of the MRP DCP and includes an appropriate allocation of accessible parking spaces.



Appendix A. Hourly Traffic Generation



Start Time	All Vehicle	Light Vehicle	Heavy Vehicle	Rigid	Semi-trailer	B-double	A-double
0:00	11	8	3	2	0	0	1
1:00	10	6	3	2	0	0	1
2:00	11	7	3	2	0	0	1
3:00	12	9	3	2	0	0	1
4:00	37	31	6	4	0	0	2
5:00	71	57	14	9	1	0	4
6:00	97	77	20	13	1	0	5
7:00	96	72	24	16	2	0	6
8:00	89	61	27	18	2	0	7
9:00	77	47	30	20	2	1	8
10:00	72	43	29	19	2	0	7
11:00	76	46	30	20	2	0	7
12:00	82	56	27	18	2	0	7
13:00	99	72	27	18	2	0	7
14:00	108	84	24	16	2	0	6
15:00	92	71	21	14	1	0	5
16:00	77	60	17	11	1	0	4
17:00	63	49	14	9	1	0	4
18:00	38	28	10	7	1	0	3
19:00	23	16	6	4	0	0	2
20:00	17	12	5	3	0	0	1
21:00	22	18	4	2	0	0	1
22:00	28	23	4	3	0	0	1
23:00	19	16	4	3	0	0	1
Total	1,325	969	356	236	24	6	90

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

Appendix B. Development Traffic Flows



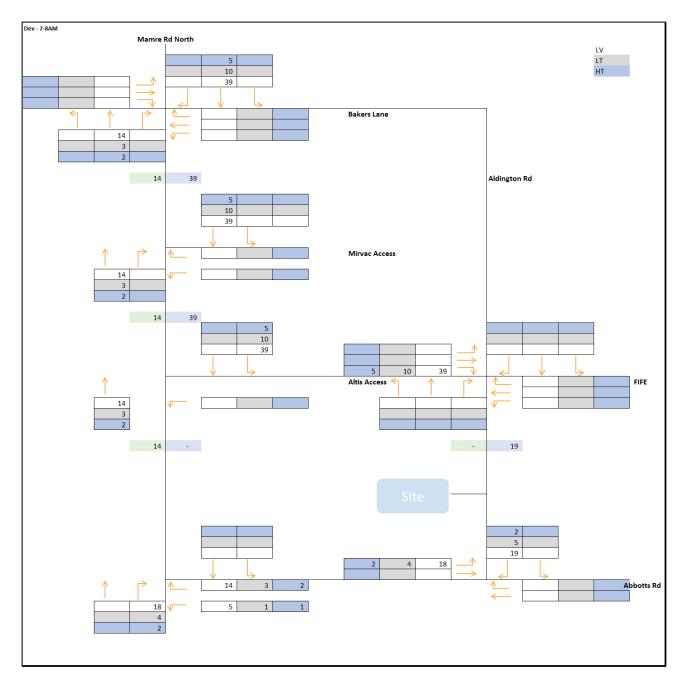


Figure 18: 2026 Development Flows AM (No SLR)

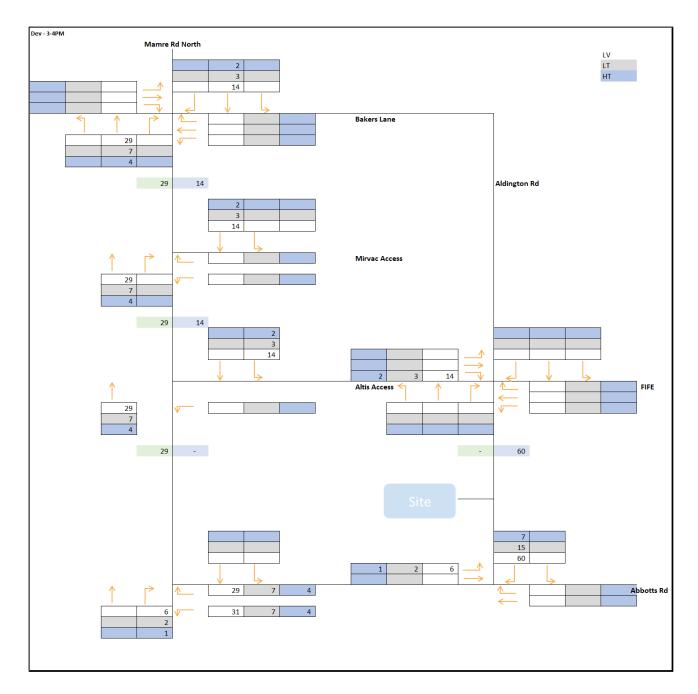


Figure 19: 2026 Development Flows PM (No SLR)

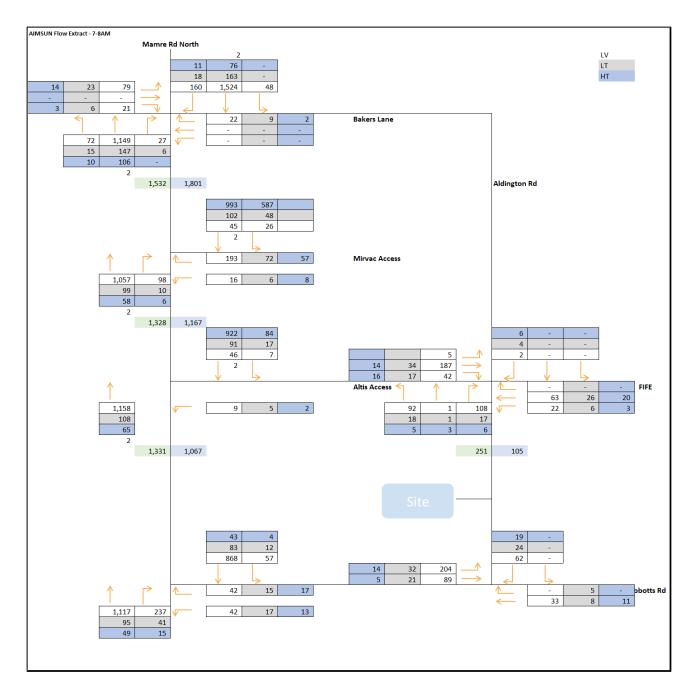


Figure 20: 2026 Base Flows AM

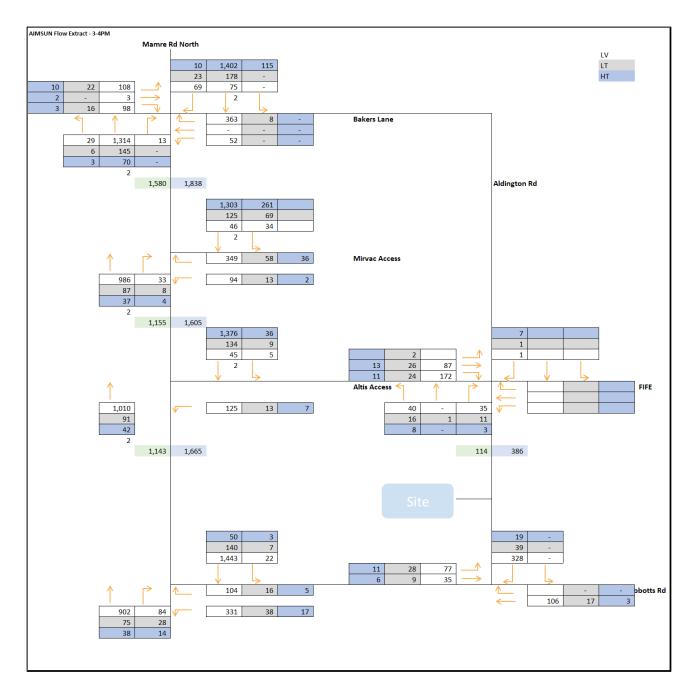


Figure 21: 2026 Base Flows PM

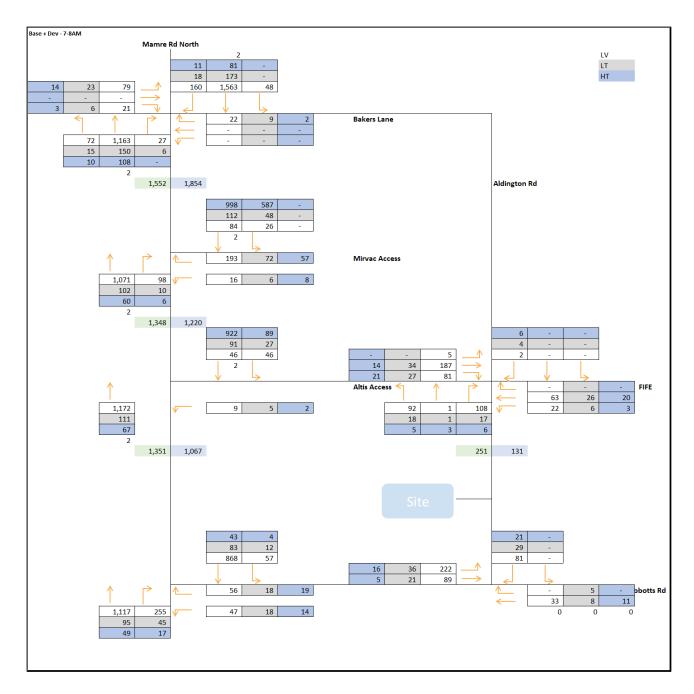


Figure 22: 2026 Base + Development AM

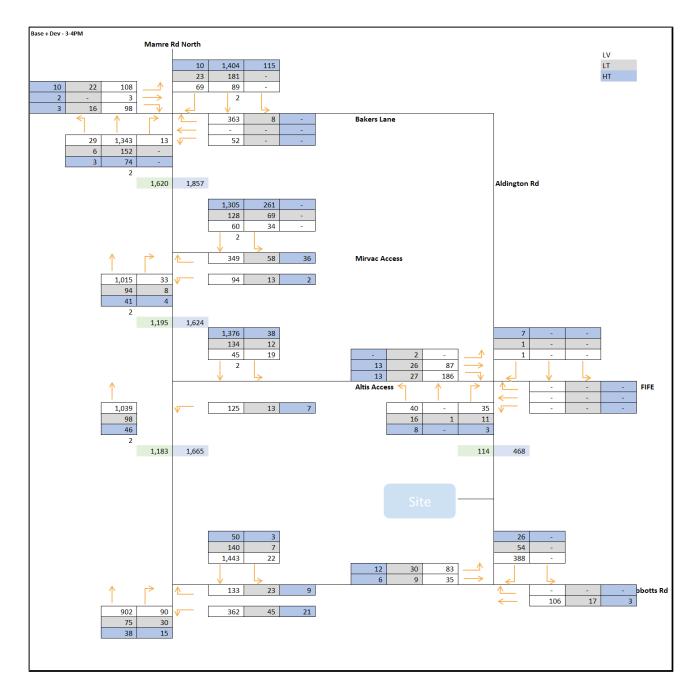


Figure 23: 2026 Base + Development PM

Appendix C. Framework Sustainable Travel Plan





Framework Sustainable Travel Plan

253-267 Aldington Road, Kemps Creek

30/10/2023 P1730r02



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contents

1	Intr	1	
	1.1	Context	1
	1.2	Background	1
	1.3	Goals	3
	1.4	Objectives	3
2	Site	e Audit	4
	2.1	Introduction	4
	2.2	Development Site	4
	2.3	Public & Active Transport Opportunities	6
	2.4	On Demand Services	13
	2.5	Existing Travel Patterns	13
3	Dev	velopment, Scope & Implementation of the Plan	14
	3.1	Introduction	14
	3.2	Responsibility	14
	3.3	FSTP Scope	14
	3.4	Implementation	14
	3.5	Consultation	15
	3.6	Travel Mode Targets	15
4	Mea	asures and Action Strategies	17
	4.1	Measures	17
	4.2	Strategies	17
	4.3	Communications Strategy	22
5	Moi	nitoring Strategy	23
	5.1	Plan Maintenance	23
	5.2	Monitoring	23



contents continued

Figures	
Figure 1: 2056 Badgerys Creek Mode Share Targets	2
Figure 2: Site Location & Road Hierarchy	5
Figure 3: Proposed Masterplan	6
Figure 4: Public & Active Transport Network	7
Figure 5: BWSEA Public Transport Structure	9
Figure 6: Metro Western Sydney Airport Alignment	10
Figure 7: BWSEA Cycle Routes	12
Tables	
Table 1: Site Description	4
Table 2: Travel Mode Summary (Journey to Work)	13
Table 3: Preliminary 2026 Mode Share Targets	16
Table 4: Proposed STP Action Strategies	18
APPENDICES	

Appendix A. Travel Access Guide
Appendix B. Sample Questionnaire



1 Introduction

1.1 Context

This Framework Sustainable Travel Plan (FSTP) has been developed to support the application in relation to State Significant Development (SSD) 23480429. The SSD relates to a proposed industrial development at 253-267 Aldington Road, Kemps Creek (the Site), within the Penrith Local Government Area (LGA).

The Site sits within (what has been termed) the Mamre Road Precinct (MRP), 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 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 / Green 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

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

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

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

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



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

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

Of particular relevance to this 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 (the Badgerys Creek Precinct is shown by **Figure 1**).

This reflects the planned land uses, which are anticipated to support warehousing and logistic uses, as noted by the AECOM Report. Notably, the Agribusiness precinct will not be served by rail, but a number of bus services are planned. These targets are long-term target, with an internet to be ambitious but achievable based on the policy framework, actions, initiatives, infrastructure and services defined through the precinct planning process. On this basis, the targets of the Badgerys Creek Precinct have informed the targets for this FSTP.

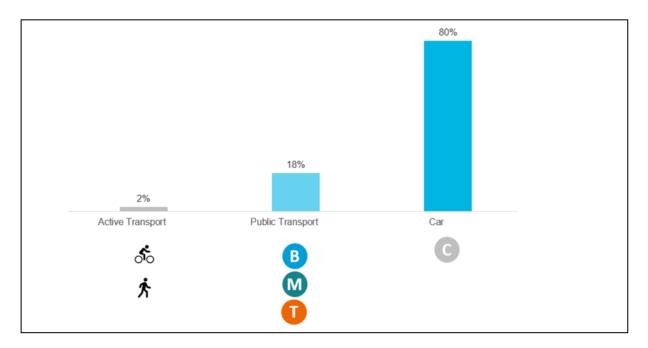


Figure 1: 2056 Badgerys Creek Mode Share Targets

Source: AECOM Report

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 sitespecific 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 a single Lot (refer to **Table 1**) and is located at 253-267 Aldington Road, Kemps Creek. It is approximately 9.5km north-east of the future Western Sydney International (Nancy-Bird Walton) Airport (WSA), 15km south-east of the Penrith CBD and 39km west of the Sydney CBD.

It currently provides for a number of rural residential properties, as well as for small scale agricultural industries businesses.

TABLE 1: SITE DESCRIPTION				
Address	Title	Area (Ha)		
253-267 Aldington Road	Lot 9 / DP 253503	10.20		

The Site's sub-regional context is shown in **Figure 2** as well as the broader MRP Structure Plan area in which the Site lies.



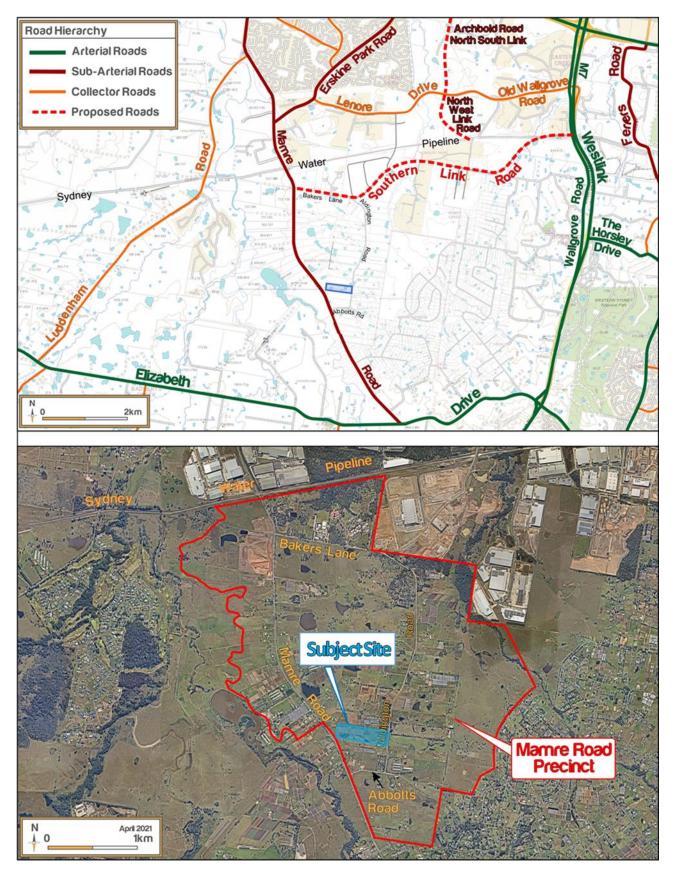


Figure 2: Site Location & Road Hierarchy

2.2.2 Proposed Development

In summary, the application relates to the construction of an industrial development with a total building area of 45,530m². The following summarises key aspects of the Proposal:

- Creation of 2 development lots.
- Approval for 4 warehouses with a total building area of 45,530m², comprising:
 - 42,625m² warehouse GFA,
 - 2,905m² of ancillary office GFA,
- Internal roads and connection to Aldington Road, as per the MRP DCP.
- Provision for 261 car parking spaces; and
- Associated site landscaping.

The proposed Masterplan is reproduced at a reduce scale in **Figure 3**.

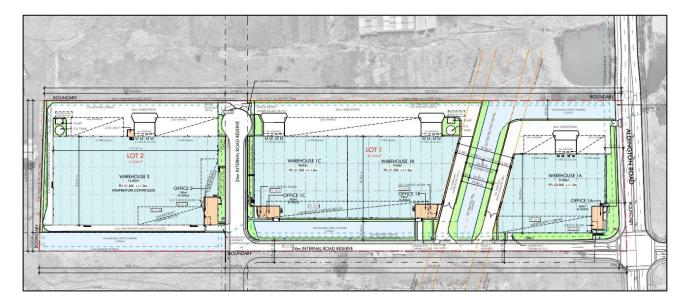


Figure 3: Proposed Masterplan

2.3 Public & Active Transport Opportunities

2.3.1 Introduction

The Site is limited with the current public transport service offering, as shown in **Figure 4**. Therefore, for this Site Audit, the public & active transport opportunities have been identified, noting that there are a number of projects and plans which relate to the strategic development of the MRP and more broadly the Western Sydney Employment Area (WSEA) and Broader Western Sydney Employment Area (BWSEA).

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

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



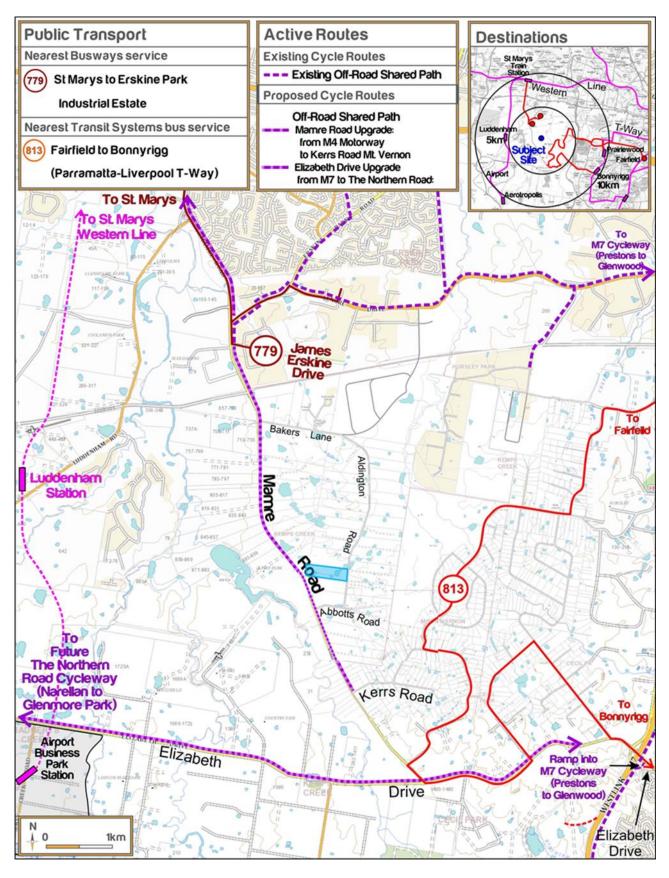


Figure 4: Public & Active Transport Network

2.3.2 Bus Services

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

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

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

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

While the internal MRP road network is still be finalised as part of the DCP, it is clear from the intent of the objectives contained within the MRP DCP that a connected bus network will be provided. As per the MRP DCP, as all internal roads will accommodate heavy vehicles, they would also be capable of accommodating bus services. Therefore, there are significant opportunities to provide sub-regional services along Mamre Road and Aldington Road, as well as services within the internal MRP road network to maximise the number of sites that lie within 400m of a viable bus service.

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

Key bus routes identified in the BWSEA Structure Plan are shown in Figure 5.



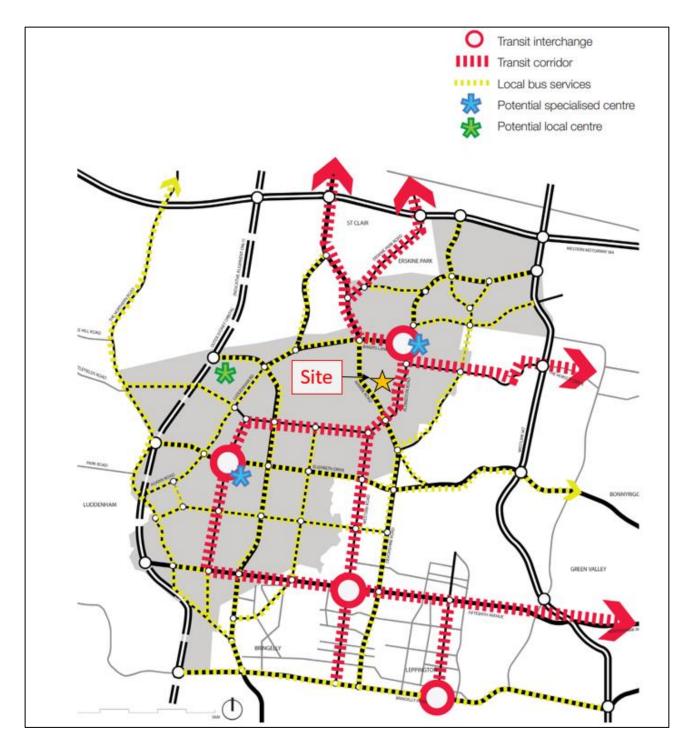


Figure 5: BWSEA Public Transport Structure

Source: BWSEA Structure Plan

2.3.3 Train Services - Metro Western Sydney Airport

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



The alignment of the Metro is shown by **Figure 6**. 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.

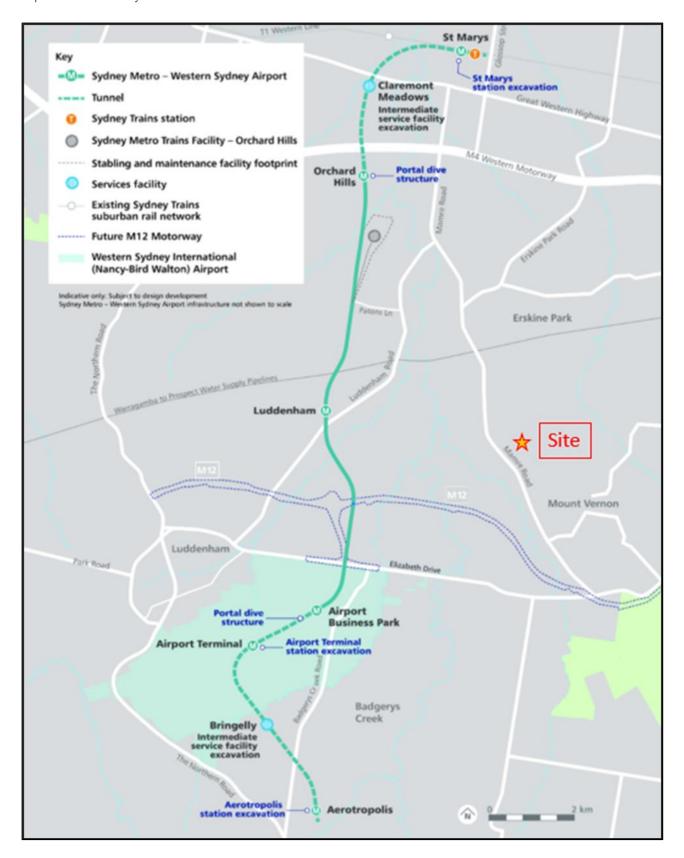


Figure 6: Metro Western Sydney Airport Alignment

2.3.4 Bicycle Network

At present, shared paths (pedestrian and cycle) are provided along Erskine Park Road and sections of Mamre Road to the west and north of the Site, but there is little cycling (or pedestrian) infrastructure around the Site itself.

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 7**, 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 also provides for shared cycle and pedestrian pathways along all local industrial collector roads, with shared paths to also be provided along the length of Aldington Road.

2.3.5 Pedestrian Connectivity

Due to the current largely undeveloped nature of the land immediately surrounding the Site, pedestrian infrastructure is currently non-existent. Key pedestrian desire lines in the vicinity of the Site would be triggered by connections to future public transport infrastructure, noting the nature of the area 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.



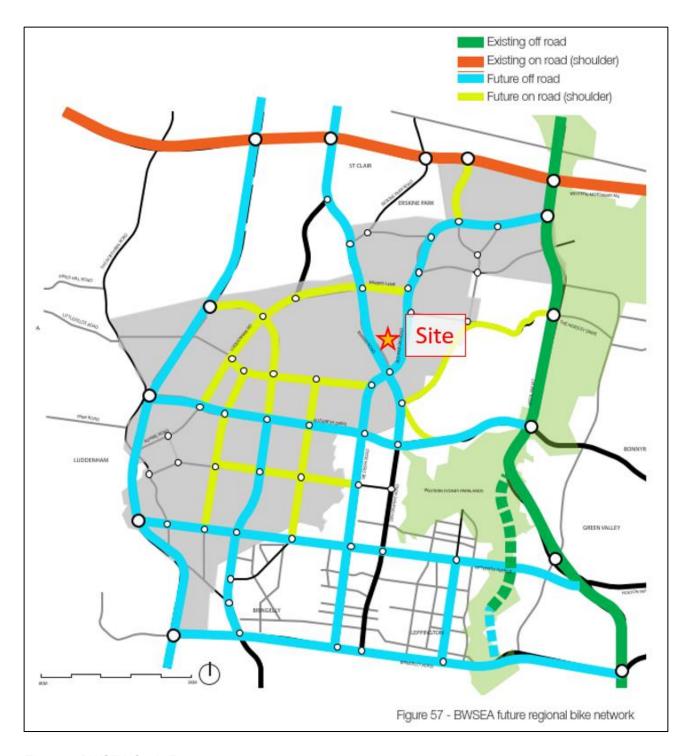


Figure 7: BWSEA Cycle Routes

Source: BWSEA Structure Plan

2.4 On Demand Services

2.4.1 Car Share

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

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

Prior to the commencement of car share providers such as GoGet, it is proposed to consider schemes such as provision of car share priority parking spaces, to actively encourage car sharing amongst staff.

2.5 **Existing Travel Patterns**

2.6.1 Journey to Work Data Analysis 2.5.1

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

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

The travel modes are presented in Table 2.

TABLE 2: TRAVEL MODE SUMMARY (JOU	JRNEY TO	WORK)
--	----------	-------

Travel Mode	Mode Share of Employees
Car as driver	92%
Train	0%
Bus	2%
Walked only	1%
Car as passenger	3%
Motorbike/Scooter	0%
Bicycle	0%
Taxi	1%
Other Modes	1%

With reference to Table 2, it is evident that the private vehicle (car) is the overwhelming preferred mode of choice for commuters travelling to work in in the area. The data indicates that 95% travel to work by car with 92% as the driver and 3% as passenger i.e. car-pooling.



3 Development, Scope & Implementation of the Plan

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 STP, including the co-ordination and joint working practices between those onsite.

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

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.

3.6 Travel Mode Targets

3.6.1 Introduction

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

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

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

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

The implemented 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.



3.6.2 Mode Share Targets

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

As per Section 1.2, the AECOM Report provides a mode share target for public & active transport of 20% and by car of 80% by 2056 for the nearby Badgerys Creek Precinct. Sites within the MRP should reflect a similar target. While at least maintaining the existing carpooling mode share of 3% (Table 2), this represents a decrease in travel by car (as a driver) by 15% by 2056.

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

The targets should therefore be revisited and updated after the opening of the relevant development as part of the monitoring process. The preliminary targets are nominated in **Table 3**, which represents a 5-year target to coincide with the minimum 5 years of monitoring and review.

TABLE 3: PRELIMINARY 2026 MODE SHARE TARGETS

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



4 Measures and Action Strategies

4.1 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 GTP 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.

4.2 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 4: PROPOSED STP ACTION STRATEGIES

STRATEGY	HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
1 Travel Planning and De	mand 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



STI	RATEGY	HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
2 Pr	omoting Public Trans	port			
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 Pr	omoting 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 inhouse car-matching scheme	Company, TPC	Ongoing in the workplace. Updates can be made to organisation as appropriate	Tenant / Business Owner



STF	RATEGY	HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
3.3	Third-party Car Sharing Program	Companies such as Liftshare are an online service that facilitates journey sharing between individual users, as well as providing separate services for businesses, organisations and events.	Staff – encouraged by TPC	Ongoing in the workplace	Staff
3.4	Carpool week	Arrange for a dedicated carpool campaign week to promote the benefits of carpooling.	Tenant / Business Owner	One week per calendar year	Tenant / Business Owner
4 Pr	omoting 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 sports complex 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 Pr	omoting Walking				
5.1	Providing End of Journey Facilities	Provision of sufficient end of trip facilities such as showers, change rooms, lockers etc	Developer	To be provided at completion of development	Tenant / Business Owner



STRATEGY	HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
	to maximise pedestrian activity throughout the site and the wider precinct.			
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 Beha	aviour			
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



4.3 Communications Strategy

4.3.1 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 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. It is recommended that an electric copy of the welcome pack be created and made available to staff.

4.3.2 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.



Monitoring Strategy 5

Plan Maintenance 5.1

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.

Monitoring 5.2

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.

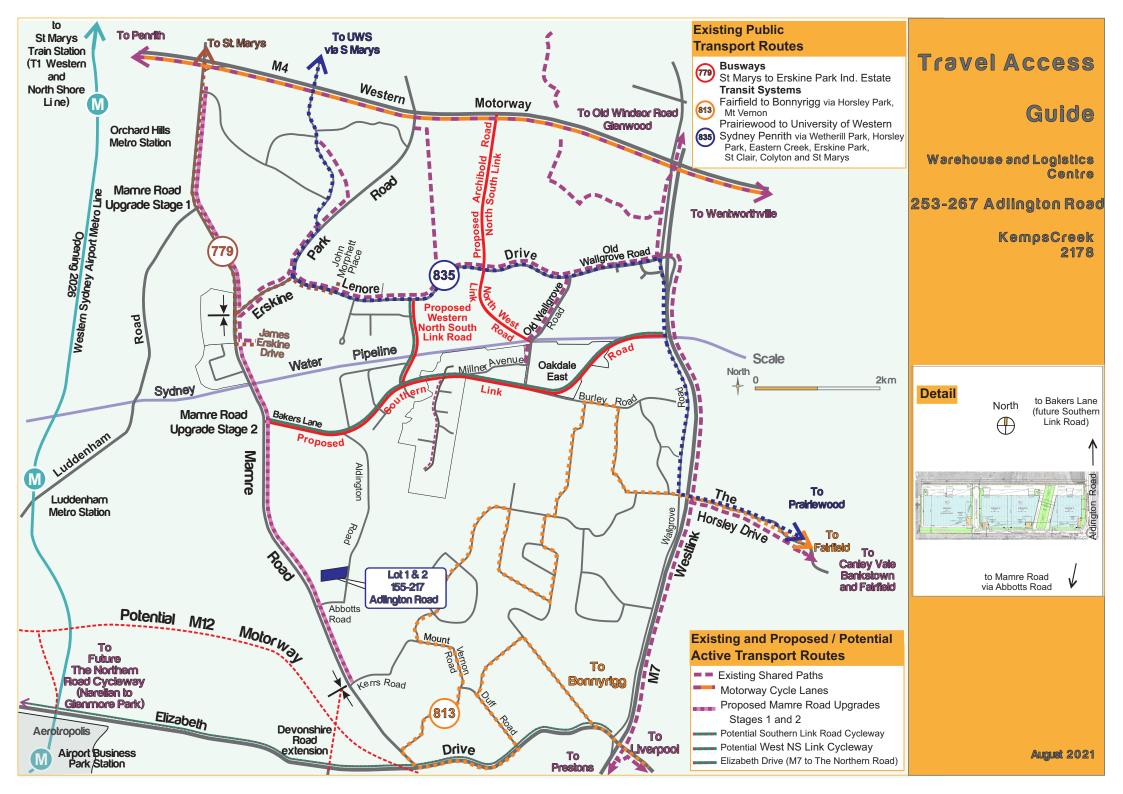
The STP will be monitored around every 1-2 years, with the first survey being carried out shortly after first occupation of the Development. Travel mode surveys would determine the proportion of persons travelling to/from the Site by each transport mode. This will be in the form of annual travel mode 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	☐ Casual contractor
☐ Office staff	☐ Company driver / sub-contractor
☐ Courier / office delivery	☐ Other (Please specify)
Q2. How did you travel to / from the site today?	
☐ Walked only	☐ Car share vehicle
☐ Bicycle only	☐ Motorcycle / scooter
□ Train	☐ Car (as passenger)
□ Bus	☐ Car (as driver)
□ Taxi	☐ 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 D. SIDRA Output Summaries



USER REPORT FOR SITE

Project: P1730m2v2_2026 Westgate Transport Assessment

Output produced by SIDRA INTERSECTION Version: 9.1.4.221

Template: Default Site User

Report

Site: 3 [[ID: 1] Abbotts Road / Mamre Road - AM (Site Folder: Item 3 - LOG E Baseline (Updated))]

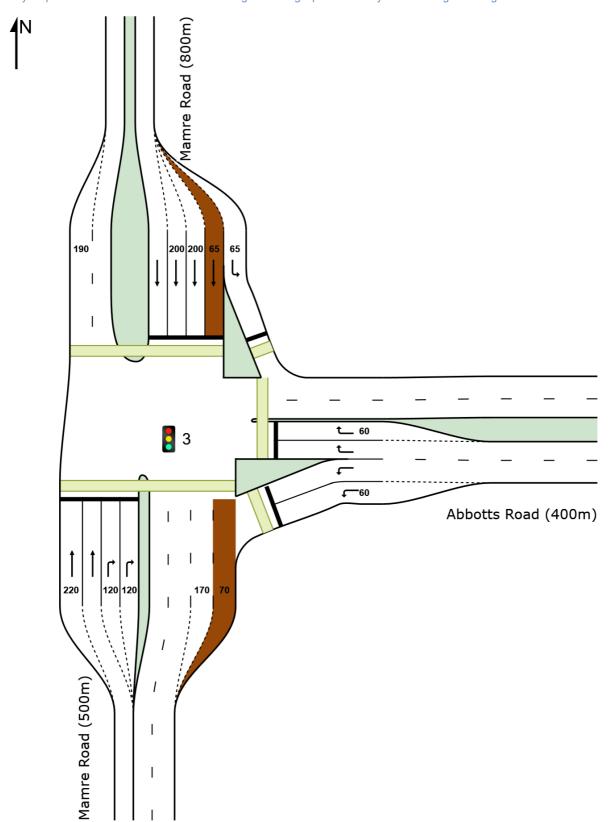
Abbotts Road / Mamre Road Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing - Copy - Import (2)

Input Phase Sequence: A, B, C, D Output Phase Sequence: A, B, C, D Reference Phase: Phase A

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Lane Use	Lane Use and Performance														
	Dem Flo		Arrival	Flows	Сар.	Deg. Satn	Lane Util.	Aver. Delav	Level of Service	95% B Que		Lane Config	Lane Length	Cap. P Adj. B	
	[Total	HV]						Dolay	0011100	[Veh	Dist]	comig	Longin		
	veh/h	%	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
South: Ma	mre Ro	ad (50	0m)												
Lane 1	677	11.4	677	11.4	1304	0.519	100	43.3	LOS D	1.6	12.9	Short	220	0.0	NA
Lane 2	652	11.7	652	11.7	1256	0.519	100	0.3	LOS A	1.5	12.5	Full	500	0.0	0.0
Lane 3	154	19.1	154	19.1	308	0.501	100	34.5	LOS C	5.6	49.0	Short	120	0.0	NA
Lane 4	154	19.1	154	19.1	308	0.501	100	34.5	LOS C	5.6	49.0	Short	120	0.0	NA
Approach	1638	13.0	1638	13.0		0.519		24.5	LOS B	5.6	49.0				
East: Abbo	otts Roa	id (400	m)												
Lane 1	38	41.7	38	41.7	542	0.070	100	25.0	LOS B	1.2	14.1	Short	60	0.0	NA
Lane 2	38	41.7	38	41.7	542	0.070	100	25.0	LOS B	1.2	14.1	Full	400	0.0	0.0
Lane 3	39	43.2	39	43.2	170	0.230	100	98.5	LOS F	2.1	25.6	Full	400	0.0	0.0
Lane 4	39	43.2	39	43.2	170	0.230	100	55.5	LOS D	2.1	25.6	Short	60	0.0	NA
Approach	154	42.5	154	42.5		0.230		51.3	LOS D	2.1	25.6				
North: Mar	mre Roa	ad (800	Om)												
Lane 1	77	21.9	77	21.9	646	0.119	100	29.3	LOS C	2.7	23.8	Short	65	0.0	NA
Lane 2	2	100.0	2	100.0	427	0.005	1 ⁵	18.4	LOS B	0.1	0.7	Short	65	0.0	NA
Lane 3	345	12.7	345	12.7	724	0.476	98 ⁶	20.2	LOS B	11.7	96.7	Short	200	0.0	NA
Lane 4	351	12.7	351	12.7	724	0.484	100	18.7	LOS B	12.0	99.1	Short	200	0.0	NA
Lane 5	351	12.7	351	12.7	724	0.484	100	18.7	LOS B	12.0	99.1	Full	800	0.0	0.0
Approach	1125	13.5	1125	13.5		0.484		19.9	LOS B	12.0	99.1				
All Vehicles	2917	14.7	2917	14.7		0.519		24.2	LOS B	12.0	99.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab)

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

- 5 Lane under-utilisation found by the program
- 6 Lane under-utilisation due to downstream effects

Vehic	Vehicle Movement Performance												
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %	Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Ba Que [Veh. veh		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South	: Mam	re Road	(500m)										
2	T1	All MCs	1329 11.6	1329 11.6	0.519	22.2	LOS B	1.6	12.9	0.04	0.04	0.04	79.5
3	R2	All MCs	308 19.1	308 19.1	* 0.501	34.5	LOS C	5.6	49.0	0.93	0.80	0.93	39.5
Appro	ach		1638 13.0	1638 13.0	0.519	24.5	LOS B	5.6	49.0	0.21	0.18	0.21	69.6
East:	Abbot	ts Road (4	400m)										
4	L2	All MCs	76 41.7	76 41.7	0.070	25.0	LOS B	1.2	14.1	0.58	0.67	0.58	37.5
6	R2	All MCs	78 43.2	78 43.2	* 0.230	77.0	LOS F	2.1	25.6	0.91	0.74	0.91	31.9
Appro	ach		154 42.5	154 42.5	0.230	51.3	LOS D	2.1	25.6	0.75	0.71	0.75	34.0
North	Mam	re Road ((800m)										
7	L2	All MCs	77 21.9	77 21.9	0.119	29.3	LOS C	2.7	23.8	0.63	0.73	0.63	47.1
8	T1	All MCs	1048 12.9	1048 12.9	* 0.484	19.2	LOS B	12.0	99.1	0.63	0.55	0.63	61.0
Appro	ach		1125 13.5	1125 13.5	0.484	19.9	LOS B	12.0	99.1	0.63	0.56	0.63	59.8
All Ve	hicles		2917 14.7	2917 14.7	0.519	24.2	LOS B	12.0	99.1	0.40	0.36	0.40	62.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Site: 4 [[ID: 2] Aldington Road / Abbotts Road - AM (Site Folder: Item 3 - LOG E Baseline (Updated))]

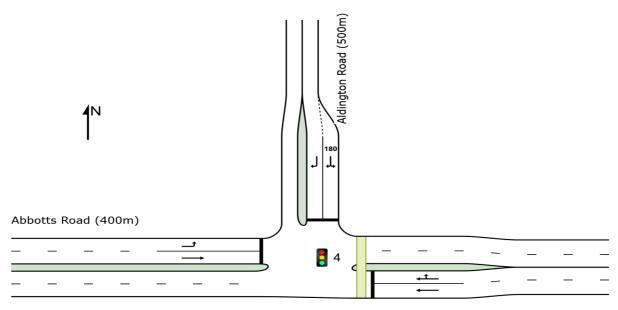
Aldington Road / Abbotts Road

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Convert Function Default Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C Reference Phase: Phase A

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



New Road (130m)

Lane Use	Lane Use and Performance														
	Dem Flo [Total		Arrival [Total		Сар.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Ba Que [Veh		Lane Config	Lane Length	Cap. F Adj. B	lock.
	veh/h	%	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
East: New	Road (130m)													
Lane 1	55	36.5	55	36.5	905	0.060	52 ⁵	5.0	LOSA	0.9	10.6	Full	130	0.0	0.0
Lane 2	5	100.0	5	100.0	45	0.116	100	70.4	LOS E	0.3	4.2	Full	130	0.0	0.0
Approach	60	42.1	60	42.1		0.116		10.7	LOSA	0.9	10.6				
North: Aldi	ington F	Road (5	00m)												
Lane 1	56	40.2	56	40.2	199	0.282	100	53.2	LOS D	2.9	33.8	Short	180	0.0	NA
Lane 2	56	41.0	56	41.0	197	0.282	100	54.0	LOS D	2.9	34.0	Full	580	0.0	0.0
Approach	112	40.6	112	40.6		0.282		53.6	LOS D	2.9	34.0				
West: Abb	otts Ro	ad (400)m)												
Lane 1	263	18.4	263	18.4	925	0.284	100	16.7	LOS B	6.9	60.8	Full	400	0.0	0.0
Lane 2	121	22.6	121	22.6	963	0.126	100	10.9	LOSA	2.8	25.1	Full	400	0.0	0.0
Approach	384	19.7	384	19.7		0.284		14.8	LOS B	6.9	60.8				
All Vehicles	556	26.3	556	26.3		0.284		22.2	LOS B	6.9	60.8				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

5 Lane under-utilisation found by the program

Vehic	Vehicle Movement Performance												
Mov ID	Turn	Mov Class		Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Ba Que [Veh. veh		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East:	New F	Road (130	lm)										
5	T1	All MCs	55 36.5	55 36.5	0.060	5.0	LOSA	0.9	10.6	0.30	0.24	0.30	49.2
6	R2	All MCs	5 ¹⁰⁰ . 0	5 ¹⁰⁰ . 0	* 0.116	70.4	LOS E	0.3	4.2	0.98	0.66	0.98	21.3
Appro	ach		60 42.1	60 42.1	0.116	10.7	LOSA	0.9	10.6	0.36	0.28	0.36	42.8
North	Aldin	gton Roa	d (500m)										
7	L2	All MCs	1 0.0	1 0.0	0.282	42.9	LOS D	2.9	33.8	0.90	0.76	0.90	26.3
9	R2	All MCs	111 41.0	111 41.0	* 0.282	53.7	LOS D	2.9	34.0	0.90	0.76	0.90	30.4
Appro	ach		112 40.6	112 40.6	0.282	53.6	LOS D	2.9	34.0	0.90	0.76	0.90	30.3
West:	Abbo	tts Road ((400m)										
10	L2	All MCs	263 18.4	263 18.4	* 0.284	16.7	LOS B	6.9	60.8	0.49	0.72	0.49	44.8
11	T1	All MCs	121 22.6	121 22.6	0.126	10.9	LOS A	2.8	25.1	0.43	0.47	0.43	43.6
Appro	ach		384 19.7	384 19.7	0.284	14.8	LOS B	6.9	60.8	0.47	0.64	0.47	44.5
All Ve	hicles		556 26.3	556 26.3	0.284	22.2	LOS B	6.9	60.8	0.55	0.62	0.55	40.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab)

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Site: 3 [[ID: 1] Abbotts Road / Mamre Road - PM (Site Folder: Item 3 - LOG E Baseline (Updated))]

Abbotts Road / Mamre Road Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing - Copy - Import Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C Reference Phase: Phase A

Lane Use and Performance															
		WS	Arrival	Flows	Сар.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% B: Que	eue	Lane Config	Lane Length	Cap. P Adj. B	
	veh/h	нv ј %	veh/h	пv ј %	veh/h	v/c	%	sec		[Veh	Dist] m		m	%	%
South: Ma	mre Ro	ad (50	0m)												
Lane 1	546	11.1	546	11.1	1309	0.417	100	5.6	LOS A	1.1	8.6	Short	220	0.0	NA
Lane 2	525	11.5	525	11.5	1260	0.417	100	0.3	LOSA	1.0	8.3	Full	500	0.0	0.0
Lane 3	66	33.3	66	33.3	125	0.529	100	67.0	LOS E	3.9	40.6	Short	120	0.0	NA
Lane 4	66	33.3	66	33.3	125	0.529	100	67.0	LOS E	3.9	40.6	Short	120	0.0	NA
Approach	1203	13.7	1203	13.7		0.529		10.1	LOS A	3.9	40.6				
East: Abbo	otts Roa	d (400	m)												
Lane 1	203	14.2	203	14.2	496	0.409	100	41.3	LOS C	9.4	79.2	Short	60	0.0	NA
Lane 2	203	14.2	203	14.2	496	0.409	100	41.3	LOS C	9.4	79.2	Full	400	0.0	0.0
Lane 3	66	16.8	66	16.8	241	0.273	100	60.0	LOS E	3.5	29.5	Full	400	0.0	0.0
Lane 4	66	16.8	66	16.8	241	0.273	100	54.8	LOS D	3.5	29.5	Short	60	0.0	NA
Approach	538	14.9	538	14.9		0.409		45.2	LOS D	9.4	79.2				
North: Mai	mre Roa	ad (800)m)												
Lane 1	34	31.3	34	31.3	792	0.043	100	18.7	LOS B	0.8	8.1	Short	65	0.0	NA
Lane 2	2	100.0	2	100.0	583	0.004	100	20.2	LOS B	0.0	0.3	Short	65	0.0	NA
Lane 3	566	11.6	566	11.6	1011	0.560	98 ⁶	18.6	LOS B	12.4	99.8	Short	200	0.0	NA
Lane 4	576	11.6	576	11.6	1011	0.570	100	7.2	LOSA	12.8	103.1	Short	200	0.0	NA
Lane 5	576	11.6	576	11.6	1011	0.570	100	7.2	LOSA	12.8	103.1	Full	800	0.0	0.0
Approach	1755	12.1	1755	12.1		0.570		11.2	LOS A	12.8	103.1				
All Vehicles	3496	13.1	3496	13.1		0.570		16.0	LOS B	12.8	103.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab)

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

6 Lane under-utilisation due to downstream effects

Vehicle Movement Performance													
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %	Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% B Que [Veh. veh		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South	South: Mamre Road (500m)												
2	T1	All MCs	1071 11.3	1071 11.3	0.417	3.0	LOSA	1.1	8.6	0.04	0.03	0.04	79.5
3	R2	All MCs	133 33.3	133 33.3	* 0.529	67.0	LOS E	3.9	40.6	0.99	0.77	0.99	28.5
Appro	ach		1203 13.7	1203 13.7	0.529	10.1	LOSA	3.9	40.6	0.14	0.11	0.14	69.5
East:	Abbot	ts Road (400m)										
4	L2	All MCs	406 14.2	406 14.2	0.409	41.3	LOS C	9.4	79.2	0.84	0.79	0.84	34.3
6	R2	All MCs	132 16.8	132 16.8	* 0.273	57.4	LOS E	3.5	29.5	0.92	0.76	0.92	35.0
Appro	ach		538 14.9	538 14.9	0.409	45.2	LOS D	9.4	79.2	0.86	0.78	0.86	34.5
North	Mam	re Road ((800m)										
7	L2	All MCs	34 31.3	34 31.3	0.043	18.7	LOS B	8.0	8.1	0.44	0.68	0.44	52.9
8	T1	All MCs	1721 11.7	1721 11.7	* 0.570	11.0	LOS A	12.8	103.1	0.41	0.37	0.41	71.4
Appro	ach		1755 12.1	1755 12.1	0.570	11.2	LOSA	12.8	103.1	0.41	0.38	0.41	70.9
All Ve	hicles		3496 13.1	3496 13.1	0.570	16.0	LOS B	12.8	103.1	0.39	0.35	0.39	62.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Site: 4 [[ID: 2] Aldington Road / Abbotts Road - PM (Site Folder: Item 3 - LOG E Baseline (Updated))]

Aldington Road / Abbotts Road

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Convert Function Default - Import Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C Reference Phase: Phase A

Lane Use and Performance															
	Dem Flo	WS	Arrival		Сар.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Ba Que	ue	Lane Config	Lane Length	Cap. F Adj. B	
	[Total veh/h	HV] %	[Total veh/h	нv ј %	veh/h	v/c	%	sec		[Veh	Dist] m		m	%	%
East: New	Road (130m)													
Lane 1	73	15.9	73	15.9	738	0.099	100	21.3	LOS B	2.5	20.6	Full	130	0.0	0.0
Lane 2	60	15.6	60	15.6	610	0.099	100	26.0	LOS B	2.3	18.7	Full	130	0.0	0.0
Approach	134	15.7	134	15.7		0.099		23.4	LOS B	2.5	20.6				
North: Ald	ington F	Road (5	500m)												
Lane 1	204	14.9	204	14.9	717	0.284	100	26.2	LOS B	7.2	60.9	Short	180	0.0	NA
Lane 2	204	15.0	204	15.0	716	0.284	100	26.7	LOS B	7.3	61.7	Full	580	0.0	0.0
Approach	407	15.0	407	15.0		0.284		26.4	LOS B	7.3	61.7				
West: Abb	otts Ro	ad (400	0m)												
Lane 1	122	33.6	122	33.6	423	0.289	100	38.0	LOS C	5.3	54.0	Full	400	0.0	0.0
Lane 2	53	30.0	53	30.0	455	0.116	100	31.0	LOS C	2.1	21.8	Full	400	0.0	0.0
Approach	175	32.5	175	32.5		0.289		35.9	LOS C	5.3	54.0				
All Vehicles	716	19.4	716	19.4		0.289		28.2	LOS B	7.3	61.7				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehicle Movement Performance													
Mov ID	Turn	Mov Class		Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% B Que [Veh. veh		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East:	New F	Road (130	Om)										
5	T1	All MCs	133 15.9	133 15.9	0.099	23.0	LOS B	2.5	20.6	0.65	0.51	0.65	33.8
6	R2	All MCs	1 0.0	1 0.0	* 0.099	75.1	LOS F	2.3	18.7	0.68	0.54	0.68	35.5
Appro	ach		134 15.7	134 15.7	0.099	23.4	LOS B	2.5	20.6	0.65	0.51	0.65	33.8
North	: Aldin	gton Roa	d (500m)										
7	L2	All MCs	1 0.0	1 0.0	0.284	19.6	LOS B	7.2	60.9	0.65	0.75	0.65	35.9
9	R2	All MCs	406 15.0	406 15.0	* 0.284	26.5	LOS B	7.3	61.7	0.65	0.75	0.65	40.1
Appro	ach		407 15.0	407 15.0	0.284	26.4	LOS B	7.3	61.7	0.65	0.75	0.65	40.0
West	Abbo	tts Road	(400m)										
10	L2	All MCs	122 33.6	122 33.6	* 0.289	38.0	LOS C	5.3	54.0	0.78	0.77	0.78	35.1
11	T1	All MCs	53 30.0	53 30.0	0.116	31.0	LOS C	2.1	21.8	0.73	0.62	0.73	30.1
Appro	ach		175 32.5	175 32.5	0.289	35.9	LOS C	5.3	54.0	0.76	0.72	0.76	34.0
All Ve	hicles		716 19.4	716 19.4	0.289	28.2	LOS B	7.3	61.7	0.68	0.70	0.68	37.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

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Project: C:\Users\Martin Li\OneDrive - Ason Group\Desktop\P1730 Westgate\SIDRA\P1730m2v2_2026 Westgate Transport Assessment.sip9

USER REPORT FOR SITE

Project: P1730m2v2_2026 Westgate Transport Assessment

Output produced by SIDRA INTERSECTION Version: 9.1.4.221

Template: Default Site User Report

Site: 3 [[ID: 1] Abbotts Road / Mamre Road - AM (Site Folder: Item 4 - LOG E + Westgate -**Updated GFA)**]

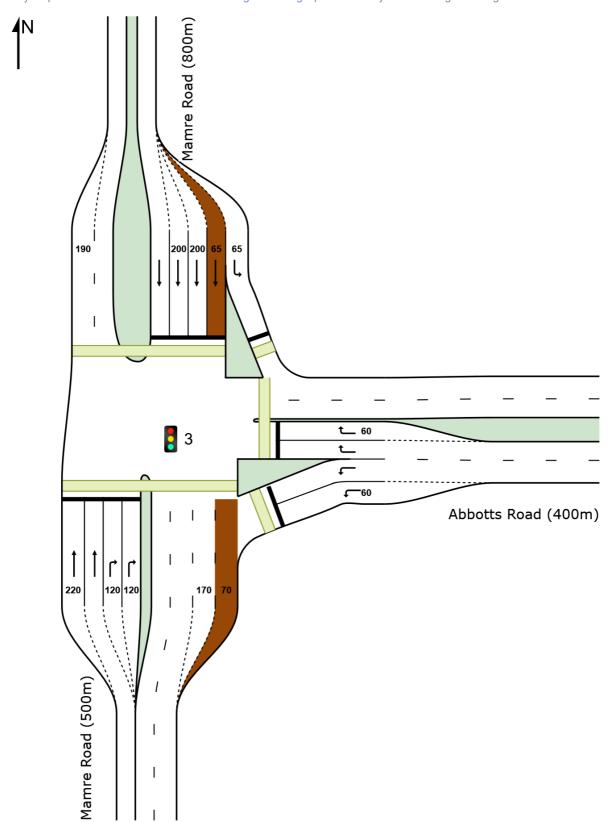
Abbotts Road / Mamre Road Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing - Copy - Import (2)

Input Phase Sequence: A, B, C, D Output Phase Sequence: A, B, C, D Reference Phase: Phase A

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Lane Use	and F	erfor	mance												
	Dem Flo		Arrival	Flows	Сар.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% B Que		Lane Config	Lane Length	Cap. F Adj. B	
	[Total veh/h	HV]	[Total veh/h	HV]	veh/h	v/c	%	sec		[Veh	Dist] m		m	%	%
South: Ma		ad (50													
Lane 1	677	11.4	677	11.4	1304	0.519	100	70.3	LOS E	1.6	12.9	Short	220	0.0	NA
Lane 2	652	11.7	652	11.7	1256	0.519	100	0.3	LOS A	1.5	12.5	Full	500	0.0	0.0
Lane 3	167	19.6	167	19.6	331	0.505	100	33.4	LOS C	5.9	52.2	Short	120	0.0	NA
Lane 4	167	19.6	167	19.6	331	0.505	100	33.4	LOS C	5.9	52.2	Short	120	0.0	NA
Approach	1663	13.2	1663	13.2		0.519		35.5	LOS C	5.9	52.2				
East: Abbo	otts Roa	ıd (400	m)												
Lane 1	42	40.5	42	40.5	567	0.073	100	23.8	LOS B	1.3	14.9	Short	60	0.0	NA
Lane 2	42	40.5	42	40.5	567	0.073	100	23.8	LOS B	1.3	14.9	Full	400	0.0	0.0
Lane 3	49	39.8	49	39.8	177	0.277	100	125.8	LOS F	2.6	31.1	Full	400	0.0	0.0
Lane 4	49	39.8	49	39.8	177	0.277	100	55.9	LOS D	2.6	31.1	Short	60	0.0	NA
Approach	181	40.1	181	40.1		0.277		60.1	LOS E	2.6	31.1				
North: Mar	mre Roa	ad (800	Om)												
Lane 1	77	21.9	77	21.9	621	0.124	100	30.6	LOS C	2.7	24.6	Short	65	0.0	NA
Lane 2	2	100.0	2	100.0	410	0.005	1 ⁵	19.7	LOS B	0.1	0.7	Short	65	0.0	NA
Lane 3	345	12.7	345	12.7	697	0.495	98 ⁶	21.9	LOS B	12.3	101.9	Short	200	0.0	NA
Lane 4	351	12.7	351	12.7	697	0.504	100	20.4	LOS B	12.6	104.5	Short	200	0.0	NA
Lane 5	351	12.7	351	12.7	697	0.504	100	20.4	LOS B	12.6	104.5	Full	800	0.0	0.0
Approach	1125	13.5	1125	13.5		0.504		21.5	LOS B	12.6	104.5				
All Vehicles	2969	14.9	2969	14.9		0.519		31.7	LOSC	12.6	104.5				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab)

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

- 5 Lane under-utilisation found by the program
- 6 Lane under-utilisation due to downstream effects

Vehic	cle Mo	ovement	Performa	nce									
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %	Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Ba Que [Veh. veh		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South	: Mam	re Road	(500m)										
2	T1	All MCs	1329 11.6	1329 11.6	0.519	36.0	LOS C	1.6	12.9	0.04	0.04	0.04	79.5
3	R2	All MCs	334 19.6	334 19.6	* 0.505	33.4	LOS C	5.9	52.2	0.92	0.80	0.92	40.0
Appro	ach		1663 13.2	1663 13.2	0.519	35.5	LOS C	5.9	52.2	0.22	0.19	0.22	69.3
East:	Abbot	ts Road (400m)										
4	L2	All MCs	83 40.5	83 40.5	0.073	23.8	LOS B	1.3	14.9	0.56	0.67	0.56	38.1
6	R2	All MCs	98 39.8	98 39.8	* 0.277	90.9	LOS F	2.6	31.1	0.92	0.75	0.92	32.2
Appro	ach		181 40.1	181 40.1	0.277	60.1	LOS E	2.6	31.1	0.76	0.71	0.76	34.2
North	Mam	re Road ((800m)										
7	L2	All MCs	77 21.9	77 21.9	0.124	30.6	LOS C	2.7	24.6	0.65	0.73	0.65	46.5
8	T1	All MCs	1048 12.9	1048 12.9	* 0.504	20.9	LOS B	12.6	104.5	0.66	0.57	0.66	59.7
Appro	ach		1125 13.5	1125 13.5	0.504	21.5	LOS B	12.6	104.5	0.66	0.59	0.66	58.6
All Ve	hicles		2969 14.9	2969 14.9	0.519	31.7	LOS C	12.6	104.5	0.42	0.37	0.42	61.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Site: 4 [[ID: 2] Aldington Road / Abbotts Road - AM (Site Folder: Item 4 - LOG E + Westgate - Updated GFA)]

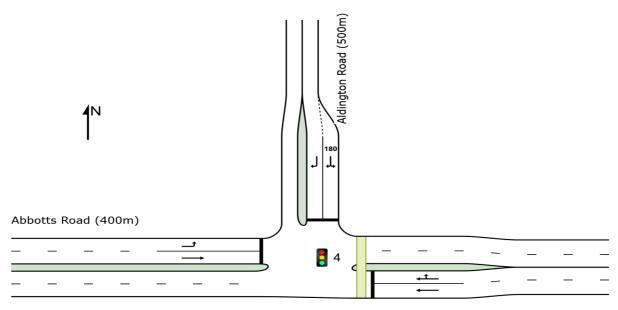
Aldington Road / Abbotts Road

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Convert Function Default Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C Reference Phase: Phase A

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



New Road (130m)

Lane Use	e and F	Perfor	mance	:											
		WS		Flows	Сар.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Ba Que	eue	Lane Config	Lane Length	Cap. P Adj. B	
	[Total veh/h	HV J %	[Total veh/h	HV J %	veh/h	v/c	%	sec		[Veh	Dist] m		m	%	%
East: New	Road ((130m)													
Lane 1	55	36.5	55	36.5	884	0.062	53 ⁵	5.6	LOSA	1.0	11.2	Full	130	0.0	0.0
Lane 2	5	100.0	5	100.0	45	0.116	100	70.4	LOS E	0.3	4.2	Full	130	0.0	0.0
Approach	60	42.1	60	42.1		0.116		11.3	LOS A	1.0	11.2				
North: Ald	ington F	Road (5	500m)												
Lane 1	70	37.6	70	37.6	225	0.310	100	51.5	LOS D	3.6	40.1	Short	180	0.0	NA
Lane 2	69	38.2	69	38.2	223	0.310	100	52.4	LOS D	3.6	40.3	Full	580	0.0	0.0
Approach	139	37.9	139	37.9		0.310		51.9	LOS D	3.6	40.3				
West: Abb	otts Ro	ad (400	Om)												
Lane 1	288	19.0	288	19.0	894	0.323	100	18.0	LOS B	8.1	71.8	Full	400	0.0	0.0
Lane 2	121	22.6	121	22.6	938	0.129	100	11.8	LOS A	3.0	26.2	Full	400	0.0	0.0
Approach	409	20.1	409	20.1		0.323		16.1	LOS B	8.1	71.8				
All Vehicles	608	26.3	608	26.3		0.323		23.8	LOS B	8.1	71.8				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

5 Lane under-utilisation found by the program

Vehic	cle Mo	ovement	Performa	nce									
Mov ID	Turn	Mov Class		Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Ba Que [Veh. veh		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East:	New F	Road (130	lm)										
5	T1	All MCs	55 36.5	55 36.5	0.062	5.6	LOSA	1.0	11.2	0.32	0.26	0.32	48.4
6	R2	All MCs	5 ¹⁰⁰ . 0	5 ¹⁰⁰ . 0	* 0.116	70.4	LOS E	0.3	4.2	0.98	0.66	0.98	21.3
Appro	ach		60 42.1	60 42.1	0.116	11.3	LOSA	1.0	11.2	0.38	0.29	0.38	42.3
North	Aldin	gton Roa	d (500m)										
7	L2	All MCs	1 0.0	1 0.0	0.310	41.4	LOS C	3.6	40.1	0.89	0.77	0.89	26.7
9	R2	All MCs	138 38.2	138 38.2	* 0.310	52.0	LOS D	3.6	40.3	0.90	0.77	0.90	30.8
Appro	ach		139 37.9	139 37.9	0.310	51.9	LOS D	3.6	40.3	0.90	0.77	0.90	30.8
West:	Abbo	tts Road ((400m)										
10	L2	All MCs	288 19.0	288 19.0	* 0.323	18.0	LOS B	8.1	71.8	0.52	0.73	0.52	44.1
11	T1	All MCs	121 22.6	121 22.6	0.129	11.8	LOS A	3.0	26.2	0.45	0.48	0.45	42.7
Appro	ach		409 20.1	409 20.1	0.323	16.1	LOS B	8.1	71.8	0.50	0.66	0.50	43.8
All Ve	hicles		608 26.3	608 26.3	0.323	23.8	LOS B	8.1	71.8	0.58	0.65	0.58	39.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab)

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Site: 3 [[ID: 1] Abbotts Road / Mamre Road - PM (Site Folder: Item 4 - LOG E + Westgate - Updated GFA)]

Abbotts Road / Mamre Road Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing - Copy - Import Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C Reference Phase: Phase A

Lane Use	and F	erfor	mance	:											
	Dem Flo		Arrival	Flows	Сар.	Deg. Satn	Lane Util.	Aver. Delav	Level of Service	95% B Que		Lane Config	Lane Length	Cap. P Adj. B	
	[Total veh/h	HV]	[Total veh/h	HV]	veh/h	v/c	%	,		[Veh	Dist]			%	%
South: Ma				70	ven/n	V/C	70	sec			m		m	70	70
Lane 1	546	11.1	546	11.1	1309	0.417	100	6.6	LOSA	1.1	8.6	Short	220	0.0	NA
Lane 2	525	11.5	525	11.5	1260	0.417	100	0.3	LOSA	1.0	8.3	Full	500	0.0	0.0
Lane 3	71	33.3	71	33.3	125	0.567	100	67.5	LOSE	4.2	43.9	Short	120	0.0	NA
Lane 4	71	33.3	71	33.3	125	0.567	100	67.5	LOS E	4.2	43.9	Short	120	0.0	NA
Approach	1213	13.9	1213	13.9		0.567		11.0	LOSA	4.2	43.9				
East: Abbo	otts Roa	id (400	m)												
Lane 1	225	15.4	225	15.4	488	0.461	100	42.0	LOS C	10.7	91.0	Short	60	0.0	NA
Lane 2	225	15.4	225	15.4	488	0.461	100	42.0	LOS C	10.7	91.0	Full	400	0.0	0.0
Lane 3	87	19.4	87	19.4	233	0.373	100	62.2	LOS E	4.7	41.3	Full	400	0.0	0.0
Lane 4	87	19.4	87	19.4	233	0.373	100	55.9	LOS D	4.7	41.3	Short	60	0.0	NA
Approach	624	16.5	624	16.5		0.461		46.7	LOS D	10.7	91.0				
North: Mar	mre Roa	ad (800	Om)												
Lane 1	34	31.3	34	31.3	792	0.043	100	18.7	LOS B	8.0	8.1	Short	65	0.0	NA
Lane 2	2	100.0	2	100.0	583	0.004	100	23.4	LOS B	0.0	0.3	Short	65	0.0	NA
Lane 3	566	11.6	566	11.6	1011	0.560	98 ⁶	21.9	LOS B	12.4	99.8	Short	200	0.0	NA
Lane 4	576	11.6	576	11.6	1011	0.570	100	7.2	LOS A	12.8	103.1	Short	200	0.0	NA
Lane 5	576	11.6	576	11.6	1011	0.570	100	7.2	LOS A	12.8	103.1	Full	800	0.0	0.0
Approach	1755	12.1	1755	12.1		0.570		12.2	LOSA	12.8	103.1				
All Vehicles	3592	13.5	3592	13.5		0.570		17.8	LOS B	12.8	103.1				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab)

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

6 Lane under-utilisation due to downstream effects

Vehic	cle Mo	ovement	Performa	nce									
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %	Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% B Que [Veh. veh		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South	: Mam	re Road	(500m)										
2	T1	All MCs	1071 11.3	1071 11.3	0.417	3.6	LOSA	1.1	8.6	0.04	0.03	0.04	79.5
3	R2	All MCs	142 33.3	142 33.3	* 0.567	67.5	LOS E	4.2	43.9	1.00	0.79	1.02	28.4
Appro	ach		1213 13.9	1213 13.9	0.567	11.0	LOSA	4.2	43.9	0.15	0.12	0.15	68.9
East:	Abbot	ts Road (400m)										
4	L2	All MCs	451 15.4	451 15.4	0.461	42.0	LOS C	10.7	91.0	0.86	0.80	0.86	33.9
6	R2	All MCs	174 19.4	174 19.4	* 0.373	59.0	LOS E	4.7	41.3	0.94	0.77	0.94	34.4
Appro	ach		624 16.5	624 16.5	0.461	46.7	LOS D	10.7	91.0	0.88	0.79	0.88	34.1
North	Mam	re Road ((800m)										
7	L2	All MCs	34 31.3	34 31.3	0.043	18.7	LOS B	0.8	8.1	0.44	0.68	0.44	52.9
8	T1	All MCs	1721 11.7	1721 11.7	* 0.570	12.1	LOSA	12.8	103.1	0.41	0.37	0.41	71.4
Appro	ach		1755 12.1	1755 12.1	0.570	12.2	LOSA	12.8	103.1	0.41	0.38	0.41	70.9
All Ve	hicles		3592 13.5	3592 13.5	0.570	17.8	LOS B	12.8	103.1	0.40	0.36	0.41	61.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Site: 4 [[ID: 2] Aldington Road / Abbotts Road - PM (Site Folder: Item 4 - LOG E + Westgate - Updated GFA)]

Aldington Road / Abbotts Road

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Convert Function Default - Import Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C Reference Phase: Phase A

Lane Use	e and F	erfor	mance												
	Dem Flo	WS	Arrival		Сар.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Ba Que	eue	Lane Config	Lane Length	Cap. P Adj. B	
	[Total veh/h	HV J %	[Total veh/h	нv ј %	veh/h	v/c	%	sec		[Veh	Dist] m		m	%	%
East: New	Road (130m)													
Lane 1	73	15.9	73	15.9	695	0.105	100	23.3	LOS B	2.6	21.4	Full	130	0.0	0.0
Lane 2	61	15.6	61	15.6	582	0.105	100	27.4	LOS B	2.4	19.3	Full	130	0.0	0.0
Approach	134	15.7	134	15.7		0.105		25.2	LOS B	2.6	21.4				
North: Aldi	ington F	Road (5	500m)												
Lane 1	247	17.0	247	17.0	737	0.335	100	25.0	LOS B	8.6	74.8	Short	180	0.0	NA
Lane 2	247	17.1	247	17.1	736	0.335	100	25.6	LOS B	8.7	75.8	Full	580	0.0	0.0
Approach	494	17.1	494	17.1		0.335		25.3	LOS B	8.7	75.8				
West: Abb	otts Ro	ad (400	Om)												
Lane 1	132	33.6	132	33.6	391	0.337	100	40.8	LOS C	6.0	61.1	Full	400	0.0	0.0
Lane 2	53	30.0	53	30.0	421	0.125	100	33.4	LOS C	2.2	22.7	Full	400	0.0	0.0
Approach	184	32.6	184	32.6		0.337		38.7	LOS C	6.0	61.1				
All Vehicles	812	20.4	812	20.4		0.337		28.3	LOS B	8.7	75.8				

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Vehic	cle Mo	ovemen	t Performa	псе									
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %	Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% B Que [Veh. veh		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East:	New F	Road (130	Om)										
5	T1	All MCs	133 15.9	133 15.9	0.105	24.8	LOS B	2.6	21.4	0.67	0.53	0.67	32.8
6	R2	All MCs	1 0.0	1 0.0	* 0.105	73.2	LOS F	2.4	19.3	0.70	0.55	0.70	34.8
Appro	ach		134 15.7	134 15.7	0.105	25.2	LOS B	2.6	21.4	0.67	0.53	0.67	32.8
North	: Aldin	gton Roa	d (500m)										
7	L2	All MCs	1 0.0	1 0.0	0.335	18.5	LOS B	8.6	74.8	0.64	0.76	0.64	36.4
9	R2	All MCs	493 17.1	493 17.1	* 0.335	25.3	LOS B	8.7	75.8	0.65	0.76	0.65	40.5
Appro	ach		494 17.1	494 17.1	0.335	25.3	LOS B	8.7	75.8	0.65	0.76	0.65	40.5
West:	Abbot	tts Road	(400m)										
10	L2	All MCs	132 33.6	132 33.6	* 0.337	40.8	LOS C	6.0	61.1	0.82	0.78	0.82	34.1
11	T1	All MCs	53 30.0	53 30.0	0.125	33.4	LOS C	2.2	22.7	0.75	0.64	0.75	29.1
Appro	ach		184 32.6	184 32.6	0.337	38.7	LOS C	6.0	61.1	0.80	0.74	0.80	33.1
All Ve	hicles		812 20.4	812 20.4	0.337	28.3	LOS B	8.7	75.8	0.68	0.72	0.68	37.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

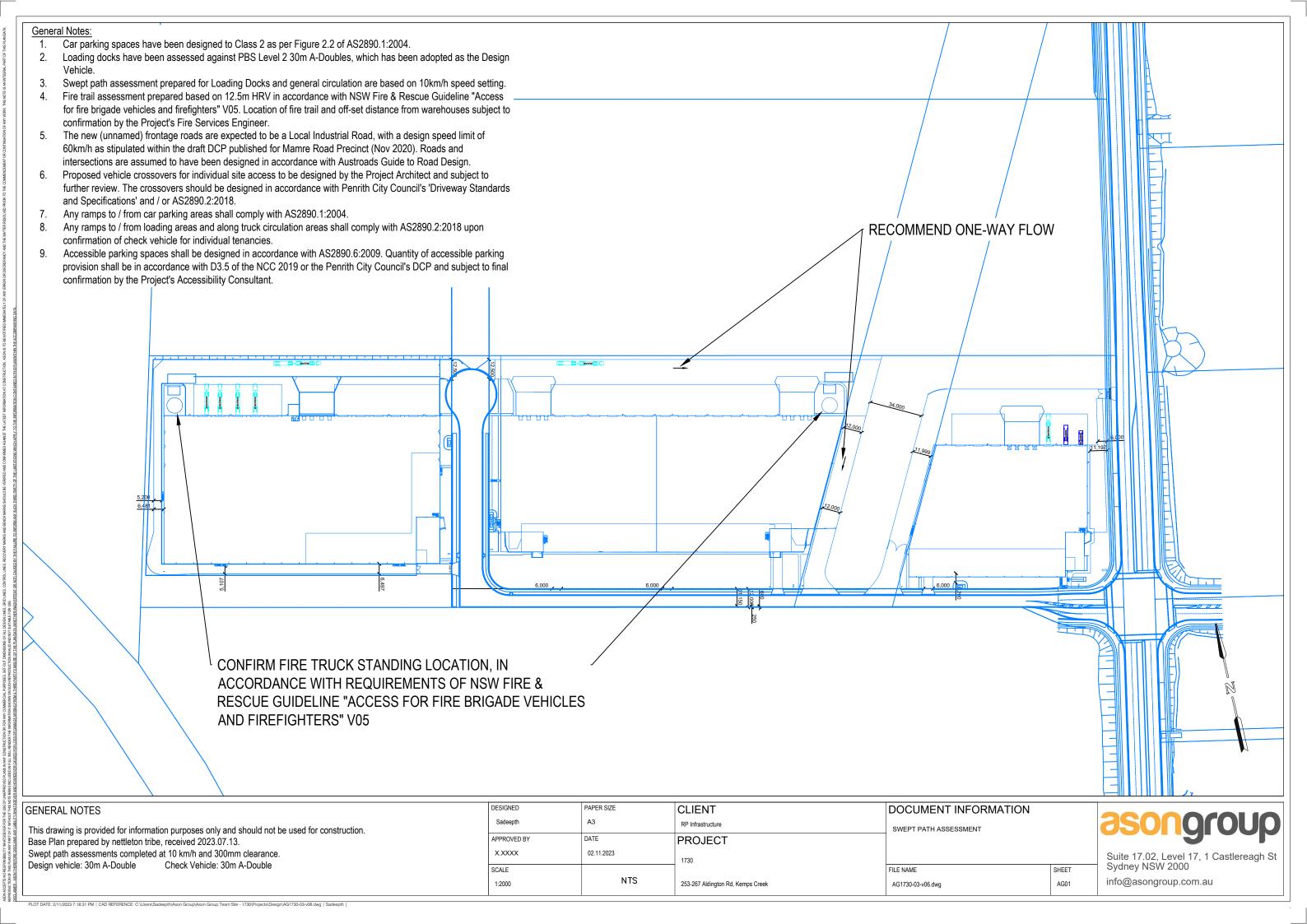
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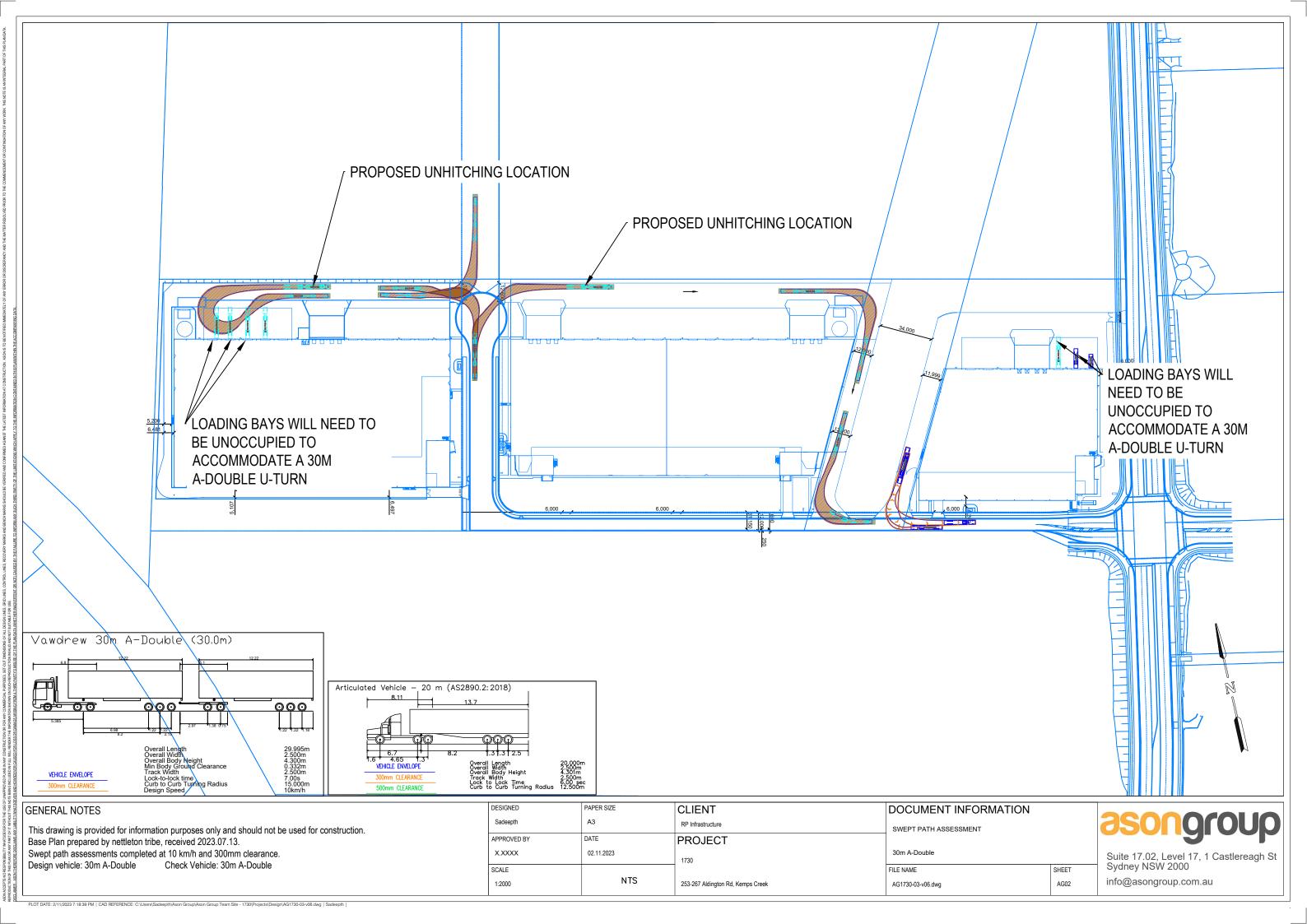
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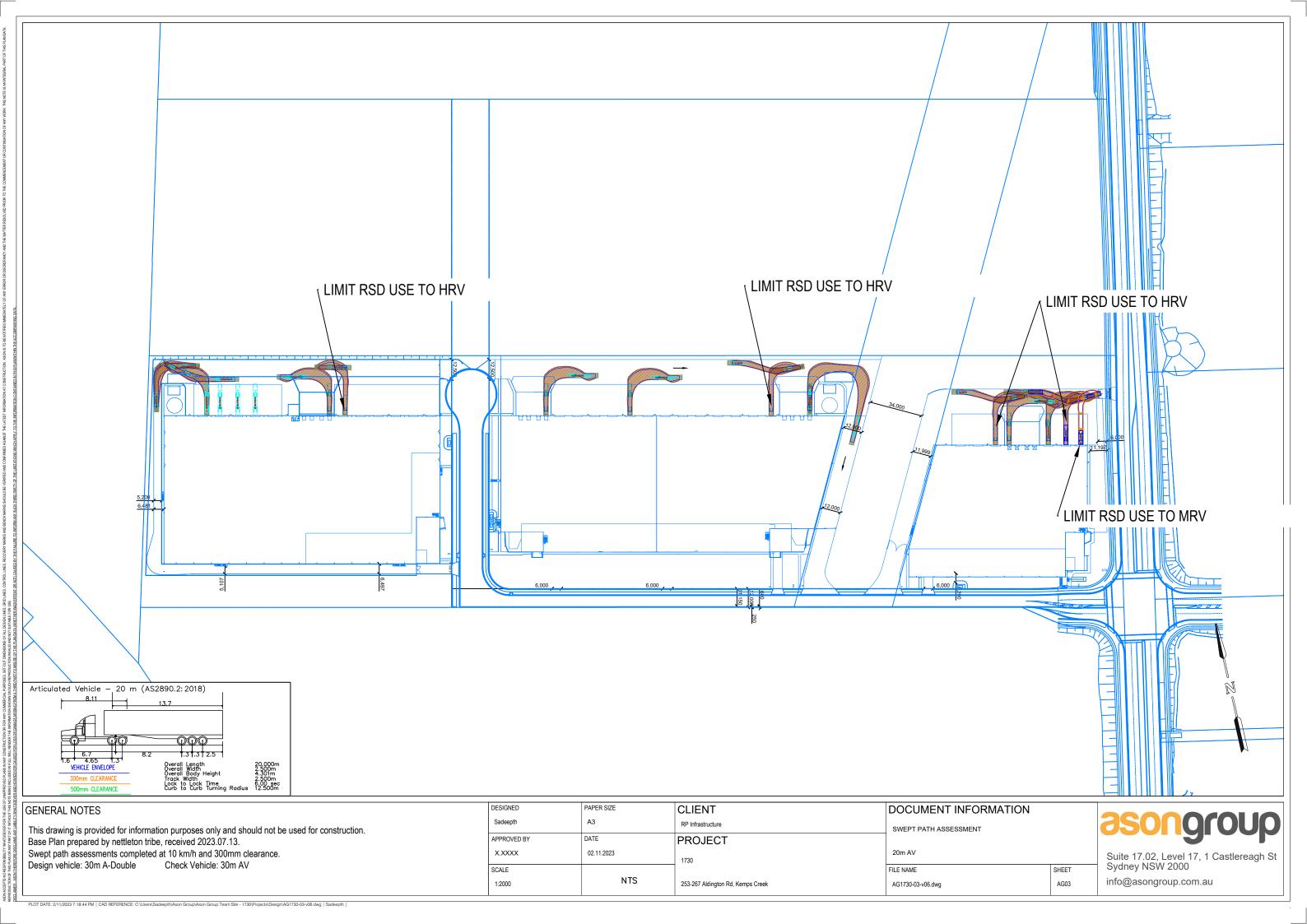
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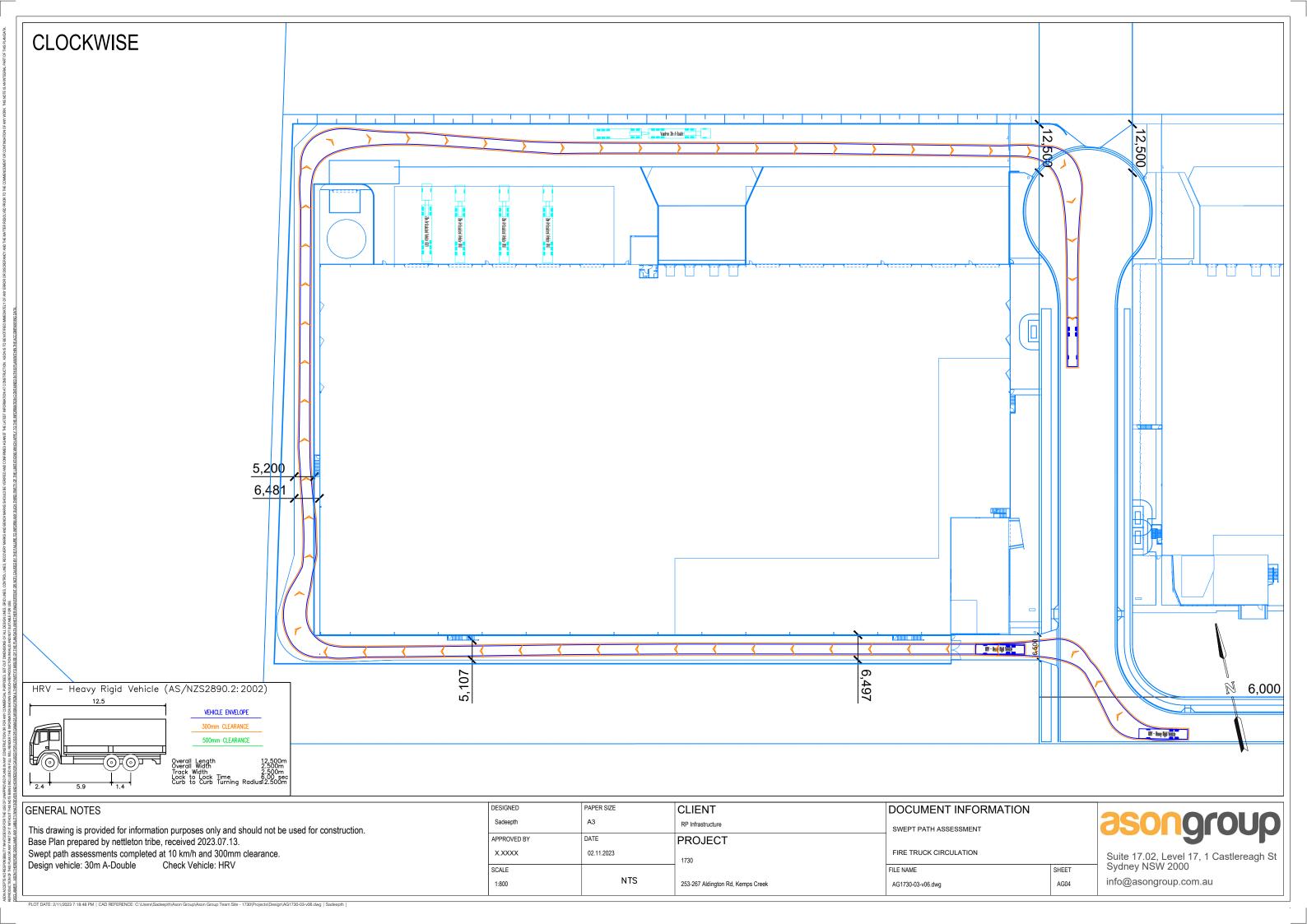
Appendix E. Swept Path Analysis











Appendix F. Prelim Construction Traffic Management Plan





Preliminary Construction Traffic Management Plan

253-267 Aldington Road, Kemps Creek

2/11/2023 P1730r03



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-	31/08/2021	Issue	S. Bandaranayake	R. Butler-Madden
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II	21/07/2023	Issue	S. Bandaranayake	R. Butler-Madden
III	30/10/2023	Issue	S. Bandaranayake	S. Bandaranayake
IV	02/11/2023	Issue	S. Bandaranayake	S. Bandaranayake

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contents

1	Intr	oduction	1
	1.1	Overview	1
	1.2	Proposed Development and Staging	1
2	The	e Site	3
	2.1	Site Location	3
	2.2	Road Network	5
3	Ove	erview of Construction Works	7
	3.1	Staging and Duration of Works	7
	3.2	Construction Hours	7
	3.3	Site Access	7
	3.4	Construction Vehicle Access Routes	9
	3.5	Fencing Requirements	g
	3.6	Materials Handling	10
	3.7	Additional Site Management	11
	3.8	Road Occupancy	11
	3.9	CTMP – Monitoring & Review Process	11
4	Ass	sessment of Traffic & Transport Impacts	12
	4.1	Construction Vehicle Traffic Generation	12
	4.2	Vehicle Management	13
5	Tra	ffic Control	14
	5.1	Traffic Control	14
	5.2	Authorised Traffic Controller	14
6	Mo	nitoring & Communication Strategies	15
	6.1	Development of Monitoring Program	15
	6.2	Communications Strategy	15
7	Sur	nmary	16



contents continued

Figures	
Figure 1: SSD Proposal Figure 2: Site Location & Road Hierarchy Figure 3: TfNSW Approved 25/26m B-Double Routes Figure 4: Indicative Vehicle Access Plan Figure 5: Construction Vehicle Routes	2 4 6 8 10
Tables	
Table 1: Site Description	3



1 Introduction

1.1 Overview

Ason Group has been engaged by Root Partnerships to prepare this Draft Construction Traffic Management Plan (CTMP) to support the application in relation to State Significant Development (SSD) 23480429. The SSD relates to a proposed industrial development at the 253-267 Aldington Road, Kemps Creek (the Site).

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

From the outset, it is noted that the future CTMP, once implemented, will be 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. 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 Draft CTMP, which has been prepared with reference to all available information in regard to the project, and all relevant CTMP preparation guidelines. The implementation of the recommendations and strategies detailed in this CTMP are the strict responsibility of FPI and / or the designated construction Project Manager once appointed.

1.2 Proposed Development and Staging

In summary, the application relates to the construction of an industrial development with a total building area of 45,530m². The following summarises key aspects of the Proposal:

- Creation of 2 development lots.
- Approval for 4 warehouses with a total building area of 45,530m², comprising:
 - 42,625m² warehouse GFA,
 - 2,905m² of ancillary office GFA,
- Internal roads and connection to Aldington Road, as per the MRP DCP.
- Provision for 261 car parking spaces; and
- Associated site landscaping.

The proposed Masterplan is reproduced at a reduce scale in **Figure 1**.



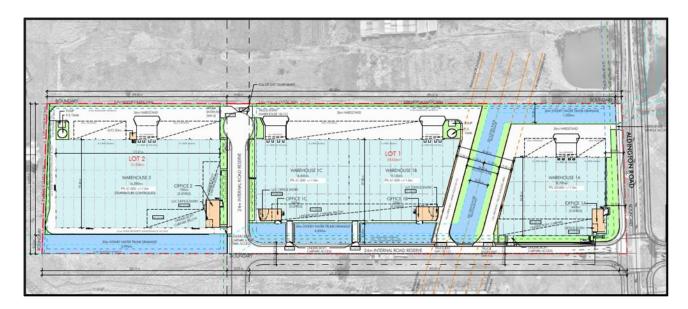


Figure 1: Proposed Masterplan

2 The Site

2.1 Site Location

The Site is comprised of a single Lot (refer to **Table 1**) and is located at 253-267 Aldington Road, Kemps Creek. It is approximately 9.5km north-east of the future Western Sydney International (Nancy-Bird Walton) Airport (WSA), 15km south-east of the Penrith CBD and 39km west of the Sydney CBD.

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

TABLE 1: SITE DESCRIPTION

Address	Title	Area (Ha)
253-267 Aldington Road	Lot 9 / DP 253503	10.20

The Site currently has an access point onto Aldington Road. Aldington Road connects with Mamre Road, by way of Abbotts Road, to the south of the Site, and to the north, Bakers Lane. 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.



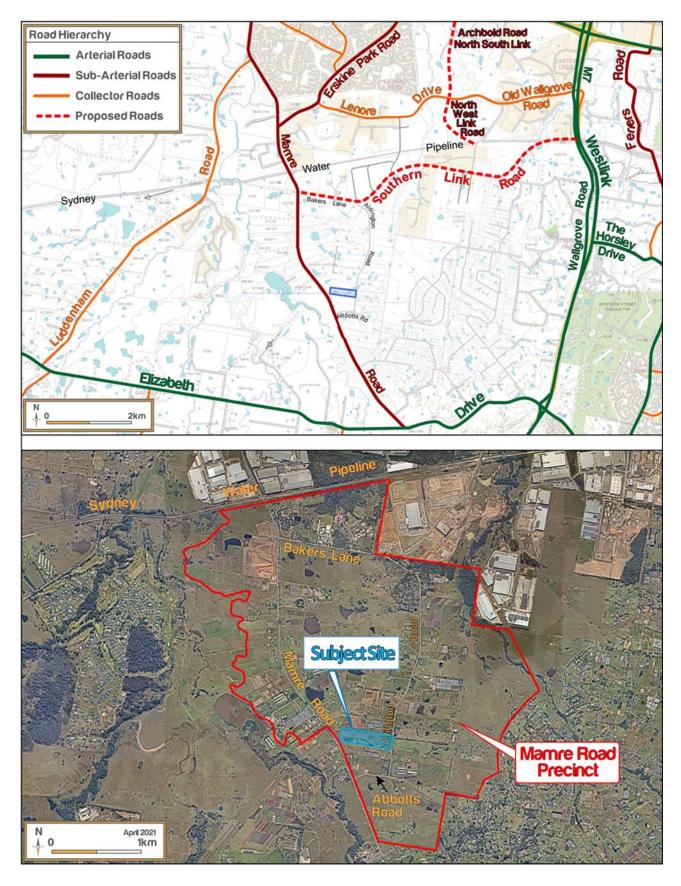


Figure 2: Site Location & Road Hierarchy

2.2 Road Network

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

- Westlink M7 Motorway: M7 Motorway is a high capacity road link of state significance and was built to accommodate future traffic growth in the Western Sydney region. It provides a key north-south link between the M2 Motorway to the north and the M5 Motorway to the south as part of the Sydney orbital road network. A major interchange between the M7 Motorway and M4 Western Motorway is located approximately 3.5 km north of the Site, which connects the Sydney CBD and western Sydney suburbs. The M7 Motorway provides 4 lanes (2 lanes per direction, divided carriageway) and has a posted speed limit of 100 km/h
- (Future) M12 Motorway: A proposed 16km motorway generally running in an east-west between the existing M7 motorway and the Northern Road. It is expected to run in parallel with Elizabeth Drive and is to have 2 lanes in each direction separated by a central median. Construction is expected to commence in 2020.
- Wallgrove Road: Wallgrove Road is an arterial road that runs in a north-south direction to the east of the Site and parallel (to the west of) the M7, functioning as a service road. The 2-lane, two-way road provides a link between the Great Western Highway to the north and Elizabeth Drive to the south. As with the M7, Wallgrove Road connects to the M4 motorway approximately 2.5 kilometres to the north of the Site.
- Elizabeth Drive: An TfNSW classified main road (MR 535) that runs in an east-west direction to the south of the site. Elizabeth Drive in the vicinity of the site generally provides 2 lanes (1 lane per direction) and has a posted speed limit of 80km/h. This road forms the Site's southern frontage and provides a vital link between Westlink M7 Motorway and The Northern Road.
- The Northern Road: The Northern Road is TfNSW classified main road (MR 154) that runs in a north-south direction to the west of the site. The Northern Road section near the vicinity of the site generally provides 3 lanes (1 to 2 lanes per direction) and has a posted speed limit of 80km/h. Currently, The Northern Road is undergoing multiple stages of road upgrades by TfNSW, including a realignment of the road in the south. The road upgrades between The Old Northern Road, Narellan and Peter Brock Drive, Oran Park, has been completed.
- Mamre Road: Mamre Road is an arterial road servicing traffic between the Great Western Highway and M4 to the north and Elizabeth Drive to the south. In the vicinity of the Site, Mamre Road generally provides 2 lanes for two-way traffic, with additional through movement and turning infrastructure at key intersections to the north through the Erskine Park and Mamre West industrial precincts, and at Elizabeth Drive to the south. Mamre Road has a posted speed limit of 80km/h in the vicinity of the Site. TfNSW has confirmed road upgrades will be undertaken for Mamre Road between Elizabeth Drive and Luddenham Road.

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. **Figure 3** shows the Site context with specific reference to the current TfNSW Restricted Access Vehicle (RAC) routes, which allow for up to 25m/26m B-Double combinations. It is expected that Aldington Road and Abbotts Road will be gazetted as a B-Double route following road upgrades.





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

3 Overview of Construction Works

3.1 Staging and Duration of Works

While there is no Contractor engaged for the project, for the purposes of the Draft CTMP, staging and duration of works has been based on similar developments in the wider area. Based on this, it is anticipated that construction works for the preliminary stages would commence in early-2024 and be completed over a duration between 1-2 years, subject to authority approvals and inclement weather delays.

The following summarises key aspects of the construction phases:

- Early works are anticipated to have a duration for 6-10 weeks.
- Internal civil works and bulk earthworks could continue for 6-12 months.
- General Construction works are estimated to continue concurrently to the later phases of the civil activities and continue for 12 months.

3.2 Construction Hours

The type of work being undertaken will remain consistent throughout the duration of construction and associated activities. All works are expected to 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

All construction vehicles will likely enter and depart the Site from / to the existing access to Aldington Road with no upgrades or alterations required to facilitate access. Vehicles will access Mamre Road by way of Abbotts Road to the south of the Site; to avoid conflict with School peak periods.

It is anticipated that the largest vehicle accessing the Site would be a 19.6m Truck & Dog combination.

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.



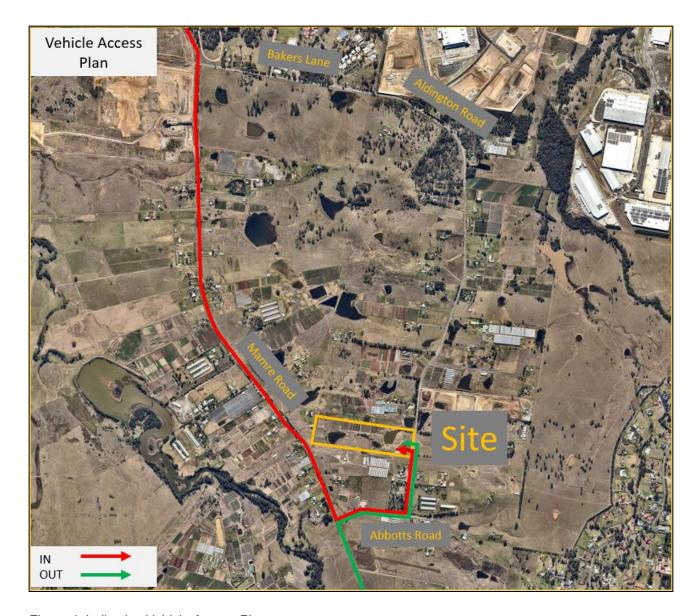


Figure 4: Indicative Vehicle Access Plan

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 Aldington 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 use it.



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 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 Aldington Road.

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.
 Continue on to Aldington Road and left into Site.
- 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. Continue on to Aldington Road and left into Site.

Departure Trips:

- Route 1: From the Site, right onto Aldington Road 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, right onto Aldington Road 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 TfNSW 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.

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 access 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. Aldington Road) then prior approval shall be sought and obtained from the appropriate authorities.

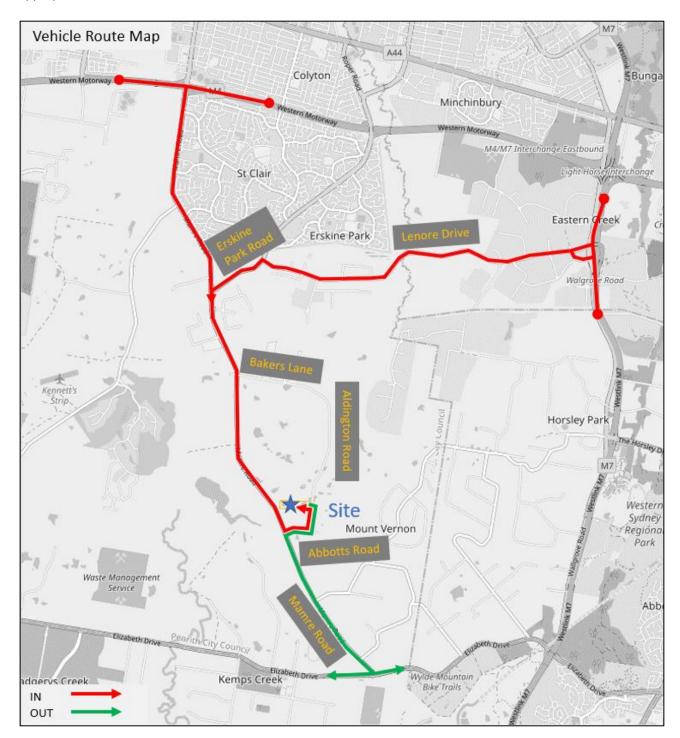


Figure 5: Construction Vehicle Routes

3.7 Additional Site Management

Although it is not expected, in the event that any Site construction traffic management outside of that described in the implemented 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 any further upgrades to Aldington Road and the intersection of Mamre Road and Abbotts 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 TfNSW 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, TfNSW and neighbouring developments will continue to be undertaken to ensure that the cumulative traffic impacts of construction within the area do not adversely impact the operations of the neighbouring developments or the local road network.



4 Assessment of Traffic & Transport Impacts

4.1 Construction Vehicle Traffic Generation

4.1.1 Staging & Heavy Vehicle Movements

In lieu of a Contractor being onboard at this early stage, the specific construction requirements are not fully understood. Therefore, this section will need to be updated prior to implementation of the future CTMP. However, for the purposes of this assessment it is anticipated that the SSD Proposal would generate less traffic volumes than the Proposal itself.

It is anticipated that peak traffic volumes will be during the bulk earthworks phase, which could see up to 150 trucks movements per day (or up to 15 movements per hour).

4.1.2 Light Vehicle Movements

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

4.1.3 Cumulative Traffic Generation Assessment

There are a number of planned developments in the area therefore, prior to implementation of the final CTMP, a cumulative traffic generation assessment should be undertaken. It is anticipated that this could be included as a Condition of Consent.

There would be significant construction activities already occurring when construction commences of the Site associated with road upgrades to Aldington and Abbotts Road, as well as other development sites. At the time of writing, the 2 key sites which have development consent are:

- Westlink Estate Stage 1 Abbotts Road SSD-9138102
- 200 Aldington Road Industrial Estate SSD-10479.

The assessment of the Stage 1 Westlink¹ development found that the peak cumulative traffic volumes associated with construction of the above developments, alongside the road works, would be as follows:

- 844 vehicle movements per day.
- 77 vehicle movements per hour (39 inbound vehicles / 38 outbound vehicles).

¹ https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-9138102%2120221021T015744.562%20GMT



As part of these wider works, it is anticipated that there would be suitable management measures associated with road works already in place. The addition of 15 vehicle movements (i.e. 7 inbound vehicles / 8 outbound vehicles), associated with construction of the development would be negligible.

4.2 Vehicle Management

4.2.1 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.

4.2.2 Construction Staff Parking

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



5 Traffic Control

5.1 Traffic Control

The TfNSW guide "Traffic Control at Worksites" (TCAW) manual contains standard traffic control plans (TCPs) for a range or work activities. The manual's objective is to maximise safety by ensuring traffic control at worksites complies with best practice.

The TfNSW TCAW outlines the requirements for a Vehicle Movement Plan (VMP) for construction works such as proposed; a VMP is a diagram showing the preferred travel paths for vehicles associated with a work site entering, leaving or crossing the through traffic stream. A VMP should also show travel paths for trucks at key points on routes remote from the work site such as places to turn around, accesses, ramps and side roads.

Regarding construction work on roads with an average daily total (ADT) in excess of 1,500 vehicles, approach speeds of between 60 km/hr and 80 km/hr, with truck movements > 20 veh/shift, and sight distance is less than 2d, (where d equals the posted speed limit and in this instance the sight distance is required to be up to 120 metres), it would be expected for the following to be required by the TfNSW TCAW:

- A detailed Traffic Control Plan (TCP) with Traffic controllers.
- A VMP.
- Warning Signs required during shifts.

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

6.2 Communications Strategy

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

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

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



7 Summary

This Draft CTMP has been prepared to ensure appropriate traffic management is undertaken during construction of the industrial development.

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

In summary the following measures are recommended:

- 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 Draft CTMP report is proposed in accordance with the TfNSW TCAW.



Appendix G. TfNSW Meeting Minutes





Meeting Minutes

Westgate – Icon Oceania Transport for NSW Meeting

Date 30/08/2023 Time 3:00 pm to 3:45 pm Location Microsoft Teams

Distribution Register

Pres	Apol.	Name	Organisation	Email
		Sarah Horsfield	Urbis	shorsfield@urbis.com.au
		Vijay Prabhu	Urbis	vprabhu@urbis.com.au
		Rebecca Butler Madden	Ason	rebecca.bmadden@asongroup.com.au
		Nico Tjen	Icon Oceania	nicot@oceaniaproperty.com.au
		Mitchell Alexander	RP Infrastructure	mitch.alexander@rpinfrastructure.com.au
		Matthew Murphy	RP Infrastructure	matthew.murphy@rpinfrastructure.com.au
		David Rohloff	Transport for NSW	david.rohloff@transport.nsw.gov.au
		Nav Prasad	Transport for NSW	nav.prasad2@transport.nsw.gov.au
		Pahee Rathan	Transport for NSW	pahee.rathan@transport.nsw.gov.au

Item			Action
1.0	Project Introduction		
	1.1	Approximately two years ago, there was a clear request from DPE and Council to wait for the design of Aldington road to be resolved before proceeding with TOA.	
	1.2	At that time, in terms of traffic modelling, it was agreed to adopt the survey data and apply a growth rate of 2% to the surveyed volumes. The development traffic impact was assessed above this.	
		To assess the cumulative impact, the approved developments were also included, consistent with the approved Aspect Estate assessment agreed with TfNSW.	
	1.3	Noting that ESR and FIFE have DA approvals (formed on the basis of the LOG-E modelling assessment), the project team seeks agreement on the proposed strategy for traffic modelling that will allow us to proceed with TOA and lodge a DA to commence the overall assessment of the development.	Note
	1.4	The current assessment has been updated with LOG-E as the baseline and the development traffic assessed over and above that.	
	1.5	Sensitivity testing has also been done of the LOG-N traffic. Noting that LOG-N does not currently have a clear strategy themselves, the traffic generation has been adopted as a sensitivity test.	
	1.6	Once in the system, the project team agrees to collaboratively work through the detail requirements with TfNSW and DPE.	

	Item		Action	
2.0	Intersection at 253-267 Aldington Road			
	2.1	2.1 The Aldington Road upgrades, and associated intersections upgrades that are currently proposed to be delivered by LOG-E do not include the signalised intersection at the site access.		
	2.2	Therefore, there is no commitment for delivery of the intersection at 253-267 Aldington Road in the short-medium term.		
	2.3	Noting that Aldington Road is being upgraded to 4 lanes in each direction, TfNSW has concerns over safety for heavy vehicles conducting right turn movements across 4 lanes of bi-directional traffic. TfNSW would therefore not accept a priority-controlled intersection, it is required to be a roundabout or signalised (Council require delivery of ultimate signals to avoid abortive works). Therefore, TfNSW require a signalised intersection.	Note	
	2.5	Due to the restrictions by the MRP DCP on vehicles using Bakers Lane until there is an upgrade - a "Left in, left out" approach is not suitable.		
	2.6	The signalised intersection is part of the DCP, however TfNSW note that there is no commitment / funding currently for it to be delivered. However, due to safety concerns, TfNSW request a form of control to ensure safe movement of right-turn vehicles from the site (regardless of low volumes). It was noted that the requirements for this was new information for the project team.	Note	
	2.7	The project team requests that OC be delayed until the provision of a signalised intersection, noting that we are aware of other parties looking to progress it, via a potential conditional DA approval. TfNSW did not raise any objection and deferred to the discretion of DPE.		
	2.8	It was also noted that DPE may be reluctant to issue conditional DA approval that relies on other developers to delivery relevant infrastructure.		
3.0	LOG-E and LOG-N Traffic Modelling			
	3.1	TfNSW stated that there is an issue with the volumes adopted in the endorsed LOG-E model as a result removing the SLR link (volumes are high on Bakers		
		Lane), which Ason and TfNSW are working through to resolve.		
	3.2	The LOG-E model needs to be revised by Ason prior to any updates to 253-267 Aldington Road traffic modelling. The project team does not have to wait, however, it is recommended that Ason / TfNSW work through the updated		
	3.2	The LOG-E model needs to be revised by Ason prior to any updates to 253-267 Aldington Road traffic modelling. The project team does not have to wait,	Note	
		The LOG-E model needs to be revised by Ason prior to any updates to 253-267 Aldington Road traffic modelling. The project team does not have to wait, however, it is recommended that Ason / TfNSW work through the updated LOG-E / N model first, prior to finalising the modelling assessment of the Site. Further clarity on the assumptions within the LOG-N modelling will be available	Note	
	3.3	The LOG-E model needs to be revised by Ason prior to any updates to 253-267 Aldington Road traffic modelling. The project team does not have to wait, however, it is recommended that Ason / TfNSW work through the updated LOG-E / N model first, prior to finalising the modelling assessment of the Site. Further clarity on the assumptions within the LOG-N modelling will be available following meetings in the first week of September 2023. It was noted that the traffic volumes for 253-267 Aldington Road are not	Note	
4.0	3.3 3.4 3.5	The LOG-E model needs to be revised by Ason prior to any updates to 253-267 Aldington Road traffic modelling. The project team does not have to wait, however, it is recommended that Ason / TfNSW work through the updated LOG-E / N model first, prior to finalising the modelling assessment of the Site. Further clarity on the assumptions within the LOG-N modelling will be available following meetings in the first week of September 2023. It was noted that the traffic volumes for 253-267 Aldington Road are not significant when compared to LOG-N and LOG-E. In terms of additional movements on Mamre Road, the development could generate an addition 40 movements in the AM peak travelling southbound on Mamre Road and 40 volumes in the PM peak travelling northbound on Mamre	Note	
4.0	3.3 3.4 3.5	The LOG-E model needs to be revised by Ason prior to any updates to 253-267 Aldington Road traffic modelling. The project team does not have to wait, however, it is recommended that Ason / TfNSW work through the updated LOG-E / N model first, prior to finalising the modelling assessment of the Site. Further clarity on the assumptions within the LOG-N modelling will be available following meetings in the first week of September 2023. It was noted that the traffic volumes for 253-267 Aldington Road are not significant when compared to LOG-N and LOG-E. In terms of additional movements on Mamre Road, the development could generate an addition 40 movements in the AM peak travelling southbound on Mamre Road and 40 volumes in the PM peak travelling northbound on Mamre Road which would not significantly impact mid-block capacity.	Note	
4.0	3.3 3.4 3.5	The LOG-E model needs to be revised by Ason prior to any updates to 253-267 Aldington Road traffic modelling. The project team does not have to wait, however, it is recommended that Ason / TfNSW work through the updated LOG-E / N model first, prior to finalising the modelling assessment of the Site. Further clarity on the assumptions within the LOG-N modelling will be available following meetings in the first week of September 2023. It was noted that the traffic volumes for 253-267 Aldington Road are not significant when compared to LOG-N and LOG-E. In terms of additional movements on Mamre Road, the development could generate an addition 40 movements in the AM peak travelling southbound on Mamre Road and 40 volumes in the PM peak travelling northbound on Mamre Road which would not significantly impact mid-block capacity. Oceania Site Modelling Strategy	Note	

rpinfrastructure.com.au Meeting Minutes 30/08/2023 Page 2 of 4

Item			Action
	4.3	4.3 The updated modelling assessment will be based on the resolved LOG-E model as a base, with the traffic flows for 253 -267 Aldington Road assessed over and above that.	
	4.4	The LOG-N traffic will be maintained as a sensitivity assessment.	
	4.5	TfNSW suggested holding off on traffic modelling until the next of the first week in September due to new information that may become available following meetings on LOG-N.	
	4.6	Only approved developments and current development applications should be considered in the cumulative assessment. Any land which is not the subject of a built-form application does not need to be considered.	
	4.7	Confirm above strategy with TfNSW via issuing meeting minutes.	
5.0	Deliv		
	5.1	TfNSW noted that in addition to the intersection at 253-267 Aldington Road, there is some key road infrastructure that they do not fully understand the timeline and responsibility for delivery.	Note
	5.2	It was also stated that without the LOG-E development of the road network, 253-267 Aldington Road cannot go ahead.	Note
	5.3	The half-road construction was also noted as a risk for DPE endorsement.	
6.0	Timing of Road Delivery		
	6.1	It was noted that there are currently delays to Mamre Road intersection and associated roads until 2025.	
	6.2	There have been several assumptions that won't be delivered on time. Such as Mirvac which is currently in delay.	
	6.3	The project team noted that the realistic timeline for DA assessment and construction of the development will not be achieved before 2025.	Note
	6.4	This development may be conditionally approved stating that is cannot be operational until essential road infrastructure is complete. Noting that conditional DA approvals are not decided by TfNSW, and they are a DPE decision.	
7.0	Stak		
	7.1	Project team to engage in further discussions with Frasers to understand timeframes for delivery of the internal road connection to the north of the Site.	RPI/Icon
	7.2	Engagement with ESR about Mamre road upgrade suggested.	IXI I/ICOII
	7.3	Project team also to engage with neighbouring developments to discuss the delivery of the 253-267 Aldington Road intersection.	
8.0	Next		
	8.1	A meeting is to be arranged once LOG-E and LOG-N traffic modelling discussions are more advanced.	Note
9.0	AOB		
	9.1	None	None

rpinfrastructure.com.au Meeting Minutes 30/08/2023 Page 3 of 4

rpinfrastructure.com.au Meeting Minutes 30/08/2023 Page 4 of 4



Appendix H. 269 Aldington Road Consultation





ANGEL PLACE LEVEL 8, 123 PITT STREET SYDNEY NSW 2000

URBIS.COM.AU Urbis Pty Ltd ABN 50 105 256 228

29 September 2023

Mr Anthony Said 269 Aldington Road Kemps Creek

Dear Anthony,

253-267 ALDINGTON ROAD, KEMPS CREEK - HALF ROAD CONSTRUCTION

Further to our letter dated 30 August 2021 and 15 November 2021, we would like to provide further information on the half road construction Icon Oceania are proposing along the boundary of 253-267 Aldington Road and 269 Aldington Road.

Based on previous discussions we understand that you are not in a position to construct or fund the construction of the other half of the road on your property at the same time. If these circumstances have changed, please advise.

As a result, Icon Oceania will design and construct the portion of the road which is on 253-267 Aldington Road. Icon Oceania will also construct a retaining wall which will be fully located on their side of the boundary.

Please refer to *Attachment 1: Civil Drawings of the Proposed Roadway*. This attachment details the proposal for the half road construction.

We would welcome your feedback on the proposed half road. Can you please confirm that you are not able to fund the construction of the road on your property at this time?

Please contact the undersigned to if you require any further information or would like to discuss the proposal in further detail.

We look forward to hearing your feedback on this proposal.

Kind regards,

Sarah Horsfield Director

+61 2 8233 9976

shorsfield@urbis.com.au



Attachment 1: Civil Drawings of the Proposed Roadway.

Appendix I. TfNSW Access Strategy Consultation



From: Anthony McLandsborough

To: "Pahee RATHAN"

Cc: Rebecca Butler-Madden; Matthew Murphy; Sarah Horsfield; "Genevieve Beard"; nicot

Subject: RE: Proposed Interim Access - 253-267 Aldington Road Kemps Creek

Date: Friday, 20 October 2023 11:38:26 AM

Attachments: image001.png

image002.png image003.png

Pahee further to my email below, would you be kind enough to give me a call about it please.

Regards,

Anthony McLandsborough

National Managing Director



Sydney | Melbourne | Brisbane www.atl.net.au

Level 7 153 Walker Street North Sydney NSW 2060

02 9439 1777 0433 973 423





Hunter Valley - NSW
Photo by our Associate | Civil Engineer - James Clare

CIVIL ENGINEERS | PROJECT MANAGERS | WATER SERVICING COORDINATORS INFRASTRUCTURE PLANNERS AND ADVISERS | CONSTRUCTION PHASE SERVICES

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From: Anthony McLandsborough Sent: Friday, October 13, 2023 4:53 PM

To: 'Pahee RATHAN' <Pahee.RATHAN@transport.nsw.gov.au>

Cc: Rebecca Butler-Madden (Rebecca.BMadden@asongroup.com.au)

<rebecca.bmadden@asongroup.com.au>; Matthew Murphy - RP

(matthew.murphy@rpinfrastructure.com.au) <matthew.murphy@rpinfrastructure.com.au>; Sarah Horsfield <shorsfield@urbis.com.au>; 'Genevieve Beard' <gbeard@urbis.com.au>; nicot@oceaniaproperty.com.au

Subject: Proposed Interim Access - 253-267 Aldington Road Kemps Creek

Pahee, I will reach out to discuss the below and attached.

As part of the SSD application for the above project (Overall Architectural attached), we have been working to resolve the access strategy for the development for both and Interim and ultimate access. As the site access road location (in accordance with the DCP) straddles the southern boundary, it is proposed for half road construction until such time the southern neighbour proposes to develop their site. As such we do not have access to the southern land holding.

As you are aware, AT&L have been working with Council and the Log East landowners to resolve

both the ultimate (shown blue on the attached) and the interim (shown yellow on the attached) Aldington Road upgrade which we are nearing completion of. The interim design does NOT include for the signalization of the intersection until all the land holding are available.

The current Interim design does allow for a single lane of travel both north and south divided by a barrier line. The proposed access is for a simple T junction which allows for all movements.

We understand Council will be the consent authority for the interim access arrangement although we would like to meet with you to step you through both the interim and ultimate access arrangements.

I will call on Monday to arrange a time.

Thanks and have a great weekend.

Regards,

Anthony McLandsborough National Managing Director



Sydney | Melbourne | Brisbane www.atl.net.au

Level 7 153 Walker Street North Sydney NSW 2060

02 9439 1777 0433 973 423





Hamilton Island - QLD
Photo by our National Director - Anthony McLandsborough

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