Construction Traffic Management Plan

Aspect Industrial Estate – Warehouse 2

7/08/2024

Ref: P2168r03

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

Document Control

Project No	P2168
Project	Aspect Industrial Estate – Warehouse 2
Client	Mirvac
File Reference	P2168r03v5 CTMP_WH2, Mamre Rd, Kemps Creek, Issue

Revision History

Revision No.	Date	Details	Author	Approved by
v2	12/07/2024	Final	Alan Tan	Rhys Hazell
v3	29/07/2024	Updated to include minor amendments	Alan Tan	Rhys Hazell
v4	01/08/2024	Updated to include minor amendments	Alan Tan	Rhys Hazell
v5	07/08/2024	Updated to include minor amendments	Alan Tan	Rhys Hazell

Contents

Contents continued

Figures

Tables

APPENDICES

1 Introduction

1.1 Introduction

Mirvac Property Services (Aust) Pty Ltd (Mirvac) engaged Ason Group to prepare a Construction Traffic Management Plan (CTMP) to support construction of an industrial development at 804-882 Mamre Road, Kemps Creek. The site is identified as Stage 3 Warehouse 2 and forms part of the broader Aspect Industrial Estate (AIE) on the eastern side of Mamre Road. AIE is planned to deliver large lot industrial warehouses across nine separate lots.

Mirvac obtained State Significant Development (SSD) Consent SSD 10448 on 24 May 2021 from the Department of Planning, Housing and Infrastructure (DPHI), formerly Department of Planning and Environment (DPE) for the AIE Concept Proposal and Stage 1 development of AIE (AIE Stage 1). Mirvac subsequently submitted SSD 58257960 for the Stage 3 Warehouse 2 development with approval granted on 5 July 2024. This CTMP follows the Warehouse 9 CTMP and therefore should be read in the context of each and the broader AIE.

This CTMP details the measures and strategies to be undertaken during all construction works to minimise the effects of the works on the surrounding road network and to ensure the safety and efficiency of the community, construction workers and all road users.

1.2 Development Consent

This CTMP responds the Development Consent issued on 5 July 2024 as it relates to SSD 58257960. The relevant conditions and associated section within the report are outlined in **Table 1**.

TABLE 1: DEVELOPMENT CONSENT

Development Consent	Reference
Access and Traffic	
A7. The Applicant must not operate the development until the Mamre Road / Access Road 1 intersection is completed to the satisfaction of the relevant roads' authority, in accordance with Condition B6.	**Noted**
A8. The largest vehicle permitted to access the site is a 30 metre Performance Based Standards (PBS) Level 2 Type B.	**Section 2.3**
A9. The Applicant must ensure all vehicles associated with construction and operation of the development do not use Bakers Lane, Aldington Road and Abbotts Road.	**Section 2.4**
Mamre Road Precinct Working Group	
A37. Prior to the commencement of construction of the development and until all components of the development are constructed and operational, the Applicant must participate in a working group with relevant consent holders in the MRP, to the satisfaction of the Planning Secretary. The purpose of the working group is to consult and coordinate construction works within the MRP to assist with managing and mitigating potential cumulative environmental impacts. The working group must:	**-**
(d) review the performance of approved industrial developments in the MRP and identify trends in the data with respect to cumulative construction traffic, erosion and sediment control, noise, stormwater management and waterway health objectives under the MRP DCP;	**Section 3.3**

(f) identify interim traffic safety measures to manage construction traffic and how these measures will be coordinated, communicated, funded and monitored in the MRP; and	**Section 3.3**
Construction Traffic Management Plan	
B1. Prior to the commencement of construction of the development, the Applicant must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must:	**-**
(a) be prepared by a suitably qualified and experienced person(s);	**Noted**
(b) be prepared in consultation with Council and TfNSW;	**Section 1.8.1** **Appendix A**
(c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction	**Section 3.3**
(d) detail proposed work zones, heavy vehicle routes, access and parking arrangements	**Section 2.4** **Section 2.8** **Section 3.5**
(e) detail the number of construction vehicle movements and demonstrate how the movements will be managed in the context of road changes in the vicinity of the site	**Section 3.1** **Section 3.2** **Section 3.3**
(f) include a Driver Code of Conduct to (i) minimise the impacts of construction on the local and regional road network (ii) minimise conflicts with other road users (iii) minimise road traffic noise (iv) inform truck drivers of the site access arrangements, turning restrictions and use of specified routes (v) include a program to monitor the effectiveness of these measures (vi) detail the compliance actions that would be implemented for any vehicles that deviate from approved routes and turning restrictions.	**Appendix D**
(g) include the location of any crane(s) and a crane movement plan	**Section 3.12** **Appendix E**
(h) include a consultation strategy for liaising with and managing the cumulative impacts of other developments in the MRP including the Mamre Road and Elizabeth Drive Upgrade Projects	**Section 4.2**
(i) include a program to monitor the effectiveness of these measures	**Section 4.2**
(j) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes	**Section 1.8.2**
B2. The Applicant must:	
(a) not commence construction until the Construction Traffic Management Plan required by condition B1 is approved by the Planning Secretary; and	**Noted**
(b) implement the most recent version of the Construction Traffic Management Plan approved by the Planning Secretary for the duration of construction.	**Noted**
Construction Access	
B3. For construction traffic associated with the development, the Applicant must:	**-**
(a) not use the Mamre Road / Access Road 1 intersection for construction vehicles associated with the development, until the intersection is fully completed to the satisfaction of the relevant roads authority	**Section 2.3**

(b) use the temporary left-in/left-out access off Mamre Road (constructed in accordance with condition D13A of Schedule 2 of SSD-10448) for construction vehicles, until the Mamre Road / Access Road 1 intersection is fully operational	**Section 2.3**
(c) not use the temporary left-in/left-out access off Mamre Road for construction vehicles, once the Mamre Road / Access Road 1 intersection is operational	**Section 2.3**
B4. Prior to the commencement of construction, the Applicant must install a 60 kilometre per hour (km/hr) road works speed limit on Mamre Road between Bakers Lane and Abbotts Road for the duration of construction and to the satisfaction of TfNSW. The road works speed limit must remain in operation 24 hours a day, seven days a week, unless otherwise instructed by TfNSW	**Section 1.8.1** **Section 3.4** **Appendix A**
B5. The Applicant must monitor construction and operational traffic volumes using the temporary left-in/left-out access off Mamre Road (constructed in accordance with condition D13A of Schedule 2 of SSD-10448) for the period that the temporary construction access is being used. Traffic volumes must be reported to TfNSW and the Planning Secretary on a monthly basis.	**Section 4.3**

1.3 Project Representatives and Stakeholders

This report has been prepared by consultants who hold a SafeWork NSW Work Health & Safety Traffic Control Work card, accredited for the 'Prepare a Work Zone Traffic Management Plan'. Details of the accredited consultants are provided below:

- Alan Tan Ticket No. TCT1043262
- Malcolm Rhys Hazell Ticket No. TCT0045321.

This CTMP has been prepared to meet the requirements outlined in Appendix A and Appendix E, Section E.2 of the Transport for NSW Traffic Control at Work Sites Technical Manual (Issue No. 6.1, 2022).

Through the preparation of this CTMP, the project representatives and stakeholders who have been/ will be consulted in the development of the traffic management strategy are listed in **Table 2**.

TABLE 2: PROJECT REPRESENTATIVES AND STAKEHOLDERS

Name	Organisation	Role
Operational Change	TfNSW	Customer Journey Planning, Greater Sydney
Gavin Cherry	Penrith City Council	Development Assessment Coordinator
Anne-Kristin Kahra	Texco Construction	Senior Project Manager
Ash McGowan	RP Infrastructure	Senior Project Manager
Malcolm (Rhys) Hazell	Ason Group	Principal Lead
Alan Tan	Ason Group	Senior Traffic Engineer

1.4 Project Details

1.4.1 Site Location

The site is within AIE which is legally known as Lot 301 and 305 in DP1305254 and Lot 104 and 105 in DP1305965. The site covers an area of 56.3 hectares (ha) and is about 4km north of the future Western

Sydney International (Nancy-Bird Walton) Airport (WSA), 13km south-east of the Penrith CBD and 40km west of the Sydney CBD.

AIE has a frontage of about 950 metres to Mamre Road along the western boundary with a future signalised intersection to provide for vehicle access via Mamre Road. Mamre Road in-turn provides direct access to the M4 Motorway and Great Western Highway to the north and Elizabeth Drive to the south. Access to the site is provided via internal access roads, with both heavy and light vehicle access available from Access Road 1 and 2 and light vehicle access via Access Road 1 only.

The location of the site within AIE and in the context of the surrounding local area is shown in **Figure 1**.

Figure 1: Site Location within the Mamre Road precinct

This project covers construction of Warehouse 2 as part of the broader AIE estate. It does not cover any other works, including delivery of the internal access roads or future signalised intersection on Mamre Road. Warehouse 2 and the broader AIE is shown in **Figure 2**.

Figure 2: Aspect Industrial Estate Overview Plan

1.4.2 Project Description

The approved works under SSD 58257960 for the construction of Warehouse 2 are as follows:

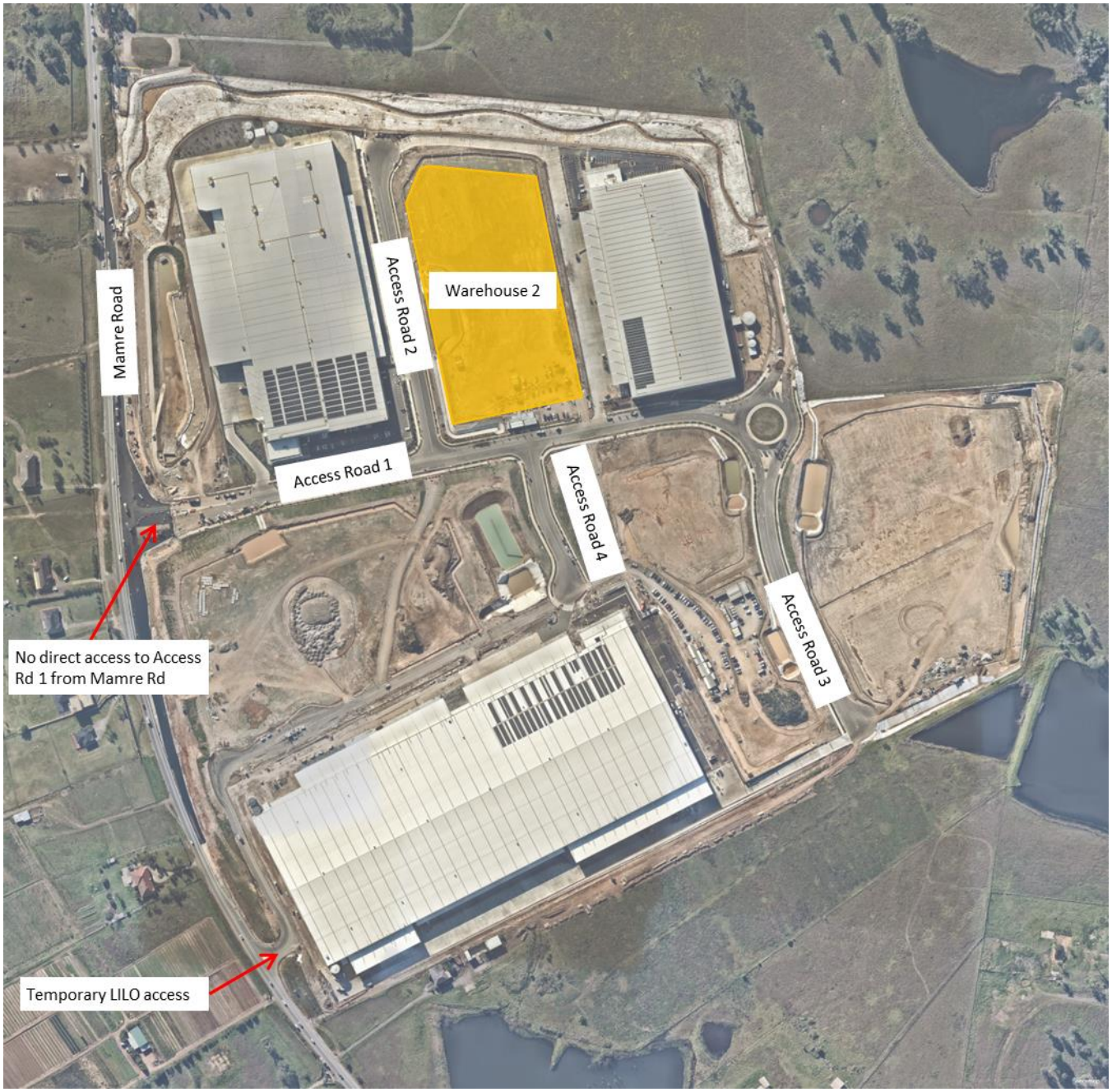
- 13.7-metre-high structure
- 22,595m² of warehouse
- 1,500m² office across two ancillary offices
- 200m² dock office space
- 138 parking spaces (63 in the northern car park, 75 in the southern car park)
- On-lot landscaping along site frontages and within car parking areas
- Installation of on-lot infrastructure, including on-lot stormwater and waterway health measures
- Operation of the warehouse and distribution facility for 24 hours a day, 7 days a week.

1.5 Existing Context

AIE currently includes operational traffic associated with Warehouse 1 and Warehouse 9 together with construction traffic associated with Warehouse 3. All operational and construction traffic currently enter and exit AIE via a temporary left in/ left out (LILO) access road on Mamre Road in the south-west of the site (adjacent to Warehouse 9). The temporary access road is shown in **Figure 3**, with site photos included in **Figure 4** to **Figure 7**.

Section 2.3 includes a detailed assessment of the temporary access road, together with details around timing and modifications to AIE access arrangements generally.

Access Road 1 has been largely constructed for the section between Mamre Road and Warehouse 3 (close to the under construction internal roundabout). and will be operational once the signalised intersection is constructed and operational. In the meantime, the vehicle access to Access Road 1 will continue via Access Road 4 and the temporary LILO access road, with internal connections to Access Road 2 and Access Road 4 also facilitated.



Source: Nearmap, 05 July 2024

Figure 3: Current AIE Access Arrangements

Figure 4: Temporary LILO Construction Site Access (looking north along Mamre Road)

Figure 5: Access Road 4 (looking north towards Access Road 1)

Figure 6: Access Road 1 (looking west towards Mamre Road)

Figure 7: Access Road 4 (looking south)

1.6 Authority Requirements

1.6.1 Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements (SEARs) were issued by DPE on 30 April 2020. The SEARs include general DPE requirements together with specific SEARs as provided by Transport for NSW (TfNSW), several of which speak directly to those covered by this CTMP.

Legislative and other requirements applicable to all aspects of the project are included in Section 3.3 of the CEMP.

1.6.2 Crash History

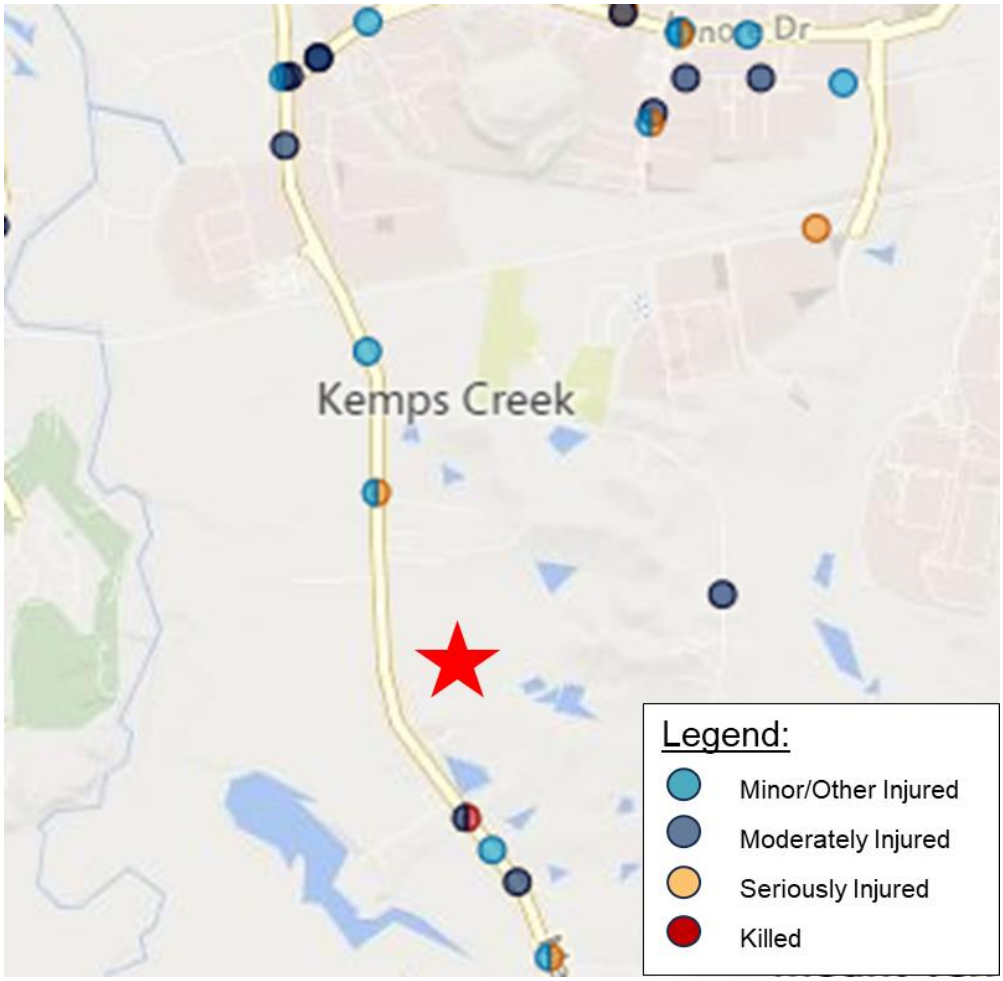
A review of the latest available data from TfNSW crash database has been completed to establish the crash history in the vicinity of the site. The latest publicly available crash data provided by TfNSW includes the 5-year period ending 2022 with any such newer crash data not yet available for reference. An assessment of the latest publicly available crash statistics is presented in **Table 3** and **Figure 8**.

TABLE 3: CRASH HISTORY

Year	Location	RUM Code	Injury/Death
2018	Mamre Road, North of Site	20 – Head on	2 injured
2018	Mamre Road, North of Site	71 – Off Road left into object	1 injured
2019	Mamre Road, South of Site	71 – Off Road left into object	nil
2019	Mamre Road, South of Site	30 – Rear End	4 injured
2019	Mamre Road, North of Site	20 – Head on	1 injured
2020	Mamre Road, South of Site	20 – Head On	1 killed, 1 injured
2020	Mamre Road, South of Site	20 – Head On	2 injured
2022	Mamre Road, South of Site	40 – U-turn	2 injured
2022	Mamre Road, North of Site	40 – U-turn	nil
2022	Mamre Road, South of Site	74 – On Road out of control	1 injured
2022	Mamre Road, North of Site	71 – Off Road left into object	nil

Source: TfNSW Crash Statistics Website

The crash statistics indicate that between 2018 and 2022, there were 11 crashes on Mamre Road within approximately 1.5km of the site. Of the recorded crashes, one crash was fatal and located at least 800m south of the site. The closest recorded crash was approximately 700m from the site which indicates no discernible historical road safety issue along this section of Mamre Road.



Source: Interactive Crash Statistics website

Figure 8: 2018-2022 5-year period crash map

As discussed, only crashes along Mamre Road within 1.5km of the site have been included as part of this assessment. These crashes are generally north of Abbotts Road and south of the Warragamba Pipeline easement. Crashes outside this area are not considered to influence the site and site access arrangements and therefore omitted from **Table 3**.

It is also recognised that while traffic volumes and road conditions along Mamre Road have continued to change in the period since 2022, anecdotal evidence indicates that isolated crashes continue to remain the predominant pattern in the study area. This indicates that while additional construction related activities have resulted in an increase in traffic volumes on Mamre Road, the restrictions and monitoring in place have evidently prevented a corresponding pattern of increasing crashes.

1.7 Site Related Data

1.7.1 Road Details

The key roads surrounding the site are identified in **Figure 2** and summarised in **Table 4**.

TABLE 4: LOCAL ROAD NETWORK

Road Name	Section	Speed Limit	Parking	Traffic Volumes
Mamre Road	Bakers Ln & Abbotts Rd	80 km/hr	No	AM Peak: 1,850[1] veh/hr PM Peak: 1,682[1] veh/hr Weekday average: 21,814[1] veh/day 7-day average: 18,653[1] veh/day
Erskine Park Road	Mamre Rd & M4	70 km/hr	No	-
Bakers Lane	Mamre Rd & Aldington Rd	60 km/hr (40 km/hr during school periods)	No	-
Elizabeth Drive	M7 & The Northern Rd, Hume Highway & Mamre Rd	80 km/hr	No	2021 ADT: 26,516[2] veh/day

Notes: 1) Mamre Road tube count data collected in May 2024 between Bakers Ln and Abbotts Rd
2) Transport for NSW Traffic Volume Viewer

1.8 Stakeholder Engagement

1.8.1 Authority Consultation

Mirvac has, through Infrastructure Project Managers Orion, engaged with TfNSW to install a posted 60 kilometre per hour road works speed limit on Mamre Road between Bakers Lane and Abbotts Road for the duration of construction works, as required under SSD 58257960 Condition B4. Relevant TfNSW consultation evidence from 10 July 2024 is included in **Appendix A.**

Mirvac have submitted this CTMP to key stakeholders including TfNSW and Penrith City Council for consultation. See **Appendix A** for evidence of this process.

1.8.2 Stakeholder Notification

In the event that any disruptions (unexpected or in advance) to roadways/ footpaths occur as a result of construction works, the procedures outlined below are to be followed:

- Any updates required to the CTMP will be resubmitted to all key stakeholders (TfNSW and Penrith City Council) for review and approval.
- During future disruptions to roadways/ footpaths are required, Council/ TfNSW is to be notified first and depending on the extent of the disruption Mirvac is to notify affected property occupiers via use of letter drops and Variable Message Signs (VMS).
- If any unforeseen disruptions to roadways/ footpaths occur, Council/ TfNSW is to be notified first and depending on the extent of the disruption, Mirvac is to notify affected property occupiers via use of traffic controllers and Variable Message Signs (VMS).

- In the event of heavy vehicle damage to Council/ TfNSW assets/ infrastructure, Mirvac will notify Penrith City Council's Traffic and Transport team and/ or Assets Branch.
- If any future disruptions to the surrounding community, they will be notified by the appointed Communications and Community Liaison Representative (CCLR) in accordance with the procedures detailed in **Section 4.5**.

2 Proposed Works and Staging

2.1 Construction Activity

Construction is expected to commence in September 2024, with practical completion planned by June 2025 (duration of approximately 10 months). The following is a breakdown of the key construction activities and installation equipment required:

- Earthworks, including cut and fill:
  - Delivery of DGB20 via truck and dogs.
  - Installation equipment: grader, dump truck, 30t excavators.
  - Timeframe: 4 weeks from commencement.
- Footings, including detailed excavation, concrete pour and HD bolt installation:
  - Delivery of material via semi-trailers and concrete agitators.
  - Installation equipment: 5t excavator, tip truck.
  - Timeframe: 2-3 weeks.
- Structural steel:
  - Delivery via semi-trailers.
  - Installation equipment: 40t crane, boom lifts.
  - Timeframe: 5 weeks.
- Precast panels:
  - Delivery via semi-trailers.
  - Installation equipment: 20t Franna, boom lifts.
  - Timeframe: 1-2 weeks.
- Roofing and wall cladding:
  - Delivery via semi-trailers.
  - Installation equipment: 40T crane, boom lifts, scissor lifts.
  - Timeframe: 3-4 weeks.
- Concrete place:
  - Delivery via concrete agitator trucks.
  - Installation equipment: somero, bobcat, ride-on and walk behind finishing machines.
  - Timeframe:
    - Internal: 4 weeks.
    - External: 3-4 weeks.
- Asphalt place:
  - Delivery via agitators.
  - Installation equipment: asphalt machine.
  - Timeframe: 1 week.
- Landscaping:
  - Delivery via truck and dogs.
  - Installation equipment: backhoe.
  - Timeframe: 3-4 weeks.
- Office fit out:
  - Delivery via trucks.

- Installation equipment: boom lifts, scissor lifts.
- Timeframe: 6-8 weeks.

This CTMP outlines the works involved and the necessary associated traffic management measures.

2.2 Construction Hours

The work hours for Warehouse 2 will be as follows:

- Monday to Friday – 7am to 6pm
- Saturday – 8am to 1pm
- Sunday and Public Holidays – No work.

The above work hours are consistent with Condition B28 of the development consent. These restrictions to work hours will also limit traffic/ deliveries to site except as permitted by emergency/ out-of-hours work approval etc.

Mirvac will lodge an application for an Out of Work Hours Permit with DPHI to seek approval for any such construction works that are not permissible under Condition B29 of the development consent, which stipulates the following:

B29. Works outside of the hours identified in condition B28 may be undertaken in the following circumstances:

(a) works that are inaudible at the nearest sensitive receivers

(b) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or

(c) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

2.3 Site Access Arrangements

As discussed in Section 1.5, access to AIE will be via the existing temporary Mamre Road LILO access road in the south-west corner of the site. This temporary access has been approved under the TfNSW Works Authorisation Deed (WAD) (TfNSW reference: WAD DS2022 / 000659). **Figure 9** details the layout of the approved access.

As required under Condition of Consent SSD 58257960 Condition B3, Warehouse 2 construction traffic will be restricted in using the Temp LILO until the signalised intersection is constructed and operational. Following the opening (and operation) of the signalised intersection Warehouse 2, construction traffic will be required to use the signalised intersection only.

At no time will construction vehicles be permitted to use Bakers Lane, Aldington Road or Abbotts Road when travelling to or from the construction site. This includes site personnel/ contractors travelling by light vehicle.

Emergency vehicle access shall be maintained at all times with a dedicated emergency vehicle parking space identified and unoccupied (unless by an emergency vehicle).

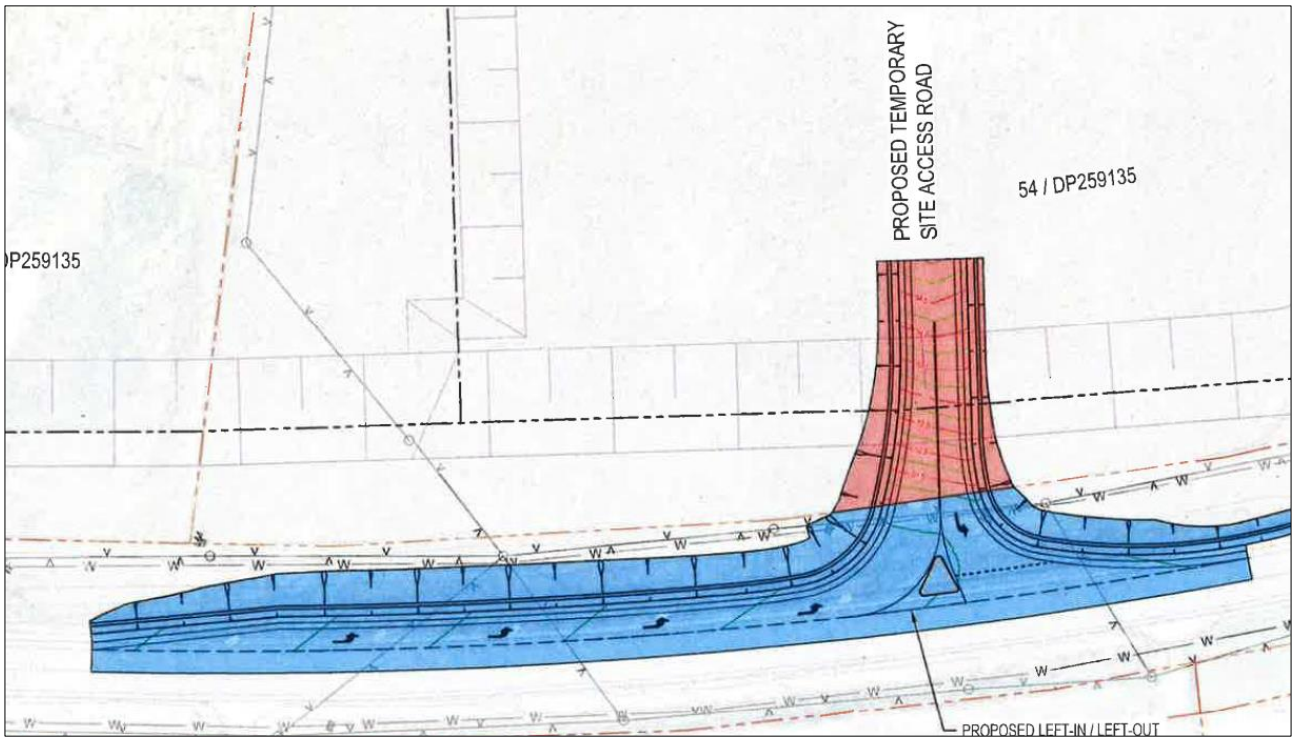


Figure 9: Approved temporary intersection layout under TfNSW WAD

During all construction works, a variety of vehicles will be used and range from concrete trucks up to 20m articulated vehicles. It is noted that Condition A8 of SSD 58257960 allows for larger vehicles to access the AIE estate, stipulating that "*the largest vehicle permitted to access the site is a 30m Performance Based Standards (PBS) Level 2 Type B.*" In this regard, no vehicles larger than this will be used throughout all construction works with the AIE access strategy shown in **Figure 10**.

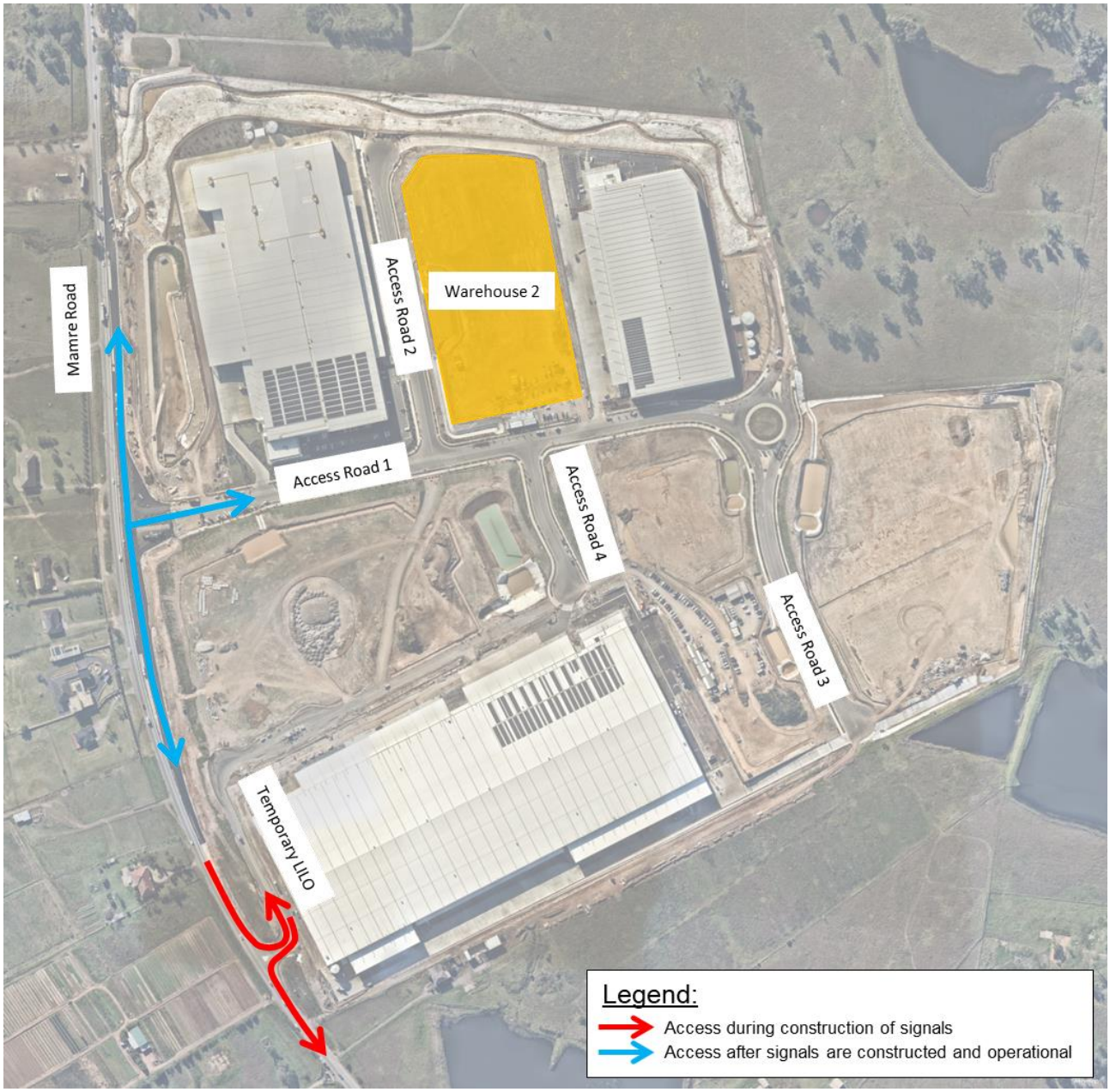


Figure 10: AIE access strategy

2.4 Truck Routes

All heavy vehicles will be strictly limited to the arrival and departure routes as detailed in **Figure 11.**

At no time will construction vehicles be permitted to use Bakers Lane, Aldington Road or Abbotts Road when travelling to or from the construction site. This includes site personnel/ contractors travelling in light vehicles. Construction vehicles shall be restricted to the temporary LILO access until such time that the new Mamre Road/ Access Road 1 signalised intersection is operational.

A copy of the approved routes will be distributed by Texco to all drivers before their arrival to site. No trucks will queue on any roads on approach to the construction site. Mobile phones, two-way radios or application-based solutions will be used to coordinate truck arrivals.

As shown in **Figure 12**, the proposed construction vehicle routes are also consistent with the TfNSW Restricted Access Vehicles (RAV) map for vehicles up to 26m B-doubles.

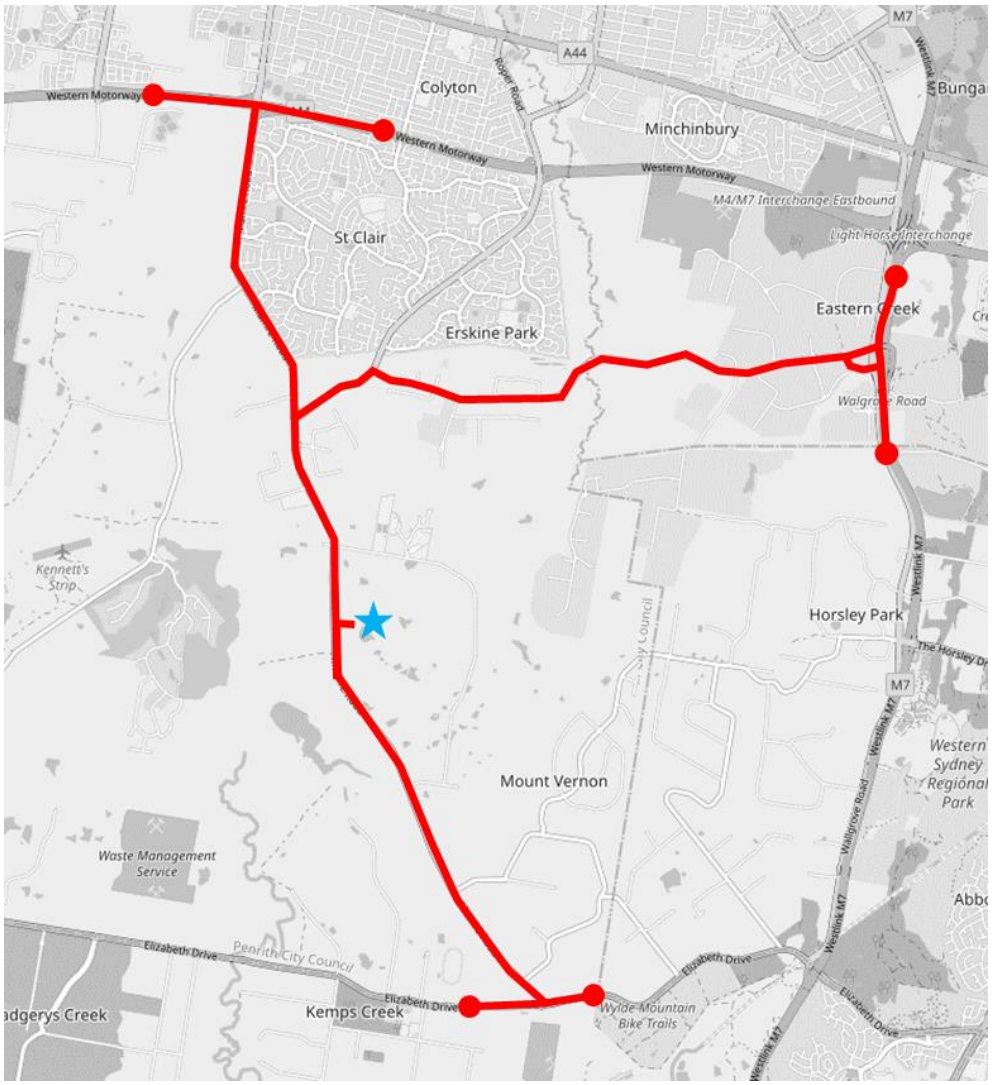


Figure 11: Construction Vehicle Route Map

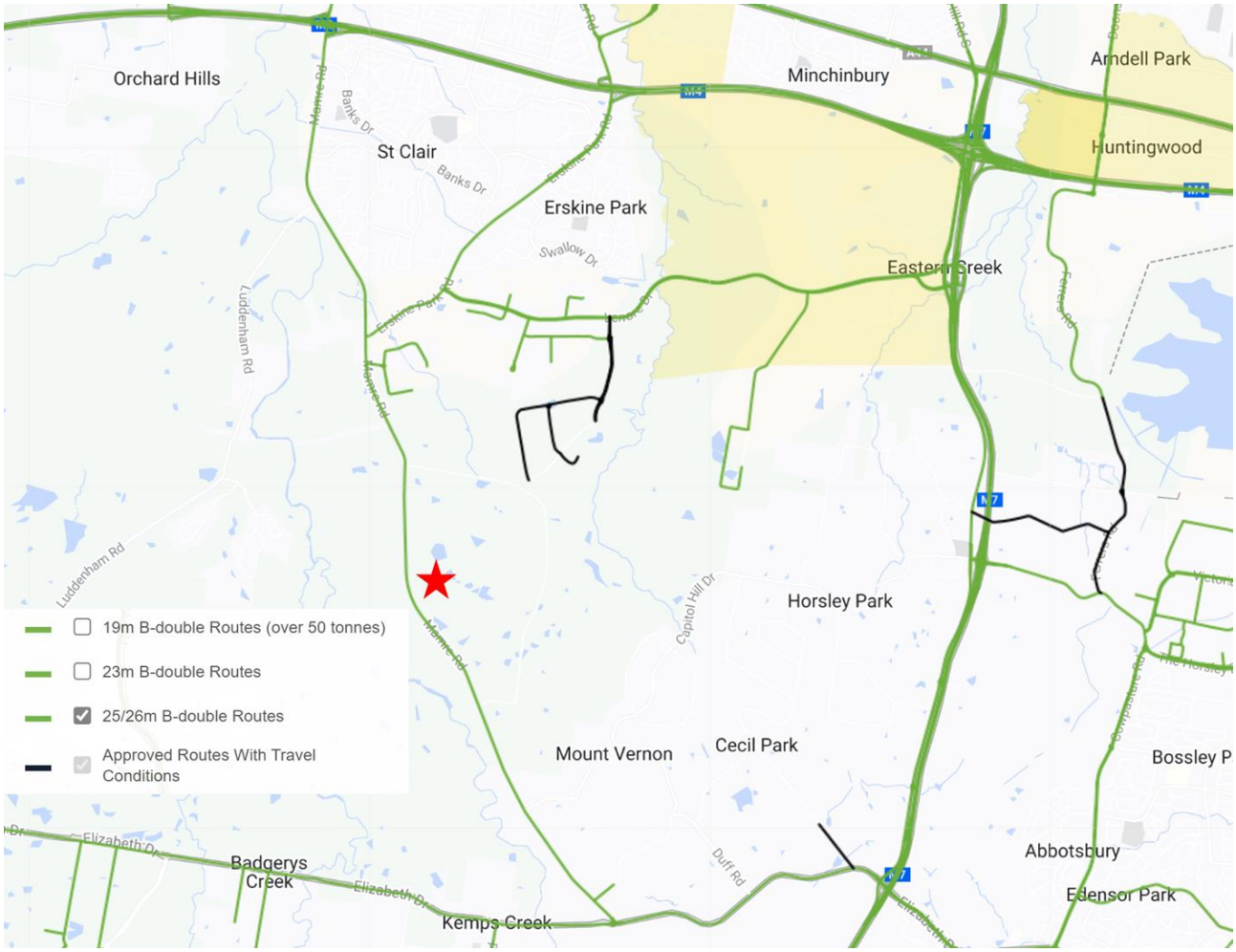
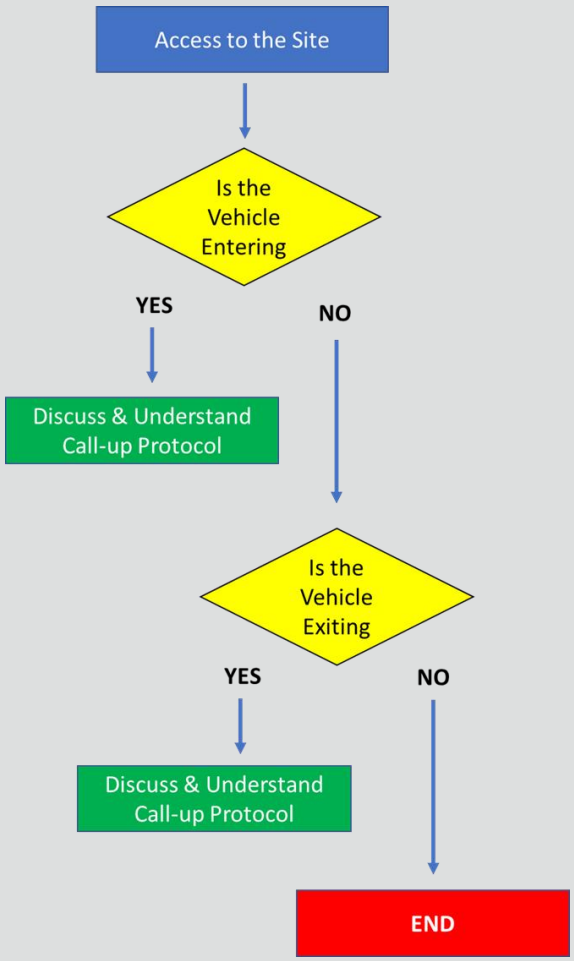


Figure 12: Restricted Access Vehicle (RAV) Map

2.5 Temporary Traffic Management Method

Traffic management shall be undertaken in accordance with the methodology outlined within the TGS included in **Appendix B** and defined in **Table 5.** All road users are expected to be directed around the worksite in order to physically separate the road user from any hazards within the worksite.

TABLE 5: ACCESS PROTOCOLS & METHODOLGY

Procedure	Responsibility	Notes
	Site Manager / Foreman / Traffic Controller	**ENTRY PROTOCOL:** Via UHF radio, channel agreed at pre-start 1. Vehicle to advise gate controller when 200m from gate via UHF — vehicle to ensure flashing lights are on 2. Vehicle advises of metres from gate in 50m lots (i.e., 150m from gate 100m from gate). 3. Gate Controller advises safe to enter, vehicle enters site and decelerates behind barriers 4. If not safe to enter, vehicle is to continue driving and not stop / queue on the public roadway 5. Vehicle uses road network to return and make another attempt at entering site
	Site Manager / Foreman / Traffic Controller	**EXIT PROTOCOL:** Via UHF radio, channel agreed at pre-start 1. Vehicle driver to radio Gate Controller to ensure exit is possible – vehicle to ensure flashing lights are on 2. If no issues driver to accelerate to exit gate and merge with traffic. 3. If driver cannot exit, Gate Controller to order vehicle to hold until gate is clear. **Gate Controller is not to stop traffic on the public road network**

2.6 Risk Assessment

A risk assessment is aimed to identify the hazards and risks associated with the works. The purpose of this risk assessment is to determine the controls required for the protection of road workers and road users. A risk assessment has been completed and is attached in **Appendix C**.

2.7 Site Contact

The key construction site contacts throughout all construction stages are detailed in **Table 6**.

TABLE 6: CONSTRUCTION CONTACT

Role	Name	Company	Contact Details
Project Principal	Meg Horan	Mirvac	0421 843 033 meg.horan@mirvac.com
Contractor's Project Manager	Anne-Kristin Kahra	Texco	0410 986 717 akahra@texco.net.au
Contractor's Environmental Advisor	Andrew Littlewood	Rubicon Enviro Pty Ltd	0429 953 626 andrew@rubiconenviro.com.au
Contractor Work Health and Safety (WHS) Coordinator	Luke Townsend	Texco	0407 469 217 ltownsend@texco.net.au
Project Environmental Representative	Maurice Pignatelli	OptimE Pty Ltd	0407 493 176 maurice@optimenv.com.au
Alternate Project Environmental Representative	Ben Bracken	BBEnviro	0410 409 897 ben.bracken@bbenviro.com.au
Principal's Environmental Consultant (PEC)	Carl Vincent	ERSED	0424 203 046 carl.vincent@ersed.com.au
Communications and Community Liaison Representative	Alanna Ryan	SLR Consulting	02 4037 3258 aryan@slrconsulting.com

The list of key contacts shall be provided to all staff and contractors as part of site induction, as well as be posted on the site shed. Consideration should also be given to presenting this list of contacts on the project website.

2.8 Works Zone

No Work Zone is required as it relates to the construction of Warehouse 2 with all construction works to occur within the Lot 301 and 305 in DP1305254 and Lot 104 and 105 in DP1305965 site boundaries.

In the event that the implementation of further temporary traffic control measures on public road/ road related area Mirvac will obtain a Road Occupancy Permit (ROP) from Penrith City Council, in accordance with Condition E1(b)i). If excavation and/ or road opening works on a public road are necessary, Mirvac will obtain a Road Opening Permit.

3 Traffic Management

3.1 Approved Operational Traffic Volumes

The Ason Group traffic report supporting the Concept Plan (ref: 1029r04) outlined the following operational traffic volumes associated with AIE once all sites are fully operational:

- AM peak: 577 vehicle movements per hour
- PM peak: 602 vehicle movements per hour
- Daily total: 7,310 vehicle movements per day.

For the purposes of this report, one truck is equal to one inbound movement plus one outbound movement for a total of two movements.

In this context, the following sections detail the various construction and operational traffic volumes to better understand the cumulative impacts both internally and external to AIE.

3.2 Construction Vehicle Traffic Generation

3.2.1 Warehouse 2 Construction Traffic

The anticipated vehicle movements associated with Warehouse 2 construction have been estimated having consideration to construction worker numbers together with plant, equipment and a variety of construction haulage requirements.

Overall, the construction schedule estimates that Warehouse 2 will generate up to 200 vehicles per day comprising 140 light vehicles and 60 heavy vehicles. This equates to 400 vehicle movements (in + out). In this regard, there will be approximately 45 vehicle movements in the AM peak hour (35 light vehicles and 10 heavy vehicles) and 35 vehicle movements in the PM peak hour (30 light vehicles and 5 heavy vehicles).

These volumes are consistent with the approved Transport Assessment prepared by Ason Group dated 24/07/2023 (report reference: P2168r01v5).

3.2.2 Internal Road Construction

Delivery of the roads internal to AIE are also important to understand. In this regard, reference to the Ason Group traffic report (ref: 1029r05v9) delivered as part of AIE construction traffic management has been referenced to understand the associated and previously approved construction traffic volumes. The AIE CTMP estimated that there would be a maximum 564 construction vehicle movements per day throughout all stages, with an estimated maximum 160 movements in any peak hour.

As discussed in **Section 1.5**, with several roads already partly or wholly delivered as part of AIE (including access roads 1, 2 and 4), the peak activity is likely already passed with the above volumes considered a theoretical peak and unlikely to coincide with construction timelines associated with delivery of Warehouse 2.

3.2.3 Operational Traffic

As discussed in **Section 1.5**, Warehouse 1 is currently operational with both Warehouse 3 and Warehouse 9 planned to be similarly operating when Warehouse 2 construction commences. In this regard, these warehouses were estimated to generate the following traffic volumes:

- Warehouse 1 – 986 vehicle movements per day and 81 movements in any peak hour
- Warehouse 3 – 627 vehicle movements per day and 52 movements in any peak hour
- Warehouse 9 – 1,931 vehicle movements per day and 160 movements in any peak hour.

In combination, these three warehouses would generate about 293 vehicle movements in any peak hour.

All operational traffic will be restricted to using Mamre Road only when travelling to and from the site. At no time will any operational vehicles be permitted to use Bakers Lane, Aldington Road or Abbotts Road.

3.2.4 Summary of Cumulative Traffic Volumes

The expected cumulative vehicle trips at the time when Warehouse 2 construction commences have been estimated and detailed in **Table 7**. This includes a combination of the operational sites (Warehouse 1, 3 and 9) and under construction sites (Warehouse 2). Construction traffic associated with delivering the Mamre Road/ Access Road 1 signalised intersection are also included.

Cumulative traffic has been benchmarked against the traffic generation of the AIE precinct, approved as part of the masterplan SSDA, with all traffic expected to use the Mamre Road/ Access Road 1 signalised intersection on arrival and departure. As such, once the intersection is constructed and operational, the intersection has been approved to accommodate 7,217 daily vehicle trips. In this regard, the cumulative vehicle trips associated with Warehouse 2 construction remain significantly less than those approved for the AIE precinct and would not be expected to materially impact the internal road network or externally along Mamre Road and other intersecting roads in the vicinity.

Mirvac will liaise regularly with appointed contractors, including works associated with delivering the signalised intersection to avoid any such large vehicle delivery conflicts and to ensure that the cumulative construction impacts are managed and not exceed approved operational limits.

Signage internal to AIE will continue to ensure appropriate use by construction and operational traffic, with use of traffic controllers where necessary and consistent with current arrangements. Peak activity associated with the operational sites would also unlikely coincide with peak construction vehicle activity, further limiting the peak hour effects. Overall, the existing AIE access arrangements (through the temporary LILO) and final signalised intersection will be able to cater for the anticipated traffic as part of the staged delivery of AIE.

TABLE 7: DAILY TRAFFIC VOLUMES

Development	Approved Volumes	Vehicle Trips	Net Difference
Warehouse 1 (operational)	7,217	986	-3,329
Warehouse 2 (construction)		400	
Warehouse 3 (operational)		627	
Warehouse 9 (operational)		1,931	
Signalised Intersection Works		10	
Total	**7,217**	**3,954**	**-3,263**

Note: As of July 2024, all internal roads have largely been constructed, with nominal ongoing construction activity expected for these works.

3.3 Impact Mitigation on Surrounding Network

The impacts of construction traffic and associated mitigation measures to be implemented are outlined below.

- **Construction Traffic in Mamre Road**: Construction traffic will initially use a temporary intersection to access the work area for the works. To ensure the impacts to motorists within the area are kept to a minimum, construction traffic will be contained with the prescribed volumes, as outlined within the CTMP prepared by WEM Civil.
- **Management of deliveries**: Mirvac will manage deliveries to shall ensure that construction vehicles, particularly heavy vehicles, will not exceed approved limits.
- **Safety During Construction**: Safety to motorists and pedestrians throughout the area will be maintained during construction through the preparation and execution of Traffic Guidance Schemes (TGS's). A range of TGS's will be incorporated to Mirvac CTMPs, for each access throughout construction, to identify all reasonably foreseeable hazards, assess the hazards, and manage the hazards as best possible by either eliminating or minimising the risks. TGS's shall be monitored and updated accordingly throughout the project.
- **Reporting**: Reporting and monitoring of movements during peak periods are to be undertaken to ensure that drivers are adhering to restricted times, and to ensure that the approved traffic generation, and subsequent impacts on the road network, are in line with those approved.

The key to managing the cumulative impact of the various construction worksites in the vicinity of the site is to firstly identify the relevant stakeholders and future coordination/ liaison requirements as part of the following major projects:

- Mamre Road Upgrade.
- Sydney Metro – Western Sydney Airport.
- Aldington and Abbotts Road Upgrade.
- ESR Silk Logistics - Westlink Kemps Creek.

Mirvac will liaise and coordinate on a regular basis in the form of construction interface meetings/ transport coordination/ liaison/ working group for coordinating activities between projects and to minimise overlapping of high-volume days, such as major concrete pours.

It is also noted that Mirvac has a representative on the Mamre Road Precinct Working Group. The working group comprises other relevant consent holders in the MRP, and will meet regularly to review cumulative traffic, safety measures to manage cumulative construction traffic (including coordination and communication), funding and monitoring.

With the above measures, it is not expected that this level of traffic movement would create any adverse impact on the surrounding road network.

3.4 Vehicle Management

In accordance with TfNSW requirements and the Conditions of Consent, all drivers are to be familiar with the Driver Code of Conduct before attending the Site. A copy of the Code is included in **Appendix C**.

All vehicles transporting loose materials will 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. Public roads used by construction vehicles are to be kept clean at all times. All vehicles enter and exit the site in a forward direction.

All subcontractors must be inducted by Mirvac's on lot contractor Texco, to ensure that the procedures are met for all vehicles entering and exiting the construction site. Mirvac will monitor the roads leading to and from the site and take all necessary steps to rectify any road deposits caused by site vehicles. Vehicle movements to, from and within the site shall do so in a manner, which does not create unreasonable or unnecessary noise or vibration. No tracked vehicles will be permitted or required on any paved roads. Public roads, access points and internal parking areas will not be obstructed by any materials, unapproved vehicles, refuse skips or the like, under any circumstances. At no time shall heavy vehicles and bins associated with the development park on local roads or footpaths in the vicinity of the site.

All vehicles are wholly contained on site before being required to stop. At no stage shall queuing or idling occur on the public road network. A schedule for deliveries of goods and materials will be established prior to that day, with Traffic Controllers to always maintain radio contact with construction vehicles. The anticipated deliveries will be made known to site personnel at daily prestart meetings.

All loading and unloading of materials will occur within the site boundary.

In accordance with SSD 58257960, Condition B5, Mirvac through their on-lot contractor will monitor construction and operational traffic volumes using the temporary LILO access on Mamre Road (constructed in accordance with condition D13A of Schedule 2 of SSD-10448) for the period that the temporary construction access is being used. Traffic volumes will be reported to TfNSW and the Planning Secretary on a monthly basis.

As discussed in Section 1.8.1, Mirvac has engaged with TfNSW as it relates to installation of a posted 60 kilometre per hour road works speed limit on Mamre Road between Bakers Lane and Abbotts Road for the duration of construction works. The details will be confirmed with TfNSW, with all necessary signage to be installed prior to the commencement of Warehouse 2 construction works. All signage will remain in place 24 hours a day, 7 days a week unless otherwise instructed by TfNSW.

3.5 Contractor and Heavy Vehicle Parking

There will be adequate parking supply to accommodate the expected maximum 100 and average 60 workers on site at any one time.

Contractors will typically drive given a general absence of practical bus services along Mamre Road in the vicinity of the site. On-site parking will be made available, with suitable pedestrian connections always maintained between the work areas and contractor parking. A dedicated contractor parking area and heavy vehicle strategy will be developed and modified as necessary throughout all works stages to ensure practical use.

It is expected that the location of dedicated heavy vehicle parking areas will change as the construction of the internal road network progresses, therefore the location of parking spaces shall be outlined within the driver code of conduct and communicated at the regular toolbox meetings. Parking will be regularly monitored to ensure no queuing onto any roadway at any time.

3.6 Pedestrian and Cyclist Management

As detailed in **Table 8**, there is a general absence of vulnerable road users along Mamre Road on account of no formal footpaths, bicycle paths or shared paths along the site frontage.

In the unlikely event that there are pedestrians or cyclists needing to cross an access driveway they will be temporarily held by an accredited traffic controller at such times that construction vehicles are entering or exiting the site. Once the construction vehicles are clear, the traffic controller will allow pedestrians/ cyclists to continue on their journey.

3.7 Fencing Requirements

Construction fencing will be provided around the perimeter of the site to ensure unauthorised persons are unable to gain access to the site.

3.8 Traffic Guidance Scheme

A site-specific TGS has been developed and included in **Appendix B** to reflect specific work activities and/ or changes to road conditions. Is it noted that any new signage will take into consideration any existing signage implemented as part of other warehouses in AIE.

3.9 Authorised Traffic Controller

There is a requirement for an authorised traffic controller to be present at the temporary construction access. The responsibilities include:

- Implementation of the TGS.
- Pedestrian and cyclist management, to ensure that adverse conflicts between vehicle movements and pedestrians/cyclists do not occur.
- Supervision of all vehicle movements across pedestrian footpaths at all times, and (if required)
- Supervision of all loading and unloading of construction materials from on-street works zone during the deliveries in the construction phase of the project (if required).

3.10 Driver Awareness & Code of Conduct

All drivers shall be made aware of and adhere to the Driver Code of Conduct, as outlined in **Appendix D.**

it is understood that DPHI are working with key proponents of the Mamre Road Precinct Consultative Committee to ensure availability of an updated Driver Code of Conduct. Whilst the Driver Code of Conduct included in this CTMP does not yet reflect any such updates, Mirvac is committed to updating and implementing as necessary within one month of receiving direction from the Planning Secretary.

3.11 Worker Induction

All workers and subcontractors engaged on-site would be required to complete a site induction. The induction will include permitted access routes to and from the construction site for all vehicles, as well as standard environmental, work, health and safety (WHS), driver protocols and emergency procedures.

Any workers required to undertake works or traffic control within the public domain must be suitably trained and covered by adequate and appropriate insurances.

3.12 Cranage

The location of cranes and a crane movement plan has been prepared by Texco and attached to **Appendix E**.

4 Monitoring and Review

4.1 Report Monitoring

This CTMP shall be subject to ongoing review and will be updated accordingly. Regular reviews will be undertaken by the on-site coordinator. A review of the CTMP shall occur monthly. All and any reviews undertaken should be documented, however key considerations regarding the review of the CTMP shall be:

- Tracking deliveries against the volumes outlined within the report. Deliveries will be tracked against approved volumes and will keep a vehicle log - including Rego & time of entry - for the purpose of assessing the effectiveness of these monitoring programs.
- To identify any shortfalls and develop an updated action plan to address issues that may arise during construction (parking and access issues)
- Ensure TGS's are updated (if necessary) by "Prepare a Work Zone Traffic Management Plan" cardholders to ensure they remain consistent with the set-up on-site.
- Regular checks to ensure all loads are entering and leaving the site covered as outlined within this CTMP.
- A Dilapidation report shall be undertaken periodically to assess the condition of the road and note whether there has been any reduction in the quality of the road as a result of construction vehicles.

The development of a program to monitor the effectiveness of this CTMP shall be established by Mirvac. This process is expected to form part of the monitoring plan required to be included as part of the overarching Construction Environmental Management Plan (CEMP), of which this CTMP forms a part.

The roadway (including the footpath) must be kept in a serviceable condition for the duration of construction. At the direction of Council, undertake remedial treatments such as patching at no cost to Council.

4.2 Traffic Monitoring Program

Texco has commenced regular traffic monitoring through hourly construction vehicle traffic counts. This data is submitted to Mirvac at the end of every week to ensure that construction traffic volumes are within the approved thresholds. All Mirvac sub-contractors are also required to monitor traffic on their respective worksites. The temporary LILO also includes a gatehouse operated by Mirvac, with personnel keeping record of all vehicle entries and exits. Given that all traffic entering and exiting AIE do so via the temporary LILO, Mirvac is able to obtain traffic volumes for the entire AIE precinct. These traffic volumes will be reported to TfNSW and the Planning Secretary monthly and as required.

It is also noted that there is distinct and obvious on-site signage that definitively reinforces the need to turn left on entry and exit, with no U-turns permitted on Mamre Road at any time. These signs also warn of the penalties; $8,000 fines for individuals and $15,000 fines for companies. Signage indicating the placement of licence plate recognition technology further reinforces the access arrangements.

Any non-compliances will be immediately communicated with the relevant contractors for action and Mirvac will notify DPHI accordingly.

4.3 Work Site Inspections, Recording and Reporting

Recording and reporting of the monitoring programs shall be done in accordance with Section E.3, E.4 and E.5 of the TCAWs Manual. As such, the structure, schedule, and frequency of these activities have been considered and identified.

To inspect, review and audit the temporary traffic management (TTM) arrangements implemented on site, the following actions are to be undertaken by suitably qualified personnel in accordance with TCAWS 6.1 requirement during all phases of construction, being:

TABLE 8: EXAMPLE REVIEW OF ACTIVITIES

Activity			Frequency or Details
Shift Inspections	☐ Yes	☐ No	
Regular Inspections	☐ Yes	☐ No	
TMP Review	☐ Yes	☐ No	
Road Safety Audit	☐ Yes	☐ No	
Other	☐ Yes	☐ No	
Comments			

Given that the length of construction and that no regular works have been proposed outside the site, monthly TTM inspections is considered sufficient.

4.4 Contingency Plan

A contingency plan shall be established by Mirvac and is to be included in the overarching CEMP. Notwithstanding, **Table 9** outlines an indicative plan to be undertaken by Mirvac in the event that the monitoring program identifies the management plan is not effective in managing the construction impacts.

This contingency plan can also be used for works on the Mamre Road/ Access Road 1 intersection however, it is expected that WEM Civil (who prepared the site specific CTMP's for the intersection works) will also provide an updated Contingency Plan. A Compliance Report must be submitted to DPHI reviewing the environmental performance of the development to:

- identify any trends in the monitoring data over the life of the development
- identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies
- describe what measures will be implemented over the next year to improve the environmental performance of the development.

TABLE 9: CONTINGENCY PLAN

Risk		Condition Green	Condition Amber	Condition Red
Construction Movements	Trigger	Both peak hour and daily Construction traffic volumes are in accordance with volume and time constraints as outlined within Section 3.1 (150 LV & 184 HV Movements per day) and **Section 3.2**	Construction traffic volumes exceeds programmed Peak volumes but is within permissible daily volume constraints (150 LV & 184 HV Movements per day)	Construction traffic volumes exceeds permissible volume and time constraints (150 LV & 184 HV Movements per day)
	Response	No response required	Review and investigate construction activities, and where appropriate, implement	As with Condition Amber, plus; • If it is concluded that construction activities were directly responsible for the

			additional remediation measures such as: • Review CTMP and update where necessary • Provide additional training.	exceedance, submit an incident report to government agencies. • Stop all transportation into and out of the site.
Queuing	Trigger	No queuing identified	Queuing identified within site, but not on to public road	Queuing identified on the public road
	Response	No response required. Continue monitoring program	Review the delivery schedule prepared by Mirvac. If drivers are not following the correct schedule, then they should be provided with additional training and an extra copy of the Driver Code of Conduct	As with Condition Amber, plus • Review and investigate construction activities. • If it is concluded that construction activities were directly responsible for the exceedance, submit an incident report to government agencies. • Temporary halting of activities and resuming when conditions have improved. • Stop all transportation into and out of the site. • Review CTMP and update where necessary, provide additional training.
Noise	Trigger	Noise levels do not exceed imposed noise constraints, as outlined within the Noise Assessment Report (<45dBA), nor has there been a traffic noise related complaint	Noise levels in minor excess (<10dBA) of imposed noise constraints, or receipt of a single noise complaint	Noise levels greatly in excess (>10dBA) of imposed noise constraints or consistent noise complaints.
	Response	No response required	Undertake all feasible and reasonable mitigation and management measures to minimise noise impacts.	As with Condition Amber. If noise levels cannot be kept below applicable limits, then a different construction method or equipment must be utilised.
Traffic Guidance Scheme	Trigger	No observable issues (TGS implements according to plan)	Minor inconsistencies with TGS to onsite operations (such as covered signs, missing signs, fallen cones, etc.)	Failure to implement plan effectively (even if there has been no near miss or incident)
	Response	No response required	Traffic Controller to amend TGS on site and to keep a log of all changes	Stop work until an investigation has been undertake into the incident. There are to be changes made to the TGS to ensure that the safety of all workers, students and civilians are catered for.
Dust	Trigger	No observable dust	Minor quantities of dust in the air and tracking on to the road	Large quantities of dust in the air and tracking on to the road
	Response	No response required	Review and investigate construction vehicle movements and activities and respective control measures, where appropriate. Implement	As with Condition Amber. • If it is concluded that construction vehicle activities and movements were directly responsible for the exceedance, submit an

			additional remedial measures, such as: • All drivers of vehicles transporting loose materials will be required to ensure the entire load is covered using a tarpaulin or similar impervious material. • Deployment of additional water sprays • Wheel wash station shall be positioned at the exit point of all gates. • Temporary halting of vehicle movements and activities and resuming when conditions have improved. • The roads will also be cleaned on a regular basis to minimise dust/dirt particles depositing externally from the site.	incident report to government agencies. • Implement relevant responses and undertake immediate review to avoid such occurrence in future.

4.5 Communications Strategy

Community consultation and complaints for Warehouse 2 will be managed in accordance with the Community Consultation and Complaints Handling Strategy (CCCHS) (SLR 2023).

The appointed CCLR shall be responsible for ensuring that the appropriate management response and handling procedures are instigated and carried through in the event of an environmental complaint. The roles of the CCLR would comprise:

- Lead and manage the community involvement activities, including liaison with property owners and key stakeholders.
- Be the primary daily contact to the public handling of enquiries / complaints management / interface issues.
- Maintain the complaints register and make available the complaints register to the ER on a daily basis.
- Be available for contact by local residents and the community at all reasonable times to answer any questions.
- Liaise with property owners to co-ordinate access and to deal with specific property related issues arising from the upgrade works.
- Lead the delivery of communication and community engagement strategies and plans.
- Facilitate meetings, forums and arranging interviews to address concerns from community.
- Provide advice and participate with the project teams to improve and enhance the delivery of communication services to the community.
- Build, maintain collaborative and consultative working relationships with internal and external stakeholders.
- Be available for contact by local residents, key stakeholders and community representatives to answer queries and provide more information or feedback.

All employees who are made aware of a complaint, either verbal or written, are to immediately notify the Mirvac Project Manager, who will then contact the CCLR. Upon becoming aware of a complaint, the protocol outlined below will be followed.

TABLE 10: RESPONSE STRATEGY

Ref	Protocol	Action
1	Record and acknowledge	Any employee who takes receipt of a complaint, either verbal or written, are to immediately notify Mirvac's Project Manager who will then contact the Communications and Community Liaison Representative. Mirvac's Project Manager will be available 24 hours a day, seven days a week and have the authority to stop or direct works. In the normal course of events, the first contact for complaints will usually be made in person or by telephone. The complainant's name, address, and contact details, along with the nature of the complaint, will be requested. If the complainant refuses to supply the requested information, a note will be made on the form and complainant advised of this.
2	Assess and prioritise	The CCLR will prioritise all complaints by severity for the risk to health and safety and will attempt to provide an immediate response via phone or email.
3	Investigate	An on-site investigation will be initiated in an attempt to confirm details relevant to the complaint and the cause of the problem. Any monitoring information and/or records at and around the time of the complaint will be reviewed for any abnormality or incident that may have resulted in the complaint.
4	Action or rectify	Once the cause of the complaint has been established, every possible effort will be made to undertake appropriate action to rectify the cause of the complaint and mitigate any further impact. The CCLR will assess whether the complaint is founded or unfounded and delegate the remediation of the issue to Mirvac's Project Manager for action, as required.
5	Respond to Complainant	The CCLR will oversee the rectification of the issue and respond to the complainant once the issue has been resolved. The complainant will be provided with a follow up verbal response on what action is proposed within two hours during night-time works (between the hours of 6:00 pm and 10:00 pm) and 24 hours at other times. Where a complaint cannot be resolved by the initial or follow-up verbal response, a written response will be provided to the complainant within ten days.
6	Record	It is imperative that an assessment of the situation is carried out and documented to minimise the potential for similar complaints in the future. On this basis, every complaint received is to be recorded in the Community Correspondence Register. A copy of the completed form will be maintained for at least five years
7	Preventative Action	Once the complaint has been suitably handled, appropriate measures will be identified and implemented to negate the possibility of re-occurrence. The Community Correspondence Register is not finalised until the preventative actions are completed and recorded on the form.

In addition to the above, the CCLR is to notify the community liaison representative when traffic is expected to exceed the parameters set within "Condition Green" of **Table 9**. Notwithstanding, **Table 11** outlines an indicative communication strategy to ensure that adequate communication with key stakeholders have been met.

TABLE 11: COMMUNICATIONS STRATEGY

Risk	Impact	Comms Channel
Wider Traffic Disruption	Wider community and stakeholders informed through local and wider advertising and notification	• stakeholder meetings • stakeholder email blast • communications and community liaison representative

Appendix A. Stakeholder Consultation

Appendix B. Traffic Guidance Scheme

Appendix C. Risk Assessment

Appendix E. Crane Movement Plan