16 July 2024

Mamre Developments Pty Ltd
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Willoughby NSW 2068

Attn: Josh Weaver | Development Manager

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RE: 805 Mamre Road, Kemps Creek [SSD-30871587] – Response to DPHI

Dear Josh,

We have reviewed the comments included in the letter dated 17 April 2024 from Department of Housing Planning and Infrastructure (DPHI).

DPHI is not satisfied that the Transport Management & Accessibility Plan (TMAP) the Secretary's Environmental Assessment Requirements (SEARs) issued for this project, namely:

- *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 on existing performance levels of nearby intersections.*
- *A key consideration in the Mamre Road Precinct is the capacity of the regional and local road network (namely Mamre Road, Aldington Road and Abbotts Road) to safely accommodate the number of developments in the precinct and to ensure the functionality of the roads and associate intersections are maintained at an acceptable standard and level of performance. Your project needs to adequately assess and demonstrate both construction and operational traffic, on these regional and local roads, can be accommodated to ensure safety, functionality and performance is maintained to acceptable standards*.

In this regard, DPHI have provided the following key comments:

1. *The TMAP does not consider mid-block capacity of Mamre Road,*
2. *nor all or proposed approved developments in the precinct.*

A response to these queries is provided below.

It should be recognised that feedback received from Transport for New South Wales (TfNSW) via a letter dated 12 December 2023 stated that *the issues that were of concern and raised for inclusion in the Secretary's Environmental Assessment Requirements (SEARs) have generally been adequately addressed*.

The comments received from TfNSW related to the design processes required for the temporary left-in / left-out access and construction traffic management. All of which can be dealt with via suitable Conditions of Consent.

Therefore, the assessment conducted is considered to adequately address the SEARs. Nevertheless, the information requested by DPHI has been addressed. In considering DPHI comments, further consultation has been undertaken with TfNSW to revise the access arrangements proposed for the temporary access, which is discussed in the below.

Cumulative Analysis

The assessment undertaken adopted the endorsed Land Owner's Group East (LOG-E) model as the baseline in which to assess the development. The endorsed LOG-E included a Gross Floor Area of approximately 990,000m^2. Approximately 700,000m^2 of GFA has currently been approved within the MRP. the modelling undertaken has thus assessed over and above the level of development that can currently be achieved in the MRP.

Therefore, no further analysis is considered necessary to address the *consideration of cumulative traffic impacts on existing performance levels*.

Midblock Capacity

Context

Mamre Road Upgrade Stage 2

Of relevance to this submission, and the MRP more broadly, is the Stage 2 upgrade to Mamre Road.

The assessment of the Proposal has been undertaken on the basis of the existing Mamre Road configuration which provides for one lane in each direction through the MRP, between the existing Bakers Lane and Abbotts Road intersections with Mamre Road. Some widening will be delivered via the signalised intersection into the Aspect Industrial Estate[1] (AIE) and the upgrade to the Abbotts Road intersection.

As a committed project, it is deemed appropriate to consider the upgrade in appreciation of any new development within the MRP. Key features of the project include:

- Upgrades to two existing intersections (James Erskine Drive and Bakers Lane);
- Upgrades to two future intersections (Abbotts Road and Aspect Industrial Estate);
- Road widening to a minimum of four lanes (two in each direction) with the potential for six lanes;
- Shared user path on eastern side of the carriageway; and
- Footpath on western side of carriageway.

The current timing for delivery of the upgrade is unknown. Recent Federal Government announcements suggest it would be delivered by 2029[2]. However, based on Ason Group's understanding, it would be more likely to be completed by 2031.

Regardless, any degradation in road network performance as a result of the approved developments and background traffic growth, based on midblock capacity would be temporary.

[1] https://www.planningportal.nsw.gov.au/major-projects/projects/aspect-industrial-estate
[2] https://investment.infrastructure.gov.au/projects/126960-23nsw-np

Approved Developments

In consideration to the future midblock capacity of Mamre Road, the approved developments have been included in the assessment of the road network. This is consistent with other assessments undertaken. The following applications have been considered.

TABLE 1: APPROVED DEVELOPMENTS

Reference Number	Site Address	Application Number	Status
1	Mamre South Precinct 657-769 Mamre Road, Kemps Creek	SSD-9522	Approved: 21/12/2020
		SSD-10101987	Approved: 13/07/2023
		SSD-25725029	Approved: 29/09/2022
		DA22/0671	Approved: 22/07/2022
		DA22/1172	Approved: 09/12/2022
2	Yiribana Logistics Estate – 772-786 Mamre Road, Kemps Creek	SSD-10272349	Approved: 22/09/2023
3	Aspect Industrial Estate – 788-882 Mamre Road, Kemps Creek	SSD-10488	Approved: 24/05/2022
		SSD-46516461	Approved: 02/03/2023
		SSD-58257960	Approved: 05/07/2024
4	Access Logistics Park – 884-928 Mamre Road, Kemps Creek	SSD-17647189	Approved: 18/12/2023
5	200 Aldington Road Estate	SSD-10479	Approved: 05/05/2023
6	Westlink Stage 1	SSD-9138102	Approved: 21/04/2023
7	BAPS Temple 232 Aldington Road	DA17/1247	Approved: 23/09/2019
8	Yiribana West Logistics Estate	DA23/0067	Approved: 14/05/2024

Midblock Capacity Thresholds

As it relates to midblock capacity thresholds, we note that the analysis below, is predicated on a single lane assessment of Mamre Road. In relation to the Mamre Road Stage 2 project, we anticipate this analysis is temporary in its nature and would only apply in advance of completion of the Stage 2 upgrade works.

Midblock capacity thresholds are outlined in the RTA Guide to Traffic Generating Developments, 2002 (Guide) and Austroads. For the purpose of this analysis, consideration to the limits provided in Table 4.4 of the Guide have been considered and summarised below:

- 600 veh/hr per lane – Level of Service (LOS) C;
- 900 veh/hr per lane – LOS D; and
- 1400 veh/hr per lane – LOS E.

The Guide also acknowledges that network capacity is typically governed by intersection capacity, with midblock capacity normally reserved for strategic level assessment.

This is similarly reflected in Part 3 of the Austroads Guide to Traffic Management, which notes that peak period midblock capacity on a road can increase under certain network conditions, including:

- Adequate flaring at major upstream intersections
- Uninterrupted flow from wider carriageway upstream
- Absence of crossing or entering traffic,
- Control or absence of parking
- Absence or control of right turns at difficult intersections
- High-volume flows of traffic from upstream intersections

It is evident that the conditions that influence midblock capacity are therefore varied, and in considering the guidance both in Austroads and the current RTA Guide, midblock volumes should not be the critical element when assessing new developments but a consideration in a more holistic approach. Whilst these thresholds exist, it does not mean that roads cannot operate above them.

To provide context there are numerous roads in Western Sydney that currently operate at these thresholds, with recent survey data recording the following volumes:

- Chandos Road / Wallgrove Road (4:30-5:30pm): North approach = 1,412 veh/hr
- Redmayne Road / Wallgrove Road (4:30-5:30pm): North approach = 1,354 veh/hr
- Wallgrove Road / The Horsley Drive (4:30-5:30pm): North approach = 1,387 veh/hr
- The Horsley Drive / Ferrers Road (8:00-9:00am): West approach = 1,317 veh/hr.

To further highlight this, spit road Mosman operates with **1,600veh/hr** (based on TfNSW surveys from 2023) in a single lane during the morning peak period. Whilst delays along the corridor are noted, it does still demonstrate that road network operation above the thresholds in Austroads and the RTA Guide are still possible.

Midblock Capacity Assessment

Mamre Road Volumes

The baseline midblock volumes are provided below. The below volumes have been extracted from a May 2024 survey, which also takes account of the existing construction volumes on the network. The volumes are shown diagrammatically in **Attachment 3** (**Figure 3**).

TABLE 2: BASE VOLUMES

Location	Direction	Veh/hr/lane	
		AM	PM
Mamre Road, Outside Site	Northbound	846	700
	Southbound	710	849

The trip generation for each of the approved developments (Table 1) has been adopted from the respective traffic reports. The analysis suggests that the midblock volumes could increase by approximately 300-500 veh/hr following completion of the approved developments. The below table demonstrates the approved development near the Site, with the flows through the network shown at a diagrammatic level in Attachment 3 (**Figure 4**).

TABLE 3: APPROVED DEVELOPMENT VOLUMES

Location	Direction	Veh/hr/lane	
		AM	PM
Mamre Road, North of Site	Northbound	395	500
	Southbound	460	319
Mamre Road, South of Site	Northbound	399	311
	Southbound	321	333

Table 4 provides the volumes anticipated on Mamre Road on the basis of the anticipated baseline volumes and the approved developments in an assessment year of 2026. The below volumes are shown at a diagrammatic level in Attachment 3 (**Figure 5**).

TABLE 4: 2026 BASE PLUS APPROVED DEVELOPMENT VOLUMES

Location	Direction	Veh/hr/lane	
		AM	PM
Mamre Road, North of Site	Northbound	1,241	1,200
	Southbound	1,170	1,168
Mamre Road, South of Site	Northbound	1,245	1,011
	Southbound	1,031	1,182

Table 4 demonstrates that the midblock capacity of the approved developments, alongside the baseline voumes, currently sits below the 1,400veh/hr LOS E threshold.

The Proposal includes a GFA of 25,340m^2. The associated traffic generation of these developments is as follows:

- AM Peak: Inbound: 42veh/hr
  Outbound: 16veh/hr
  Total: 58veh/hr
- PM Peak: Inbound: 17veh/hr
  Outbound: 44veh/hr
  Total: 61veh/hr

The table below provides the midblock volumes following addition of the Proposal's traffic generation. Volumes are shown at a diagrammatic level in Attachment 3 (**Figure 6**).

The analysis is based on the proposed temporary left-in / left-out (LILO) arrangements. It is Ason Group's understanding that the ultimate connectivity via the MRP road network will not be available for some time. Until the ultimate Mamre Road upgrade is delivered by TfNSW, it is therefore expected that traffic would only utlise the northbound lane to travel to and from the Site.

TABLE 5: 2026 BASE PLUS APPROVED DEVELOPMENT AND PROPOSAL

Location	Direction	Veh/hr/lane	
		AM	PM
Mamre Road, North of Site	Northbound	1,257	1,244
	Southbound	1,170	1,168
Mamre Road, South of Site	Northbound	1,287	1,028
	Southbound	1,031	1,182

The analysis shows that the addition of the Proposal's traffic volumes would not materially change the midblock volumes. Equally relevant however, is that the intersection performance has been demonstrated to remain consistent with the LOG-E baseline.

Mamre Road Background Traffic Redistribution

It is important to note, that this exercise is completely theoretical in its nature. In practice, midblock capacity thresholds are rarely exceeded due to the ability for road users to change their behaviour including route choice and time of travel.

This theory is fundamental to traffic planning and traffic modelling principals. In practice, traffic modelling is predicated on the analysis of a route in comparison to other available routes, and dynamically redistributes traffic on the basis of time (delay) and cost functions.

On this basis, and having consideration to the current function of Mamre Road, which generally distributes traffic between the M4 motorway and Elizabeth Drive, multiple alternate routes are available for road users, including The Northern Road, Wallgrove Road, and The M7 Motorway (**Figure 1**).

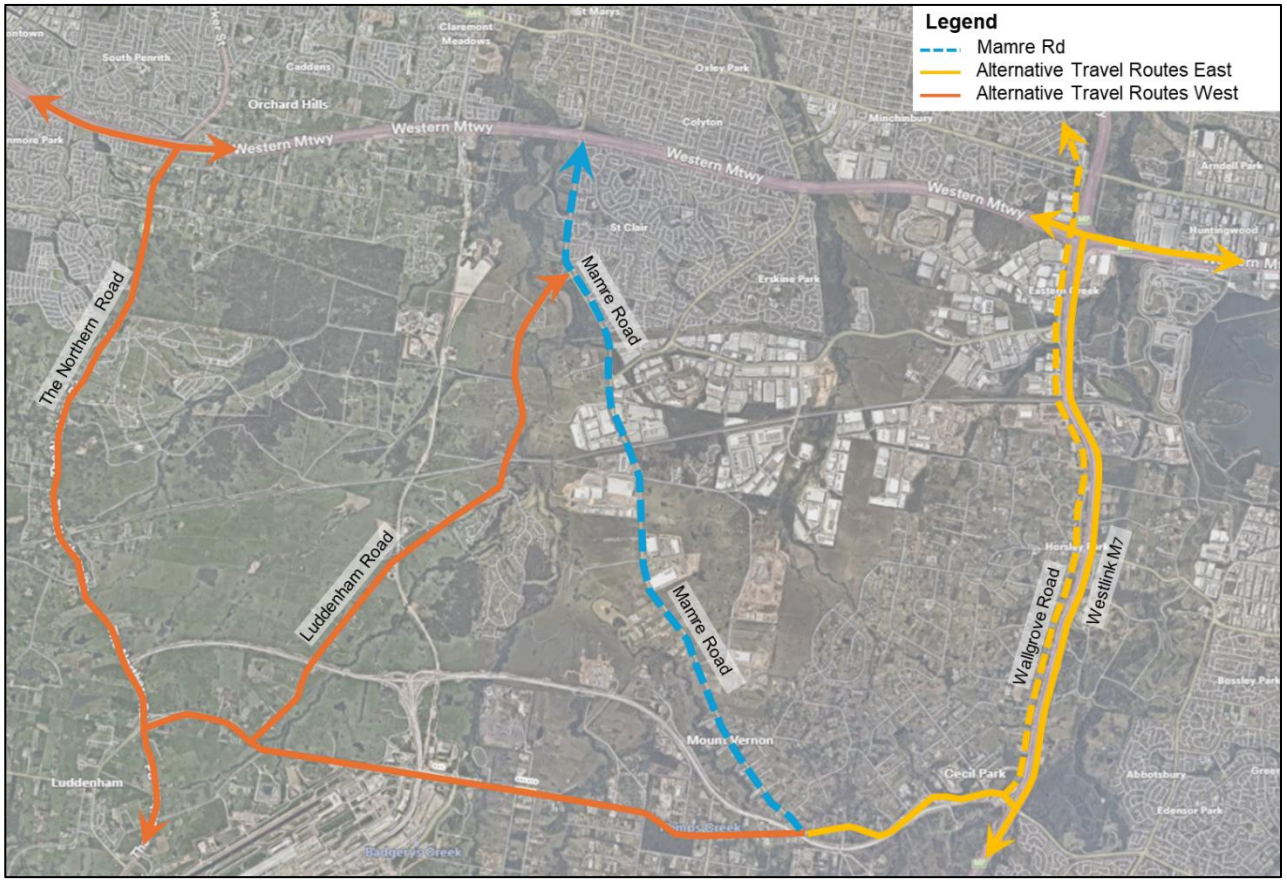


Figure 1: Travel Routes

In this regard, delays are anticipated on Mamre Road due to the Mamre Road Stage 1 works and increased construction activity relating to the development of the MRP and Aerotropolis more generally which would result in some redistribution of background traffic.

Having consideration to high proportion of background traffic on Mamre Road a relatively minor redistribution of this traffic to the alternate available routes would off-set the additional traffic generated by the development.

We note that a detailed assessment of this trip redistribution hasn't been undertaken in detail. However, in the context of this proposal, no further assessment is considered necessary given the low volumes that would be generated by a site of this size.

Revised Left-in / Left-Out Access Arrangements

In regard to DPHI's commentary, and for discussions with both TfNSW and DPHI, further consideration has been given to the temporary LILO access proposed from Mamre Road into the Site.

The Proposal now includes the extension of the second through lane being delivered as part of the AIE signalised intersection, rather than provision of a dedicated deceleration lane, to increase the midblock capacity at this location. The lane would be extended for 330m past the Site, with the access driveway being provided in accordance with AS2890.2:2018.

The revised access arrangements, prepared by MU Group, are shown by the below figure.

TfNSW were consulted on this proposal and have provided concurrence for the proposal (see **Attachment 2**). Therefore, while the midblock analysis demonstrates that the impact of the development is not material, the proposed temporary access arrangements will provide a benefit to the operation of the network by widening the northbound lane past the Site, in advance of the ultimate Mamre Road Stage 2 Upgrade.

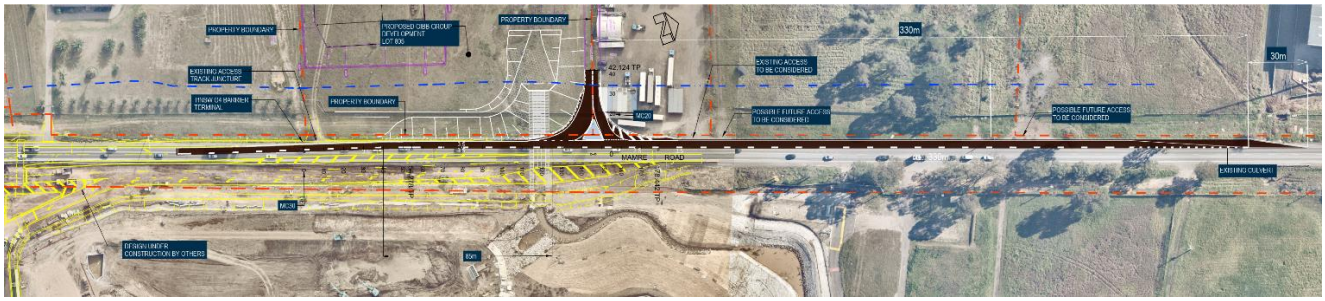


Figure 2: Revised Temporary Access Arrangements

Summary & Conclusion

The Department of Housing Planning and Infrastructure (DPHI) has requested further information with regards to the cumulative traffic impact assessment undertaken, and the midblock capacity of Mamre Road.

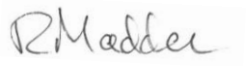
In regard to the cumulative assessment undertaken, as discussed, the endorsed LOG-E model has been adopted as the baseline. This model included a GFA over and above what is currently approved within the MRP and it is therefore not considered necessary to conduct any further modelling assessment.

For the midblock capacity of Mamre Road, analysis to support the Proposal has been completed having consideration to the approved developments and demonstrates:

- The midblock operation of Mamre Road, will operate below the 1,400veh/hr LoS E threshold. Notwithstanding this, it is noted that:
  - There are multiple examples of midblock flows within Western Sydney and Sydney more generally with flows above the midblock thresholds nominated in the RTA Guide.
  - Transport planning principles are predicated on route choice of road users, that take into account prevailing road network conditions and adapt driving behaviour and route choice assumptions in response to these conditions. Therefore, it is wholly reasonable to expect that there will be some redistribution of background traffic due to the delays associated with the Stage 1 roadworks, regardless of what is occurring in the MRP itself.
  - Within the assessment year of 2026, the Proposal would only impact the northbound lane. The volumes associated with the Proposal would only increase traffic on the northbound lane by 44 vehicle movements. This volume of traffic has no material impact to the midblock capacity of Mamre Road.
- The access arrangements for the Proposal will also increase the midblock capacity from the AIE signalised intersection being delivered, by extending the second northbound lane for 330m past the Site itself. Therefore, while the Proposal itself does not warrant the duplication of Mamre Road, it will provide a benefit to network operation in the vicinity of the Site.
- With consideration to the Mamre Road Stage 2 project, the timing for delivery is also unable to be reasonably affected by a proponent. However, it is expected that should all the developments currently approved actually be realised in advance of the upgrade, that it would not be for an extended period. With the alternative routes available for redistribution of through traffic, it is not anticipated that the midblock capacity of Mamre Road would operate above the thresholds acceptable for this location on the basis of the analysis undertaken for this assessment.

We trust the above is of assistance and please don't hesitate to contact the undersigned or to discuss further.

Yours sincerely,



Rebecca Butler-Madden

Principal Transport Planner

E: rebecca.bmadden@asongroup.com.au

Attachment 1 – Flow Diagrams

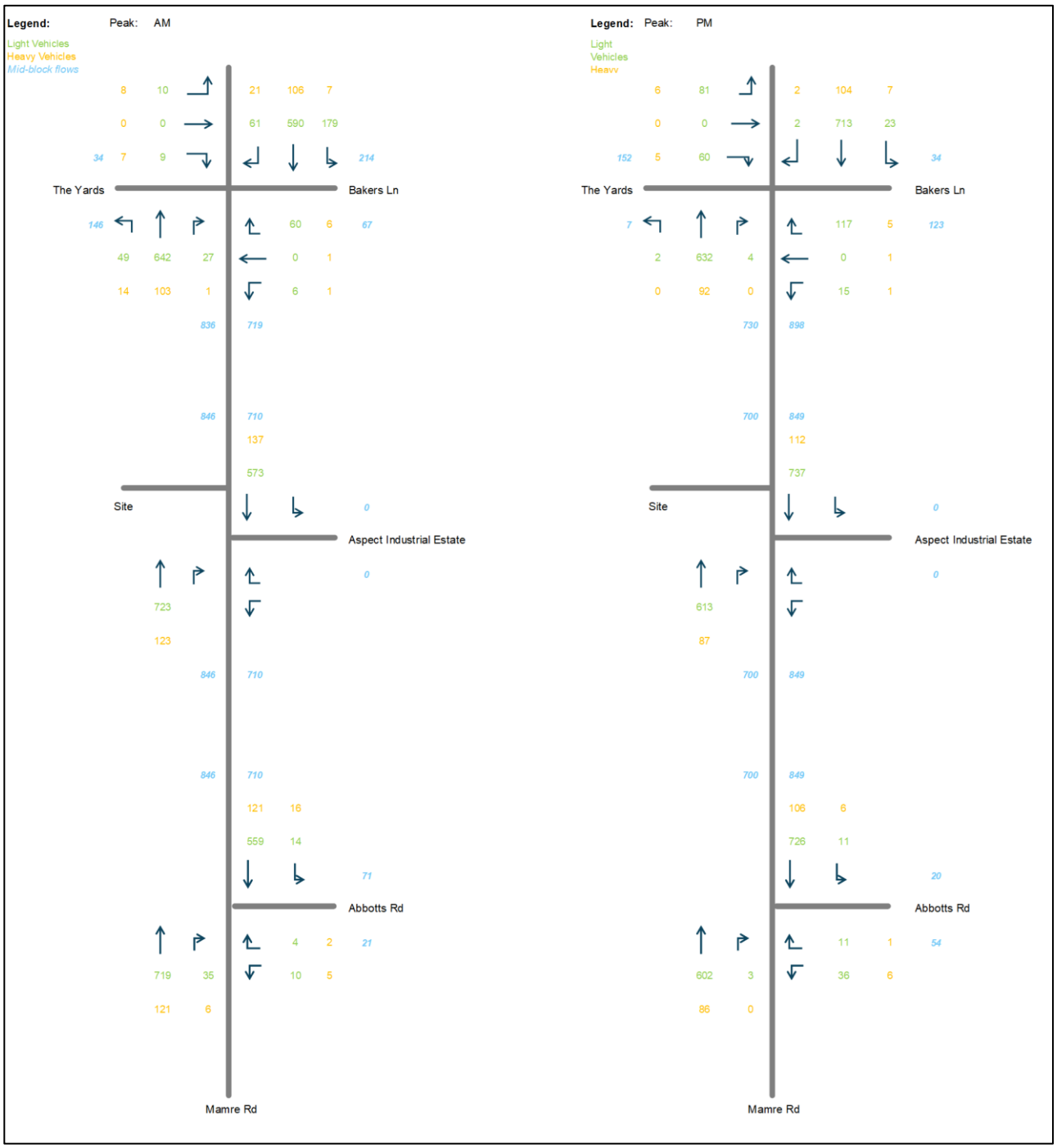


Figure 3: 2024 Baseline Midblock Volumes

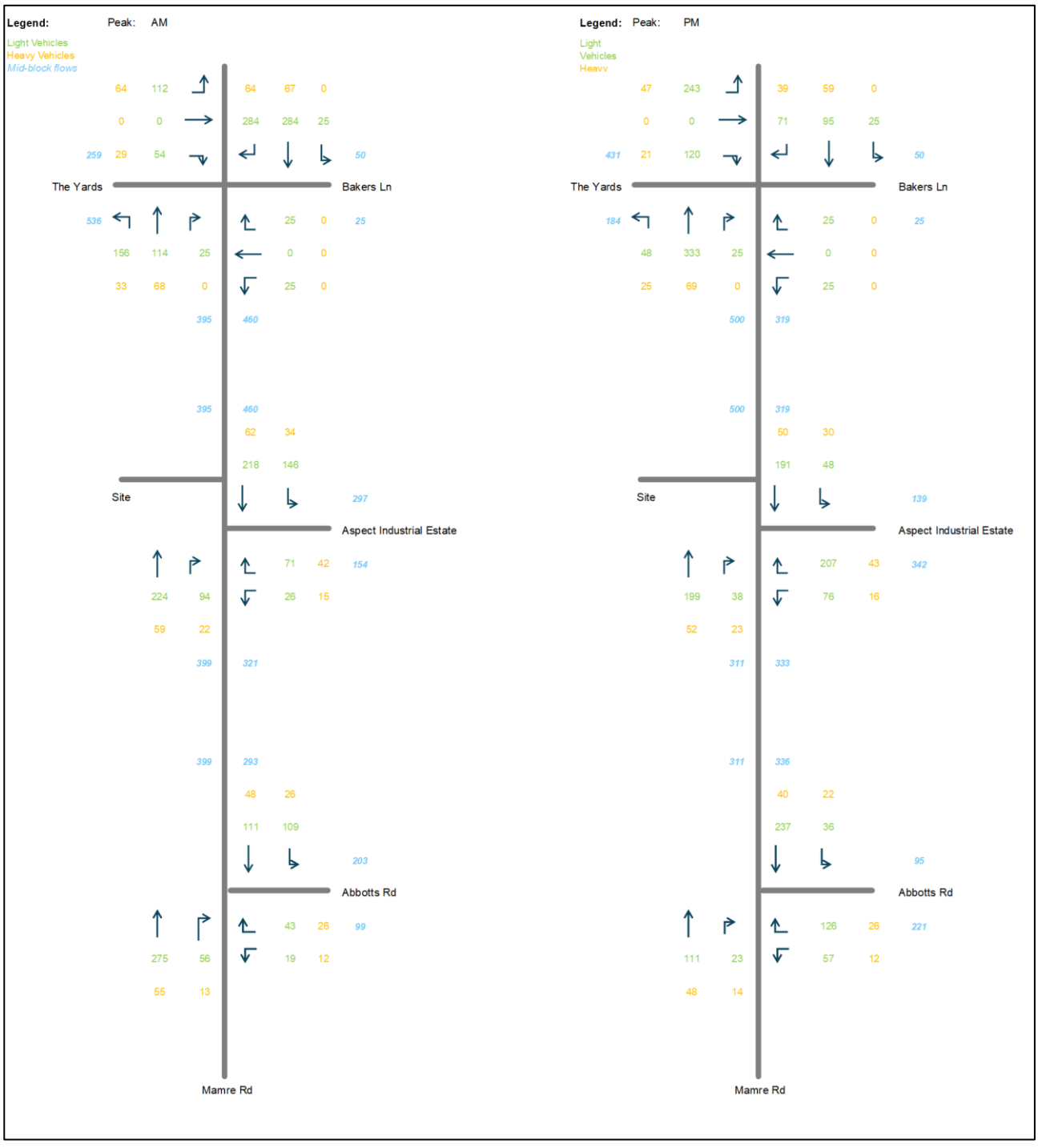


Figure 4: Approved Development Traffic Volumes

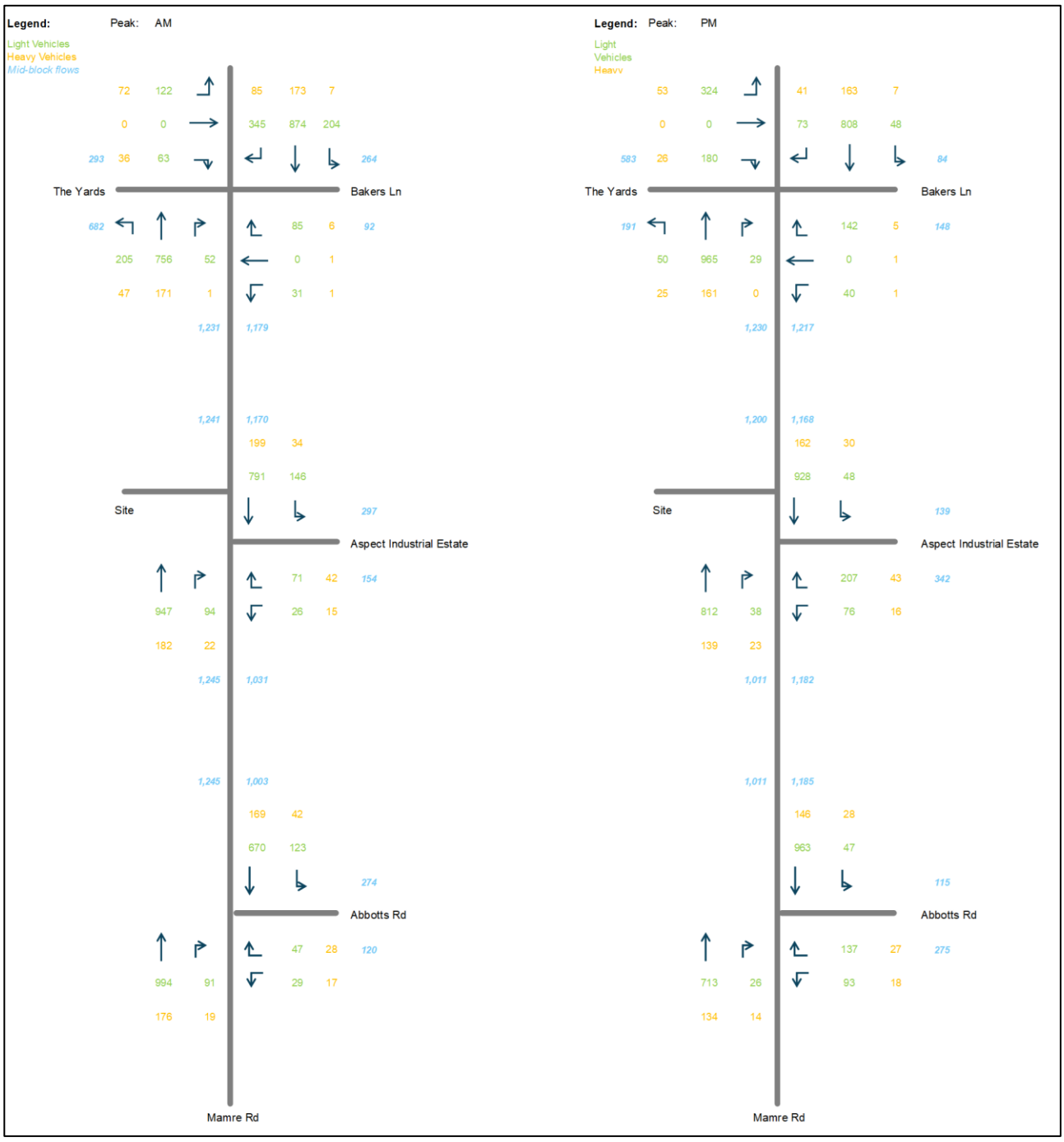


Figure 5: Base Volumes plus Approved Developments (as per Table 1)

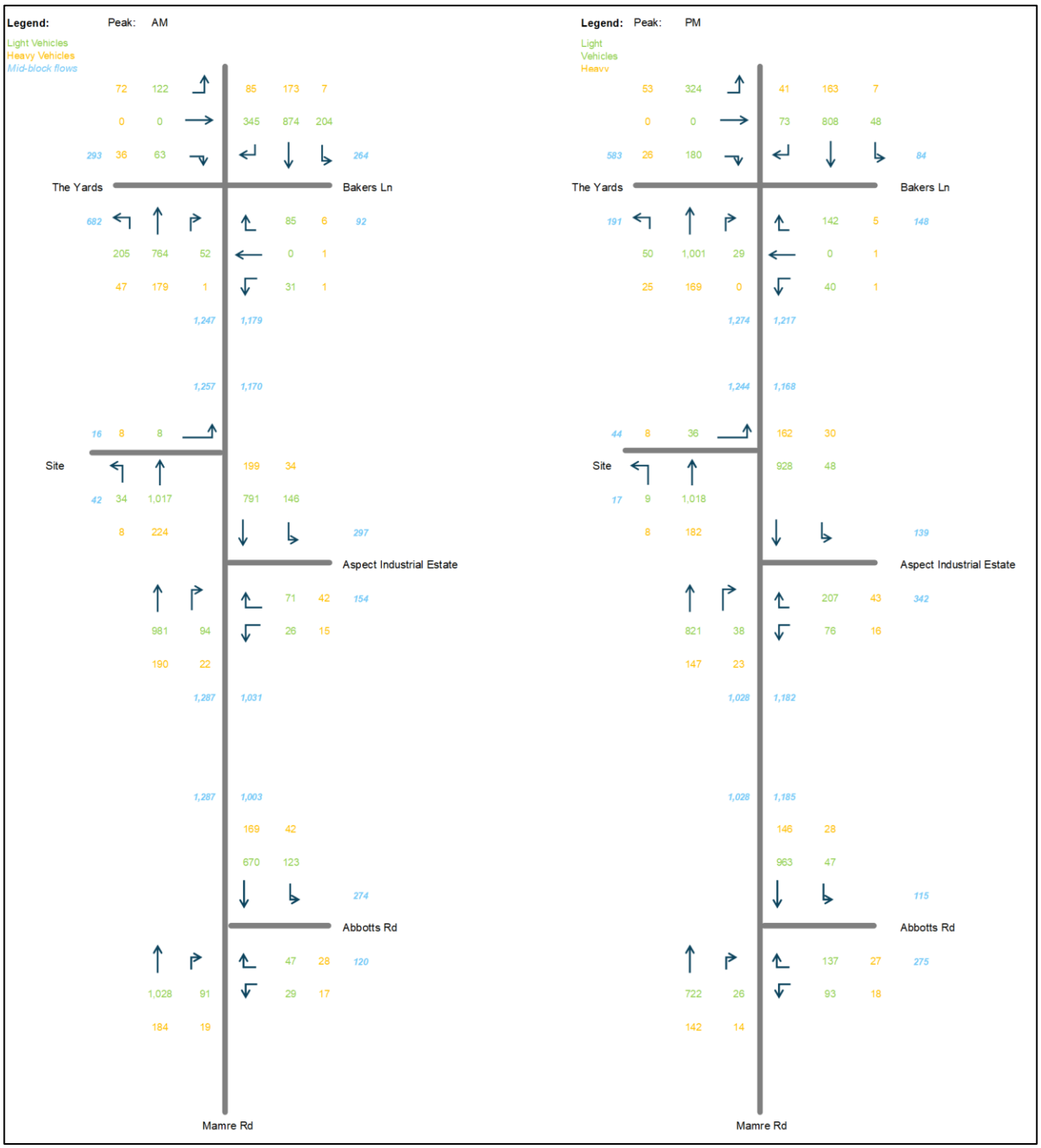


Figure 6: Total Future Mamre Road Traffic Flows

Attachment 2 – TfNSW Correspondence

Transport for NSW

11 July 2024

TfNSW Reference: SYD24-00016/03

Mr. Andrew Johnson
Ason Group
Suite 17.02, Level 17
1 Castlereagh Street
Sydney NSW 2000

SECTION 138 OF THE ROADS ACT, 1993 CONCURRENCE
AMENDED PLAN FOR ACCESS ARRANGEMENTS
805 MAMRE ROAD, KEMPS CREEK

Dear Mr. Johnson,

Reference is made to your email dated 17 June 2024 to Transport for NSW (**TfNSW**) seeking concurrence under section 138 of the *Roads Act, 1993* for the temporary arrangements on Mamre Road (**classified road**) as part of the approved development (SSD-30871587).

TfNSW has reviewed the submitted material and would provide concurrence to the proposed temporary civil works on the Mamre Road frontage under section 138 of the *Roads Act 1993*, subject to your acceptance of the following requirements:

1. The proposed interim accessed arrangements on Mamre Road shall be designed to the satisfaction of TfNSW with a 90km/h design speed limit and endorsed by a suitably qualified practitioner.

   The design requirements shall be in accordance with AUSTROADS. The certified copies of the civil design plans shall be submitted to TfNSW for review and approval prior to the release of the Construction Certificate and commencement of any road works.

2. The developer shall be responsible for all public utility adjustment/relocation works, necessitated by the above work, and as required by the various public utility authorities and/or their agents.

3. Once the temporary access road is no longer required for the development, the Applicant shall carry out the works to remove the deceleration lane as instructed by TfNSW and at no cost to TfNSW.

4. The developer is required to enter a Works Authorisation Deed (WAD) for the abovementioned works. Please note that the WAD will need to be executed prior to TfNSW assessment of the detailed civil design plans.

   A plan checking fee and lodgement of a performance bond are required from the applicant prior to the release of the approved road design plans by TfNSW.

5. Any infrastructure (e.g., batter, retaining wall, drainage basins etc.) that is required to support the development shall not be located within land zoned as SP2.

6. A Road Occupancy Licence (ROL) should be obtained from Transport Management Centre (TMC) for any works that may impact on traffic flows on Mamre Road during construction activities. A ROL can be obtained through https://myrta.com/oplinc2/pages/security/oplincLogin.js.

7. Prior to the issue of any construction certificate or any preparatory, demolition or excavation works, whichever is the earlier, the applicant shall prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with TfNSW.

Upon receiving your acceptance of the above requirements, TfNSW will commence the WAD process. Should you have any further enquiries in relation to this matter, please do not hesitate to contact Navin Prasad, Land Use Planner via email at development.sydney@transport.nsw.gov.au.

Yours sincerely,

Brendan Pegg
Senior Manager Land Use Assessment Central and Western
Planning and Programs, Greater Sydney Division