

26 November 2021

Bruce Zhang Industry Assessments Department of Planning and Environment GPO Box 39 SYDNEY NSW 2001

Dear Mr Zhang

## RESPONSE TO SUBMISSIONS – ASPECT INDUSTRIAL ESTATE – LOTS 54-58, DP259135 – MAMRE ROAD – KEMPS CREEK

Aspect Industrial Estate proposed Signalised Intersection background:

For ease of reference, please see below background summary of information which has informed the proposed signalised intersection with Mamre Road as part of the Mirvac Aspect Industrial Estate (AIE) SSD-10448.

TfNSW has prepared a Strategic Road Design for the Mamre Road Upgrade from Kerrs Road, Kemps Creek to M4 Motorway, St Clair. This was released to Mirvac in July 2020. This strategic design provided for an initial midblock widening of Mamre Road to four (4) lanes (two (2) lanes northbound and two (2) lanes southbound) with capacity for future midblock central widening of Mamre Road to deliver six (6) lanes (three (3) lanes northbound and three (3) lanes southbound). The TfNSW Strategic Design requires land acquisition along both the eastern and western verges of Mamre Road.

The Mamre Road Precinct DCP (DCP) was adopted on 19 November 2021. As outlined within the DCP finalisation report, traffic modelling using Aimsum was undertaken to determine the road hierarchy and confirm the road network for the Mamre Road Precinct in consultation with Council and TfNSW (DCP Road Network Modelling). SIDRA intersection modelling also determined ultimate intersection configurations and layouts to deliver to full development of the Mamre Road Precinct (2036).

Following the completion of the DCP Road Network Modelling, Mirvac engaged Orion Consulting to document the ultimate 2036 signalised intersection arrangement (Ultimate Intersection) for the AIE intersection with Mamre Road in accordance with:

- TFNSW' main line alignments determined by TfNSW within the Mamre Road Strategic Design; • and
- SIDRA intersection layouts completed as part of the DCP Road Network Modelling. •

The Ultimate Intersection arrangement (2036) requires land acquisition on both the eastern and the western verge.

The Mirvac AIE is located on the eastern verge of Mamre Road. As part of the proposed AIE development, Mirvac are proposing to construct the ultimate intersection along the eastern verge. These

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works and the required land dedication to TfNSW are included within the Voluntary Planning Agreement (VPA) currently on notification for the Aspect Industrial Estate.

As the Ultimate Intersection arrangement (2036) requires land acquisition along the western verge by TfNSW, Mirvac are limited to constructing an Interim Intersection (**Interim Intersection**) in advance of a land acquisition and future upgrade of Mamre Road by TfNSW. As requested in email by TfNSW, the Interim Intersection has been designed to cater for the traffic requirements of the <u>entire</u> Aspect Industrial Estate concept masterplan as well as other approved developments within the Mamre Road Precinct (SSD-9522).

Following completion of the Interim Intersection proposed as part of the AIE, there will be no further requirements for land acquisition on the eastern verge fronting the AIE.

### TfNSW comments received:

Please see below responses to key items raised within TfNSW' letter dated 4 November 2021 (TfNSW reference: SYD19/01350/24).

In relation to other comments provided by TfNSW within letter dated 4 November 2021, though not specifically responded to within this letter, we acknowledge these comments and do not believe any additional information is required from Mirvac or its consultants at this stage.

The below responses have been informed by previously submitted information and the meeting on 16 November between Department of Planning, Industry and Environment (DPIE), Transport for NSW (TfNSW), Mirvac and our consultants, ASON Group and Orion Consulting.

### TfNSW key comment No.1:

 a) It is understood that the SIDRA outputs provided have included the traffic generation input for the whole of the Aspect Industrial Estate Masterplan (table 8) and not specifically Warehouse 1 & 3 (table 6).

Whilst it is clear that the proposed configuration will be able to accommodate for Warehouse 1 & 3, the various models provided to date (showing different phasing/cycle time arrangements) indicate that the intersection is already running at critical levels.

## Response:

In response to TfNSW' email on 4 August 2021, the submitted modelling includes an assessment for the 2026, 2031 and 2036 horizon years to identify the minimum required upgrades to support the <u>entire</u> Aspect Industrial Estate master plan.

In addition, TfNSW requested that 'only approved developments are to be included in the model'. As such the modelling has been prepared including the entire AIE masterplan and the recently approved Frasers / Altis SSD-9522.

At the meeting with TfNSW on 16 November 2021, TfNSW noted concerns relating to the overall masterplan capacity noting some legs within the intersection are nearing capacity.

The Precinct Outcomes criteria established and endorsed by TfNSW for the broader DCP Road Network Modelling stipulated that an average Level of Service (LoS) E was acceptable at the

intersection of precinct roads and the regional road network, such as the Mamre Rd / AIE Road 01 intersection.

The modelling provided demonstrates the Interim Intersection will operate at an acceptable average Level of Service of B, with all approaches operating at LoS C or better to 2031. It is only in 2036, that the Aspect (east) leg of the intersection has been modelled at Los D which is still well within the LoS E required under the Precinct Outcomes criteria established for the broader precinct. Mamre Road legs still report an approach LoS B or better under this scenario.

For ease of reference see below table displaying average delay and Level of Service as reported in the previously provided RtS documentation (Ref: P1029I03).

Period	Year	2026	2031	2036
AM Peak	Intersection	B (17.8)	B (18.5)	B (18.6)
	Mamre Rd (N)	B (21.5)	B (22)	B (21.7)
	Mamre Rd (S)	A (13.2)	A (14.3)	A (14.5)
	Aspect (E)	C ( 30.4 )	C ( 31.4 )	C (32.3)
PM Peak	Intersection	B (17.4)	B (18.3)	B (23.8)
	Mamre Rd (N)	B (17.3)	B (18.8)	B (27.5)
	Mamre Rd (S)	A ( 11.2 )	A (11.5)	A (11.8)
	Aspect (E)	C ( 31.8 )	C (34.3)	D (43.9)

Should additional upgrades be required to enable further development in the future, this will necessitate land acquisition by TfNSW on the western verge of Mamre Road. This would be the responsibility of TfNSW / others to determine the required timing for infrastructure upgrades and land acquisition at this time.

# TfNSW key comment No.2:

b) TfNSW suggested that the model be tested using different phasing arrangements whilst keeping the worst case scenario of 140sec cycle time. However noting that utilising the cycle time of 140 sec does result in further deterioration of the intersection, TfNSW would consider a maximum cycle time of 120 sec.

## Response:

As TfNSW notes, 140 second cycle time demonstrates a worst-case scenario.

This advice regarding utilising different cycle times differs from previously received advice and requests from TfNSW. It is respectfully requested that TfNSW provide consistent advice in relation to modelling inputs and assessment criteria to enable modelling finalisation and avoid delays associated with preparation of additional iterations.

Based on the meeting with TfNSW on 16 November 2021 it is understood that TfNSW agree that optimisation of the signalised intersection may be carried out as part of the detailed design during the WAD process.

### TfNSW key comment No.3:

b) (continued...)

Whilst TfNSW does not support the use of Optimum Cycle times (as we need to understand what the worst case scenario would look like), the SIDRA model indicates during the interim even with using optimum cycle time of 90 and 100sec, the right turn lane of Mamre South Approach and East AIE access has a LoS D. That means by 2026 these 2 right turn lanes will be operating at near capacity. This may lead to safety issue within a short time frame after the implementation of the interim intersection.

# Response:

Refer comments provided to TfNSW key comment No.1.

The Precinct Outcomes criteria established and endorsed by TfNSW for the broader DCP Road Network Modelling stipulated that a LoS E was acceptable at the intersection of precinct roads and the regional road network, such as the Mamre Rd / AIE Road 01 intersection.

The proposed intersection is an interim measure in advance of the future Mamre Road land acquisition and widening on the western verge by TfNSW and the addition of fourth leg of the intersection (by others).

It is noted that a LoS D is an acceptable level of service. Further, LoS D is not considered a safety issue and rather relates to performance.

Finally, as demonstrated within the submitted modelling, queue lengths (under a worst case 140 second cycle time scenario) are wholly contained within the right-turn bays and all right-turn movements are subject to signal control to ensure safe operation(s).

## TfNSW key comment No.4:

c) Should the broader masterplan (comprising of 11 industrial buildings) be developed and the internal road connection to the adjoining properties be provided, it is expected that the intersection will not operate at a safe level. Ason group's TMAP (issue 24/06/2021) provided a table (Table 10) that included the known LOG developments with 75% yield of 1,189,712 GFA. This amounts to 2,736 AM and 2,855 PM peak vehicle movements. This number is substantially higher than the current modelling provided for the AIE Masterplan.

## Response:

TfNSW's email to the Applicant on 4 August 2021 requested that the traffic modelling be updated to assume the <u>entire</u> Aspect Industrial Estate masterplan and only approved developments. As such the modelling has been prepared including the <u>entire</u> AIE and the recently approved Frasers / Altis SSD-9522.

The submitted modelling includes traffic generated by the <u>entire</u> AIE masterplan and the approved developments.

The submitted modelling demonstrates an acceptable Level of Service for the Interim Intersection to cater for the <u>entire</u> AIE masterplan.

Any additional modelling and infrastructure delivery to support additional developments outside of those listed above shall be the responsibility of others.

### TfNSW key comment No.5:

c) (continued...)

It is unknown at this stage what the maximum GFA is permissible before either individual legs or the whole signals fail. There needs to be further investigation into understanding as to when will this intersection begin to operate at unacceptable levels. Until the broader road network is developed there is a clear need to manage the size and scope of developments in this Precinct in order to ensure safe operation of the intersection.

### Response:

Refer above comments.

As discussed within meeting on 16 November 2021, TfNSW advised that this comment was provided for the DPIE consideration in relation to future modelling and the staging of infrastructure (by others) to support additional development (by others) within the wider Mamre Road Precinct.

Mirvac support that any additional modelling and infrastructure delivery to support additional developments shall be the responsibility of others.

## TfNSW key comment No.6:

d) Further to above points it should be noted that the Warrant Assessment undertaken by Asongroup (TMAP) relied on the anticipated development of the broader LOG sites and considered the signals warranted by 2026. It is unclear if this assessment was based on the internal road network enabling a connection through to the adjacent sites.

It is understood that should the AIE Masterplan be constructed in its entirety than the Warrants would be met however it is unclear if this will take place within the next 5 years. In order to satisfy the Warrants at this location will there be further need to construct the internal road connection to the adjoining sites?

## Response:

Mirvac note that based on current customer commitments and enquiry it is anticipated that the entire AIE masterplan would be developed by 2026.

As per TfNSW' comments above, the entire AIE masterplan meets the Warrants for the proposed signalised intersection by 2026.

### TfNSW key comment No.7:

It is critical to understand whether this intersection will operate at a safe level once the internal road network in line with the DCP has been constructed.

There may be a need to widen the intersection footprint in the future. Should this be the case it would be beneficial to understand prior to the AIE Masterplan being agreed to so we can ensure that enough building setback has been provided.

### Response:

Refer initial comments contained within this letter regarding intersection background and confirmation of Ultimate Intersection arrangement.

As part of the proposed AIE development, Mirvac are proposing to construct the Ultimate Intersection along the eastern verge. These works and the required land dedication to TfNSW are included within the VPA currently on notification for the AIE.

Following completion of the Interim Intersection proposed as part of the AIE, there will be no further requirements for land acquisition on the eastern verge fronting the AIE.

All space planning to provision for the Ultimate Intersection has been considered as part of the development of the AIE concept masterplan.

In relation to network capacity once the entire Mamre Road local road network has been delivered consistent with that outlined in the DCP, TfNSW are referred to the 2036 Aimsum modelling completed as part of the DCP finalisation in consultation with Council and TfNSW.

## TfNSW key comment No.8:

However it should be noted that further analysis is required to understand the threshold where additional upgrades to the intersection is required. In addition there needs further refinement to understand what is the limit of infrastructure within the Mamre Road Precinct Land Owners and how this will be managed.

In this regard TfNSW requests that DPIE provide a <u>condition</u> limiting any further proposals under this Masterplan until a clear approach is provided as to the infrastructure splits within this precinct. There may also be a need to further refine the Masterplan in particular Warehouse 9, should additional setbacks be required for widening of the intersection.

## Response:

<u>Mirvac do not support such a condition.</u> Such a condition would only further delay the ability for investment within the Mamre Road Precinct and only add uncertainty to our customers.

The modelling provided for proposed Interim Intersection has been prepared in response to TfNSW requests and space plans for the Ultimate Intersection on the eastern verge. As such there is no requirement for additional setbacks within the AIE to those provided within the masterplan.

As discussed above, the submitted modelling for the Interim Intersection which has been prepared in accordance with TfNSW requirements demonstrates ability to cater for the <u>entire</u> AIE masterplan as well as approved developments (SSD-9522).

Thresholds for additional upgrades are to be determined by TfNSW and DPIE as part of future assessments of development within the Mamre Road Precinct and consideration of the wider road network growth.

During the assessment of additional development applications within the Mamre Road Precinct, it is suggested that the micro simulation transport model developed for the Precinct as part of the DCP finalisation be utilised (by others) to determine existing network performance and any infrastructure upgrades required to support the proposed development. This assessment could consider the existing road network plus any approved development and infrastructure (including timing) within the Mamre Road Precinct.

As discussed above, the modelling for the Interim Intersection which has been prepared in accordance with TfNSW requirements demonstrates ability to cater for the <u>entire</u> AIE masterplan as well as approved developments (SSD-9522).

# TfNSW Comments - Attachment A

## TfNSW key comment No.9:

## 1. Comment

TfNSW reiterates the comment provided in TfNSW letter dated 29 March 2021 regarding access to warehousing along the Access Road 1. The response to RFI provided by Ason Group received on the 7 June does not justify why there is a need to retain the proposed multiple access points along the 'High Order Road.'

TfNSW remains concerned with the number of conflict points along Access Road 1, particularly within proximity to the Signalised intersection at Mamre Road for safety and efficiency reasons

# Response:

The DCP was adopted on the 19 November 2021. The DCP confirms AIE Access Road No.1 as a Collector Industrial Road.

In relation to access to and from Collector Roads, the DCP notes the following:

- 4.6.1 (control 21) Vehicular access to the loading / unloading area(s) is preferred off rear lanes, side streets and right of ways. Where appropriate, consider a single vehicular access point for the loading / unloading area(s) and waste collection area(s)
- 4.6.2 (control 4) Driveways should be:
  - Provided from lanes and secondary streets rather than the primary street
  - Designed to avoid direct access across a site boundary with a major road. Auxiliary lanes (deceleration and acceleration) may need to be provided to minimise conflicts between entering / leaving traffic and fast moving through traffic;
  - For driveways with high traffic volumes, located away from major roads, intersections, opposite other intense developments, high pedestrian zones, and where right turn movements would obstruct traffic.

Mirvac have considered the access requirements within the DCP and have subsequently amended the concept masterplan to amend, remove or relocate key access points to AIE Collector Road No.1 where appropriate and possible inline with the DCP and TfNSW comments. Refer attached revised AIE concept masterplan.

As outlined within the DCP Section 4.6.2 control No.4, and discussed with TfNSW at meeting on 16 November 2021, Mirvac have sought to amend the access to Warehouse No.1 as follows:

- Access to the café / western fire compliance access road to be via a dedicated left in only deceleration and slip turning lane; and
- Access to Warehouse No.1 southern carpark to be moved east of the proposed AIE access Road No.4.

It should be noted that direct access from the AIE Road No.1 Collector Road to Warehouse No.1 hardstand is unavoidable due to typical industrial user circulation requirements (i.e right hand down) and access circulation requirements to meet fire compliance standards.

We believe the proposed revised access arrangement for Warehouse No.1 with the inclusion of a deceleration / slip lane still achieves the aims and objectives of the DCP, is necessary in this

circumstance, and will provide for improved access outcomes to the allotment whilst maintaining efficiency of the proposed road system.

It is noted that within meeting with TfNSW on 16 November 2021, TfNSW advised access points to AIE Access Road No.1 east of AIE Access Road No.4 could be provided without the need for deceleration / slip lanes. Notwithstanding, as discussed above, Mirvac have amended the concept masterplan to amend, remove or relocate key access points to AIE Collector Road No.1 where appropriate and possible.

Finally, it is however noted that several other working examples exist within the Western Sydney Employment Area with unrestricted driveways close to signalised intersections without the need for deceleration / slip lanes. These examples are provided below for ease of reference.



Calibre Industrial Estate - Entry / exit located 60m from intersection stop line

Old Wallgrove Road / Eastern Creek Drive - Hardstand entry located 50m from intersection stop line



Lenore Drive / Templar Road – Heavy Vehicle diesel station – entry located 53m from intersection stop line



Old Wallgrove Road / Millner Avenue – Carpark and Hardstand entry / exists located approximately 113m from intersection stop line



Aspect Industrial Estate (RTS concept masterplan) - Proposed Warehouse No.1 - 87m from stop line



Aspect Industrial Estate (Revised concept masterplan) – Proposed Warehouse No.1 – with deceleration / slip lane for left in only access and carpark entry / exit moved east of AIE Road No.4.



### TfNSW key comment No.10:

### Recommendation

It is recommended that the following condition be included should any consent be provided:

No warehouse access will be supported on Access Road 1 between the Signalised intersection of Mamre Road/Access Road 1 and Access Road 4 for safety and efficiency reasons. Any Warehouse access on Access Road 1 east of Access Road 4 is to include a slip lane in line with Austroads Standards to ensure that the 'High Order Road' maintains its efficiency once the broader Mamre Road Precinct has been developed.

### Response:

## Mirvac does not support a condition per the above.

The above differs from advice given from TfNSW in meeting on 16 November 2021. TfNSW advised:

 Access west of Road No.4 along Road No.1 could be considered as left in only with the provision of a deceleration / slip lane. • Access east of Road No.4 along Road No.1 could be provided without the need for deceleration / slip lanes.

Refer comments above in which Mirvac has sought to amend the AIE concept masterplan where possible / appropriate.

We maintain that the proposed revised access arrangement for Warehouse No.1 with the inclusion of a deceleration / slip lane still achieves the aims and objectives of the DCP, is necessary in this circumstance, and will provide for improved access outcomes to the allotment whilst maintaining efficiency of the proposed road system.

### TfNSW key comment No.11:

The swept path of the longest vehicle (including garbage trucks, building maintenance vehicles and removalists) entering and exiting the subject site, as well as manoeuvrability through the site, shall be in accordance with AUSTROADS. In this regard, a plan shall be submitted to Council for approval, which shows that the proposed development complies with this requirement.

## Response:

Noted. Swept paths were included as part of the latest RtS submission.

## TfNSW key comment No.12:

# Comment

There are several driveway accesses located within the proposed signal footprint. It is the responsibility of the applicant to initiate discussions with the landowner to relocate the driveway a safe distance from the signals. TfNSW will not support the driveway access being retained within the intersection.

### **Recommendation**

It is recommended that the following <u>condition</u> be included should any consent be provided:

The driveway access for 819-831 and 833B Mamre Road is to be removed and relocated away from the signal footprint and written agreement from the landowner is to be provided prior to entering into a WAD with TfNSW.

## Response:

### Mirvac does not support a condition per the above.

It is not uncommon for private driveways to be included within the area of influence of an intersection, particularly 'interim' signal arrangements such as the proposed intersection.

While it is desirable to avoid private driveways opposite signalised legs at intersections, it is not always possible to do so and over the years there have been a number of traffic signal sites operating with unsignalised private driveways at the intersection.

Recent examples of this as approved by TfNSW include the following:

- Intersection of Bringelly Road and Kelvin Park Drive, Bringelly. This intersection was commissioned in August 2020; and
- Intersection of Windsor Road and Mount Carmel Drive, Box Hill which was approved by TfNSW under TCS 4805 and commissioned in October 2020.

Images of these intersections are provided below for ease of reference.



Intersection of Bringelly Road and Kelvin Park Drive, Bringelly

Intersection of Windsor Road and Mount Carmel Drive, Box Hill



TfNSW comments above differs from the position taken by TfNSW with the abovementioned recently commissioned interim and ultimate intersections.

Whilst we note that historically, driveways at intersections with traffic signals have been dealt with on a case-by-case basis, there is nothing in the traffic signal design guide or any technical directions that we are aware of, that states that private driveways should be removed/relocated when traffic signals are installed.

Suitable arrangements shall be made to maintain existing driveways. However, the relocation of those driveways more broadly is not practicable at this late stage in the assessment of the AIE and may need to be deferred to a later phase of design and require TfNSW to facilitate consultation regarding driveway relocation. However Mirvac do not support driveway relocation to be a condition of consent for the AIE.

It should be noted that Ultimate Intersection arrangement for the AIE intersection will include a fourth leg in the future post TfNSW land acquisition and development of the land on the western side of Mamre Road. At which time, the aforementioned driveways on the western verge will no longer exist.

The existing driveway(s) are to private properties and would only generate small volumes of traffic, i.e. 1 to 2 vehicles per hour and as such represents a very low risk in terms of potential road safety at the intersection. The driveway(s) will be examined in a road safety audit, as part of the WAD design process rather than a condition be placed over the consent prior to entering into a WAD.

Finally, the private driveways were discussed with TfNSW at pre-lodgement meeting held on 21 September 2020. TfNSW advised no concern with the driveways remaining as left in / left out arrangements. TfNSW noted that TfNSW would notify residents of left in / left out arrangements post intersection design approvals. This correspondence with TfNSW was noted within Table 20 of the AIE EIS. No further comment has been received by TfNSW on these driveways until letter received on 4 November 2021.

## TfNSW key comment No.13:

TfNSW notes that the Road 1 is a "High Order Road" or primary (collector) road as stated in the Mamre Road Precinct DCP. The DCP also states Driveways should be provided from lanes and secondary streets rather than the primary street, wherever practical. In this regard TfNSW would not support multiple access points along the collector road Road 1.

In addition the access point to Warehouse 1 carpark is located in close proximity to the proposed signals and would not be supported.

### **Recommendation**

It is recommended to consolidate individual sites to reduce fragmented road side activity. Site consolidation should keep direct access to the collector roads to a minimum. Reducing conflict points along the collector road will support traffic efficiency and safety.

Warehouse 1 has access to the minor road Access Road 1. All accesses to the development should be from this road.

## Response:

Refer above responses to TfNSW key comment No.9.

We believe we have adequately addressed all key comments as provided by TfNSW.

Given the stage of the assessment of the AIE SSD-10448 and current customer commitments to the site, we respectfully request DPIE to seek TfNSW' urgent review and confirmation that the AIE SSD-10448 determination can be supported based on the above comments and proposed revised AIE concept masterplan.

Should it assist DPIE and TfNSW to expedite a review and provide response to the items contained within this letter, Mirvac would be happy to facilitate a meeting with our consultants to resolve.

Yours sincerely