

Five Ways, Crows Nest (SSD-66826207) | Traffic Addendum Statement

1. Introduction

This traffic addendum statement has been prepared by JMT Consulting to respond to the feedback provided by Transport for NSW (TfNSW) following the exhibition of State Significant Development SSD-66826207 for the proposed development at Five Ways, Crows Nest. This document specifically responds to Item 5 (Traffic Impact) of the TfNSW correspondence dated 4 June 2024 (refer Appendix A of this document). This addendum statement should be read in conjunction with the updated transport impact assessment report prepared by JMT Consulting and dated 29 August 2024 submitted as part of the broader Response to Submissions package.

2. Response to TfNSW Submission – Item 5 (Traffic Impact)

TfNSW Comment:

a) The proposed vehicular access on Alexander Street should be assessed and designed taking into account the total traffic generation anticipated to be generated by the proposed development. In this regard the following comments are provided which should be addressed in the applicant's Response to Submissions:

i. The retail traffic generation rate relied upon was based on a full line supermarket site in an area and at a site not considered to be directly comparable to the subject site in Crows Nest. The proposed development has 8 retail tenancies ranging in size, and it is likely that the site uses could include restaurants/cafes and other retail uses which may result in a higher density of people per sqm when compared to the supermarket surveyed and different mode share. As such, additional justification for the traffic generation rates relied upon are to be provided,

ii. There is currently minimal on-site car parking and as such, people driving to visit existing uses within the proposed development boundaries would park on-street or within one of a number of other car parks within Crows Nest. The Transport Impact Assessment prepared by JMT dated 28/3/24 uses a discount of the site's existing floor area as justification for the reduced trip generation rates however these existing trips would be spread across Crows Nest and are now proposed to be concentrated in Alexander Street.

Response:

Updated traffic modelling has been undertaken and is detailed in the revised transport impact assessment report dated 29 August 2024. This traffic modelling has not considered any discounted traffic generation associated with existing site uses in accordance with the advice provided by TfNSW – therefore considering a worst case scenario.

The traffic surveys referenced in the transport impact assessment report for a comparable site are considered appropriate given this site contains a number of speciality stores as well as restaurants/cafes. The full size supermarket acts as an anchor to the centre and draws in both a local and more regional catchment – therefore representing a suitable comparison for the purposes of traffic generation.

TfNSW Comment:

b) The proposed development site driveway was modelled as an isolated intersection using Sidra Intersection 9.1. Due to the closely spaced intersections and platoons created by those intersections and the queuing that is typically observed northbound on Alexander Street adjacent to the proposed development, additional information is required in relation to the existing northbound queues and how often they are observed to extend past the proposed development driveway during weekday and weekend peak periods.

Response:

In response to concerns raised by TfNSW regarding the traffic impact of the proposal, the design of the driveway has been modified to restrict vehicle movements out of the driveway on Alexander Street to left in – left out only. This turning restriction will remove any impact of queueing vehicles on Alexander Street waiting to turn right into the site and therefore completely eliminating any risk of traffic queuing back to the Falcon Street traffic lights.

In this context the potential for the site access driveway to impact northbound queues is completely eliminated and therefore there is no further requirement to consider the interaction of northbound queues with the future point of access.

An updated SIDRA traffic model was developed to understand the extent of queues that may form on Alexander Street in the vicinity of the proposed driveway – noting the proposed left in – left out restriction. The outcomes of the modelling are summarised in Table 1 and indicate the following:

- The driveway access point on Alexander Street is forecast to operate at a strong ‘Level of Service A’ with significant spare capacity.
- No vehicle queue is forecast on Alexander Street given the left in / left out restriction.

Detailed traffic modelling outputs are provided as Appendix A of the updated transport impact assessment dated 29 August 2024 and provided as Appendix B of this document.

Table 1 Traffic modelling outcomes – Alexander Street driveway

Scenario	Performance of Alexander Street Driveway		
	Level of Service	Degree of Saturation	95% queue (Alexander Street)
AM Peak Hour	A	0.20	0m
PM Peak Hour	A	0.20	0m
Sat Peak Hour	A	0.19	0m

TfNSW Comment:

c) Motorists turning right into the proposed site access on Alexander Street have the potential to cause queueing on Alexander Street which could extend back to the signalised intersection of Falcon Street / Alexander Street, impacting signal operations. Consideration may need to be given to the removal of some on-street parking in the kerbside lane on Alexander Street (southbound) in peak periods to allow space for vehicles to pass vehicles turning right into the site. North Sydney Council should be consulted in this regard.

Response:

In response to concerns raised by TfNSW regarding the traffic impact of the proposal, the design of the driveway has been modified to restrict vehicle movements out of the driveway on Alexander Street to left in – left out only. This turning restriction will remove any impact of queueing vehicles on Alexander Street waiting to turn right into the site and therefore completely eliminating any risk of traffic queuing back to the Falcon Street traffic lights.

In this context there is not considered any requirement for on-street parking on the kerbside lane of Alexander Street to be removed as part of the proposal.

Appendix A: TfNSW Correspondence

4 June 2024

TfNSW Reference: SYD24/00406/03
Council's Reference: SSD-66826207

Ms Kiersten Fishburn
Secretary
Department of Planning Housing and Infrastructure
Locked Bag 5022
Parramatta NSW 2124

Attention: John Martinez

**MIXED USE DEVELOPMENT INCLUDING IN-FILL AFFORDABLE HOUSING - FIVE WAYS, CROWS NEST
EXHIBITION OF EIS**

Dear Ms Fishburn,

Thank you for providing Transport for NSW (**TfNSW**) an opportunity to comment on the exhibition of the Environmental Impact Statement (**EIS**) for the application SSD-66826207 which is for a mixed-use development including in-fill affordable housing at the Five Ways intersection in Crows Nest.

TfNSW provides comments and recommended conditions to the Department to assist with the determination of the application which are set out in **Attachment A**. If not already undertaken, the application should be referred to Sydney Metro to ensure that the development does not impact the structural integrity of the Metro tunnel. TfNSW advises that this submission should be read in conjunction with any submission provided by Sydney Metro.

For more information, please contact Matthew Houlden, Land Use Planner, by email at development.sydney@transport.nsw.gov.au.

Yours sincerely,



Rachel Davis
Senior Land Use Planner
Land Use Assessment Eastern
Planning and Programs, Greater Sydney Division

OFFICIAL

Attachment A: TfNSW comments and recommended conditions

Category	Comment/Condition
<p>1. Pedestrians</p>	<p><u>Comment:</u></p> <p>a) TfNSW notes the proposed pedestrian through-site links which connect Falcon Street, Alexander Street and Pacific Highway. The Department should be satisfied that the proposed design provides measures to minimise the risk of pedestrians attempting to cross midblock which could lead to pedestrian crashes.</p> <p>b) Up to 81% of the users of the development are anticipated to walk or cycle to and from the development, including as part of a public transport trip. The Applicant should assess the capacity of the existing pedestrian refuge island at the intersection of Pacific Highway / Falcon Street to accommodate the additional pedestrian demands and if required, consider the impacts of removing the left turn slip lane in the southeast corner at the intersection of Pacific Highway / Falcon Street to better cater for active transport users. Traffic modelling should be undertaken to determine the impact of the removal the left turn slip on traffic using the intersection to understand feasibility of this option.</p>
<p>2. Public Transport</p>	<p><u>Comment:</u></p> <p>The central section of the building facing Pacific Highway is setback to allow additional space for the existing bus stop along with other potential uses at this location. The existing bus stop, seat and queuing area is wholly underneath building awnings at the ground floor level. The proposed building appears to not have awnings above the entire existing bus stop location with some awnings provided at the ground floor and some at the mezzanine level. If bus passengers are not provided weather protection across the entire bus stop, this could lead to a worse customer experience at the bus stop on days with wet or hot and sunny weather. Clarification should be provided in the applicant's Response to Submissions that awnings will cover the entire bus stop area.</p> <p><u>Recommended condition:</u></p> <p>If construction works will impact pedestrian or vehicular access to the bus stop adjacent to the site on Pacific Highway (Bus Stop ID 2065137), the bus stop shall be temporarily relocated to a suitable location to be determined in consultation with Transdev John Holland Buses (NSW) Pty Ltd and TfNSW. After the construction works affecting access to the bus stop are complete, the bus stop sign and seat shall be returned to the bus stop. These works shall be at no cost to TfNSW.</p>
<p>3. Car Parking</p>	<p><u>Comment:</u></p> <p>a) Considering that the site is within 400m to Sydney Metro and there are frequent bus services provided along the Pacific Highway, TfNSW recommends that consideration is given to adopting lower car parking rates than currently provided. It is noted that this feedback was provided previously by Sydney Metro as part of the planning proposal submission, which suggested using parking rates similar to the Sydney Metro Crows Nest OSD as more appropriate given the significant investment in public transport in the area. This was also a recommendation set out previously within the Department's transport strategy for the precinct - Strategic Transport Study: St Leonards and Crows Nest Station Precinct (2018). Page 99 of the 2018 strategy states:</p> <ul style="list-style-type: none"> • "Car parking rates for future development, particularly close to the provision of high capacity and frequency public transport services should adopt a minimalist approach to reduce the impact of additional vehicle traffic in the Precinct." <p>b) There is inconsistency in the quantum of car parking for commercial and retail uses between the EIS and the Transport Impact Assessment. The Applicant should clarify the number of commercial and retail car parking spaces that will be allocated to each site use as this is considered likely to impact the traffic generation of the commercial and retail uses.</p>
<p>4. Site Design</p>	<p><u>Recommended condition:</u></p> <p>The layout of the proposed car parking areas associated with the subject development (including, driveways, grades, turn paths, interface with the footpath on Alexander Street, sight distance requirements, aisle widths, aisle lengths, and parking bay dimensions) should be in accordance with AS 2890.1-2004, AS2890.6-2022 and AS 2890.2-2018 for heavy vehicle usage.</p>

<p>5. Traffic Impact</p>	<p><u>Comment:</u></p> <p>a) The proposed vehicular access on Alexander Street should be assessed and designed taking into account the <i>total</i> traffic generation anticipated to be generated by the proposed development. In this regard the following comments are provided which should be addressed in the applicant’s Response to Submissions:</p> <p>i. The retail traffic generation rate relied upon was based on a full line supermarket site in an area and at a site not considered to be directly comparable to the subject site in Crows Nest. The proposed development has 8 retail tenancies ranging in size, and it is likely that the site uses could include restaurants / cafés and other retail uses which may result in a higher density of people per sqm when compared to the supermarket surveyed and different mode share. As such, additional justification for the traffic generation rates relied upon are to be provided.</p> <p>ii. There is currently minimal on-site car parking and as such, people driving to visit existing uses within the proposed development boundaries would park on-street or within one of a number of other car parks within Crows Nest. The Transport Impact Assessment prepared by JMT dated 28/3/2/24 uses a discount of the site’s existing floor area as justification for the reduced trip generation rates however these existing trips would be spread across Crows Nest and are now proposed to be concentrated in Alexander Street.</p> <p>b) The proposed development site driveway was modelled as an isolated intersection using Sidra Intersection 9.1. Due to the closely spaced intersections and platoons created by those intersections and the queuing that is typically observed northbound on Alexander Street adjacent to the proposed development, additional information is required in relation to the existing northbound queues and how often they are observed to extend past the proposed development driveway during weekday and weekend peak periods.</p> <p>c) Motorists turning right into the proposed site access on Alexander Street have the potential to cause queueing on Alexander Street which could extend back to the signalised intersection of Falcon Street / Alexander Street, impacting signal operations. Consideration may need to be given to the removal of some on-street parking in the kerbside lane on Alexander Street (southbound) in peak periods to allow space for vehicles to pass vehicles turning right into the site. North Sydney Council should be consulted in this regard.</p>
<p>6. Digital Advertising Sign</p>	<p><u>Comment:</u></p> <p>TfNSW does not support the proposed installation of the LED advertising sign at this complex intersection due to the potential distractions it may cause for drivers approaching and pedestrians and cyclists using the intersection. TfNSW is of the view that the digital advertising sign does not meet a number of criteria required by the 2017 NSW Transport Corridor Outdoor Advertising and Signage Guidelines.</p>
<p>7. Green Travel Plan</p>	<p><u>Comment:</u></p> <p>TfNSW notes the preliminary Green Travel Plan (GTP) included as part of the Transport Impact Assessment prepared by JMT dated 28 March 2024.</p> <p>A full GTP should be prepared to support the mode share targets of the proposed development along with a Travel Access Guide (TAG), an implementation strategy and details on incentives and other measures that may assist the development meeting its goals. You can refer to the NSW Government website for Travel Demand Management (TDM) www.mysydney.nsw.gov.au/travelchoices/tdm with useful resources and templates for GTPs. This also includes both hard activities and soft activities for GTP initiatives.</p> <p>TfNSW is also happy to meet with the proponent to discuss these requirements.</p> <p><u>Recommended condition:</u></p> <p>Prior to the issue of the first Occupation Certificate, the proponent shall prepare a Green Travel Plan (GTP) in consultation with TfNSW. The NSW Government provides a range of resources to help in the development of a GTP at www.mysydney.nsw.gov.au/travelchoices/tdm#support</p> <p>The Applicant should submit a copy of the final GTP to TfNSW at development.sco@transport.nsw.gov.au for endorsement, prior to the issue of any Occupation Certificate.</p>

<p>8. Construction Impacts</p>	<p><u>Recommended conditions:</u></p> <p>a) A Construction Pedestrian Traffic Management Plan (CPTMP) detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to TfNSW for review and endorsement prior to the issue of a construction certificate.</p> <p>Please send to development.ctmp.cjp@transport.nsw.gov.au.</p> <p>b) A Road Occupancy Licence (ROL) should be obtained from Transport Management Centre (TMC) for any works that may impact on traffic flows on Pacific Highway and Falcon Street during construction activities. A ROL can be obtained through https://myrta.com/oplinc2/pages/security/oplincLogin.jsf.</p>
<p>9. Impacts to Pacific Highway and Falcon Street</p>	<p><u>Comment:</u></p> <p>a) The proposed basement excavation has the potential to impact the stability of the Pacific Highway and Falcon Street.</p> <p>b) Any kerb and gutter reconstruction, gutter crossing removal works and utility works (between kerbs) proposed or required along the Pacific Highway or Falcon Street frontages will require TfNSW concurrence under section 138 of the <i>Roads Act 1993</i>.</p> <p><u>Recommended conditions:</u></p> <ul style="list-style-type: none"> The developer is to submit design drawings and documents relating to the excavation of the site and support structures to TfNSW for assessment, in accordance with Technical Direction GTD2020/001. <p>The developer is to submit all documentation at least six (6) weeks prior to commencement of construction and is to meet the full cost of the assessment by TfNSW. Please send all documentation to development.sydney@transport.nsw.gov.au.</p> <p>If it is necessary to excavate below the level of the base of the footings of the adjoining roadways, the person acting on the consent shall ensure that the owner/s of the roadway is/are given at least seven (7) day notice of the intention to excavate below the base of the footings. The notice is to include complete details of the work.</p> <ul style="list-style-type: none"> TfNSW would provide concurrence to the kerb and gutter and associated works on Pacific Highway and Falcon Street under section 138 of the <i>Roads Act 1993</i> subject to the following conditions being included in any consent: <ul style="list-style-type: none"> i. The design and construction of any kerb and gutter works on Pacific Highway and Falcon Street shall be in accordance with TfNSW requirements. Details of these requirements should be obtained by email to developerworks.sydney@transport.nsw.gov.au. <p>Detailed design plans of the proposed kerb and gutter are to be submitted to TfNSW for approval prior to the issue of a construction certificate and commencement of any road works. Please send all documentation to development.sydney@transport.nsw.gov.au.</p> <p>A plan checking fee and lodgement of a performance bond is required from the applicant prior to the release of the approved road design plans by TfNSW.</p> ii. Any proposed public utility adjustment/relocation works on the state road network will require detailed civil design plans for road opening/underboring to be submitted to TfNSW for review and acceptance prior to the commencement of any works. The developer must also obtain any necessary approvals from the various public utility authorities and/or their agents. Please send all documentation to development.sydney@transport.nsw.gov.au. A plan checking fee will be payable and a performance bond may be required before TfNSW approval is issued.

Appendix B: Traffic Modelling Outputs

MOVEMENT SUMMARY

 Site: 101 [Saturday Peak Hour LILO (Site Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h]	[HV veh/h]	[Total veh/h]	[HV %]				[Veh. veh]	[Dist m]				
South: Alexander Street (S)														
1	L2	72	2	76	2.8	0.186	5.6	LOS A	0.0	0.0	0.00	0.13	0.00	57.1
2	T1	262	7	276	2.7	0.186	0.0	LOS A	0.0	0.0	0.00	0.13	0.00	58.8
Approach		334	9	352	2.7	0.186	1.2	NA	0.0	0.0	0.00	0.13	0.00	58.4
North: Alexander Street (N)														
8	T1	318	6	335	1.9	0.174	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		318	6	335	1.9	0.174	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
West: Site Driveway														
10	L2	71	1	75	1.4	0.069	9.3	LOS A	0.3	1.9	0.37	0.88	0.37	51.4
Approach		71	1	75	1.4	0.069	9.3	LOS A	0.3	1.9	0.37	0.88	0.37	51.4
All Vehicles		723	16	761	2.2	0.186	1.5	NA	0.3	1.9	0.04	0.15	0.04	58.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
 Delay Model: SIDRA Standard (Geometric Delay is included).
 Queue Model: SIDRA Standard.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: 101 [PM Peak Hour LILO (Site Folder: General)]

New Site

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h]	[HV veh/h]	[Total veh/h]	[HV %]				[Veh. veh]	[Dist m]				
South: Alexander Street (S)														
1	L2	87	2	92	2.3	0.200	5.6	LOS A	0.0	0.0	0.00	0.15	0.00	56.9
2	T1	268	15	282	5.6	0.200	0.1	LOS A	0.0	0.0	0.00	0.15	0.00	58.6
Approach		355	17	374	4.8	0.200	1.4	NA	0.0	0.0	0.00	0.15	0.00	58.1
North: Alexander Street (N)														
8	T1	362	12	381	3.3	0.200	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		362	12	381	3.3	0.200	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
West: Site Driveway														
10	L2	56	1	59	1.8	0.056	9.3	LOS A	0.2	1.5	0.38	0.87	0.38	51.3
Approach		56	1	59	1.8	0.056	9.3	LOS A	0.2	1.5	0.38	0.87	0.38	51.3
All Vehicles		773	30	814	3.9	0.200	1.4	NA	0.2	1.5	0.03	0.13	0.03	58.4

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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

Queue Model: SIDRA Standard.

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

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

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MOVEMENT SUMMARY

 Site: 101 [AM Peak Hour LILO (Site Folder: General)]

New Site

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h]	[HV veh/h]	[Total veh/h]	[HV %]				[Veh. veh]	[Dist m]				
South: Alexander Street (S)														
1	L2	23	2	24	8.7	0.185	5.7	LOS A	0.0	0.0	0.00	0.04	0.00	57.5
2	T1	313	7	329	2.2	0.185	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.6
Approach		336	9	354	2.7	0.185	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.4
North: Alexander Street (N)														
8	T1	368	5	387	1.4	0.200	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		368	5	387	1.4	0.200	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
West: Site Driveway														
10	L2	37	1	39	2.7	0.039	9.6	LOS A	0.1	1.1	0.40	0.87	0.40	51.2
Approach		37	1	39	2.7	0.039	9.6	LOS A	0.1	1.1	0.40	0.87	0.40	51.2
All Vehicles		741	15	780	2.0	0.200	0.7	NA	0.1	1.1	0.02	0.06	0.02	59.2

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

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

Queue Model: SIDRA Standard.

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

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

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