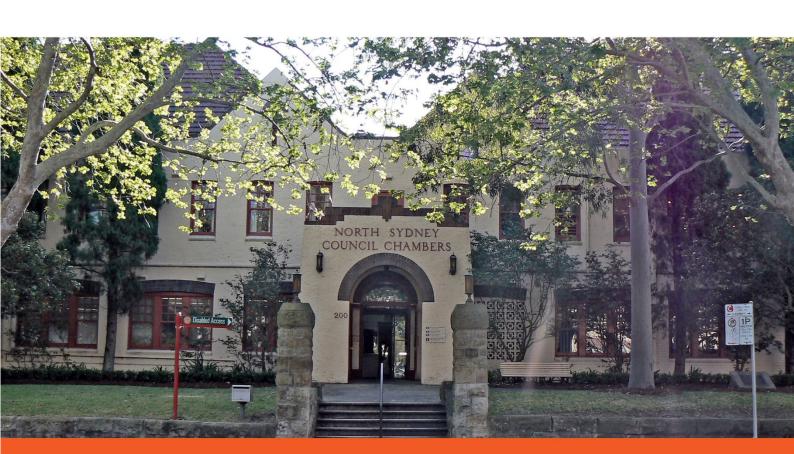


AGENDA

A **MEETING** of the **Traffic Committee** will be held at the Council Chambers, 200 Miller Street, North Sydney at 10:00 AM on Friday 22 July 2022.

The agenda is as follows.

Rob Emerson A/GENERAL MANAGER



North Sydney Council is an Open Government Council. The records of Council are available for public viewing in accordance with this policy, with the only exception being made for certain confidential documents such as legal advice, matters required by legislation not to be divulged, and staff matters.

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1	Confirma	ation	of N	/linutes
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The Minutes of the previous meeting held on 10 June 2022, copies of which had been previously circulated, were taken as read and confirmed.

2.	Disc	losures	of I	nterest
~ .	DISC	iosui cs	VI II	iitei est

3. Matters Arising from the Minutes

Nil.

4. Matters Arising from Council Resolutions

Nil.

5. Items for Consideration

5.1. 19 Lavender Street Parking Changes

AUTHOR: Lizzie Cheng, Traffic and Transport Engineer

ENDORSED BY: Duncan Mitchell, Director Engineering and Property Services

ATTACHMENTS:

1. LTC 19 Lavender St attachment [5.1.1 - 3 pages]

PURPOSE:

Removal of the existing two on-street parking spaces '1P 8.30 am – 6 pm, Mon – Fri, Permit Holders Excepted Area 6' in front of 19 Lavender Street, Lavender Bay and replace it with 'No Parking' restriction to improve access to 21 Lavender Street.

EXECUTIVE SUMMARY:

Council has received a request from the owner of 21 Lavender Street to remove the existing parking spaces on the south side of Lavender Street (service road) to improve access to this property at the end of the service road.

A site investigation revealed that house number 19 and 21 Lavender Street benefitting offstreet parking spaces with their access positioned off Waiwera Street. The laneway is narrow and serving these two properties only.

Application of AS 2890.1 2004 indicated an impediment using a B85 vehicle when vehicle are parked on the existing on-street parking area, therefore it is proposed to remove the two existing on-street parking spaces.

FINANCIAL IMPLICATIONS:

Signage changes only.

RECOMMENDATION:

1. THAT Council remove the two existing on-street parking spaces '1P 8.30 am – 6 pm, Mon – Fri, Permit Holders Excepted Area 6' in front of HNo.19 Lavender Street and replace the parking zone with 'No Parking' restriction.

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

- 2. Our Built Infrastructure
- 2.4 Improved traffic and parking management
- 5. Our Civic Leadership
- 5.3 Community is informed and consulted

BACKGROUND

A request was received from the resident of 21 Lavender Street, Lavender Bay concerning the narrow laneway off Waiwera Street for accessing this property at the end of cul-de-sac.

This section of Lavender Street only serves two properties, No19 and No.21. Accessing the garage to HNo.21 requires traveling past the two parking spaces. Application of AS 2890.1 2004 indicated an impediment using a B85 vehicle when vehicles are parked on the existing on-street parking area, therefore it is proposed to remove the two existing on-street parking spaces.

CONSULTATION REQUIREMENTS

Community engagement is not required.

Relates to ECM No: 8867334

Standard or Guideline Used: AS 2890.1 and NSW Road Rules

Signs & Lines Priority: 2

Precinct and Ward: Lavender Bay and Cammeraygal

Impact on Bicycles: NA Impact on Pedestrians: NA

Impact on Parking: Yes, remove two on-street parking spaces.

DETAIL

An inspection of the location was conducted by Council's Traffic Engineer (Figures 1 and 2 in the attachment). This section of Lavender Street is a cul-de-sac and the only access point for this section of the street is from Waiwera Street. The road is a two-way road, which is approximately 45 meters long with an available varying width of approximately 3.6 meters excluding the garden bed on the northern side.

The existing on-street parking are restricted to '1P $8.30 \, \text{am} - 6 \, \text{pm}$, Mon – Fri, Permit Holders Excepted Area 6' and are located on the southern side of the laneway for a length of 9.7 metres (approximately 2 spaces) adjacent to 19 Lavender Street. The rest of the street has 'No Parking' restriction on the southern side.

The resident from No.21 claims that due to the narrow width of the laneway and the existing garden bed, it is difficult to access their property when vehicles are parked in the 1P restricted parking area adjacent to 19 Lavender Street.

Due to an increasing demand for similar requests, the matter has been previously considered by the North Sydney Traffic Committee. Subsequently, Council resolved

THAT future requests for removal of parking adjacent and or opposite a driveway to improve maneuvering space be handled in the following manner:

- (a) Where the development application indicated no change to on-street parking, the applicant be responded to indicating that Council does not support the request.
- (b) Where applicant has an opportunity to undertake unimpeded left or right out only manoeuvers, the applicant be responded to, indicating that Council does not support the request.
- (c) Where the application of AS 2890.1: 2004 indicates no impediment using a B85 vehicle, the applicant be responded to, indicating that Council does not support the request.
- (d) Where the application of AS 2890.1: 2004 indicates an impediment using a B85 vehicle, Council officers install a temporary advisory sign at the location of parking, indicating that the parking restrictions are being reviewed at the next Traffic Committee meeting.

The issue falls into category (d) above, and therefore a B85 swept path has been prepared by Council's Traffic Engineer, a copy is attached to this report. The swept path indicates an impediment using B85 vehicles when vehicles are parked in the existing restricted on-street parking spaces in front of 19 Lavender Street.

Consequently, a temporary advisory sign was prepared and installed adjacent to No.19 in the restricted parking area from 10 May 2022 to 24 May 2022 (2 weeks) with the proposal of removing the existing two on-street parking spaces.

Community Feedback:

Council received below feedback from resident of 2/19 Lavender Street, Lavender Bay, objecting to the proposed removal of parking spaces.

Sent: Sat, 14 May 2022 10:59:50 +1000

To: "Engineering" <engineering@northsydney.nsw.gov.au>

Subject: Remove the existing parking space at Lavender streetLavender bay

CAUTION: Do not click links or open attachments unless you recognise the sender and know the content is safe.

Dear Lizzie / North Sydney Traffic Committee,

Refering to our telephon conversation on 12th May, regarding the notice from North Sydney Council on a exisiting parking space infront of my property at 2/19 Lavender street Lavender Bay to be taken away to give access to property number 21.

I object this request as I would lose my rights and a access to my property at number 2/19. I hold a permit for zone 6 in my area and this is the most connvenient spot specially for load and unloading shopping and such . It is not fair to make life difficult for a senior citizen .

I sugest before you deside to take the car space away all toghther consider these options.

- 1- Removing the trees along the sandstone wall that are growing fast and leaning over the property 19 and 21 as resently one was cut down for a fear of falling over on property 21.
 Or
- 2- Narrowing the supposedly path way that is over grown by plants and not used as path way anymore.

Or/ and

3- changing the exicting sign to residents parking only.

I hope you consider my concers and rights before you make finnal decision .

Kindly,

Shahla Jalili

During the consultation period, verbal discussion and written comments was received from the resident of 19 Lavender Street. The resident raised objections to the removal of existing two on-street parking spaces and the primary reason for the objection is the resident would lose the opportunity and convenience in her daily life to utilise this space for loading and unloading her daily shopping. In the submission the resident has suggested Council to consider the followings options:

- Removing the trees along the sandstone wall that are growing fast and leaning over property 19 and 21 as recently one was cut down for a fear of falling over on property 21
- 2. Narrowing the supposedly pathway that is overgrown by plants and not used as path way anymore
- 3. Changing the existing sign to residents parking only.

Council has investigated all the options that suggest by the resident from No.19 and the responses to the suggested options were:

Option 1 was referred to Council's Urban Forest Team and team indicated that the existing trees in the sandstone wall area are in good health and condition, therefore, removing is unlikely.

Option 2 was investigated, an inspection by Council's Traffic engineer has confirmed the width of the existing footpath to be 0.8 metres. The minimum footpath width in the North Sydney Council Local Government Area is 1.2 metres, therefore, Council will not consider further reducing this footpath width.

Option 3 was also considered, but as there are no such on-street parking spaces just dedicated to residents and approved in the North Sydney Local Government area it is not recommended to proceed.

As all the suggested options from the resident of No.19 were investigated and none of them were suitable to implement, consequently, by considering the need of the resident from No. 19, it is recommended to replace the two existing on-street parking spaces with 'No Parking' restrictions. Under the NSW Road Rule (Rule 168) it will allow the vehicles to stay in this section of the road for 2 minutes to load and unload goods and the driver of the vehicle does not leave the vehicle unattended. Therefore, if No.21 would like to get access to their property while No.19 is loading and unloading goods then No. 19 can legally stay in the proposed 'No Parking' area and respond quickly to move the car to allow access.

NSW Road Rule, Rule 168:

- (1) The driver of a vehicle must not stop on a length of road or in an area to which a no parking sign applies, unless the driver—
 - (a) is dropping off, or picking up, passengers or goods, and
 - (b) does not leave the vehicle unattended, and
 - (c) completes the dropping off, or picking up, of the passengers or goods, and drives on, as soon as possible and, in any case, within the required time after stopping.
- (2) For this rule, a driver leaves a vehicle **unattended** if the driver leaves the vehicle so the driver is over 3 metres from the closest point of the vehicle.
- (3) In this rule—

required time means—

- (a) if information on or with the sign indicates a time—the indicated time, or
- (b) if there is no indicated time—2 minutes, or
- (c) if there is no indicated time, or the indicated time is less than 5 minutes, and rule 206 applies to the driver—5 minutes

Council's waste collection service was consulted on this matter, it was confirmed that the small trucks can go through the area and there was no issue raised by the residents and contractors in the past concerning the waste collection access. As B85 vehicles are the smallest standard vehicles in the Australian Standards and the swept path indicates an impediment, therefore, it was assumed that at the time of the waste collection the on-street 1P parking area was purposely vacant to allow the collection.



Site inspection photos

Figure 1, Locality map street view from Waivera Street

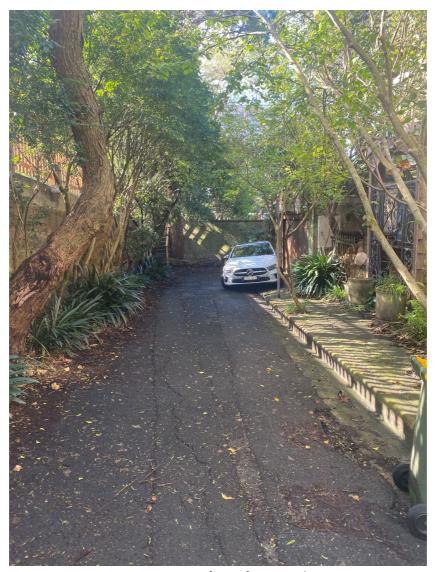
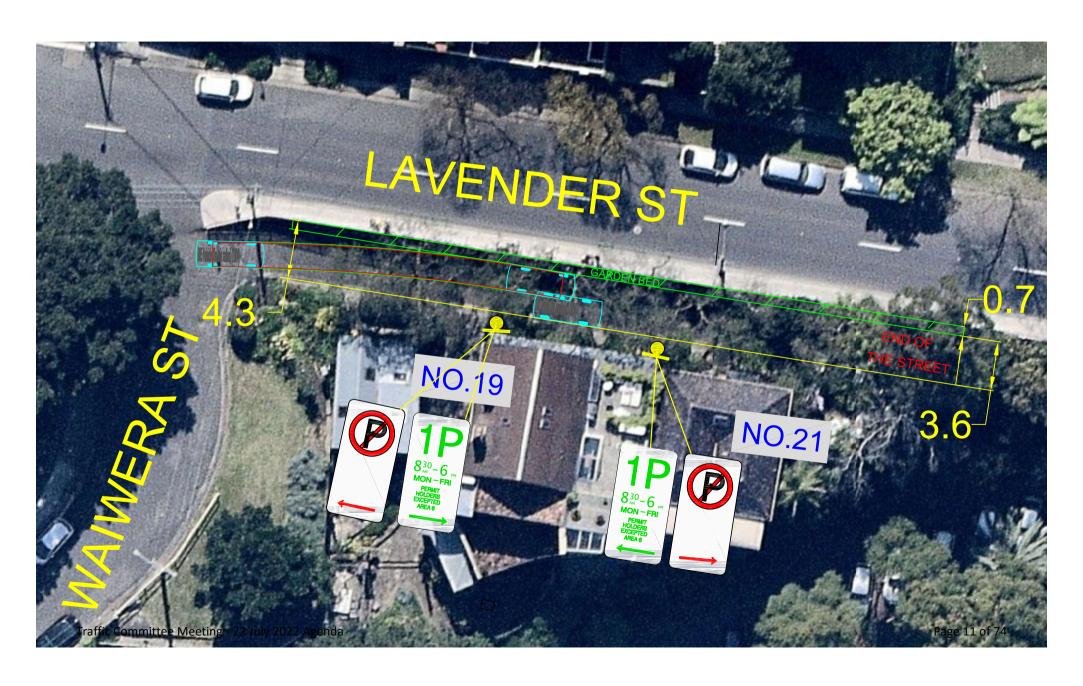


Figure 2, street view in front of 19 Lavender Street

SWEPT PATH ANALYSIS WITH B85 VEHICLES



5.2. Traffic Delegations

AUTHOR: Narelle Lamond, Traffic Operations Officer

ENDORSED BY: Duncan Mitchell, Director Engineering and Property Services

ATTACHMENTS:

1. Attach Traffic Delegations 548 [**5.2.1** - 6 pages]

PURPOSE:

To report to the Committee matters given approval under delegated authority to the Traffic & Transport Operations Manager.

EXECUTIVE SUMMARY:

Attached is a list of projects given approval under delegated authority to the Traffic & Transport Operations Manager. Approval was given subject to concurrence of Transport for NSW, the NSW Police and the local State Members.

FINANCIAL IMPLICATIONS:

There are no direct financial implications arising from this report.

RECOMMENDATION:

1. THAT the information regarding Delegated Authority items be received.

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

- 2. Our Built Infrastructure
- 2.1 Infrastructure and assets meet community needs
- 2.4 Improved traffic and parking management
- 3. Our Future Planning
- 3.5 North Sydney is regulatory compliant

CONSULTATION REQUIREMENTS

Community engagement is not required.

APPROVAL FOR PROJECTS UNDER DELEGATED AUTHORITY TO THE TRAFFIC & TRANSPORT OPERATIONS MANAGER 548th TRAFFIC COMMITTEE – 22 July 2022

No.	Street	Location	Precinct, Ward, Electorate	Issue	Recommendation	Appr	Date	ECM	Comme nts
Reside	nt Parking	1	-	•				•	•
Tempo	orary Road Closu	res							
22-	Ennis Road	Ennis Rd,	Milson,	Temporary	1. THAT Council raise no objection to	Yes	24-May-22	8903034	
045		Milsons Point	Cammeraygal,	Road Closure	the temporary road closure of Ennis				
			North Shore		Rd, Milsons Point off Broughton St				
					from 9pm 24/06 until 4am 24/06 for				
					the purpose of Sydney Harbour Bridge				
					maintenance, as per the submitted				
					application and council's standard				
					road closure conditions. Approval is				
					subject to managed access to all				
					affected properties and the applicant				
					notifying all affected				
					residents/tenants as per Council's				
					standard conditions of approval.				
					2. THAT should Council receive an				
					application for an extension or				
					alternative date/s to carry out these				
					works due to inclement weather or				
					operational delays, that application be				
					approved, subject to Police Permit				
22-	Blue Street	Blue St, North	Layender Day	Tomporoni	approval. 1. THAT Council raise no objection to	Yes	24 May 22	8903036	
046	Blue Street	· ·	Lavender Bay, Cammeraygal,	Temporary Road Closure	the temporary road closure of Blue St,	res	24-May-22	8903036	
046		Sydney	North Shore	Road Closure	North Sydney from 9pm 24/06 until				
			NOI UI SIIOI E		4am 24/06 for the purpose of Sydney				
					Harbour Bridge maintenance, as per				
					the submitted application and				
					council's standard road closure				
	1				council's standard road closure				

No.	Street	Location	Precinct, Ward, Electorate	Issue	Recommendation	Appr	Date	ECM	Comme nts
					conditions. Approval is subject to managed access to all affected properties and the applicant notifying all affected residents/tenants as per Council's standard conditions of approval. 2. THAT should Council receive an application for an extension or alternative date/s to carry out these works due to inclement weather or operational delays, that application be				
					approved, subject to Police Permit approval.				
22- 053	Cabramatta Road	Cabramatta Rd, Cremorne	Harrison, Cammeraygal, North Shore	Temporary Road Closure	1. THAT Council raise no objection to the temporary road closure of Cabramatta Rd, Cremorne on 07.07.22 from 7pm to 5am for the purpose of telecommunications upgrade, as per the submitted application and council's standard road closure conditions. Approval is subject to managed access to all affected properties and the applicant notifying all affected residents/tenants as per Council's standard conditions of approval. 2. THAT should Council receive an application for an extension or alternative date/s to carry out these works due to inclement weather or operational delays, that application be approved, subject to Police Permit approval.	Yes	15-Jun-22		Emerge ncy works

No.	Street	Location	Precinct, Ward, Electorate	Issue	Recommendation	Appr	Date	ECM	Comme nts
Specia	l Use Zones	l		Ш				l	l .
22- 048	Bay Road	North Sydney Demonstration School located at Bay Rd Waverton	Waverton, Cammeraygal, North Shore	Works Zone	1. THAT existing "Bus Zone 8:30-9:30am, 2:30-3:15pm Mon-Fri" signs be removed and 20 metres of "Works Zone 7am-5pm Mon-Fri 8am-1pm Sat", be installed outside North Sydney Demonstration School, on the opposite side of the road to no. 12-14 Bay Road, Waverton, for an initial period of 37 weeks. 2. THAT two parking spaces (11.6 metres) of "1/4P 6:30-9:30am; 2:30-6:30pm Mon-Fri" and "2P 9:30am-2:30pm Mon-Fri Permit Holders Excepted Area 10" be installed to the west of the works zone. 3. THAT 20 metres of "1/4P 8:30-9:30am; 2:30-3:30pm Mon-Fri" and "1/2P 9:30am-2:30pm, 3:30-6:00pm Mon-Fri Permit Holders Excepted Area 10" be removed and replaced with 20 metres of "Bus Zone 8:30-9:30am, 2:30-3:15pm Mon-Fri" further west of the pedestrian	Yes	20-Jun-22	8913127	
					crossing, opposite no. 24 Bay Road, Waverton.				
22- 049	Thomas Street	26 Thomas St, McMahons point	Works Zone	Union, Cammeraygal, North Shore	THAT opposite no. 26 Thomas St, McMahons Point, a 7-metre 'Works Zone 7am-5pm Mon-Fri 8am-1pm Sat' be installed as shown on the attached plan, subject to the attached conditions, for an initial period of 66 weeks.	Yes	23-Jun-22	8883677	

No.	Street	Location	Precinct, Ward, Electorate	Issue	Recommendation	Appr	Date	ECM	Comme nts
22- 054	High Street	42 High St, North Sydney NSW 2060	CBD, Cammeraygal, North Shore	Works Zone	THAT in front of 42 High St, 8.2 metre 'Works Zone 7am-5pm Mon-Fri 8am-1pm Sat' be installed as shown on the attached plan, subject to the attached conditions, including truck size limit of 6.4m small rigid vehicle (SRV), for an initial period of 12 weeks.	Yes	20-Jun-22	8912341	
22- 055	Parraween Street	At the rear of 372 Military Rd, Cremorne in Parraween St	Brightmore, St Leonards, Willoughby	Works Zone	THAT the existing "2P 8.30am to 6.00pm Mon to Friday Permit Holders Excepted Area 27 sign at the rear of property in Parraween Street be removed. THAT a 9.2m metres 'Works Zone 7am-5pm Mon-Fri 8am-1pm Sat' be installed at the rear of property in Parraween Street as shown on the attached plan, subject to the attached conditions and for an initial period of 12 weeks. THAT the existing "No Parking (R) sign relocated on the same stem as Works Zone (L) sign	Yes	20-Jun-22	8929234	
Regula	tory Signs	_						_	_
22- 047	Kurraba Road	143 Kurraba Road, Kurraba Point	Kurraba, Cammeraygal, North Shore	No U turn	THAT Council install a No U-turn on the eastern side of Kurraba Road near No. 184B Kurraba Road, Kurraba Point	Yes	30-May-22	8912369	

No.	Street	Location	Precinct, Ward, Electorate	Issue	Recommendation	Appr	Date	ECM	Comme nts
22-	McHatton St	McHatton St,	Waverton,	Signage	THAT the existing "2P 9:30am-	Yes	15-Jun-22	8948180	
051		North Sydney	Cammeraygal,	update	2:30pm Mon-Fri" (L&R) and "P 5min				
			North Shore		8:30-9:30am, 2:30-3:30pm Mon-Fri,				
					School Days" (L&R) signs and pole				
					opposite 28 McHatton St be shifted				
					10m left so that it is centred				
					between the 2 existing poles				
					THAT Council install a mobility				
					parking space "8:30-9:30am, 2:30-				
					3:30pm School Days" next to the				
					newly constructed ramp access to				
					the North Sydney Demonstration				
					School on McHatton Street THAT the pole opposite 10				
					McHatton St be removed and the				
					"2P 9.30am-2.30pm Permit holders				
					Excepted Area 10" sign be relocated				
					to the adjacent Electric Light Pole on				
					the left.				
					THAT the redundant "2P 9.30am-				
					2.30pm Permit holders Excepted				
					Area 10 (L&R)", "1/4 P 8.30am-				
					9.30am, 2.30pm – 3.30pm (L)" and				
					"1/4 P 8.30am-9.30am, 2.30pm -				
					3.30pm (R)" sign and stem signs				
					opposite 8 McHatton Street be				
					removed.				
Signs A	cross Driveways						1		
22-	Wycombe	63 Wycombe	Neutral,	Driveway line	THAT Council install driveway line	Yes	08-Jun-22	8922059	
050	Road	Rd, Neutral Bay	Cammeraygal,	marking	markings across the driveway to no.				
			North Shore		63 Wycombe Road, Neutral Bay.				
22-	John Street	5 John St,	Union,	Driveway Line	THAT Council install driveway line	Yes	15-Jun-22	8924347	
052		MCMAHONS	Cammeraygal,	Marking and	marking x 1 on the north-western side				
		POINT	North Shore	No Parking	of the driveway at No. 5 John St,				
				Signage	McMahons Point NSW 2060				
	ng Signs	1	1	<u></u>	T		1	I	
Nil									

No.	Street	Location	Precinct, Ward, Electorate	Issue	Recommendation	Appr	Date	ECM	Comme nts
Constr	uction Managen	nent Plan							
Austra	lian Road Rules	Compliance Signs							
Nil									
Traffic	Facilities	•				•	•		•
Counci	l Decisions	•	•						
Nil									

5.3. Standing Item Pedestrian Safety

AUTHOR: Iman Mohammadi, Acting Manager Traffic and Transport Operations

ENDORSED BY: Duncan Mitchell, Director Engineering and Property Services

ATTACHMENTS:

Standing Item - Pedestrian Safety - attach July 2022 [5.3.1 - 6 pages]

PURPOSE:

To provide a report to the Committee on current pedestrian safety matters and projects, and their current status.

EXECUTIVE SUMMARY:

At the 530th Traffic Committee meeting on 7 February 2020, it was recommended that pedestrian safety be added to the agenda as a standing item. A list of current pedestrian safety standing items and their current status is attached.

FINANCIAL IMPLICATIONS:

There are no financial implications arising directly from this report.

RECOMMENDATION:

1. THAT the information concerning Standing Item - Pedestrian Safety be received.

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

- 2. Our Built Infrastructure
- 2.1 Infrastructure and assets meet community needs
- 2.3 Sustainable transport is encouraged

BACKGROUND

At the 530th Traffic Committee meeting on 7 February 2020 it was recommended that pedestrian safety be added to the agenda as a standing item.

At the 547th Traffic Committee meeting on 10 June 2022 it was resolved to recommend:

- 1. **THAT** a report come back to the next meeting on pedestrian safety around Young Street Plaza with consideration for options such as a pedestrian overpass from May Gibbs Place to the Young Street Plaza with a lift. (5.3)
- 2. **THAT** a report come back to the next meeting on pedestrian and vehicular accidents at the corner of Military Road and Young Street. (5.3)

Reported crash data in the latest five year period from 1 July 2016 to 30 June 2021 reveals the following crashes in Military Rd with Young Street and May Gibbs Place intersections:

- 1. In 2016, one "rear end" non-casualty crash at Young Street involving an SUV and a sedan/hatch traveling east.
- 2. In 2017, one "rear end" minor injury crash at Young Street involving an unknown motor vehicle and a sedan/hatch traveling east.
- 3. In 2016, one "Lane change left" serious injury crash at Young Street involving an SUV and a motorcycle traveling west.
- 4. In 2016, one "On road-out of control" serious injury crash at May Gibbs Place involving a motorcycle traveling west.

There have not been any recorded incidents involving pedestrians in the latest five year period at the intersection of Military Road and Young Street.

Council has engaged a Traffic Consultant to prepare a Traffic Impact Assessment (TIA) for the proposed re-Opening of Young Street at Military Road which will take into consideration, safety of pedestrians and other road users. The TIA is required to be approved by TfNSW under Section 138 which also requires Local Traffic Committee's approval.

This is similar to the report that was prepared for Closure of Young Street in 2021 and endorsed by TfNSW.

CONSULTATION REQUIREMENTS

Community engagement is not required.

Relates to ECM No: N/A

Standard or Guideline Used: N/A

Signs & Lines Priority: N/A

Precinct and Ward: All Precincts, All Wards

Impact on Bicycles: Impacts on cyclists will be assessed for individual projects when they are

reported to the Committee in detail.

Impact on Pedestrians: This report highlights current projects that benefit pedestrians

Impact on Parking: Impacts on parking will be assessed for individual projects when they are

reported to the Committee in detail.

DETAIL

The table below has the current status of projects that relate to pedestrian safety.

Standing Item - Pedestrian Safety Traffic Committee 22 July 2022

Item	Street	Location	First TC	Summary	Problem/Request	Comments	ECM
20/01	Bligh Street, Kirribilli	Between Broughton Street and Humphrey Place	20/3/20	Request for Shared Zone	Mayor Gibson has requested a Shared Zone be implemented in Bligh Street due to narrow footpaths and high pedestrian activity in the street.	Bligh Street Shared Zone is listed in Council's Zone 7 LATM Action Plan as a long term priority (T.17). Bligh Street Shared Zone is also listed in Council's Draft 40km/h and 10km/h Shared Zone Masterplan as a long term priority. A Shared Zone for Bligh Street is being implemented as part of the DPIE Streets as Shared Spaces Program. A proposal to construct a permanent shared zone in Bligh Street has been submitted under Active Transport Walking & Cycling Program for funding.	
20/02	Various	Various	8/7/20	Blackspot Grant Funded Projects 2020/21	Council was successful with grant funding applications for 4 locations under the Federal Black Spot Program. Design, consultation and construction is scheduled for 2020/21 financial year.	Projects include: 1. Hazelbank St/Morton St - move stop lines forward & install refuge island (TC 5/2/21 - Item 4.6; TC 19/3/21 - Item 4.5) (Completed) 2. Kurraba Road near Hayes St - raise existing pedestrian crossing (Completed) 3. Lavender St at Walker St - raise existing pedestrian crossing (TC 5/2/21 - Item 4.7)(Completed) 4. Ben Boyd Road between Lindsay Street and Kurraba Road - traffic calming (TC 19/3/21 - Item 4.4) (Further investigation is being undertaken) TfNSW has agreed to roll over the funding to FY22-23.	

Item	Street	Location	First TC	Summary	Problem/Request	Comments	ECM
20/03	Various	Various	20/3/20	Pedestrian Crossing Audit	Council's Traffic Engineer completed an audit of all existing	Crossings to be upgraded in 2020/21 include: 1. Clark Road at Margaret Street (Completed) 2. Ben Boyd Road at Hardie Street (Completed) 3. Carabella Street at Fitzroy Street (TC 5/2/21 - Item 4.8)(Completed) Crossings to be upgraded in 2021/22 include: 1. Burton Street at St Aloysius Junior School, Kirribilli - Was ot supported by Community 2. Clarke Street at Willoughby Road, Crows Nest (Design completed, community consultation closed on 13 March 22, a TDA has been prepared and submitted to TC on 22 March 22) - Approved under TDA 22/022 - Ready for construction – Waiting for Council's PM to award the contract 3. Waters Road at Grosvenor Street, Cremorne (Design completed, community consultation is being undertaken close on 13 March 22). reported to 22 April TC. Ready for construction – Waiting for Council's PM to award the contract 4. Morton Street at Rocklands Road, Wollstonecraft. (Design completed, community consultation finished and a TDA prepared and approved by TC, the project passed to project team for action) - Construction is complate 5. Crows Nest Rd/ McHatton St – ped refuge - Community Consultation was concluded 20 March 2022) – Approved under TDA 22/023 Ready for construction – Waiting for Council's PM to award the	
20/06	Moodie Street, Cammeray	Between Ernest Street and Falcon Street	27/11/20	safety	raised concerns about pedestrian safety due to lack of footpath in	Refer to report 4.4 to the Traffic Committee 27/11/20 and report to 23/7/2021. Matter deferred until after Council elections & when public is able to address Committee. Community consultation to be carried out as per the pettition recived at the Marchg 2022 Rtaffic Committee - Also a Traffic Impact Assessment (TIA) be prepared by a Traffic Consultant to determine any impacts that the proposed one way may have on the sorrunding streets	

Item	Street	Location	First TC	Summary	Problem/Request	Comments	ECM
21/01	River Road at Russell Street, Wollstonecraft		5/2/21	n - pedestrian	As part of the implementation of the 2020/21 pedestrian refuge islands are proposed at the intersection of River Road and Russell Street	Refer to report 4.5 to the Traffic Committee 5/2/21. Construction completed August 2021.	
21/02a	Gerard Street at Macpherson Street, Cremorne	Pedestrian crossing	19/3/21	Pedestrian safety at existing pedestrian crossing	At its meeting of 25 February 2019, Council resolved to adopt the following recommendation of the North Sydney Traffic Committee: 1. THAT pedestrian signals on Gerard Street at Macpherson Street be expedited as a high priority project and funding be brought forward to progress the project to construction.	A report was considered at the Council meeting on 30 November 2020 where it was resolved: 1. THAT Council write to the Minister for Transport and Roads requesting special consideration for installation of traffic signals at the intersection of Gerard Street and Macpherson Street on the basis of pedestrian safety and amenity, with reference to this report. The letter was sent 5/2/21 2. THAT the following signage changes be referred to the Traffic Committee for installation under delegation of the Manager Traffic & Transport Operations: a. an additional pedestrian crossing sign installed in front of the tree on the southern side of Gerard Street facing west. b. the Give Way sign on the left-hand side of Macpherson Street at Gerard Street be removed so as not to obstruct the pedestrian crossing sign. Approved and signage instruction issued. 3. THAT all line marking associated with the pedestrian crossing including, zebra markings and zig zag markings on approaches, be maintained and refreshed to ensure visibility to the crossing is adequate. Crossing is included in regular maintenance program. Council received a response from the Parliamentary Secretary for Transport and Roads on 19 April 2021. The response is not favourable to Council's request for traffic signals and staff will contact Transport for NSW regarding alternate solutions.	8478715

Item	Street	Location	First TC	Summary	Problem/Request	Comments	ECM
20/02Ь	Gerard Street at Macpherson Street, Cremorne	Pedestrian crossing	19/3/21	Pedestrian safety at existing pedestrian crossing	At the Traffic Committee meeting 3/9/21 it was recommended: 1. THAT Council notes that despite repeated requests to Transport for New South Wales, there has been a refusal to install traffic lights at the crossing on Gerard Street at Macpherson Street. Therefore, Council must find alternative methods to improve pedestrian safety. 2. THAT Council urgently remark the pedestrian crossing at Gerard Street and Macpherson Street to make it more visible in accordance with TfNSW standards. 3. THAT the crossing at Gerard Street and Macpherson Street be included in the maintenance schedule more frequently. 4. THAT Council examine alternative methods of increasing visibility at the crossing at Gerard Street and Macpherson Street within TfNSW standards. 5. THAT Council reviews the lighting at the crossing on Gerard Street at Macpherson Street for compliance with the relevant standards for inclusion under the pedestrian safety item at the next Traffic Committee.	27/9/21: To be investigated/actioned.	

Item	Street	Location	First TC	Summary	Problem/Request	Comments	ECM
21/03	Various Locations	Federal Stimulus	30/4/21	School Pedestrian Crossing Upgrades - Grant Funding	Council has received grant funding under the TfNSW and Federal Government Stimulus Road Safety Program (School Zone Infrastructure) for 14 projects totalling \$1.6M in 2020/21 & 2021/22. The grants will be used to create raised crossings, to extend kerbs and introduce pedestrian refuge islands, which all help improve visibility and slow down traffic, making children safer as they walk to and from school.	The funding has been allocated to upgrade the following crossings: St Aloysius College Junior School: Install two raised pedestrian crossings on the Alfred Street South at Fitzroy Street intersection, Milsons Point COMPLETED St Aloysius College: Install raised pedestrian crossing on Broughton Street at Kirribilli Avenue, Kirribilli COMPLETED - Loreto Kirribilli: Raise existing crossing on Carabella Street at Fitzroy Street, Kirribilli COMPLETED - St Aloysius College: Raise existing crossing on Clark Road at Margaret Street, North Sydney COMPLETED - Neutral Bay Public School: Raise existing crossing on Ben Boyd Road at Hardie St, Neutral Bay COMPLETED - Cammeray Public School: Raise existing crossing on Carter Street at Colin Street, Cammeray COMPLETED - Cammeray Public School: Raise existing crossing on Clarke Street at Willoughby Road, Crows Nest - Contract awarded, awaiting for construction to commence - St Aloysius College Junior School: Raise existing crossing on Burton Street, Kirribilli. NOT TO PROCEED (Refer to TC 15/10/21 item 5.2) - Redlands: Raise existing crossing on Waters Road at Grosvenor Street, Neutral Bay (Design completed, community consultation is being undertaken close on 13 March 22) Refer to notes above in item 20/03 - Contract awarded, awaiting for construction to commence - North Sydney Public School: Raise existing crossing on Morton St at Rocklands Rd, Wollstonecraft - COMPLETED - North Sydney Public School: Construct pedestrian refuge islands and kerb buildouts on Crows Nest Road at McHatton Street, Waverton - Contract awarded,	
21/04	Military Road. Neutral Bay	At Spofforth Street and Cabramatta Road	24/7/20	Request to amend phasing and cycle times	A resident of Cremorne has requested additional time be added to the pedestrian phase to cross at this intersection, and reduced waiting time between cycles for pedestrians.	1/7/20: The email from the resident was to TfNSW for their attention as the Road Authority for Military Road and all signalised intersections.	

Item	Street	Location	First TC	Summary	Problem/Request	Comments	ECM
21/05	Grosvenor Lane, Neutral Bay	At Young Street	30/4/21		in Grosvenor Lane be moved closer to Young Street and add "give way to pedestrian" signage. (7.4) 2. THAT Council Staff review the current signage and options for increased safety measures. (7.4)	16/8/21: Signage changes completed 29/7/21. Further reviews to be undertaken when public health orders permit. An instruction has been issued to relocate the Give Way to Pedestrian signs at Young St intersection to be in front of the trees and lower the STOP signs to normal eye level. A STOP line is also being installed at the exit to Young St where it joins the footpath.	8525757
21/07		Intersection traffic signals	11/6/21	Pedestrian Safety - reports of near misses & recent crashes	On 11/6/21 the Traffic Committee recommended: 1. THAT the Traffic Committee acknowledge a recent incident at the intersection of Miller and Amherst Streets which involved the safety of a child crossing the road on the 24 May 2021. Council thank our resident Ms Freeman for bringing this to our attention at the meeting and that this be actioned as a matter of urgency. 1a) THAT Council acknowledge the incident and the long history of dangerous driving and incidents at this intersection. 2. THAT Council start immediate lobbying to TfNSW to extend the redlight pedestrian protection arrow and add a green right turn arrow phase at the intersection. 3. THAT Council TfNSW looks at the intersection of Palmer and Miller Streets in conjunction with this matter. 4. THAT Council actively lobby Transport for NSW for a red-light camera to be installed in this location. 5. THAT the matter be brought back to the next Traffic Committee meeting to be held on Friday, 23 July 2021.	Letter sent to TfNSW 19/7/21. Response received 13/8/21 from A/Director Network and Asset Management: Road safety, including pedestrian safety, is a top priority for Transport for NSW. I am very sorry to read about the very serious incident you describe, and I wish the people involved a full recovery. As you may be aware, Transport for NSW installed an extra left and right-turn red arrow at the traffic lights under the 'Green on Green' project in June 2020, to improve safety for pedestrians at this location. Miller Street is a State Road which caters for high network demands, including public transport to and from the Cammeray area. Installing a dedicated right-turn arrow from Miller to Amherst streets is not supported at this time due to further congestion that would occur on Miller Street. You may be assured that Transport for NSW will continue to monitor the intersection, to ensure it operates safely and as reliably as possible. Transport for NSW is reviewing further potential safety measures in this area, including: • Adjusting the traffic light phasing for both pedestrians and motorists at the intersection • Constructing a pedestrian crossing on the western side of the intersection of Miller and Palmer streets. Transport for NSW will continue to update council's local traffic committee on the review of these safety measures. 27/9/21: Variable Messaging Sign (VMS) installed in Amherst Street near Miller Street temporarily to alert motorists to watch for pedestrians.	8606280
21/08	Miller Street, Cammeray	Mid-block pedestrian signlas at Cammerayg al Place	3/9/21		Reports of pedestrian crash which occured on Sunday evening 1/8/21	16/8/21: Request sent to TfNSW 3/8/21 to lengthen pedestrian crossing signal (phasing) b, and suggestion to improve the visibility of the lights. This is being investigated by TfNSW Network Operations.	

5.4. Sydney Metro Crows Nest

AUTHOR: Iman Mohammadi, Acting Manager Traffic and Transport Operations

ENDORSED BY: Duncan Mitchell, Director Engineering and Property Services

ATTACHMENTS:

1. Crows Nest Kerbside Usage Concept [5.4.1 - 1 page]

- 2. Hume Street Concept Design [5.4.2 1 page]
- 3. Crows Nest WAD Package 01 Technical Note Pacific Oxley [5.4.3 32 pages]

PURPOSE:

The purpose of this report is to update and seek endorsement from the North Sydney Traffic Committee on the Crows Nest Interchange Access Plan traffic and parking arrangements for Crows Nest Station along Oxley Street, Clarke Street and Hume Street, Crows Nest that affect local roads and existing parking arrangements.

Updates are also provided on the Sydney Metro website at https://www.sydneymetro.info/

EXECUTIVE SUMMARY:

Consent for the Metro City & South-West (Metro) project was granted by the Department of Planning and Environment on 9 January 2017. The consent can be viewed in full at www.majorprojects.planning.nsw.gov.au.

The project will deliver new railway infrastructure for Sydney, including two new Metro stations within the North Sydney Local Government Area - at Crows Nest and Victoria Cross (North Sydney Centre). Construction commenced in early 2017, with train operations expected to be underway by 2024.

As part of the project planning condition (E92), Sydney Metro must develop an Interchange Access Plan for each station to inform the final design of transport and access facilities and services, including footpaths, cycleways, passenger facilities, parking, traffic and road changes, and integration of public domain and transport initiatives around and at each station.

The Crows Nest Interchange Access Plan has been approved by Department of Planning and Environment (DPE) in March 2022.

Sydney Metro and North Sydney Council worked collaboratively over the past year to provide facilities and services for Crows Nest Station. These facilities and services will be operational upon 'day one' of train operations. The changes involve the following:

- 1. Kerb side parking changes on Oxley Street and Clarke Street.
- 2. A new marked foot crossing (northern approach), widening of the existing eastern and southern crossing at Pacific Highway and Oxley Street Intersection. These proposed changes have been approved by Transport for NSW.
- 3. New pedestrian zebra crossing along Clarke Street (northern leg) and Hume Street (western leg) at Hume Street/ Clarke Street intersection.
- 4. Introduction of an on-road cycleway along Hume Street between Nicholson Street and Clarke Street.
- 5. Removal of eastbound traffic lane along Hume Street between Pacific Highway and Clarke Street. The unused width adjacent to northern kerb (painted as chevron marking) could potentially be used for activation area, future OSD construction or increased footpath.
- 6. Crossing widening of the eastern crossing of Hume Street at Pacific Highway and Hume Street intersection (approved by Transport for NSW).

As part of these facility and services changes, Sydney Metro and North Sydney Council will review capacity and operation of kiss-and-ride (and taxi) spaces 12 months after metro opening to ensure the capacity accommodates demand.

It is expected Sydney Metro will begin works relating to these changes in late 2022 (TBC), further consultation will be provided to Stakeholders and the Community closer to the anticipated start date.

FINANCIAL IMPLICATIONS:

There are no direct financial implications arising from this report.

RECOMMENDATION:

1. THAT the information concerning Sydney Metro City & South-West Crows Nest Station Interchange Access Plan be received and endorsed.

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

- 2. Our Built Infrastructure
- 2.1 Infrastructure and assets meet community needs
- 2.4 Improved traffic and parking management
- 5. Our Civic Leadership
- 5.2 Council is well governed, and customer focused
- 5.3 Community is informed and consulted

BACKGROUND

Consent for the Metro City & South-West (Metro) project was granted by the Department of Planning and Environment on 9 January 2017. The consent can be viewed in full at www.majorprojects.planning.nsw.gov.au

The project will deliver new railway infrastructure for Sydney, including two new Metro stations within the North Sydney Local Government Area - at Crows Nest and Victoria Cross (North Sydney Centre). Construction commenced in early 2017, with train operations expected to be underway by 2024.

CONSULTATION REQUIREMENTS

Community engagement will be undertaken in accordance with Council's Community Engagement Protocol.

Relates to ECM No: 8958298

Standard or Guideline Used: AS1742.2, 2890.5

Signs & Lines Priority: 2

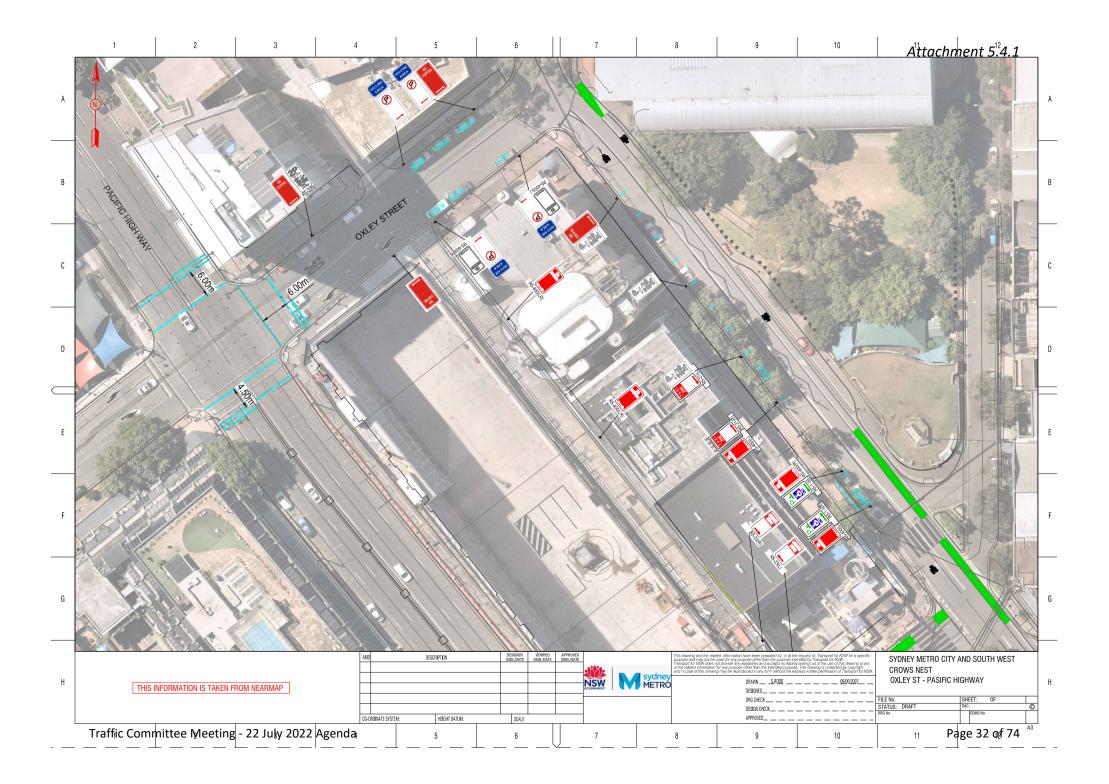
Precinct and Ward: Holtermann, Tunks

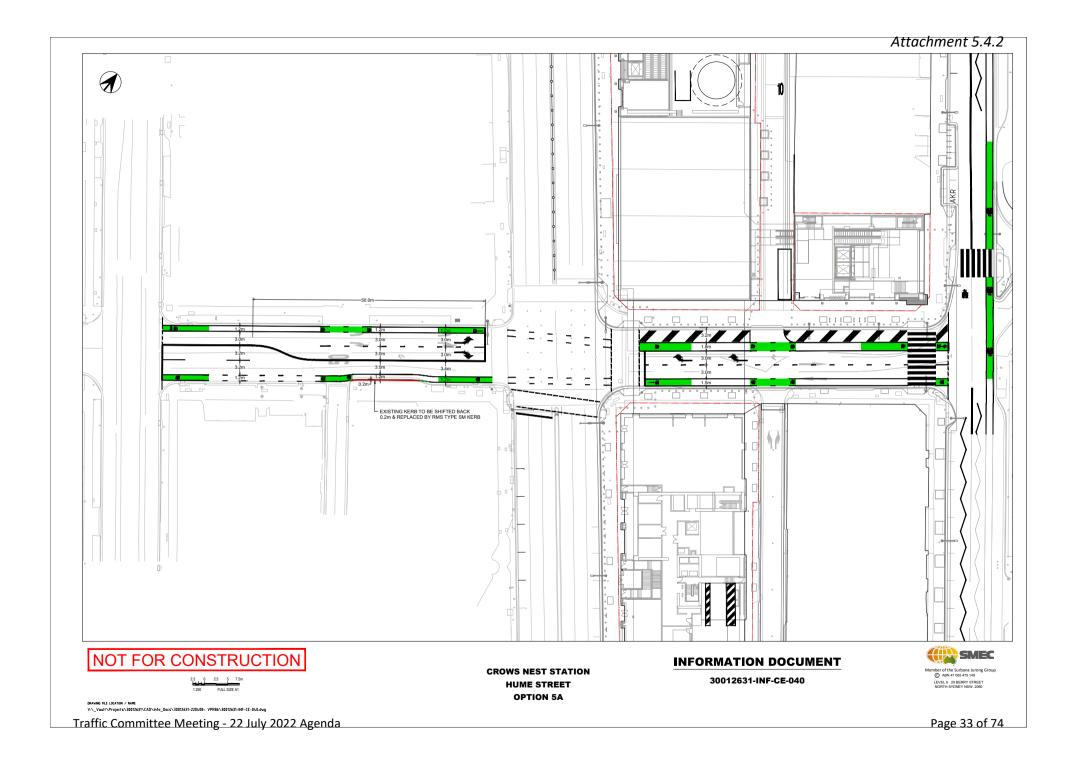
Impact on Bicycles: Bicycle access is improved under the proposed works

Impact on Pedestrians: Pedestrian's access is improved under the proposed works

Impact on Parking: The proposal will result in loss of 8 parking spaces in Oxley Street and 5 parking spaces in Clarke Street. The motorbike parking on Clarke Street will be used for taxing and tries and ride spaces.

zone and kiss-and-ride spaces.







Crows Nest Station WAD Package 01 – Signalised crossing upgrades at the intersection of the Pacific Highway / Oxley Street, Crows Nest

WAD Package TECHNICAL NOTE

Project:	Sydney Metro City and Southwest	Date:	28/04/2022			
Group:	Metro Operations, Customer & Placemaking	Status:	Draft Final			
Author:	P Brogan / K Hind / G Hitchcox	Revision:	5			
Company:	Sydney Metro	File number:	N/A			
File name:	Crows Nest Station WAD Package 01 - Technical Note					

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Revision	Revision date	Status	Brief reason for update	Author	Reviewer/ Approver	Signature
0	12/06/2018	Draft	Develop tech note	P Brogan / K Hind / Traffic Advisor / Sydney Metro	Program Manager, Trans. Planning	
1	06/08/2019	Draft	Edits and updates	P Brogan / K Hind / Traffic Advisor / Sydney Metro	Program Manager, Trans. Planning	
2	20/09/2019	Draft Final	Edits and updates	P Brogan / K Hind / Traffic Advisor / Sydney Metro	Program Manager, Trans. Planning	
3	14/11/2019	Draft Final	Issue to RMS	P Brogan / K Hind / Traffic Advisor / Sydney Metro	Program Manager, Trans. Planning	
4	07/04/2022	Draft Final	Issued to Planning and Programs for review / approval	G Hitchcox / Senior Manager / Transport Planning Advisory / Sydney Metro	TfNSW GS Planning and Programs	
5	28/04/2022	Draft Final	Updates based on TfNSW comments.	G Hitchcox / Senior Manager / Transport Planning Advisory / Sydney Metro	TfNSW GS Planning and Programs	

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Executive Summary Table

Item	WAD Package Assessment Summary	TfNSW Response
1.WAD	Crows Nest Station WAD Package 01 –	1
Package No	Signalised crossing upgrades at the intersection	
	of the Pacific Highway & Oxley Street, Crows	
	Nest.	
2.WAD	The works include a new 6.0m wide marked foot	
Package	crossing of the Pacific Highway (northern	
Description	approach) at the intersection with Oxley Street	
	and widening of the existing eastern crossing of Oxley Street (from 3.4m to 6.0m) and southern	
	crossing of Pacific Highway (from 3.4m to 4.5m).	
	The previously proposed changes to the marked	
	foot crossings received in principle support from	
	the TfNSW Planning and Program (former RMS)	
	by way of email dated 11 December 2019.	
3.Rationale	Customer accessibility, safety & crossing	
	capacity - provides for improved access for	
	pedestrians crossing the Pacific Highway, and	
	increases crossing capacity in response to forecast increased pedestrian demands without	
	significant changes or impact on traffic flow.	
	significant changes of impact on trainchow.	
4.RMS	Satisfies TfNSW warrant for pedestrian crossings	
Warrants &	on all legs of a signalised intersection in	
Design	accordance with TfNSW (previously RMS) Traffic	
Standards	Signal Design Guide.	
E Maratina	Company in a second and destrice are conserved and	
5.Meeting RMS KPI's	Supporting increased pedestrian movement and	
RIVIS KPIS	activity at the intersection with opening of Sydney Metro and growth in St Leonards and	
	Crows Nest.	
5.1 Traffic &	Pacific Highway: 2,680(AM) – 2,390(PM) veh/hr.	
Pedestrian	Oxley St: 300(AM) - 380(PM) veh/hr.	
Demands	Forecast 2036 pedestrians - Highway/Oxley St	
	intersection: 4,430(AM) - 4,100(PM) ped/hr.	
5.2 Network	The works would not adversely impact traffic	
Efficiency	flow efficiency or journey time reliability for traffic	
,	and pedestrians.	
	·	
5.3 Pedestrian	The works would improve pedestrian safety by	
Safety	accommodating forecast growth in pedestrian	
	activity through this intersection.	
5.4	The works would not significantly impact the	
Intersection	operation of the Pacific Highway / Oxley Street	
Operation	intersection.	
- Polation	intorocouon.	<u> </u>



5.5 Crashes	Four (4) crashes at the Pacific Highway / Oxley Street intersection recorded in the July 2013 to June 2017 survey period. One crash involved a collision with a pedestrian.	
5.6 Regulatory Signage and linemarking	Minor changes to regulatory, advisory or way finding signage and linemarking.	
6.Conclusions	The works are required to enhance pedestrian accessibility, safety & signalised crossing capacity at the intersection. The works will not adversely impact traffic flow efficiency.	

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1. WAD Package Proposal

The works involve the following:

- New marked foot crossing on the northern side of Pacific Highway (6.0m wide).
- Widening of the eastern marked foot crossing of Oxley Street (from 3.2m to 6.0m).
- Widening of the southern marked foot crossing of Pacific Highway (from 3.2m to 4.5m)
- The western crossing is not proposed to be widened.

The works are required to enhance pedestrian accessibility, safety & crossing capacity in response to forecast growth in pedestrian activity through this intersection. Pedestrian modelling has indicated the proposed works improve the pedestrian level of service to an acceptable level for 2036. These works were agreed in principle through a TfNSW collaboration forum between Sydney Metro and Greater Sydney Division. The changes will involve the following works, to be defined during detailed design:

- Carriageway line marking removal and installation.
- Footpath kerb ramp installation and modifications.
- Traffic signal post / lantern, detectors, and light pole relocation/installation.
- · Possible road carriageway and drainage works.
- Traffic signal personality modifications (TfNSW responsibility).

The works are required to support end state Metro Day One operational outcomes. Refer to **Figure 1** for an indicative layout of the proposed station location and accesses.

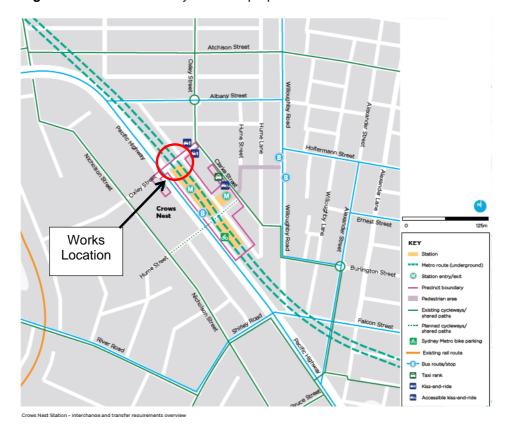


Figure 1 – Crows Nest Station indicative layout (Crows Nest IAP ver v5, February 2022)

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Crows Nest Station WAD Package 01 - Technical Note

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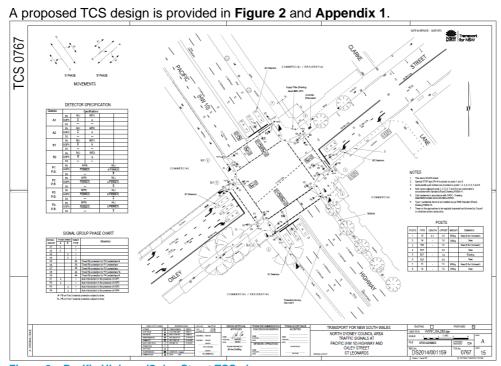


Figure 2 – Pacific Highway/Oxley Street TCS plan

2. Rationale

The WAD package works are required for the following reasons:

- Accessibility pedestrian movement across the Pacific Highway and other roads will
 increase over time with the introduction of the Crows Nest Metro station and planned
 growth in the St Leonards and Crows Nest centres. The new marked foot crossing
 and increased marked foot crossing width will facilitate improved access to and from
 the Metro station entry and the St Leonards activity centre.
- 2. Safety the new marked foot crossing and increased marked foot crossing width will provide direct access and additional space for pedestrian movement at the intersection, reducing the risk of pedestrian-vehicle conflict from overspill or illegal carriageway crossings.
- 3. Capacity the new marked foot crossing and increased marked foot crossing width will increase crossing capacity in response to forecast increase in pedestrian activity.

The works require delivery via the Works Authorisation Deed (WAD) because they will impact traffic signal geometry and layout at the Pacific Highway / Oxley Street intersection, and require additional traffic signal hardware and programming.

3. TfNSW Warrants

The proposal to install a pedestrian crossing across the Pacific Highway on the northern side of the intersection complies with Section 2.4 of the TfNSW (previously RMS) Traffic Signal Design Manual document which states "A signalised marked foot crossing must be provided on each leg of a signalised intersection (including T junctions), in a built up area…" Section 2.4 also lists circumstances where a crossing may not be provided, however, it is considered that none of the listed circumstances would apply to this intersection.

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A proposal to widen an existing marked foot crossing at a signalised intersection does not require assessment against the RMS warrants. Section 6.3 of the TfNSW Traffic Signal Design document states that "the standard width of a marked foot crossing at an intersection is 3.6 metres measured to the outside edge of the dashed paint lines. However, where large flows of pedestrians use the crossing (more than two ranks per cycle in either direction during peak periods) or large numbers of pedestrians arrive in platoons (eg: near railway stations or schools), wider crossings may be used. Wider crossings should be 4.5m, 6m or 10 m in width shown on the design layout."

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4. Key WAD assumptions

The key assumptions for Crows Nest WAD Package 01 are as follows:

- The existing marked foot crossings at the intersection are between 3.3 and 3.6 metres wide.
- 2. The proposed new marked foot crossing on the northern side of Pacific Highway will be 6.0 metres wide.
- 3. It is proposed to widen the eastern existing marked foot crossing on Oxley Street to 6.0 metres.
- 4. It is proposed to widen the southern existing marked foot crossing on Pacific Highway to 4.5 metres.
- 5. The western crossing is not proposed to be widened.
- 6. The extent of the post, lantern and light pole relocations has yet to be defined.
- 7. The works will require footpath kerb ramp and drainage modifications.
- 8. It is anticipated that the changes will occur immediately prior to Metro Station opening in 2024 and remain in place post 2024.

The key assumptions adopted in the SIDRA analysis (applies to all Crows Nest station endstate WAD packages) are as follows:

- 1. The volumes at the following intersections were obtained from traffic surveys undertaken on Tuesday 25 October 2016:
 - Pacific Highway / Albany Street (signals)
 - Pacific Highway / Oxley Street (signals)
 - Pacific Highway / Hume Street (signals)
 - Pacific Highway / Falcon Street (signals)
 - Clarke Street / Oxley Street (sign control)
 - Clarke Street / Hume Street (sign control)
- 2. Existing signal phasing was based on SCATS data obtained for the above signalised intersections.
- 3. Traffic volumes for the modelling are for total passenger car units (PCU), to take account of the heavy vehicle volumes.
- 4. Zero background traffic growth was assumed for future scenarios, based on nearby RMS traffic count stations indicating stable traffic volumes in the peak periods.
- 5. A sensitivity test was undertaken with +15% background traffic growth to understand potential future performance with additional traffic.
- 6. Scenarios modelled included the following:
 - a. Scenario 0 Existing 2016
 - b. Scenario 1 Future base layout (additional 2036 traffic & pedestrians but no physical changes)
 - c. Scenario 2 Future proposed layout (additional 2036 traffic & pedestrians)
 - d. Scenario 3 Sensitivity test with proposed layout
- 7. Civil works assumed in the future proposed layout (Scenario 2) and associated traffic and pedestrian modelling:
 - Additional crossing on the Northern approach of the Pacific Highway / Oxley Street intersection (this intersection)
 - Crossing widening on the Eastern approach of the Pacific Highway / Oxley Street intersection (this intersection)
 - Crossing widening on the Southern approach of Pacific Highway / Oxley Street intersection (this intersection).

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 Provision of an on-road cycleway on Hume Street between Nicholson Street and Clarke Street, removing a travel lane (adjacent intersection) and associated signal phasing changes would be included in Crows Nest Station WAD Package 02 -Technical Note (currently working in progress).



Figure 3 – Looking south along the Pacific Highway at the Oxley Street intersection.

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Figure 4 – Looking east along Oxley Street at the Pacific Highway intersection.

5. Network Operations

Section 5 demonstrates how the WAD package meets the RMS KPI's of safety and traffic flow efficiency. This has been done with reference to the criteria below.

5.1. Traffic & Pedestrian Demand

Traffic count data has been obtained from the 2016 Traffic surveys. The peak period vehicle flows were as follows:

Pacific Highway (between Oxley & Hume) southbound (AM/PM): 1,340 / 1,260 veh/hr Pacific Highway (between Oxley & Hume) northbound (AM/PM): 1,340 / 1,130 veh/hr Oxley Street (east of Highway) westbound (AM/PM): 173 / 142 veh/hr Oxley Street (east of Highway) eastbound (AM/PM): 126 / 240 veh/hr

Pedestrian volumes (Nov 2015) from the EIS at the Pacific Highway $\!\!\!/$ Oxley Street intersection are shown **Appendix 2**.

The forecast Crows Nest Metro station patronage demands were obtained from PTPM outputs and are consistent with the 2016 EIS volumes. The adopted patronage demand is as follows:

AM passenger entries: 4,700 ped/hr (2036)AM passenger exits: 5,800 ped/hr (2036)

It was estimated from the EIS and Stage 1 design analysis that passengers will use the station entries in the following proportions:

• AM passenger entries and exits 2036 (Highway entry): 64% (6,760)

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Crows Nest Station WAD Package 01 - Technical Note

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• AM passenger entries and exits 2036 (Clarke St entry): 36% (3,740)

The eastern marked pedestrian crossing of Oxley Street accommodates the bulk of pedestrian movement at the Pacific Highway / Oxley Street intersection, about 60% of total intersection pedestrian demand in 2015 (AM).

The southern marked pedestrian crossing of Pacific Highway accommodates the pedestrian movements travelling to and from the northbound bus stop and south western side of Pacific Highway.

The northern crossing of Pacific Highway accommodates the pedestrian movements travelling in a North West direction along Pacific Highway.

There is no widening proposed for the western crossing of Pacific Highway.

The forecast additional pedestrian volumes and modelling in the precinct necessitate the proposed additional crossing and widened marked foot crossings.

5.2. Network Efficiency

SIDRA network performance outputs for all scenarios are presented in **Appendix 3**. Implementing the proposed changes was assessed using SIDRA and observed to have minimal impact on overall network performance. Queueing along the Pacific Highway increases under all future 2036 scenarios and may spill over to adjacent intersections at the 95th percentile, however SIDRA network modelling indicated that network performance was not impacted. Implementation of the proposed works is expected to have negligible incremental impact, as is demonstrated by the performance of Scenario 2 relative to Scenario 1.

5.3. Pedestrian Safety

The additional signalised crossing will provide a formal, safe crossing point for an existing and future pedestrian desire line across the Pacific Highway at Oxley Street, significantly reducing the risk of conflict at the intersection. The widened crossing on Oxley Street will provide additional space and capacity for pedestrian movement along the Pacific Highway with consequent reductions in the risk of conflict at the intersection.

5.4. Intersection Operations

SIDRA intersection performance outputs for all scenarios are presented in **Appendix 3**. The results indicate that the intersection modifications will not significantly impact intersection operation. The intersection operates at level of service 'A' under existing conditions, as well as under future scenarios 1 and 2. Under the sensitivity test, the intersection is expected to operate at level of service 'B', with a degree of saturation greater than 1 in both peak periods.

5.5. Bus Operations

The proposed WAD works would not impact bus operations.

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5.6. Crashes

TfNSW recorded crash data was analysed for the period July 2013 to June 2017 (inclusive). At the Pacific Highway / Oxley Street intersection there were four (4) crashes recorded in the four year survey period. One of the crashes was a 'hit pedestrian' crash. Two of the crashes were 'intersection adjacent approaches' crashes. The other crash was a rear end crash. Two of the crashes resulted in injuries, including one major injury. The crash data is presented in **Appendix 4**.

5.7. Regulatory Signage

The proposed WAD works may require minor changes to regulatory, advisory or way finding signage and line marking at the Pacific Highway and Oxley Street intersection.

6. Conclusion

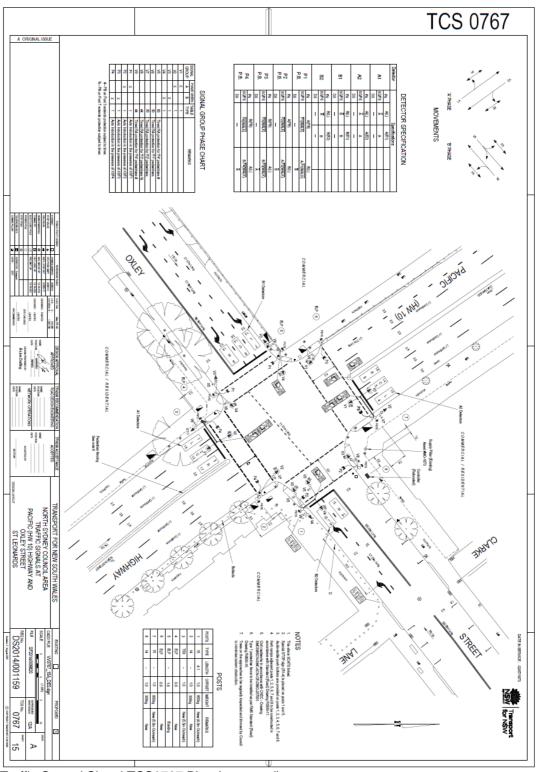
The proposed works are required on pedestrian accessibility, safety and capacity grounds. The additional crossing and increased marked foot crossing width will facilitate improved access to and from the Metro station entries and the Crows Nest activity centre. The changes will provide direct access, additional space and capacity for pedestrian movement with consequent reductions in the risk of conflict at the intersection.

SIDRA traffic modelling results indicate that the proposed works will not significantly impact on Pacific Highway or intersection operations.

The works require delivery via the Works Authorisation Deed (WAD) as they will impact traffic signal geometry and layout at the Pacific Highway / Oxley Street intersection. Initial analysis indicates the proposed works will result in improvements to intersection geometry and reduce the potential for vehicle/pedestrian conflict.



Appendix 1 – Traffic Control Signal design (proposed)



Traffic Control Signal TCS0767 Plan (proposed)

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Crows Nest Station WAD Package 01 - Technical Note

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Appendix 2 – Existing (2015) Pedestrian Volumes (WSP)

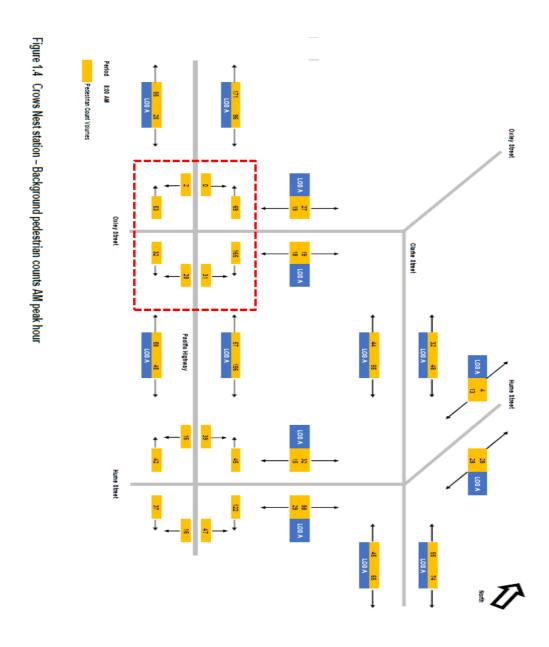
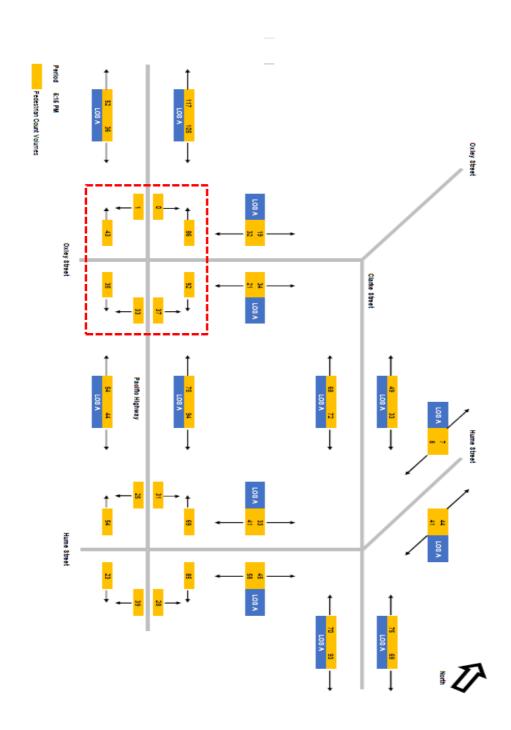




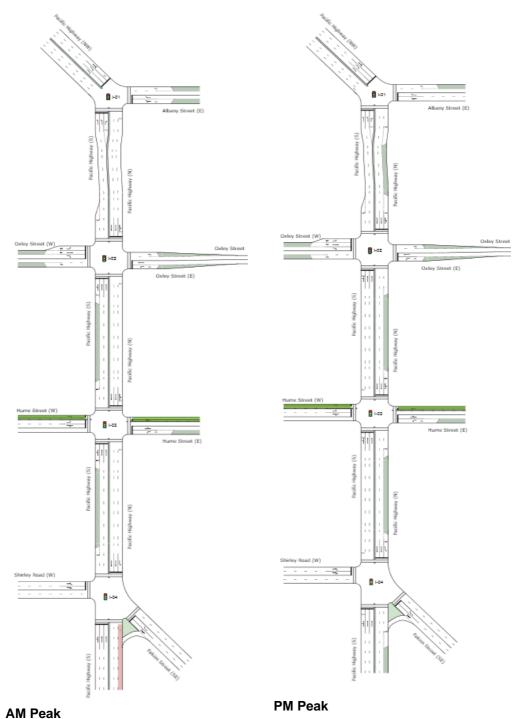
Figure 1.5 Crows Nest station - Background pedestrian counts PM peak hour





Appendix 3 – SIDRA Traffic Modelling Outputs & Checklist

Future Network Layout



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Crows Nest Station WAD Package 01 - Technical Note

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Intersection Performance

Site ID	Intersection		Scenario	Peak	DoS	Ave. Delay	LoS	Queue
I-01	Pacific Highway /	SO	2016 Existing		0.88	27	В	170 (S)
	Albany Street	S1	Future Base	AM	0.88	32	С	246 (NW)
		S2	Future Proposed	Alvi	0.88	32	С	246 (NW)
		S3	S2+15% traffic		1.04	49	С	388 (NW)

Peak	DoS	Ave. Delay	LoS	Queue
	0.84	25	В	146 (S)
PM	0.88	28	В	175 (E)
PIVI	0.88	28	В	175 (E)
	0.88	29	С	222 (S)

Site ID	Intersection		Scenario	Peak	DoS	Ave. Delay	LoS	Queue
I-02	Pacific Highway /	SO	2016 Existing		0.87	9	Α	56 (E)
	Oxley Street	S1	Future Base	АМ	0.84	10	Α	67 (E)
		S2	Future Proposed	Aivi	0.84	10	Α	67(E)
		S3	S2+15% traffic		0.93	21	В	196 (S)

Peak	DoS	Ave. Delay	LoS	Queue
	0.82	12	Α	75 (W)
PM	0.95	13	Α	72 (W)
FIVI	0.95	14	Α	72 (W)
	1.02	16	В	89 (S)

Site ID	Intersection		Scenario	Peak	DoS	Ave. Delay	LoS	Queue
I-03	Pacific Highway /	SO	2016 Existing		0.59	11	Α	94 (S)
	Hume Street	S1	Future Base	AM	0.64	13	Α	98 (N)
		S2	Future Proposed	AIVI	0.85	16	В	106 (N)
		S3	S2+15% traffic		1.75	53	D	299 (E)

F	Peak	DoS	Ave. Delay	LoS	Queue
Г		0.61	12	Α	70 (N)
	РМ	0.87	15	В	95 (N)
	FIVI	0.87	17	В	112 (N)
		0.87	17	В	137 (N)

Site ID	Intersection		Scenario	Peak	DoS	Ave. Delay	LoS	Queue
I-04	Pacific Highway /	SO	2016 Existing		0.89	39	С	211 (N)
	Falcon Street	S1	Future Base	АМ	0.89	38	С	223 (N)
		S2	Future Proposed	Alvi	0.89	38	С	222 (N)
		S3	S2+15% traffic		1.53	117	F	614 (W)

Peak	DoS	Ave. Delay	LoS	Queue
	0.98	38	С	296 (SE)
PM	0.98	39	С	229 (SE)
FIVI	0.97	39	С	229 (SE)
	1.64	121	F	653 (W)

Network Performance

Netwo	ork Performance AM Pe	ak				
Scenario		Network LoS	Travel Time Index	Travel Speed (km/h)	Degree of Saturation	Control Delay (total veh. Veh-h/h)
S0	2016 Existing	E	3.04	22	0.89	87.0
S1	Future Base	E	2.92	22	0.89	99.2
S2	Future Proposed	E	2.88	21.5	0.88	101.3
S3	S2+15% traffic	F	0.94	11.1	1.74	286.9

Network Performance PM Peak						
Scenario Network		Network LoS	Travel Time Index	Travel Speed (km/h)	Degree of Saturation	Control Delay (total veh. Veh-h/h)
SO	2016 Existing	E	3.06	23	0.98	86.0
S1	Future Base	E	2.95	22	0.97	97.4
S2	Future Proposed	Е	2.89	21.6	0.97	100.0
S3	S2+15% traffic	F	1.35	13.3	1.64	225.4

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Movement summaries (Pacific Highway / Oxley Street)

AM Peak

MOVEMENT SUMMARY

Site: I-02 [I-02 EX AM-Pac Hwy||Oxley]

♦♦ Network: 1 [Scenario 0 AM]

Pacific Highway / Oxley Street 2016 EX AM

Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 132 seconds (Network Site User-Given Phase Times)

Move	ement F	erforman	ce - V	ehicles										
Mov	Turn	Demand I	lows	Arrival F	lows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID	TUITI	Total	HV	Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh					km/h
South	: Pacific	Highway (S)											
1	L2	133	1.6	133	1.6	0.108	8.2	LOS A	1.0	7.0	0.12	0.59	0.12	39.
2	T1	1278	4.8	1278	4.8	0.542	0.7	LOS A	2.0	14.9	0.05	0.05	0.05	55.
Appro	ach	1411	4.5	1411	4.5	0.542	1.4	LOS A	2.0	14.9	0.06	0.10	0.06	50.
East:	Oxley S	street (E)												
4	L2	49	2.1	49	2.1	0.397	71.1	LOS F	3.2	22.8	1.00	0.75	1.00	4.
5	T1	133	1.6	133	1.6	0.454	55.8	LOS D	7.9	56.1	0.96	0.77	0.96	15.
Appro	ach	182	1.7	182	1.7	0.454	60.0	LOS E	7.9	56.1	0.97	0.76	0.97	12.
North:	Pacific	Highway (N	1)											
7	L2	54	3.9	54	3.9	0.092	8.6	LOS A	1.0	7.6	0.15	0.35	0.15	38.
8	T1	1338	9.7	1338	9.7	0.458	8.0	LOS A	1.7	12.6	0.05	0.06	0.05	54.
Appro	ach	1392	9.5	1392	9.5	0.458	1.1	LOS A	1.7	12.6	0.05	0.07	0.05	54.
West:	Oxley S	Street (W)												
10	L2	62	8.5	62	8.5	0.286	59.4	LOS E	3.6	27.3	0.93	0.76	0.93	12.
11	T1	79	1.3	79	1.3	0.867	61.5	LOS E	5.7	40.5	0.94	0.78	1.09	11.
12	R2	52	2.0	52	2.0	0.867	83.0	LOSF	5.7	40.5	1.00	0.96	1.44	9.
Appro	ach	193	3.8	193	3.8	0.867	66.6	LOSE	5.7	40.5	0.95	0.82	1.13	11.
All Ve	hicles	3177	6.5	3177	6.5	0.867	8.6	LOS A	7.9	56.1	0.16	0.17	0.17	32.

(Uncontrolled when printed)



PM Peak

MOVEMENT SUMMARY

♦♦ Network: 1 [Scenario 0 PM]

Pacific Highway / Oxley Street
2016 EX PM
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Move	ement F	erforman	ce - V	ehicles										
Mov	Turn	Demand	Flows	Arrival F	lows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID	Turri	Total	HV	Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh					km/h
South	: Pacific	Highway (S)											
1	L2	64	0.0	64	0.0	0.083	8.7	LOS A	0.8	5.5	0.13	0.43	0.13	41.3
2	T1	1121	5.5	1121	5.5	0.414	1.2	LOS A	2.5	18.2	0.07	0.07	0.07	51.7
Appro	ach	1185	5.2	1185	5.2	0.414	1.6	LOS A	2.5	18.2	0.07	0.09	0.07	49.9
East:	Oxley S	treet (E)												
4	L2	61	0.0	61	0.0	0.305	63.7	LOS E	3.7	25.7	0.96	0.75	0.96	4.4
5	T1	88	1.2	88	1.2	0.238	48.0	LOS D	4.8	33.7	0.89	0.70	0.89	17.0
Appro	ach	149	0.7	149	0.7	0.305	54.4	LOS D	4.8	33.7	0.92	0.72	0.92	12.0
North:	Pacific	Highway (I	N)											
7	L2	65	1.6	65	1.6	0.081	10.7	LOS A	1.2	8.7	0.21	0.47	0.21	31.5
8	T1	1143	3.3	1143	3.3	0.406	1.3	LOS A	2.2	15.6	0.07	0.07	0.07	52.7
Appro	ach	1208	3.2	1208	3.2	0.406	1.8	LOS A	2.2	15.6	0.08	0.09	0.08	50.9
West	Oxley S	Street (W)												
10	L2	103	2.0	103	2.0	0.301	53.4	LOS D	5.7	40.3	0.90	0.77	0.90	13.2
11	T1	187	0.0	187	0.0	0.517	50.9	LOS D	10.7	75.0	0.94	0.78	0.94	13.9
12	R2	103	0.0	103	0.0	0.817	76.4	LOS F	7.2	50.3	1.00	0.94	1.30	10.1
Appro	ach	394	0.5	394	0.5	0.817	58.3	LOS E	10.7	75.0	0.95	0.82	1.02	12.5
All Ve	hicles	2937	3.5	2937	3.5	0.817	12.0	LOS A	10.7	75.0	0.23	0.22	0.24	27.5

(Uncontrolled when printed)



AM Peak

MOVEMENT SUMMARY

Site: I-02 [I-02 FU Base AM-Pac Hwy||Oxley]

+ Network: 1 [Scenario 1 AM]

Pacific Highway / Oxley Street Future Base AM

Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 132 seconds (Network Site User-Given Phase Times)

Move	ement F	erforman	ce - V	ehicles										
Mov	Turn	Demand F	lows	Arrival F	lows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID	Tulli	Total	HV	Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
		veh/h		veh/h	%	v/c	sec		veh					km/h
South	n: Pacific	Highway (S	S)											
1	L2	133	1.6	133	1.6	0.142	8.5	LOS A	1.2	8.9	0.12	0.49	0.12	40.8
2	T1	1278	4.8	1278	4.8	0.710	2.3	LOS A	6.4	47.0	0.16	0.16	0.16	46.4
Appro	oach	1411	4.5	1411	4.5	0.710	2.9	LOS A	6.4	47.0	0.15	0.19	0.15	45.0
East:	Oxley S	Street (E)												
4	L2	140	0.8	140	0.8	0.778	72.6	LOSF	9.5	66.7	1.00	0.88	1.18	3.9
5	T1	133	1.6	133	1.6	0.378	51.5	LOS D	7.6	53.7	0.93	0.75	0.93	16.2
Appro	oach	273	1.2	273	1.2	0.778	62.3	LOS E	9.5	66.7	0.96	0.82	1.05	9.8
North	: Pacific	Highway (N	1)											
7	L2	54	3.9	54	3.9	0.101	9.0	LOS A	1.1	8.3	0.15	0.34	0.15	37.6
8	T1	1428	9.1	1428	9.1	0.506	0.9	LOS A	2.0	14.9	0.06	0.06	0.06	54.2
Appro	oach	1482	8.9	1482	8.9	0.506	1.2	LOS A	2.0	14.9	0.06	0.07	0.06	53.3
West	Oxley S	Street (W)												
10	L2	62	8.5	62	8.5	0.291	56.3	LOS D	3.6	26.7	0.91	0.76	0.91	12.7
11	T1	79	1.3	79	1.3	0.225	49.8	LOS D	4.4	30.8	0.89	0.70	0.89	14.2
12	R2	52	2.0	52	2.0	0.839	83.4	LOSF	3.7	26.7	1.00	0.89	1.43	9.4
Appro	oach	193	3.8	193	3.8	0.839	60.9	LOS E	4.4	30.8	0.93	0.77	1.04	12.1
All Ve	ehicles	3358	6.1	3358	6.1	0.839	10.3	LOS A	9.5	66.7	0.22	0.22	0.24	29.4

(Uncontrolled when printed)



PM Peak

MOVEMENT SUMMARY

Site: I-02 [I-02 FU Base PM-Pac Hwy||Oxley]

♦♦Network: 1 [Scenario 1 PM]

Pacific Highway / Oxley Street
Future Base PM
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Move	ment F	erformand	e - V	ehicles										
Mov	Turn	Demand F	lows	Arrival F	lows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID	Tuiti	Total	HV	Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South	: Pacific	Highway (S	S)											
1	L2	64	0.0	64	0.0	0.090	9.2	LOS A	0.8	6.0	0.14	0.42	0.14	40.9
2	T1	1121	5.5	1121	5.5	0.449	1.3	LOS A	2.8	20.2	0.07	0.07	0.07	51.1
Аррго	ach	1185	5.2	1185	5.2	0.449	1.8	LOS A	2.8	20.2	0.07	0.09	0.07	49.4
East:	Oxley S	treet (E)												
4	L2	144	0.0	144	0.0	0.561	62.2	LOS E	8.7	61.2	0.98	0.80	0.98	4.5
5	T1	88	1.2	88	1.2	0.205	44.2	LOS D	4.6	32.2	0.85	0.68	0.85	17.9
Аррго	ach	233	0.5	233	0.5	0.561	55.3	LOS D	8.7	61.2	0.93	0.75	0.93	9.6
North:	Pacific	Highway (N	1)											
7	L2	65	1.6	65	1.6	0.091	10.2	LOS A	1.1	7.9	0.18	0.44	0.18	32.8
8	T1	1226	3.1	1226	3.1	0.453	1.4	LOS A	2.5	18.1	0.07	0.08	0.07	52.0
Appro	ach	1292	3.0	1292	3.0	0.453	1.9	LOS A	2.5	18.1	0.08	0.09	0.08	50.5
West	Oxley S	Street (W)												
10	L2	103	2.0	103	2.0	0.272	49.8	LOS D	5.4	38.7	0.87	0.77	0.87	13.9
11	T1	187	0.0	187	0.0	0.436	46.9	LOS D	10.2	71.7	0.91	0.75	0.91	14.8
12	R2	103	0.0	103	0.0	0.951	94.1	LOS F	8.1	57.0	1.00	1.09	1.65	8.5
Аррго	ach	394	0.5	394	0.5	0.951	60.0	LOSE	10.2	71.7	0.92	0.85	1.09	12.2
All Ve	hicles	3103	3.4	3103	3.4	0.951	13.2	LOS A	10.2	71.7	0.25	0.24	0.27	25.9

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AM Peak

MOVEMENT SUMMARY

Site: I-02 [I-02 Proposed AM-Pac Hwy||Oxley]

♦♦ Network: 1 [Scenario 2 AM]

Pacific Highway / Oxley Street Future Proposed AM

Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 132 seconds (Network Site User-Given Phase Times)

Move	ement F	erforman	ce - V	ehicles										
Mov	Turn	Demand F	lows	Arrival F	lows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID	Turri	Total	HV	Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh					km/h
South	n: Pacific	Highway (S	S)											
1	L2	133	1.6	133	1.6	0.136	7.0	LOS A	0.6	4.2	0.06	0.49	0.06	42.4
2	T1	1278	4.8	1278	4.8	0.682	1.2	LOS A	4.0	29.3	0.09	0.09	0.09	51.7
Appro	ach	1411	4.5	1411	4.5	0.682	1.8	LOS A	4.0	29.3	0.08	0.13	0.08	49.3
East:	Oxley S	treet (E)												
4	L2	140	8.0	140	0.8	0.778	72.6	LOS F	9.5	66.7	1.00	0.88	1.18	3.9
5	T1	133	1.6	133	1.6	0.378	51.5	LOS D	7.6	53.7	0.93	0.75	0.93	16.2
Appro	oach	273	1.2	273	1.2	0.778	62.3	LOS E	9.5	66.7	0.96	0.82	1.05	9.8
North	: Pacific	Highway (N	1)											
7	L2	54	3.9	54	3.9	0.101	9.0	LOS A	1.1	8.3	0.15	0.34	0.15	37.6
8	T1	1428	9.1	1428	9.1	0.506	0.9	LOS A	2.0	14.9	0.06	0.06	0.06	54.2
Appro	ach	1482	8.9	1482	8.9	0.506	1.2	LOS A	2.0	14.9	0.06	0.07	0.06	53.3
West	Oxley S	Street (W)												
10	L2	62	8.5	62	8.5	0.534	69.4	LOS E	4.0	30.4	0.99	0.77	0.99	10.8
11	T1	79	1.3	79	1.3	0.225	49.8	LOS D	4.4	30.8	0.89	0.70	0.89	14.2
12	R2	52	2.0	52	2.0	0.839	83.4	LOSF	3.7	26.7	1.00	0.89	1.43	9.4
Appro	ach	193	3.8	193	3.8	0.839	65.1	LOSE	4.4	30.8	0.95	0.78	1.07	11.5
All Ve	hicles	3358	6.1	3358	6.1	0.839	10.1	LOS A	9.5	66.7	0.19	0.20	0.21	29.7

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PM Peak

MOVEMENT SUMMARY

♦♦Network: 1 [Scenario 2 PM]

Pacific Highway / Oxley Street
Future Proposed PM
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Move	ment F	erforman	ce - V	ehicles										
Mov	Turn	Demand F	lows	Arrival F	lows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID	Turn	Total	HV	Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
		veh/h	%	veh/h	%	v/c	sec		veh					km/h
South	: Pacific	: Highway (S	S)					101 - 201 - 201 - 201						
1	L2	64	0.0	64	0.0	0.094	6.7	LOS A	0.3	2.3	0.05	0.37	0.05	44.4
2	T1	1121	5.5	1121	5.5	0.472	1.7	LOS A	3.4	24.8	0.09	0.09	0.09	49.3
Appro	ach	1185	5.2	1185	5.2	0.472	2.0	LOS A	3.4	24.8	0.09	0.11	0.09	48.6
East:	Oxley S	Street (E)												
4	L2	144	0.0	144	0.0	0.561	62.2	LOS E	8.7	61.2	0.98	0.80	0.98	4.5
5	T1	88	1.2	88	1.2	0.205	44.2	LOS D	4.6	32.2	0.85	0.68	0.85	17.9
Appro	ach	233	0.5	233	0.5	0.561	55.3	LOSD	8.7	61.2	0.93	0.75	0.93	9.6
North:	Pacific	: Highway (N	١)											
7	L2	65	1.6	65	1.6	0.091	10.2	LOS A	1.1	7.9	0.18	0.44	0.18	32.8
8	T1	1226	3.1	1226	3.1	0.453	1.4	LOS A	2.5	18.1	0.07	0.08	0.07	52.0
Appro	ach	1292	3.0	1292	3.0	0.453	1.9	LOS A	2.5	18.1	0.08	0.09	0.08	50.5
West	Oxley S	Street (W)												
10	L2	103	2.0	103	2.0	0.468	61.7	LOS E	6.2	44.2	0.97	0.79	0.97	11.8
11	T1	187	0.0	187	0.0	0.439	46.9	LOS D	10.2	71.7	0.91	0.75	0.91	14.8
12	R2	103	0.0	103	0.0	0.951	94.1	LOS F	8.1	57.0	1.00	1.09	1.65	8.5
Appro	ach	394	0.5	394	0.5	0.951	63.1	LOS E	10.2	71.7	0.95	0.85	1.12	11.8
All Ve	hicles	3103	3.4	3103	3.4	0.951	13.7	LOS A	10.2	71.7	0.26	0.25	0.28	25.4
All Ve	hicles	3103	3.4	3103	3.4	0.951	13.7	LOS A	10.2	71.7	0.26	0.25	0.28	

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AM Peak

MOVEMENT SUMMARY

♦♦ Network: 1 [Scenario 3 AM]

Pacific Highway / Oxley Street
Future Proposed AM
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 132 seconds (Network Site User-Given Phase Times)

Move	ement F	erforman	ce - V	ehicles										
Mov	Turn	Demand F	lows	Arrival F	lows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID	rum	Total	HV	Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
		veh/h	%	veh/h		v/c	sec		veh					km/h
South	: Pacific	Highway (S	S)											
1	L2	153	1.4	149	1.4	0.182	7.3	LOS A	0.9	6.3	0.07	0.43	0.07	42.8
2	T1	1469	4.8	1435	4.9	0.908	24.5	LOS B	26.9	195.8	0.46	0.56	0.60	15.2
Appro	ach	1622	4.5	1584 _{N1}	4.6	0.908	22.9	LOS B	26.9	195.8	0.43	0.55	0.55	17.8
East:	Oxley S	street (E)												
4	L2	147	0.7	147	0.7	0.844	75.2	LOS F	10.4	73.1	1.00	0.95	1.29	3.8
5	T1	153	1.4	153	1.4	0.386	49.0	LOS D	8.5	60.4	0.91	0.74	0.91	16.7
Appro	ach	300	1.1	300	1.1	0.844	61.9	LOS E	10.4	73.1	0.95	0.84	1.10	10.1
North	Pacific	Highway (N	1)											
7	L2	61	3.4	61	3.4	0.122	10.1	LOS A	1.1	8.1	0.18	0.43	0.18	33.2
8	T1	1629	9.2	1629	9.2	0.612	1.1	LOS A	2.9	22.2	0.07	0.07	0.07	53.7
Appro	ach	1691	9.0	1690 _{N1}	9.0	0.612	1.4	LOS A	2.9	22.2	0.07	0.08	0.07	52.5
West	Oxley S	Street (W)												
10	L2	72	8.8	72	8.8	0.550	66.9	LOS E	4.6	34.6	0.99	0.79	0.99	11.1
11	T1	91	1.2	91	1.2	0.229	47.2	LOS D	4.9	34.4	0.88	0.69	0.88	14.7
12	R2	59	1.8	59	1.8	1.084	164.0	LOS F	6.4	45.8	1.00	1.18	2.22	5.1
Appro	ach	221	3.8	221	3.8	1.084	84.7	LOS F	6.4	45.8	0.94	0.85	1.27	9.2
All Ve	hicles	3834	6.2	3794 _{N1}	6.2	1.084	20.0	LOS B	26.9	195.8	0.34	0.38	0.42	20.2

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PM Peak

MOVEMENT SUMMARY

♦♦Network: 1 [Scenario 3 PM]

Pacific Highway / Oxley Street
Future Proposed PM
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Move	ement F	Performan	ce - V	ehicles										
Mov	Turn	Demand I	Flows	Arrival	Flows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID	Luin	Total	HV	Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
		veh/h	%	veh/h			sec		veh					km/h
South	: Pacific	c Highway (S)											
1	L2	74	0.0	73	0.0	0.133	8.8	LOS A	1.1	8.0	0.13	0.36	0.13	42.2
2	T1	1289	5.6	1273	5.6	0.663	4.0	LOS A	9.3	68.3	0.22	0.22	0.22	40.0
Appro	ach	1363	5.3	1345 _{N1}	5.3	0.663	4.3	LOS A	9.3	68.3	0.22	0.23	0.22	40.3
East:	Oxley S	Street (E)												
4	L2	154	0.0	154	0.0	0.543	58.0	LOS E	9.1	63.4	0.96	0.81	0.96	4.8
5	T1	101	1.0	101	1.0	0.199	40.0	LOS C	5.0	35.0	0.82	0.65	0.82	19.1
Appro	ach	255	0.4	255	0.4	0.543	50.9	LOS D	9.1	63.4	0.90	0.75	0.90	10.5
North	Pacific	: Highway (N	N)											
7	L2	75	1.4	75	1.4	0.128	10.5	LOS A	1.5	10.4	0.17	0.40	0.17	33.2
8	T1	1399	3.2	1399	3.2	0.642	2.0	LOS A	4.4	32.0	0.11	0.11	0.11	49.3
Appro	ach	1474	3.1	1474	3.1	0.642	2.4	LOS A	4.4	32.0	0.11	0.13	0.11	48.2
West	Oxley S	Street (W)												
10	L2	118	1.8	118	1.8	0.521	58.4	LOS E	7.0	49.7	0.96	0.80	0.96	12.3
11	T1	216	0.0	216	0.0	0.483	42.8	LOS D	11.3	79.4	0.88	0.73	0.88	15.7
12	R2	119	0.0	119	0.0	1.027	130.6	LOS F	11.5	80.4	1.00	1.26	1.92	6.4
Appro	ach	453	0.5	453	0.5	1.027	70.0	LOS E	11.5	80.4	0.93	0.89	1.17	10.8
All Ve	hicles	3544	3.4	3526N	3.4	1.027	15.3	LOS B	11.5	80.4	0.32	0.31	0.35	23.8

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Crows Nest SIDRA traffic analysis checklist Site Visit: 25 October 2016 by Chris Chun Model Name/Revision: CN - Scenario X RevC

Date of checklist: 19 September 2019

No.	Topic Sub Topic	Status	Response
0	General setting		
0a	Current setup – "New South Wales"	~	Checked
0b	Parameter Settings - Site level of service method – "Delay (RTA NSW)"	~	Checked
0c	Confirm original data source (traffic/pedestrian volume, signal timing)	~	 Existing traffic data at intersections was collected from the primary traffic surveys in October 2016. Existing and future pedestrian volumes (Nov 2015) from the EIS at the Pacific Highway / Oxley Street intersection. Intersection signal history data was obtained from the SCATS system for all signalised intersections within the study area.
Od	Calibration/validation process as per RMS modelling guidelines	~	The validation process of the SIDRA models was undertaken by adopting SCATS signal control data. After the initial modelling results produced for base models, a calibration process was undertaken by matching the queueing vehicles and traffic behaviour observation from the peak hour site inspections.
0e	Pre analysis site visit (queue lengths, lane lengths, phasing, cycle times etc.)	~	Site inspections were conducted during traffic surveys (Tuesday 25 October 2016) to make observations to assist with model development. While on site observations were made of: the function of the adjacent road network, existing traffic movement, traffic signal operation, pedestrian and cyclist movements and vehicle queuing.
Of	Software package and version	~	Version 8.0.2.7846
1	Intersection & Lane Geometry		
1a	Approach and exit distances checked	~	Network models were developed based on the geometry identified



				1
				in aerial imagery from Nearmap
				as well as observations from the
41		A : 1 C1		site inspections.
1b		Arrivals profiles	/	
1c		Length of short lane	~	
1d		Median island	~	
1e		Lane configuration	~	
1f		Lane utilisation ratio	~	Lane utilisation was adjusted based on observed traffic behaviour and lane use during the site inspection
1g		Lane discipline (for bus only lanes)	~	
1h		Parking lane assumptions / coding	~	Confirmed at site visit
2	Moven	nent Definitions		
2a		Additional vehicles types	~	
2b		Banned movements	~	Confirmed at site visit
3	Pedest	trians		
3a		Crossing location (full/slip lane)	~	
3b		Volumes	✓	
3c		Crossing distance (if manual input required)	✓ ✓	Crossing distance was measured from Nearmap
3d		Walking speed – change to 1.2m/s	~	Pedestrian walking speed of 1.2m/sec was adopted for all sites.
4	Volum	es		
4a		Traffic data checked & fit for	~	
		use?	*	
4b		Pedestrian data checked & fit for use?	~	
4b 4c		Pedestrian data checked & fit	·	
		Pedestrian data checked & fit for use? Cyclist data checked & fit for	~	
4c		Pedestrian data checked & fit for use? Cyclist data checked & fit for use? HV, bus & other data	✓ ✓	Default parameters
4c 4d 4e 4f		Pedestrian data checked & fit for use? Cyclist data checked & fit for use? HV, bus & other data checked? Peak flow factor Growth rate applied / justification		Default parameters No background growth was assumed for future scenarios, based on nearby RMS traffic count stations indicating stable traffic volumes in the peak periods.
4c 4d 4e 4f 5	Prioriti	Pedestrian data checked & fit for use? Cyclist data checked & fit for use? HV, bus & other data checked? Peak flow factor Growth rate applied / justification		No background growth was assumed for future scenarios, based on nearby RMS traffic count stations indicating stable traffic volumes in the peak periods.
4c 4d 4e 4f	Prioriti	Pedestrian data checked & fit for use? Cyclist data checked & fit for use? HV, bus & other data checked? Peak flow factor Growth rate applied / justification		No background growth was assumed for future scenarios, based on nearby RMS traffic count stations indicating stable traffic volumes in the peak
4c 4d 4e 4f 5 5a 6		Pedestrian data checked & fit for use? Cyclist data checked & fit for use? HV, bus & other data checked? Peak flow factor Growth rate applied / justification setting between traffic and pedestrians cceptance		No background growth was assumed for future scenarios, based on nearby RMS traffic count stations indicating stable traffic volumes in the peak periods. Priority was given to pedestrian crossing over turning traffic movements for signalised intersections.
4c 4d 4e 4f 5 5a	Gap ac	Pedestrian data checked & fit for use? Cyclist data checked & fit for use? HV, bus & other data checked? Peak flow factor Growth rate applied / justification es Setting between traffic and pedestrians		No background growth was assumed for future scenarios, based on nearby RMS traffic count stations indicating stable traffic volumes in the peak periods. Priority was given to pedestrian crossing over turning traffic movements for signalised



7a	Applied speed	~	Existing speed limit (60 or 50 km/h)
7b	Signal co-ord /common control group?	~	Arrival types were coded to match the observed co- ordinated traffic flow between closely located signalised intersections. There is no common control group (CCG) operating within the developed network models
7c	Signals – applied start loss or late start	~	Pedestrian protection time observed during site inspection was implemented in SIDRA models by allocating additional start/loss time for opposed turning movements.
8	Phasing & Timing		
8a	Applied cycle time / justification	~	The signal phasing and cycle time of 132 seconds for AM peak and 130 seconds for PM Peak was utilised in SIDRA intersection modelling.
8b	Source of phasing information	>	Intersection signal history data was obtained from the SCATS system for all signalised intersections within the study area. The signal sequences, timing and cycle times adopted in the existing base models were maintained in the future models. Where adjustments required, the phase times have been manually adjusted within the minimum and maximum phase times that are provided in the SCATS data to ensure each approach gets the appropriate green time. The overall cycle times remained unchanged.
8c	Phase transition	~	Not required.
9	Results		
9a	Results in "Movement Summary" and "Lane Summary"	~	Network model outputs were checked and reported
9b	Adopted cycle time setting in "Phasing Summary"	~	
9c	Lane utilisation and Capacity adjustment % in "Lane Summary"	~	
9d	Ensure sufficient delay time has been applied to traffic movement against pedestrian	~	



		crossing in "Movement timing"		
9e				
10	Netwo	rk Model		
10a		Site level of service method – "Delay (RTA NSW)"	~	Checked
10b		Cycle time	~	Network Site User-Given Phase Times of 132 seconds for AM Peak and 130 seconds for PM peak were applied at existing intersections.
10c		Signal offsets – Program or User given offsets	>	Observed signal offset during site inspections were adopted in base models and this setting was retained unchanged for the future models
10d		Network routes	✓	
10e		Network configuration – check network layout	~	
10f				

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Appendix 4 - Crash Data

TfNSW CrashLink map (Centre for Road Safety) – all crashes at intersection of Pacific Highway and Oxley Street, 1 July 2013 to 30 June 2017.



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Car Crash

Sydney Metro

Rep ID: REG01

Office: HeadQtrs

User ID: wilby

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New Year Aust. Day Tuesday State Highway Freeway/Motorway Monday Other Classified Road Multi Vehicle Single Vehicle Non intersection Pedestrian Crash Pedal Cycle Crash Motorcycle Crash Emergency Vehicle Crash Bus Crash Rigid Truck Crash Inclassified Road "Heavy Vehicle Crash Heavy Truck Crash Articulated Truck Crash 0

Session dataset North Sydney, Willoughby LGAs; all crashes for 01 Jul 2013 to 30 Jun 2017

Note: All crashes at intersection of Pacific Highway and Oxiey Street, 1 July 2013 to 30 June 2017

Crash self reporting, including self reported injuries began Oct 2014. Trends from 2014 are expected to vary from previous yrs. More unknowns are expected in self reported data Reporting yrs 1996-2004 and 2018 onwards contain uncategorised injuries. percentages are percentages of all crashes. Unknown values for each category are not shown on this report

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21/08/2018 10:29

Light Truck Crash Up to 10 metres from an intersection # These categories are NOT mutually exclusive Rigid or Artic. Truck " Heavy Truck or Heavy Bus ~ 07:30-09:30 or 14:30-17:00 on school days Road Classification Location Type # Crash Type Collision Type 25.0% Wednesday 0 0 0.0% Thursday 0.0% 0 0 0 0 0 0 0 0 0 4 0 0 0 0 Easter Anzac Day 100.0% 100.0% 100.0% 100.0% 25.0% 0.0% (0.0%)(0.0%)25.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% ~ 40km/h or less Daylight 50 km/h zone Dusk Dawn Dry Wet Other Fatigue 70 km/h zone 60 km/h zone 40 km/h or less Darkness Snow or ice Fog or mist Overcast Rain Fine Speeding Alcohol 2 -50.0% Saturday 25.0% Friday Road Surface Condition Contributing Factors 0 0 Day of the Week Natural Lighting Weather 0.0% 0.0% Queen's BD Labour Day 0 0 0 0 0 0 4 0 0 100.0% 0 0.0% 75.0% 0.0% 25.0% 25.0% 0.0% 0.0% 0.0% 0.0% 0.0% 100.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% WEEKDAY 0.0% Sunday Periods ~ School Travel Time Involvement Other crash type Off road on curve, hit object Off road on straight, hit object Hit parked vehicle Overtaking; same direction Vehicle leaving driveway Out of control on curve Off road, on curve Out of control on straight Off road, on straight Hit animal Permanent obstruction on road Hit pedestrian Hit railway train Parallel lanes; turning Lane change Rear-end Opposing vehicles; turning Head-on (not overtaking) Intersection, adjacent approaches Speed Limit 0 0 90 km/h zone 110 km/h zone 100 km/h zone 80 km/h zone 0.0% Christmas January SH 0 4 ********* Crash Movement 0.0% WEEKEND 0 0 0 0 0 0 0.0% 0.0% 0.0% 0.0% 0.0% 0 0 Easter SH June/July SH 25.0% 25.0% 50.0% Street Lighting Off/Nil 09:00 - 09:59 07:00 - 07:59 06:00 - 06:59 05:00 - 05:59 03:00 - 04:59 00:01 - 02:59 Non-casualty Uncategorised inj Minor/Other inj. Moderate inj Serious inj. 16:00 - 16:59 14:00 - 14:59 12:00 - 12:59 11:00 - 11:59 10:00 - 10:59 08:00 - 08:59 Self Reported Crash 0 22:00 - 24:00 20:00 - 21:59 19:00 - 19:59 18:00 - 18:59 17:00 - 17:59 13:00 - 13:59 15:00 - 15:59 Time Grou 00 CRASHES 0.0% 0 Sept./Oct. SH December SH in Dark 0 0 0 0 % of Dark 25.0% 4.2% 25.0% 25.0% 4.2% 25.0% 4.2% 0.0% 0.0% 0.0% 0.0% 0.0% 8.3% 0.0% 4.2% 0.0% 4.2% 0.0% 4.2% 0.0% 4.2% 0.0% 4.2% 0.0% 4.2% 0.0% 4.2% 0.0% 4.2% 0.0% 8.3% 0.0% 12.5% of Day C 25.0% 25.0% 50.0% 0.0% 4.2% 4.2% 0.0% Uncategorised 0.0% 0.0% 4.2% Moderately inj Minor/Other inj Seriously inj. Onrestrained ^ Belt fitted but not worn, No restraint fitted to position OR No helmet worn I 0 C B McLean Periods Crashes 25.0% 25.0% CASUALTIES 2 0 2 0 0 0 2017 2013 2014 50.0% 25.0% 25.0% 0.0% 0.0% 0.0% 0.0% Casualties % Week 0 0 0 0 50.0% 50.0% 17.9% 17.9% 0.0% 10.7% 0.0% 0.0% 0.0% 3.6% 3.5% 7.1%



Summary Crash Report

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6. Informal Items for Consideration

6.1. Standing Item - Western Harbour Tunnel & Warringah Freeway Upgrade

AUTHOR: Iman Mohammadi, Acting Manager Traffic and Transport Operations

ENDORSED BY: Duncan Mitchell, Director Engineering and Property Services

ATTACHMENTS: Nil

PURPOSE:

The purpose of this report is to provide an update on current works and impacts associated with the Transport for NSW Western Harbour Tunnel and Warringah Freeway Upgrade project (SSI 8863).

EXECUTIVE SUMMARY:

The Western Harbour Tunnel and Warringah Freeway Upgrade project SSI 8863 was approved by the Minister for Planning and Public Spaces on 21 January 2021. The project is being undertaken by Transport for NSW.

Warringah Freeway Upgrade Early Works commenced in April 2021 and impact on a number of Council roads adjacent to and alongside the Warringah Freeway. Transport for NSW has exercised functions of a roads authority under the Roads Act 1993 for those roads.

This report provides a high-level overview of the current work sites and summary of complaints received by Council.

FINANCIAL IMPLICATIONS:

There are no direct financial implications arising from this report.

RECOMMENDATION:

1. THAT the information concerning the Western Harbour Tunnel and Warringah Freeway Upgrade project be received.

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

- 2. Our Built Infrastructure
- 2.1 Infrastructure and assets meet community needs
- 2.4 Improved traffic and parking management
- 5. Our Civic Leadership
- 5.2 Council is well governed and customer focused
- 5.3 Community is informed and consulted

BACKGROUND

The Western Harbour Tunnel and Warringah Freeway Upgrade project SSI 8863 was approved by the Minister for Planning and Public Spaces on 21 January 2021. The project is being undertaken by Transport for NSW.

Warringah Freeway Upgrade Early Works commenced in April 2021. The works impact on a number of Council roads adjacent to and alongside the Warringah Freeway. All community notifications are available on the Western Harbour Tunnel and Warringah Freeway Upgrade webpage at https://caportal.com.au/rms/wht/documents-and-notifications

CONSULTATION REQUIREMENTS

As this is a state government project, Transport for NSW are responsible for all community engagement relating to the project.

DETAIL

Relates to ECM No:

Standard or Guideline Used: Signs & Lines Priority: N/A

Precinct and Ward: Hayberry/ Registry/ Stanton/ Neutral/ Anderson/ CBD; Tunks/ Victoria/

Wollstonecraft

Impact on Bicycles: Local cycling access may be impacted adjacent to and around the WHT/WFU work sites under traffic management

Impact on Pedestrians: Local pedestrian access may be impacted adjacent to and around the WHT/WFU work sites under traffic management

Impact on Parking: Approximately 75 parking spaces on Alfred Street North; 35 spaces on Cammeray Avenue and 10 spaces on Ridge Street have so far been removed by TfNSW to facilitate the works.

The works on Active Transport Link (ATL) within the Cammeray Golf Course connecting Ernest Street to Warringah Road is almost complete. The Works on the Amherst Noise wall has also been commenced.

Council has received numerous notices from Transport for NSW under 64(1A) of the Roads Act 1993 of their intention to exercise functions of a road's authority. This means that TfNSW has the same powers under the Roads Act 1993 as Council for the roads listed in each notice.

6.2. Standing Item - Sydney Metro - Project Update

AUTHOR: Iman Mohammadi, Acting Manager, Traffic and Transport Operations

ENDORSED BY: Duncan Mitchell, Director Engineering and Property Services

ATTACHMENTS: Nil

PURPOSE:

The purpose of this report is to update the North Sydney Traffic Committee on the current status of the Metro City & South-West (Metro) project and upcoming works affecting local roads.

Updates are also provided on the Sydney Metro website at https://www.sydneymetro.info/

EXECUTIVE SUMMARY:

Consent for the Metro City & South-West (Metro) project was granted by the Department of Planning and Environment on 9 January 2017. The consent can be viewed in full at www.majorprojects.planning.nsw.gov.au.

The project will deliver new railway infrastructure for Sydney, including two new Metro stations within the North Sydney Local Government Area - at Crows Nest and Victoria Cross (North Sydney Centre). Construction commenced in early 2017, with train operations expected to be underway by 2024.

In accordance with the various conditions of consent, a Traffic and Transport Liaison Group (TTLG) has been established to inform traffic and transport measures during construction and operation of the project. The TTLG is chaired by the Sydney Coordination Office (SCO) and comprises representatives from the relevant Road Authorities, which includes North Sydney Council. The TTLG meets monthly and a smaller group of representatives known as the Traffic Control Group (TCG) meets weekly to discuss impending construction-related traffic management matters.

The Construction Traffic Management Plans (CTMPs) must be developed in consultation with the TTLG. TfNSW is the approval authority for the CTMPs, following endorsement by the SCO.

FINANCIAL IMPLICATIONS:

There are no direct financial implications arising from this report.

RECOMMENDATION:

1. THAT the information concerning Sydney Metro City & South-West Construction Update be received.

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

- 2. Our Built Infrastructure
- 2.1 Infrastructure and assets meet community needs
- 2.4 Improved traffic and parking management
- 5. Our Civic Leadership
- 5.2 Council is well governed and customer focused
- 5.3 Community is informed and consulted

BACKGROUND

Consent for the Metro City & South-West (Metro) project was granted by the Department of Planning and Environment on 9 January 2017. The consent can be viewed in full at www.majorprojects.planning.nsw.gov.au.

The project will deliver new railway infrastructure for Sydney, including two new Metro stations within the North Sydney Local Government Area - at Crows Nest and Victoria Cross (North Sydney Centre). Construction commenced in early 2017, with train operations expected to be underway by 2024.

CONSULTATION REQUIREMENTS

As this is a state government project, Transport for NSW are responsible for all community engagement relating to the project.

DETAIL

Relates to ECM No: N/A

Standard or Guideline Used: N/A

Signs & Lines Priority: N/A

Precinct and Ward: Various precincts, St Leonards & Cammeraygal Wards

Impact on Bicycles: Local cycling access maintained and managed through traffic guidance

schemes

Impact on Pedestrians: Local pedestrian access may be impacted adjacent to and around the Sydney Metro work sites and managed through traffic guidance schemes.

Sydney Wetro work sites and managed through traine guidance scremes.

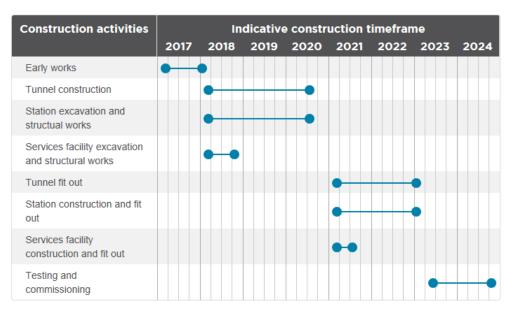
Impact on Parking: Parking adjacent to each construction site has been removed under applications throughout the project to facilitate construction.

There are four (4) construction sites within the North Sydney LGA associated with the Metro project.

- 1. Victoria Cross Station (VC2) includes 155-189 Miller Street bounded by Miller Street, Berry Street and Denison Street.
- 2. Victoria Cross North (VC1) —site for the services building and additional access point at 52 McLaren Street (vacant site on northern corner of Miller Street and McLaren Street intersection).
- 3. **Crows Nest Station (CN)** includes 497-521 Pacific Highway bounded by Pacific Highway, Oxley Street, Clarke Lane and Hume Street; 14 Clarke Street (Beaurepaires site); and 477-495 Pacific Highway bounded by Pacific Highway, Hume Street and Clarke Lane.
- 4. **Blues Point Reserve (BP)** Temporary construction site, including creation of a shaft for the delivery and extraction of tunnel boring equipment.

The City & Southwest (Chatswood to Sydenham) project has been split into stages. Each stage is subject to separate contracts and may be undertaken by different contractors. An indicative timeline for the full City & Southwest portion is provided below.

Indicative timeline



Source: Sydney Metro website 26/5/17

Works at each site are currently at station construction/ fit out and linewide trackworks. The key activities are summarised below.

Update on sites within North Sydney Council area

Victoria Cross South

Vic Cross – Construction Updates

Excavation works, formwork steel fitting, deliveries, concrete pouring. Installation of hoardings, site accommodation and tower cranes on Miller Street frontage. Deliveries via Miller Street Work Zone.

Miller Street – major stormwater upgrade works located within southbound, establishment of one-way contra flow – staged night works from March 2022 until first week of May (approx. 4 weeks total). This works are now complete and it is anticipated that further Stormwater works to be undertaken in Denison Street in July 2022 with partial closure of Denison Street and conversion of street to one way traffic for approximately 6-8 weeks

Victoria Cross North

Vic Cross – Construction Updates

Temporary fencing for the McLaren St footpath closure and occupation of parking spaces for pedestrian access during installation of B-Class scaffold in McLaren Street, east of Miller Street.

Crows Nest Station

Crows Nest – Construction Updates

Deliveries occurring from Pacific Highway "logistics lane" – footpath occupation - pedestrians diverted to western side of Pacific Highway. Some concrete pours occurring from Clarke Lane.

Hume Street fully closed to traffic between Pacific Highway and Clarke Lane until 31 December.

Blues Point

Blues Point – Construction Updates

DPIE granted modification for continued use of Blues Point site for additional 12 months from December 2020 for linewide track fitout.

Existing parking spaces at Blues Point Road will be temporary removed and Blues Point Road be closed to traffic at the reserve to enable commencement of the reconfiguration of Blues Point from Henry Lawson Avenue to the reserve. These works are expected to be carried out from 22 May till 30 Sep 2022.



7.	Local Development Advisory Committee Items for Consideration
Nil	
8. 9.	General Business Closure