



**Planning &  
Environment**

## **Sydney Metro City & South West: Victoria Cross Integrated Station Development**

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**Peer Review of Transport, Traffic & Parking  
Assessment**

October 2018

**SAMSA CONSULTING**

TRANSPORT PLANNING & TRAFFIC ENGINEERING

Samsa Consulting Pty Ltd  
**Transport Planning & Traffic Engineering**

ABN: 50 097 299 717

46 Riverside Drive, Sandringham, NSW 2219, AUSTRALIA

Phone: (+61) 414 971 956

E-mail: [alansamsa@gmail.com](mailto:alansamsa@gmail.com)

Skype: alan\_samsa

Web: [www.samsaconsulting.com](http://www.samsaconsulting.com)

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# 1. Introduction

The New South Wales (NSW) Government is implementing *Sydney's Rail Future*, a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of customers in the future.

Sydney Metro is a new standalone rail network identified in *Sydney's Rail Future*. The Sydney Metro network consists of Sydney Metro Northwest (Stage 1) and Sydney Metro City & Southwest (Stage 2).

Stage 2 of Sydney Metro includes the construction and operation of a new metro rail line from Chatswood, under Sydney Harbour through Sydney's CBD to Sydenham and on to Bankstown. Stage 2 also involves the delivery of seven (7) new metro stations, including at North Sydney (Victoria Cross).

This report details a review of the transport, traffic and parking assessment for the proposed Victoria Cross Station integrated station development and has been prepared by *Samsa Consulting Pty Ltd*, Transport Planning & Traffic Engineering Consultants, for *NSW Department of Planning & Environment (DP&E)* as part of its assessment of a Concept State Significant Development Application.

## 1.1 Objectives & Scope of Work

The DP&E requires independent technical advice with respect to the Project's transport, traffic and parking assessment. This review has been carried out to provide independent technical advice including the following:

### 1. EIS Review

Identify key issues and prepare advice to DP&E for incorporation in correspondence to the applicant and its assessment of the application including:

- Reviewing the EIS, taking into account relevant traffic and transport guidelines and industry best practice.
- Site familiarisation visit of Project areas to observe and assess traffic and transport issues generally, determine surrounding road / public transport environment, road network conditions, etc.
- Considering agency and public submissions as relevant to the traffic and transport impacts.
- Preparing a Preliminary Review Report.

### 2. Review of Response to Submissions (RtS)

Review adequacy of responses to any traffic and transport issues identified in the EIS review task or additional traffic and transport issues arising from amendments to the proposal where required. Prepare a Final Review Report including comments and recommendations, following a review of any revised transport, traffic and parking assessment and modified design outlined in the RtS report, including consideration of information and findings from the Preliminary Review report.

3. Draft Recommended Conditions

Recommend conditions of approval that could be applied to avoid, minimise, mitigate, and/or manage the residual traffic and transport impacts (should DP&E recommend approval of the project) subsequent to completion of the reviews of the EIS and RtS.

4. Meetings

Meet with DP&E, Sydney Metro (the Proponent) and/or its consultants / contractors, and relevant public agencies.

In undertaking the review, the main document reviewed was AECOM Australia's "Sydney Metro City & South West Victoria Cross Over Station Development: Transport, Traffic and Parking Assessment Report (TT&P)", 17 May 2018. Other documents that were referenced / reviewed include the following:

- Secretary's Environmental Assessment Requirements (SEARs): *Application Number SSD 8874*, 30 November 2017
- Submissions received from the general community, government agencies (including Local Councils) and other organisations.
- Sydney Metro "Victoria Cross Station Over Station Development, Submissions Report", September 2018
- Transport for NSW "Sydney Metro City & South West, Victoria Cross Station Over Station Development, Concept State Significant Development Application, Environmental Impact Statement", 18 May 2018

## 1.2 Report Structure

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The remainder of this report is presented as follows:

**Chapter 2** describes the proposed Project.

**Chapter 3** provides a review of the traffic and transport assessment undertaken for the Project.

**Chapter 4** provides conclusions and recommendations.

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## 2. Project Details

### 2.1 Background

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Sydney Metro is the Project proponent (*Development Application SSD 17\_8874*). A specialised delivery office has been established to manage the planning, procurement and delivery of the Sydney Metro network.

Stage 2 of Sydney Metro includes the construction and operation of a new metro rail line from Chatswood, under Sydney Harbour through Sydney's CBD to Sydenham and on to Bankstown. Stage 2 also involves the delivery of seven (7) new metro stations, including at North Sydney (Victoria Cross).

Sydney Metro is seeking to secure concept approval for a commercial office tower above Victoria Cross Station, otherwise known as the over station development (OSD) – the 'Project'. The Project is identified as State Significant Development pursuant to *Schedule 1, 19(2)(a)* of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP).

Sydney Metro proposes to procure the construction of the OSD as part of an Integrated Station Development package, which would result in the combined delivery of the station, OSD and public domain improvements. The station and public domain elements form part of a separate planning approval for Critical State Significant Infrastructure (CSSI) approved by DP&E on 9 January 2017.

Since the CSSI Approval was issued, Sydney Metro has lodged four modification applications to amend the CSSI Approval including Modification 1: Victoria Cross, which involves relocation of the Victoria Cross northern services building from 194-196A Miller Street to 50 McLaren Street together with inclusion of a new station entrance at this location referred to as Victoria Cross North. This modification application was approved on 18 October 2017.

The concept SSD Application seeks approval for the planning and development framework and strategies to inform the future detailed design of the OSD. The application comprises the first stage of the Victoria Cross OSD project. It will be followed by a detailed SSD Application for the design and construction of the OSD to be lodged by the successful contractor who is awarded the contract to deliver the Integrated Station Development.

### 2.2 Project Description

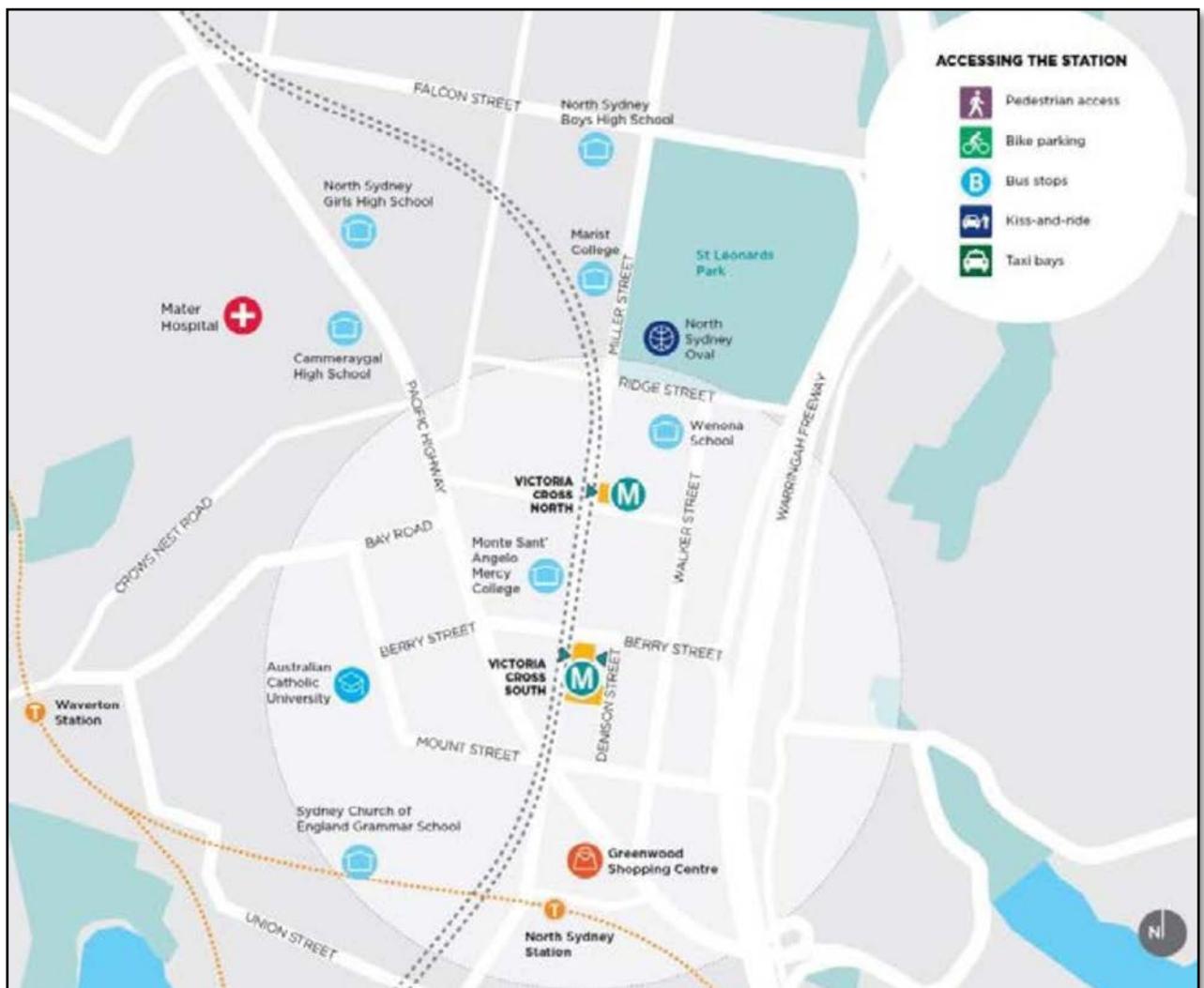
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The Project specifically seeks approval for the following:

- Building envelope including a maximum building height of approximately 42 storeys, comprising of 40 commercial storeys and two additional storeys for roof top plant for the high-rise portion of the building envelope and approximately 13 storeys for the lower rise eastern portion of the building envelope.
- Maximum gross floor area (GFA) of 60,000 square metres for the OSD component.
- Use of the building envelope area for commercial premises including commercial office, retail and business premises.

- Use of the conceptual OSD space provisioning within the footprint of the CSSI Approval (both above and below ground), including the OSD lobby and associated retail space, basement parking, end-of-trip facilities, etc.
- Car parking for a maximum of 150 parking spaces over four basement levels with an additional 11 parking spaces allocated to the station retail.
- Loading, vehicle and pedestrian access arrangements from Denison Street.
- Strategies for utility and services provision, management of stormwater and drainage, achievement of ecologically sustainable development and public art within a design excellence framework.
- Indicative signage zones.
- Future subdivision of parts of the OSD footprint (if required).

The location of the proposed Victoria Cross metro station development is shown in *Figure 2.1* below.



Source: AECOM "Sydney Metro City & South West Victoria Cross Over Station Development: Transport, Traffic and Parking Assessment Report", 17 May 2018

**Figure 2.1: Proposed Project Location**

Three possible construction staging scenarios have been identified for delivery of the Victoria Cross Station OSD:

- Scenario 1 – the station and OSD are constructed concurrently with a program completion date for both the station and OSD in 2024.
- Scenario 2 – the station is constructed first and ready for operation in 2024 and under this scenario OSD construction may still be incomplete or ready to commence after station construction is completed. This means that some or all of the OSD construction is likely to still be undertaken after the opening of the station in 2024.
- Scenario 3 – the station is constructed first and ready for operation in 2024 and the OSD is built at a later stage, with timing yet to be determined. This creates two distinct construction periods for the station and OSD.

## 2.3 Summary of Submissions

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The concept SSD Application was publicly exhibited between 25<sup>th</sup> May 2018 and 22<sup>nd</sup> June 2018. The DP&E received 60 submissions, including 10 from government agencies, Council and other key stakeholders and the remaining 50 from members of the local community, interest / community groups and businesses.

The submissions related to traffic and transport issues include road network capacity and traffic generation, pedestrian circulation and capacity, and the management and mitigation of construction noise. All were adequately addressed by the TT&P and via the RtS report.

It is also noted that a number of transport-related issues raised fall outside the scope of the application and are relevant to the CSSI Approval and the scope of work that will be delivered under that approval. These include the following issues:

- Adequacy of the ground level through-site link and pedestrian circulation.
- Pedestrian connection between North Sydney Station and the Victoria Cross metro station.

## 2.4 Project Amendments

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Project amendments / modifications were made and additional information was provided by the proponent to aid in the assessment of the proposal and in response to issues identified during the exhibition period.

The amendments and additional information generally related to the building design and did not include any components or information that were specifically related to transport issues.

### 3. Review of Traffic & Transport Assessment

#### 3.1 Secretary's Environmental Assessment Requirements (SEARs)

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The environmental assessment requirements for the assessment of transport, traffic, parking and access (SEARs issued by the DP&E) include the following.

- Accurate details of the current daily and peak hour vehicle, public transport, pedestrian and bicycle movements from existing buildings/ uses on the site using the adjacent and surrounding road network.
- Forecast total daily and peak hour trips likely to be generated by the proposed development including vehicle, public transport, pedestrian and bicycle trips, together with cumulative impacts of existing, proposed and approved developments in the area and any transport/ traffic upgrade.
- Impacts of the proposed development on the operation of existing and future transport networks, including the public transport capacity and its ability to accommodate the forecast number of trips to and from the development.
- Detailed assessment of the existing and future performance of key intersections providing access to the site, supported by appropriate modelling and analysis to the satisfaction of RMS and TfNSW.
- Measures to mitigate impacts of the proposed development on the operation of existing and future traffic, public transport, pedestrian and bicycle networks, including any required upgrades.
- Proposed car and bicycle parking provision for workers and visitors, including consideration of the availability of public transport and the requirements of the relevant parking codes and Australian Standards.
- Loading dock and servicing arrangements, including consideration of loading zone hub facilities.
- Measures to be implemented to encourage users of the development to make sustainable travel choices, including walking, cycling, public transport and car sharing, such as provision of adequate bicycle parking and end of trip facilities.
- Consider the future pedestrianisation of laneways east of the Metro site (Denison Street, Spring Street and Little Spring Street) with regard to the North Sydney Council concept plan for the treatment of laneways in the CBD.
- Consider the impacts of the proposed Western Harbor Tunnel Beaches Link.
- Identify required work zones and the functionality and impact on pedestrian amenity and public domain.

The SEARs for the environmental assessment formed the basis of issues considered in the peer review of the transport, traffic and parking assessment. The assessment has covered all the issues raised in the SEARs for the Project. Issues identified during the peer review are characterised in the following sections.

### 3.2 Assessment Methodology

In general, the assessment covered the operational phase of the proposed Project thoroughly with an appropriate methodology.

- The assessment was undertaken within a regulatory context provided by a number of transport planning provisions, goals and strategic planning objectives relevant to the proposal including SEPP (Infrastructure) 2007, North Sydney LEP (2013), North Sydney DCP (2013), Greater Sydney Region Plan, North District Plan, Future Transport Strategy 2056, Sydney's Bus Future, Sydney's Walking Future, Sydney's Cycling Future, and Sydney Metro Planning Study – Crows Nest and North Sydney. In addition, specific transport related documents were considered during the assessment including RMS Guide to Traffic Generating Developments, AS 2890 Parking Facilities Parts 1 to 6, North Sydney Council's Central Laneways Masterplan proposals (January 2018). The proposed concept OSD aligns with the relevant strategies / policies above.
- Traffic surveys along relevant road sections surrounding the site were undertaken in 2015, which is acceptable. These were supplemented by RMS SCATS intersection data (Wednesday 7 December 2016) at key intersections surrounding the site, which were used to assess the intersection performance.
- The TT&P assessment provides an understanding of travel patterns and the accessibility of the site under current operating conditions.
- The traffic generation rates were used from the RMS '*Guide to Traffic Generating Developments*' (2002) and the more recent RMS '*Technical Direction 2013/04a: Guide to Traffic Generating Developments – Updated Traffic Surveys*' (2013). These are considered to be generally conservative (high) given the characteristics of the planned uses.
- Conservative (high) traffic trip generation rates were adopted based on parking space and service vehicle numbers.
- The land uses are consistent with the detail provided in the concept SSD Application for the Victoria Cross and include consideration of the land uses in the CSSI Approval (including station retail).
- For the purposes of adopting the most relevant parking and trip generation rates from the Integrated Station Development (ie. as a result of the total development of the site), the GFA approved in the CSSI was included in the assessment. This approach ensures that an adequate level of infrastructure was considered to support the concept proposal and future detailed SSD Application.
- Because it was not possible to confirm the previous development trip generation rates using survey data, an alternative approach was adopted in order to determine the site's baseline approved (or existing) development traffic generation level. This was determined through reviewing information for the adjacent approved developments at 1 Denison Street and 177 Pacific Highway, North Sydney. Both of these developments are in close proximity to the site with similar commercial uses, and it is considered that this together with the traffic surveys carried out at 65 Berry Street, provides an appropriate baseline for the study.
- Traffic distribution is based on information extracted from BTS '*Journey to Work*' (JTW) data for the North Sydney area, which is acceptable. In addition to the BTS JTW data, journey-to-work data was also reviewed from 2016 Census data for centrally based

local areas in City of Sydney and North Sydney LGA, which is considered to be prudent.

- The road network assessment and intersection performance were limited to the operation of nearby intersections during weekday AM and PM peak periods, which is considered acceptable for the proposed OSD development scenario. Intersection operations were evaluated using the SIDRA 7.0 intersection modelling package.
- The impact from the proposed construction activity on surrounding development is expected to be managed through the staging of the development and in the implementation of a Construction Traffic Management Plan (CTMP).
- There was no detailed assessment undertaken of the proposed Project's impacts during construction, eg. traffic generation, trip distribution, delivery / haul routes, road network operations, parking management, site access, etc. In lieu of the detailed assessment, the Proponent proposes that the contractor responsible for the delivery of the OSD works will prepare a CTMP prior to works commencement. This would need to identify potential impacts and demonstrate how traffic and pedestrians will be managed when construction works are being carried out. The CTMP would comprise a combination of Traffic Control Plans, Vehicle Movement Plans, Pedestrian Movement Plans, Parking Management Plans and Traffic Staging Plans. As the SSD application is for a Stage 1 concept, it is noted that no construction works are proposed. However, any Stage 1 concept approval should include the requirement to prepare a CTMP for assessment with any Stage 2 detailed development application.
- A Construction Management Statement has been prepared addressing how future construction stages will manage impacts to pedestrians, rail users, bus services and taxis.

### 3.3 Operational Impacts

Operational impacts were noted as being largely positive. The location of the OSD will enable its users to benefit from nearby public and active transport modes. Along with the intensification of North Sydney CBD, it is considered achievable that the mode share attributable to the OSD will be comparable with sites in the Sydney CBD such as Pitt Street and Martin Place.

The OSD development assessment supports a positive shift in travel mode share away from private vehicle travel, which both agrees and aligns with the planned growth of North Sydney CBD and travel patterns already exhibited elsewhere.

The following comments / issues are noted for each transport component.

#### 3.3.1 Road Network / Traffic Operations

- The estimated traffic generation from the proposed concept OSD development is approximately 109 two-way vehicle trips per hour (including passenger and service vehicles), which represents only an additional 33 vehicle trips per hour above that generated from the previously approved on-site developments. This equates to about one additional vehicle trip every two minutes during the AM peak hour. Therefore, the additional trip generation is insignificant and is forecast to have insignificant impact on the operating performance of the surrounding road network.

- In determining the existing traffic generation from the site (in order to discount it from future OSD traffic generation), trips were based on previous parking space numbers and a rate of 0.3 trips / parking space was adopted for both AM and PM. However, the last paragraph of *Section 6.1.1* shows different trips for AM and PM – PM uses a rate of 0.25 trips per parking space. This anomaly is noted and is not considered to be significant because traffic generation is minor due to the relatively low number of parking spaces proposed.

### **3.3.2 Parking and Access**

- The proposed provision of 161 car parking spaces is in accordance with North Sydney Council's DCP maximum requirements for car parking for new developments. This is considered a prudent approach to manage traffic flows into the proposed development.
- Access will be managed through the provision of a single, consolidated two-way access driveway located off the western side of Denison Street, which would reduce the number of vehicle conflict points along Denison Street from the existing three access points to one.
- Access for larger / longer vehicles is proposed via Denison Street. However, it is unclear how service vehicle size and associated manoeuvrability will be managed to avoid access issues between the surrounding road network and the basement loading areas.
- There is some inconsistency between *Appendix A: Delivery Service Plan Principles* and *page 49* of TT&P assessment – the latter indicates an additional two (2) van spaces designated for the Victoria Cross Station for maintenance and operational purposes. It is acknowledged that this is a detail design matter in relation to the CSSI works.

### **3.3.3 Public Transport**

- No specific comments / issues with respect to public transport impacts (trains and buses) during operations.

### **3.3.4 Active Transport**

- The TT&P assessment indicates that *'during peak periods, the North Sydney's pedestrian crossings can become congested, due to outdated designs and treatments that don't offer the priority and spatial allocation for pedestrians'*. However, it is unclear what will be done to alleviate these outdated designs / treatments. The assessment then mentions that *'North Sydney Council and Transport for NSW are currently developing planning strategies that will help prioritise movement and allocate sufficient space to support the current and planned levels of growth in the North Sydney Centre'*. But there are no specific details including responsibilities, timetables (before or after Victoria Cross Station OSD), etc. It is noted that ground plane conditions within and around the Victoria Cross site are to be resolved in the detail design of the station box as part of the CSSI approval.
- The footpath along Denison Street (south of the station access) currently operates poorly at level of service (LoS) F, with sub-standard capacity. The upgrading / widening of the footpath into the adjacent Denison Street parking lane to create an effective footpath width of 3.0 m is shown indicatively within the concept application and is expected to improve the performance of the footpath. This is a matter for resolution of access and transport aspects in relation to the station box within the CSSI approval.

- Numerous studies undertaken by Council and RMS were mentioned in the TT&P assessment in regards to cycling facilities and there is a discussion pertaining to proposed enhancements in the future. The assessment relies (somewhat) on cycling facilities being provided by others, especially connectivity between the North Sydney CBD and surrounding areas. However, there was minimal detail in regards to timetables for any upgrade works, responsibilities, funding, etc.
- The proposed provision of 802 bicycle parking spaces with end-of-trip facilities exceeds North Sydney Council's DCP minimum bicycle parking requirements for new developments.
- The proposed bicycle parking in the basement area will require adequate wayfinding and public exposure so that cyclists are able to locate the facilities in order to use them.

### **3.3.5 Cumulative Impacts**

- No specific comments / issues with respect to cumulative impacts during operations although it is acknowledged that pedestrian modelling of the Metro station with and without the OSD was undertaken to support the design development process.

## **3.4 Construction Impacts**

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Potential impacts of the proposed Project may occur during the construction phase if not managed appropriately. However, the TT&P assessment provided no detailed assessment of the proposed Project's impacts during construction including traffic generation, trip distribution, delivery / haul routes, road network operations, parking management, site access, etc.

In lieu of the detailed assessment, the Proponent proposes that the contractor responsible for the delivery of the OSD works prepares a Construction Traffic Management Plan (CTMP) prior to works commencing, which would identify transport impacts during construction and detail mitigation measures to manage the impacts.

Typically, construction phase impacts would include the following:

- Potential performance deterioration of intersections surrounding the construction site.
- Potential safety implications for pedestrians, cyclists and motorists especially around construction access and egress points.
- Potential temporary closure of pedestrian and cyclist facilities during construction.
- Temporary relocation of bus stops and delays to bus services on routes around the construction site.

The following comments / issues are noted for each transport component.

### **3.4.1 Traffic Generation / Road Network / Traffic Operations**

- There is no specific detail provided on potential traffic generated during the construction phase or the trip distribution and potential delivery routes. This is proposed to be covered by the preparation of the CTMP, which would describe in detail what work activities are proposed, how they will be staged, the potential impact on the surrounding road network and other road users, and how these impacts will be managed. This is considered to be an acceptable approach in view of the different construction methodologies that may be chosen by the successful project construction firm.

### 3.4.2 **Parking and Access**

- There is no specific detail provided on how construction staff will access the site, especially during peak construction periods. This is proposed to be covered within the CTMP and is considered to be an acceptable approach in view of the various staffing and transport options available to the successful project construction firm.

### 3.4.3 **Public Transport**

- No specific comments / issues with respect to public transport impacts (trains and buses) during construction, although it is acknowledged that the construction management principles cover that buses '*need to run on time with no disruption to routes and stops*'. No impacts are anticipated other than for buses.

### 3.4.4 **Active Transport**

- No specific comments / issues with respect to active transport impacts during construction, although it is acknowledged that the construction management principles cover that there should be minimal disruption to pedestrians and cyclists.

### 3.4.5 **Cumulative Impacts**

- There is no specific assessment undertaken of potential cumulative construction impacts, either associated with the Sydney Metro project itself or with potential surrounding project developments. This is proposed to be covered within the CTMP and is considered to be an acceptable approach considering the presently unknown timetable for construction of the Project.

## 3.5 **Proposed Mitigation Measures**

Due to the operational impacts being insignificant and largely positive, no specific mitigation measures were considered to be required or proposed by the TT&P assessment.

Because the construction impacts were not identified in detail, only general strategies and principles were provided with downstream mitigation and management measures to be detailed in a Project CTMP.

Typically, construction phase mitigation measures would include:

- Ongoing consultation with RMS, North Sydney Council, emergency services and bus operators in order to minimise traffic and transport impacts during construction, including during special events.
- Community consultation in advance of proposed road and pedestrian network changes.
- Road safety audits would be carried out at each construction site access.
- Vehicle access to and from construction sites would be managed to ensure pedestrian, cyclist and motorist safety.
- Any relocation of bus stops would be carried out in consultation with relevant authorities / organisations.
- Construction site traffic would be managed to minimise movements during the AM and PM peak commuter periods as well as minimise movements through school zones during pick-up and drop-off times.

- Construction sites would be managed to minimise construction staff parking on surrounding streets by encouraging public transport use and ride-sharing and the provision of alternative parking locations and shuttle bus transfers where feasible.
- Property access would be maintained in consultation with property owners.

## 4. Conclusions & Recommendations

### 4.1 Conclusions

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The following conclusions are provided in the peer review of the proposed Project's transport, traffic and parking assessment:

- In general, the assessment during the operations phase has been undertaken thoroughly with an appropriate methodology and covered all the issues raised in the SEARs for the environmental assessment. For the construction phase, there was no detailed assessment undertaken of the proposed Project's impacts. This is proposed to be covered by the preparation of the CTMP, which is considered to be an acceptable approach in view of the different construction methodologies that may be chosen by the successful project construction firm and current uncertainty regarding the timetable for construction of the OSD.
- The assessment was undertaken within a regulatory context provided by a number of transport planning provisions, goals and strategic planning objectives relevant to the proposal.
- The assessment provides an understanding of travel patterns and the accessibility of the site under current operating conditions including relatively recent traffic survey data.
- The traffic generation rates were adopted based on parking space and service vehicle numbers, which are considered to be conservative (high) given the characteristics of the planned uses.
- The road network assessment and intersection performance were limited to weekday AM and PM peak periods, which is acceptable given the low trip generation and impacts as well as the likelihood of weekend traffic generation from the development being insignificant.
- Parking provision is considered to be appropriate.
- Operational impacts were noted as being largely positive including increases in public transport mode share and reducing road-based private transport.
- The potential impacts of the project may occur during the construction phase (if not managed appropriately) and include:
  - Potential performance deterioration of intersections surrounding the construction site.
  - Potential safety implications for pedestrians, cyclists and motorists especially around construction access and egress points.
  - Potential temporary closure of pedestrian and cyclist facilities during construction.
  - Temporary relocation of bus stops and delays to bus services on routes around the construction site.
- There was no detailed assessment undertaken of the proposed Project's impacts during construction. In lieu of the detailed assessment, the Proponent proposes that the contractor responsible for the delivery of the OSD works will prepare a CTMP prior to works commencing to address construction-related impacts.
- A Construction Management Statement has been prepared addressing how future construction stages will manage impacts to pedestrians, rail users, bus services and taxis.

Generally, the assessment of impacts has been undertaken adequately. However, the following issues require clarification:

- Access for larger / longer vehicles via Denison Street needs to be confirmed as adequate with respect to manoeuvrability to avoid access issues between the surrounding road network and the basement loading areas. A swept path analysis would be useful in confirming appropriate access. A condition is recommended below to require this detailed assessment to be undertaken as part of the Stage 2 design development.
- There is no firm commitment to providing adequate wayfinding infrastructure to the proposed bicycle parking in the basement area. A condition is recommended below in relation to the issue.
- A number of issues are to be resolved / investigated at a later date (eg. during downstream design development) in consultation with Councils, RMS, TfNSW and/or other authorities. However, no details (eg. responsibilities, funding and timeframes) are specified on when issues are to be resolved / finalised, etc. Firm commitments to the following Project components would be prudent for the CSSI and OSD:
  - Development of pedestrian environment on Denison Street including addressing the existing congestion at pedestrian crossings in North Sydney surrounding the subject site during peak periods.
  - Provision of upgraded cycling facilities, especially connectivity between the North Sydney CBD and surrounding areas.

## 4.2 Recommendations

Based on the findings of this review, the following Draft Conditions and actions by the proponent are recommended:

1. As part of downstream detail design development, confirm the adequacy of site access (particularly with respect to turning movement swept paths) via Denison Street for larger / longer vehicles.
2. As part of downstream detail design development, stipulate the wayfinding infrastructure required and public exposure necessary for the proposed bicycle parking in the basement area.
3. Prior to Project implementation, determine responsibilities, timing and commitments to the development of pedestrian facilities and bicycle infrastructure proposed to be undertaken by other parties.
4. Prior to Project construction, the preparation of a Construction Traffic Management Plan (CTMP) would need to be undertaken by the chosen contractor in consultation with, and to the satisfaction of relevant local councils and RMS. The overall Project CTMP should include, but not be limited to, the following:
  - Construction car parking strategy;
  - Haulage movement numbers / routes including contingency routes;
  - Detailed travel management strategy for construction vehicles including staff movements;
  - Maintaining property accesses;

- Maintaining bus operations including routes and bus stops;
- Maintaining pedestrian and cyclist links / routes;
- Independent road safety audits on construction-related traffic measures; and
- Measures to account for any cumulative activities / work zones operating simultaneously.

*The CTMP would need to be a Condition.*

5. Independent road safety audits are to be undertaken for all stages of further design development involving road operations and traffic issues. Any issues identified by the audits will need to be closed out to the satisfaction of the relevant authorities including RMS and/or Councils.