

Appendix D

Construction Pedestrian and Traffic Management Plan

Macquarie

**Sydney Metro Martin Place
integrated station development**

**North Tower, SSD DA Stage 2
Construction Pedestrian and Traffic
Management Plan**

CSWSMP-MAC-SMN-TF-REP-999902

Rev 4.0 | 29 March 2019

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Contents

	Page
1 Description of construction works	1
1.1 Site description	1
1.2 Description of the works	2
1.3 Amendments following authority submissions	2
1.4 Sydney Metro City and Southwest Construction Traffic Management Framework	3
1.5 Concurrent construction projects	5
2 Methodology	6
2.1 Duration and staging of works	6
2.2 Hours of construction	7
2.3 Site access and traffic staging plans	8
2.4 Traffic generation	11
2.5 Haulage routes	12
2.6 Traffic management	13
2.7 On-site parking	14
2.8 Pedestrian and cyclist management	14
2.9 Construction vehicle marshalling areas	15
2.10 Special events	16
3 Assessment of impacts	17
3.1 Impact to emergency service access	17
3.2 Impacts to pedestrians and cyclists	17
3.3 Impact to bus zones and bus services	17
3.4 Impact to on-street parking	18
3.5 Impact to loading zones	18
4 Mitigation measures	19
4.1 Parking/Loading/Bus Zone signage	19
4.2 Traffic control plans	19
4.3 Pedestrian access management	20
4.4 Sydney Coordination Office discussions	21
5 Conclusion	21

1 Description of construction works

1.1 Site description

The Metro Martin Place precinct development consists of the Martin Place Metro station, Over Station Development (OSD) and the associated integrated civic, retail and commercial areas. This proposed redevelopment is to create a transportation metro precinct that offers mixed use space including commercial office space, modern retail outlets and civic space. The North Tower OSD consists of 39 storeys of office space.

The precinct is located between Hunter Street to the north, 39 Martin Place to the south, Elizabeth Street to the east and Castlereagh Street to the west.

The buildings located at 39 Martin Place, 55 Hunter Street, 5 Elizabeth Street, 7 Elizabeth Street, 8-12 Castlereagh Street and 9-19 Elizabeth Street will be demolished, and the site excavated by the Tunnel and Station Excavation Works (TSE) Contractor prior to Lendlease commencing site establishment.

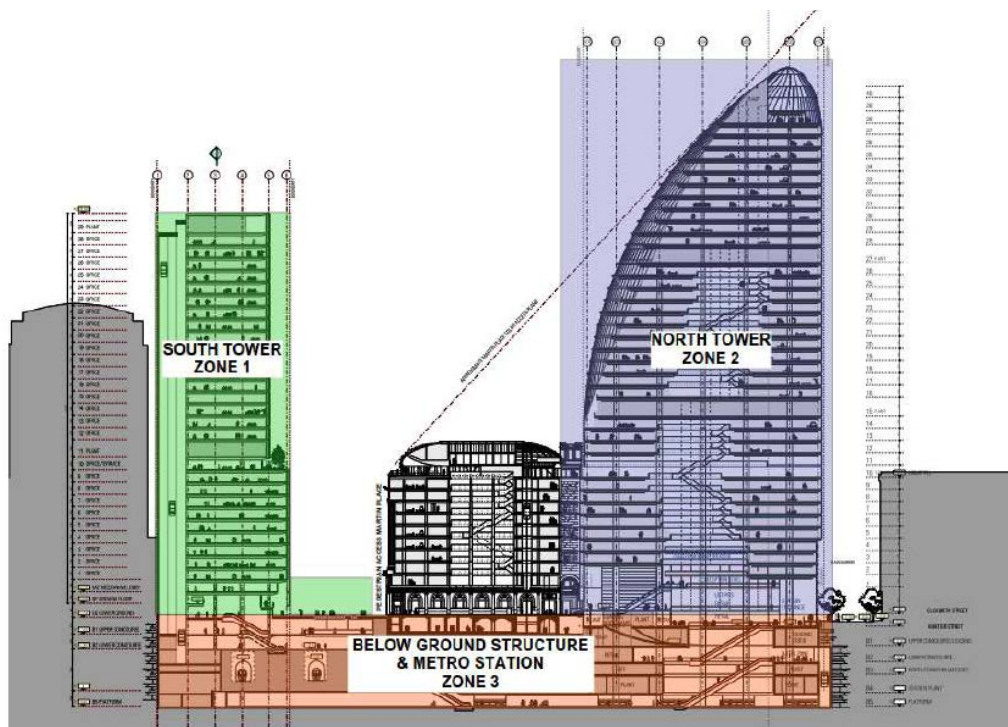


Figure 1 Construction zone break up

This Construction Pedestrian and Traffic Management Plan (CPTMP) provides an assessment of the impact to road users during the North Tower OSD construction and describes the mitigation measures proposed. Where relevant, reference is made to Sydney Metro (Chatswood to Sydenham) Critical State Significant Infrastructure (CSSI) EIS ('CSSI EIS') given the integration of projects, location of the site and representative nature of the construction traffic volumes and impacts for the North and South Tower OSD.

1.2 Description of the works

The North Site OSD proposal indicated in Figure 1 above (Zone 2), involves the redevelopment of the site, as well as the following:

- Integration of an underground pedestrian link under 50 Martin Place, new metro train station and associated tunnel fit-out;
- Construction of the 39 story North Tower, comprising a reinforced concrete structure with a glass lift core on Castlereagh Street; and
- Integration of the North Tower and 50 Martin Place with interconnecting bridges at nominated levels, and a link to the ground floor.

1.3 Amendments following authority submissions

This report is the version of the Framework Construction Pedestrian and Traffic Management Plan that was submitted with the EIS for the **North Site Over Station Development (OSD)**. It has been restructured from that previously submitted in order to accurately respond to the submissions received to the exhibition of the EIS. Given the level of detail now provided, the word 'framework' has been removed from the title of this document.

The Sydney Coordination Office within TfNSW requires a number of items to be addressed as part of the CPTMP for the project. These items are listed in Table 1, along with the relevant section in which it is contained within this report.

Table 1 CPTMP requirements

Requirement	Reference
Consistency with the Construction Traffic Management Framework prepared as part of the Sydney Metro City and Southwest;	This plan is consistent with the framework. Further information provided in section 1.4.
Loading and unloading details, including the locations of all proposed work zones;	See section 2.3
Haulage routes;	See section 2.5
Construction vehicle access arrangements;	See section 2.3
Proposed construction hours	See section 2.2
Estimated number and type of construction vehicle movements including morning and afternoon peak and off peak movements, distinguishing concrete pours from other construction activity and noting that construction vehicles would be restricted from using work zones on Castlereagh Street and Elizabeth Street during certain times of the day	See section 2.4 for traffic generation and 2.3 for proposed use of work zones.
Construction program, highlighting details of peak construction activities and proposed construction 'Staging';	See section 2.1
Details of specific measures to ensure the arrival of construction vehicles to the site does not cause additional queuing on Elizabeth Street, Hunter Street, Castlereagh Street and King Street;	See section 2.5 and 2.3 for routing which avoids movements which could cause in additional

	queuing on congestion streets. The traffic generation is reduced during peak times as per section 2.4
Details of construction vehicle marshalling areas outside the CBD;	See section 2.9
Details of pedestrian and traffic management measures;	See section 2.3 and 2.8
The staging of works and simultaneous construction with other projects in the precinct including the Sydney Light Rail Project, Sydney Metro City and Southwest and private development to mitigate the cumulative construction impacts of projects;	See section 1.5
Any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during the construction of the proposed works; and	See section 3
Measures proposed to mitigate any associated general traffic, public transport, pedestrian and cyclist impacts should be clearly identified and included in the CPTMP.	See section 4

1.4 Sydney Metro City and Southwest Construction Traffic Management Framework

The Construction Traffic Management Framework (CTMF), produced by Sydney Metro, sets out the approach to managing traffic impacts during the construction of the Chatswood to Sydenham component of the Sydney Metro City and Southwest project.

It has been prepared to address the general requirements for contracts which form part of the project that was approved under the CSSI EIS. It establishes the traffic management processes and acceptable criteria to be considered and followed in managing roads and footpaths adjacent to Project worksites.

Although the OSD works do not form one of the contracts approved under the CSSI, given the location of the work and integrated nature of the project, the principles of the CTMF have been considered.

The preparation of the CPTMP for the OSD works considers the CTMF in terms of the approval process, content and issues to be addressed. This is described in the following sections.

1.4.1 CPTMP approvals process

The approval process for the OSD CPTMP is summarised as:

- Preparation in consultation with SCO;
- Submitted to SCO for review and comment;
- After review and agreed edits, it will be submitted for approval following the SCO endorsement, prior to the OSD construction works commencing; and
- Issued to DP&E as required under the SSDA consent.

1.4.2 CPTMP content

The CTMF requires site specific CTMPs to comprise of other plans and drawings, including:

- Traffic Staging Plans
- Traffic Control Plans
- Vehicle Movement Plans
- Pedestrian Movement Plans
- Parking Management Plans

This CPTMP provides preliminary Traffic Staging Plans for the OSD works in section 2.3. This plan also indicates the proposed movement plans for vehicles, pedestrians and any proposed changes to parking, buses and loading zones.

Once the principals of the Traffic Staging Plans have been endorsed, Traffic Control Plans will be produced along with other plans as required and included in the CPTMP for approval.

1.4.3 Site specific issues

The CTMF sets out a number of site-specific issues for Martin Place to be addressed as part of any site-specific CTMP. The issues are listed in Table 2.

Table 2 Martin Place site-specific issues

Martin Place Issues	Section
Pedestrian and cyclist safety, and access through Martin Place, particularly during weekday AM, weekday lunch, weekday PM and special events.	The traffic staging plans (see section 2.3) describe how pedestrians and cyclists will be managed on weekdays, with the impact described in section 3.2. Controls during special events will be discussed and agreed on a case by case basis with SCO.
Heavy pedestrian activity in Martin Place, Castlereagh Street, Elizabeth Street, Hunter Street.	The management of pedestrians and cyclists is summarised in section 2.8.
Access to Martin Place station including marshals to direct commuters during peak periods.	The requirement of marshals to be discussed with SCO.
Impact on bus stops and bus operations	Discussed in section 3.3
Special events	Discussed in section 2.10
Impact on service vehicle parking and car parking.	Discussed in section 3.4 and 3.5
Cumulative construction traffic from other developments.	Identified concurrent developments discussed in section 1.5. Cumulative traffic generation discussed in section 2.4.

1.5 Concurrent construction projects

There are a number of construction sites already established and proposed within the Sydney CBD. Surrounding construction activities include (but are not limited to):

- Sydney Metro - *expected to be operational by 2024*
- 1 Carrington Street (Wynyard Place) – *expected to be completed by 2020*
- 280 George Street – *expected to be completed by 2020*
- One Circular Quay – *expected to be completed by 2022*
- AMP Quay Quarter – *expected to be completed by 2022*
- Barangaroo Precinct – *expected to be completed by 2024*
- Sydney Light Rail - *expected to be completed by end of 2019 and operational by May 2020*

Works at the majority of these sites are expected to be completed by 2022. With North Tower OSD works anticipated to commence in January 2021 (basement works approved under the CSSI will commence in June 2020), it is works at Barangaroo, Circular Quay, Quay Quarter and those associated with the Sydney Metro that are expected to be the main construction traffic generating sites overlapping with the North Tower OSD works.

Ongoing review of cumulative heavy vehicle traffic generation and coordination of heavy vehicle routes used by such major projects will be undertaken on a regular basis between the Project Team and Sydney Coordination Office to minimise impacts on the road network.

2 Methodology

2.1 Duration and staging of works

The timeline of construction works relating to the North Tower Site is shown in Table 3. Given the integrated nature of the project, works approved under the CSSI are provided for information also. Those works are not, however, subject to this CPTMP.

Underground station works and aboveground up to Level 6 of the North Tower are approved under the CSSI and will be carried out by a separate Lendlease construction team. From Level 6 and above, works will be approved under the SSDA.

The works are to be carried out over a duration of 36 months with a planned start date in June 2020 and a completion date in June 2023. It is anticipated SSDA approved works will commence in January 2021. Station fit-out works will be occurring concurrently with those works.

Table 3 Staging and duration

Stage	Activities	Start Date	Finish Date	Duration	Approval
1	Basement structure works	June 2020	July 2021	13 months	CSSI
2A	North Tower Cores (up to level 6)	July 2020	August 2021	13 months	CSSI
2B	North Tower Cores (level 6 and above)	January 2021	March 2022	15 months	SSDA
3A	Podium Levels (up to level 6)	February 2021	September 2021	7 months	CSSI
3B	Floor Plates (level 6 and above)	August 2021	November 2022	15 months	SSDA
4	Façade	September 2021	February 2023	17 months	SSDA
5	Plant and Services	March 2022	April 2023	13 months	SSDA
6	Vertical Transportation	January 2022	June 2023	18 months	SSDA
7	Finishes and Station Fit-out	July 2020	June 2023	35 months	CSSI
8	Finishes and North Tower Fit-out	September 2021	May 2023	20 months	SSDA
9	Integrated Fit-out	January 2023	May 2023	4 months	SSDA
10	Commissioning	February 2022	June 2023	16 months	SSDA

Stage 1: Excavation works are completed, and station/basement structure works commence. Given level differences between the site and adjacent streets during this stage, a platform within the site is in place to allow vehicles to be loaded and unloaded.

Stage 2A: The core will advance ahead of suspended slabs below. There are 4 cores structure within the site and a mix of jumpform, conventional and craneable shutters will be used, commencing at different times. Up to Level 6 is approved as part of the CSSI for the Metro.

Stage 2B: Two of the cores (located on the western boundary of the site) continue from Level 6 and above. The other two cores do not extend beyond Level 6.

Stage 3A: Floor slabs constructed up to Level 6 as part of the CSSI. Once the ramp has been constructed into the future loading dock, construction vehicles will be able to access basement level 1 off Castlereagh Street. Once the ground level slab has been constructed, access from Elizabeth Street can be achieved.

Stage 3B: Floor slabs continue to be constructed from Level 6 and above as part of the SSDA

Stages 4 -10: These stages generally follow the base building structure. The façade will be installed from the floors. There are no significant changes to the site access points during these stages.

It is noted that the South Tower is proposed to be constructed between February 2021 and August 2023. Demolition and tunnelling works for Sydney Metro, already approved under the CSSI, are the responsibility of the TSE contractor and are taking place on-site at present, with handover of the South Tower site expected in February 2021.

2.2 Hours of construction

Main site working hours will be governed by the final State Significant Development Application (DA) consent conditions, however the following is proposed for this CPTMP for the North Tower OSD works only (i.e. from level 6 and above).

- Mondays to Fridays inclusive: 7am-7pm
- Saturdays: 7am-5pm
- Sundays and public holidays: No work
- Works may be undertaken outside these hours where:
 - It is required by a major works authorization deed executed with Roads and Maritime Services (RMS); or
 - The delivery of materials is required outside these hours by the Police or other authorities; or
 - It is required in an emergency to avoid the loss of life, damage to property and/or environmental harm; and
 - Variation is approved in advance in writing by the Director General
- Works approved under the CSSI are subject to the hours of construction set out in the associated conditions of consent.

2.3 Site access and traffic staging plans

Two traffic staging plans (TSP 1 and TSP 2) have been proposed for the North Site to manage traffic at different stages of construction. These are described in the following sections, along with the location of the site access points.

2.3.1 TSP 1

Stages of construction: 1, 2A, 3A (generally below ground level works and associated with the station structure)

Indicative time period: June 2020 – January 2021

Site Access: Separate entry and exit on Castlereagh Street

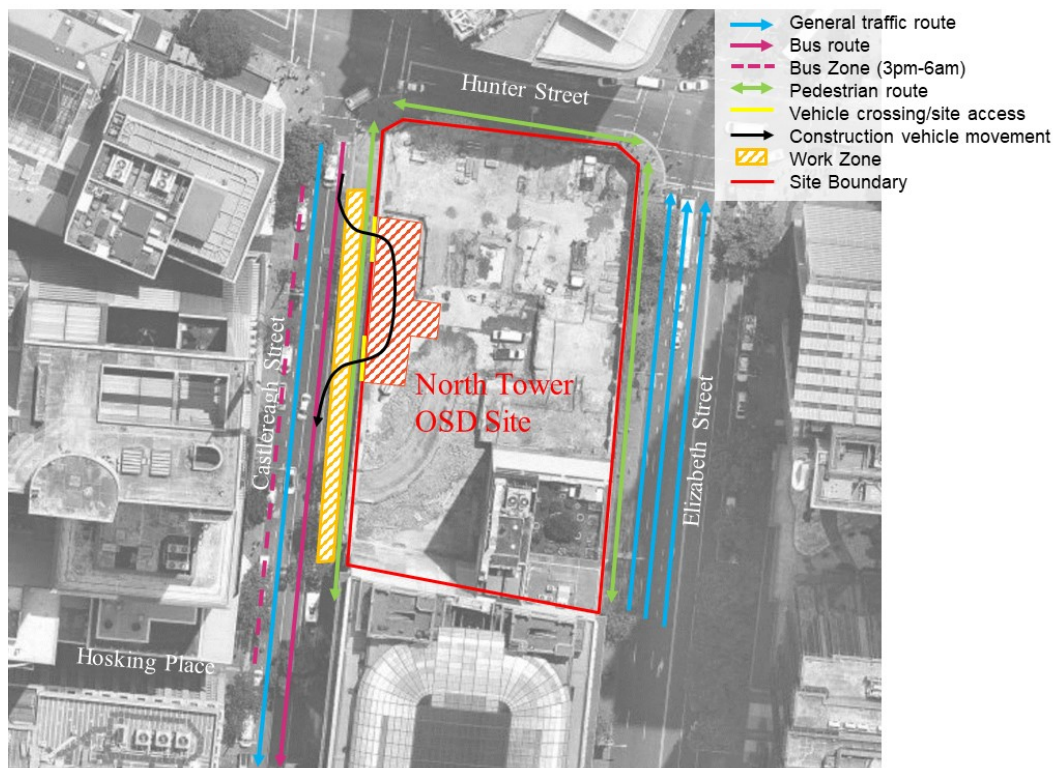


Figure 2 TSP 1 Site Access and Traffic Staging Plan

Site Access

As presented in Figure 2, a separate entry and exit off Castlereagh Street is proposed during TSP 1. This will allow vehicles to access a temporary platform within the site boundary from which they can be unloaded and loaded before exiting onto Castlereagh Street in a forward direction. Due to spatial constraints, only one vehicle is expected on the platform at any time. Pedestrian movements on the footpath across the site access would be managed by traffic controllers and concertina gates at both the access and egress point.

The road network capacity would not be reduced as the proposed access point is on the departure side of the Castlereagh Street/ Hunter Street intersection. As

such, the traffic signals would generate sufficient gaps in traffic to enable heavy vehicles to safely exit the site via Castlereagh Street.

The largest construction vehicle to access the subject site would be a rigid vehicle with overall length up to 9.4m.

Work Zones

A work zone is proposed on Castlereagh Street (eastside – between Hunter Street and the boundary with 50 Martin Place) as shown in Figure 2. It is proposed to operate the work zone from 7.00am-7.00pm Monday to Friday and 7.00am-5.00pm on Saturday in accordance with the hours of construction. The proposed changes to kerbside uses on Castlereagh Street (eastside) are summarised in Table 4.

Table 4 Castlereagh Street (eastside) kerbside use

Kerbside Use	Existing times	Proposed times
Work zone	n/a	7am-7pm (Mon-Fri) 7am-5pm (Sat)
Bus zone	3pm – 8pm (Mon-Fri)	None
Loading zone (ticket)	6am - 3pm (Mon-Fri) 6am - 10am (Sat)	None
4P (ticket)	8pm-12am (Mon-Fri) 10am-10pm (Sat) 8am - 10pm (Sun/Bank Hol)	7pm – 12am (Mon-Fri) 5pm – 10pm (Sat) 8am - 10pm (Sun/Bank Hol)

To mitigate the impact of the lost bus zone on the eastside of Castlereagh Street (between 3pm and 8pm), it is proposed to change the hours of the bus zone on the westside of Castlereagh Street (between Hosking Place and Hunter Street). It is proposed to operate the bus zone from 3pm – 6am on weekdays. The proposed changes to kerbside uses on Castlereagh Street (westside) are summarised in Table 5.

Table 5 Castlereagh Street (westside) kerbside use

Kerbside Use	Existing times	Proposed times
Bus zone	6pm – 6am, 7 days	3pm – 6am, (Mon-Fri) 6pm-6am (Sat/Sun/Bank Hol)
Loading zone (ticket)	6am - 6pm (Mon-Fri) 6am - 10am (Sat)	6am - 3pm (Mon-Fri) 6am - 10am (Sat)
4P (ticket)	10am - 6pm (Sat) 8am - 6pm (Sun/Bank Hol)	10am - 6pm (Sat) 8am - 6pm (Sun/Bank Hol)

Existing ‘No parking’ restrictions in front of driveways along Castlereagh Street (westside) would be retained.

The proposed work zones and site access would not affect the pedestrian and cyclist routes.

2.3.2 TSP 2

Stages of construction: 2B, 3B, 4, 5, 6, 7, 8, 9, 10 (generally above ground level works)

Indicative time period: January 2021 – June 2023

Site Access: Combined entry and exit on Castlereagh Street, Separate entry and exit on Elizabeth Street

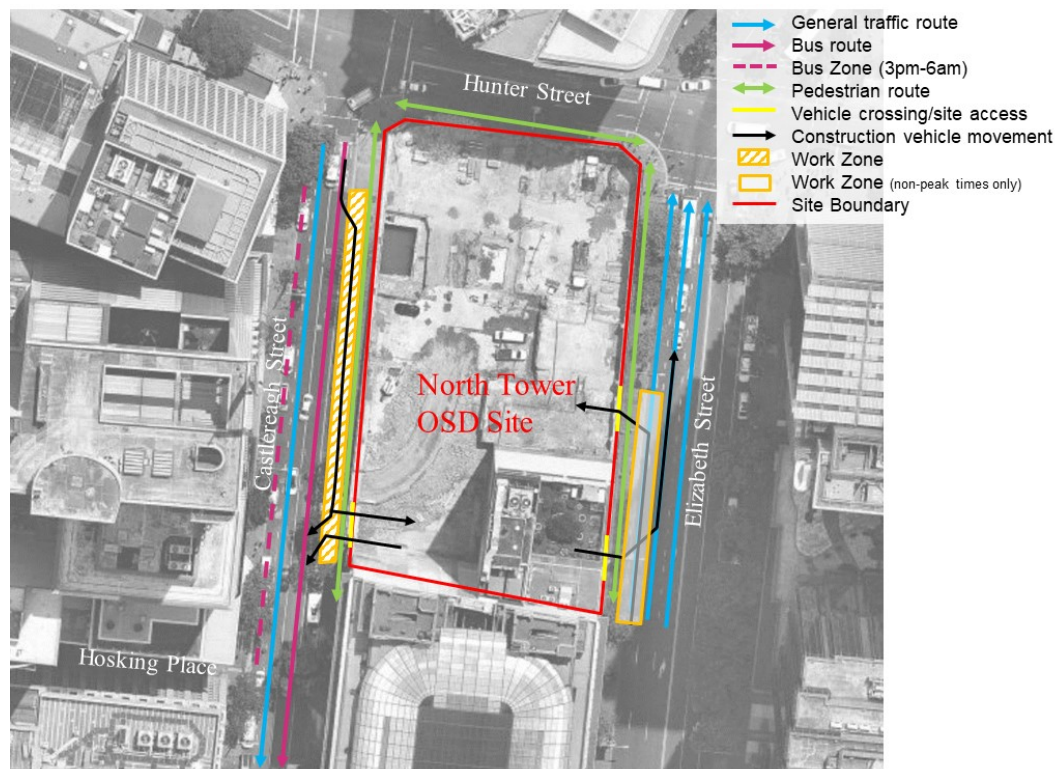


Figure 3 TSP 2 Site Access and Traffic Staging Plan

Site Access

As presented in Figure 3, a combined entry and exit off Castlereagh Street is proposed during TSP 2. This is location of the future loading dock driveway.

A separate entry and exit off Elizabeth Street is also proposed. It will operate as a one-way system, with access to the site via the northern gate and egress via the southern gate. Vehicle movements would be restricted to left-in, left-out only.

Traffic signals at the Martin Place pedestrian crossing on Elizabeth Street will generate sufficient gaps in traffic to enable heavy vehicles to safely exit the site via Elizabeth Street.

Pedestrian movements on the footpath across the site access/egress points on Castlereagh Street and Elizabeth Street would be managed by traffic controllers and concertina gates.

The largest construction vehicle to access the subject site would be a rigid vehicle with overall length up to 9.4m.

Work Zones

The proposed work zone along Castlereagh Street (eastside) described as part of the TSP 1 arrangement will continue to be in place, along with the changes proposed along Castlereagh Street (westside), between Hunter Street and Hosking Street.

From discussions held to date with SCO, it is understood that a work zone along Elizabeth Street (westside) is not supported during peak times due to the impact to buses. It is intended, however, to propose the use a section of Elizabeth Street outside of peak times and explore peak time usage with SCO in the future. This work zone would assist in reducing the impact at the intersection of Castlereagh Street and King Street where difficulties turning left during busy periods is noted.

2.4 Traffic generation

The CSSI EIS estimated precinct wide construction volumes of 6 heavy vehicles per hour (i.e. 12 heavy vehicle movements) during peak times, increasing to 26 heavy vehicles per hour (i.e. 52 heavy vehicle movements) outside of peak times.

During peak time periods, it is estimated the North Site and South Site will collectively generate 6 heavy vehicles (i.e. 12 heavy vehicle movements). This would be shared evenly between the sites.

This may increase to a peak of 26 heavy vehicles per hour (i.e. 52 heavy vehicle movements) during the middle of the day, however it is expected to generally be lower than this and in the range of 15-20 heavy vehicles per hour.

Traffic generation shared across both sites during the peak periods and middle of the day would be as follows:

- AM peak period (7am-10am) – Up to 6 heavy vehicles per hour which would generate up to 12 heavy vehicle movements per hour.
- Middle of the day (10am-4pm) – Up to 26 heavy vehicles per hour but typically in the range of 15-20 vehicles per hour (i.e. 30-40 heavy vehicle movements per hour).
- PM peak period (4pm-7pm) – Up to 6 heavy vehicles per hour which would generate up to 12 heavy vehicle movements per hour.

A summary of the anticipated traffic volume associated with the construction works are provided in Table 6.

Table 6 Construction traffic generation

	Time Period			Daily
	7am-10am	10am-4pm	4pm-7pm	7am-7pm
No. of heavy vehicles	6 veh/h	15-20 veh/h (max. 26 veh/h)	6 veh/h	Up to 192 (max)
No. of heavy vehicle movements	12 veh/h	30-40 veh/h (max. 52 veh/h)	12 veh/h	Up to 384 (max)

Given the shorter working day on Saturday (7am to 5pm), there would be less vehicle movements across the day.

Large Concrete Pours

During days when large concrete pours are anticipated, heavy vehicle traffic volumes may increase outside of peak periods. At this stage, late 2021 and early 2022 have been identified as the periods of time when large concrete pours will be occurring at both sites. The mitigation of impacts associated with large concrete pours will be discussed with SCO.

2.5 Haulage routes

The effective management of haulage operations is not only critical to the success of the project but is also necessary to minimise the impact on the road network and to maintain the safety of pedestrians.

Haulage routes have been selected on the basis that trucks are to utilise State and Regional Roads first before travelling on Local Roads. It is understood that City of Sydney could approve access for oversize and/or over mass vehicles on the City's roads following the submission of Oversize & Over Mass Vehicle Permit Application.

The proposed arrival and departure haulage routes are listed as follows and illustrated in Figure 4. It is noted that other secondary routes may also be available for use and that preferred routing will be finalised with the SCO.

Arrival Routes

The primary arrival route to be adopted to minimise traffic disruptions in the CBD is the route from the south or west where the majority of haulage trucks would originate. Key routes identified are:

- From South/East: Trucks will approach from the Eastern Distributor (ED) (northbound), then turn off at Exit 4 and left onto William Street and continuing straight until turning right onto Elizabeth Street.
- From West: Trucks will approach the site from Western Distributor, exit onto King Street and turn left onto Elizabeth Street.
- From North: Trucks will approach the site from the Harbour Bridge, then Cahill Expressway, exit onto Bridge Street and then use Gresham Street, Bent Street and Bligh Street to access the site. Outside of peak time, Macquarie Street and Hunter Street may also be used to access the site when traffic conditions are lighter.

Any of the above routes which arrive to Elizabeth Street, will need to turn left onto Hunter Street and Castlereagh Street during TSP 1 when access is from Castlereagh Street only.

Departure Routes

The primary departure route is to the south or west where the majority of vehicles would travel to. Where possible, the left-turn movement from Castlereagh Street

to King Street will be avoided during peak periods due to congestion. Key routes identified are:

- To South/East: From Castlereagh Street continue south before turning left onto Park Street. Continue along Park Street/William Street until turning left onto Bourke Street to access the ED (southbound). From Elizabeth Street, it is proposed to use Philip Street and Bent Street to access the ED and travel south.
- To West: From Castlereagh Street continue south before turning right onto Park Street and continue towards the Western Distributor. From Elizabeth, vehicles will initially need to turn left onto Hunter Street and then Castlereagh Street.
- To North: From Castlereagh Street continue south before turning left onto Park Street. Continue along Park Street/William Street until turning left onto Palmer Street to access the ED (northbound). Outside of peak times, King Street and Elizabeth Street may be used.

From Elizabeth Street, continue north onto Philip Street before turning right on Bridge Street and continue towards the Cahill Expressway.

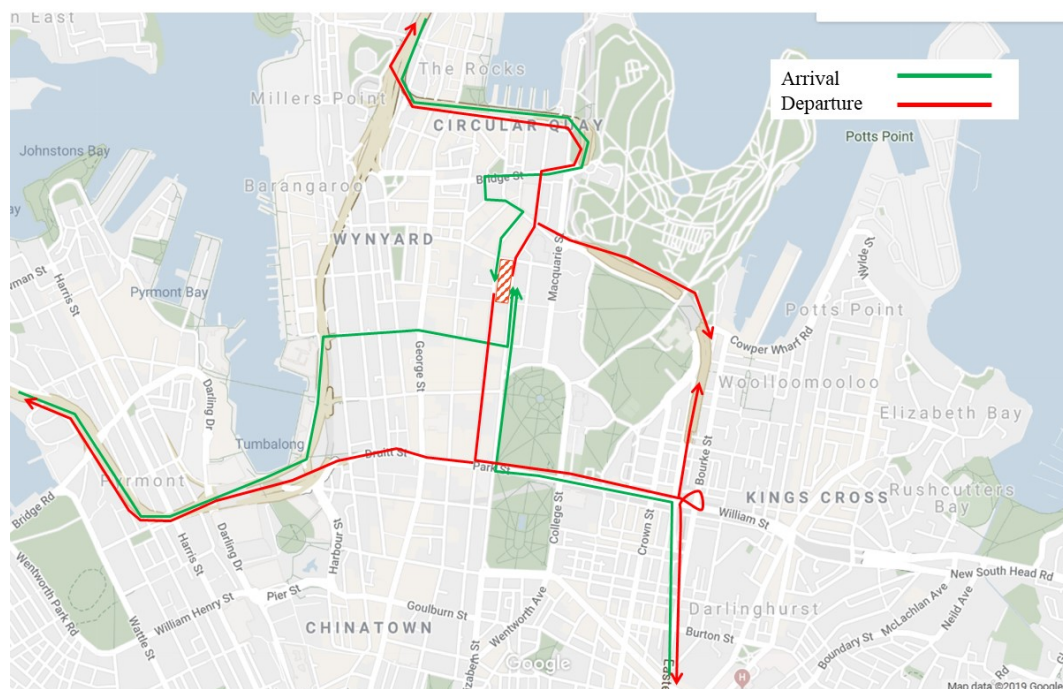


Figure 4: Construction vehicle routes to and from the site

2.6 Traffic management

Truck movements to and from the subject site would be scheduled to minimise traffic disruption in the surrounding road network. This would comprise the following measures:

- Heavy vehicles to be compliant with all relevant laws and regulations including Heavy Vehicle National Law (HVNL) and Chain of Responsibility law.

- Oversized vehicles would be transported to/from the site in strict accordance with Roads and Maritime guidelines and City of Sydney requirements, subject to one-off approval, to minimise traffic disruption during normal business hours.
- Haulage routes would be designated and communicated to all truck drivers to ensure truck movements to/from the site are as efficient as possible.
- The loading and unloading of trucks would be planned to ensure each individual truck haulage capacity is fully utilised reducing the number of truck movements.

2.7 On-site parking

Vehicles associated with the subject site must not park in any on-street parking spaces. Onsite parking will not be made available for employees working on the project. Staff will be encouraged to use public transport when travelling to/from the site, hence minimizing traffic impacts on the surrounding road network.

All construction vehicles associated with the site will be parked wholly within the site.

2.8 Pedestrian and cyclist management

B-class hoarding would be erected over the footpath on Castlereagh Street (east side), Hunter Street (south side) and Elizabeth Street (west side) to provide overhead protection to pedestrians and maintain pedestrian thoroughfare during the construction period.

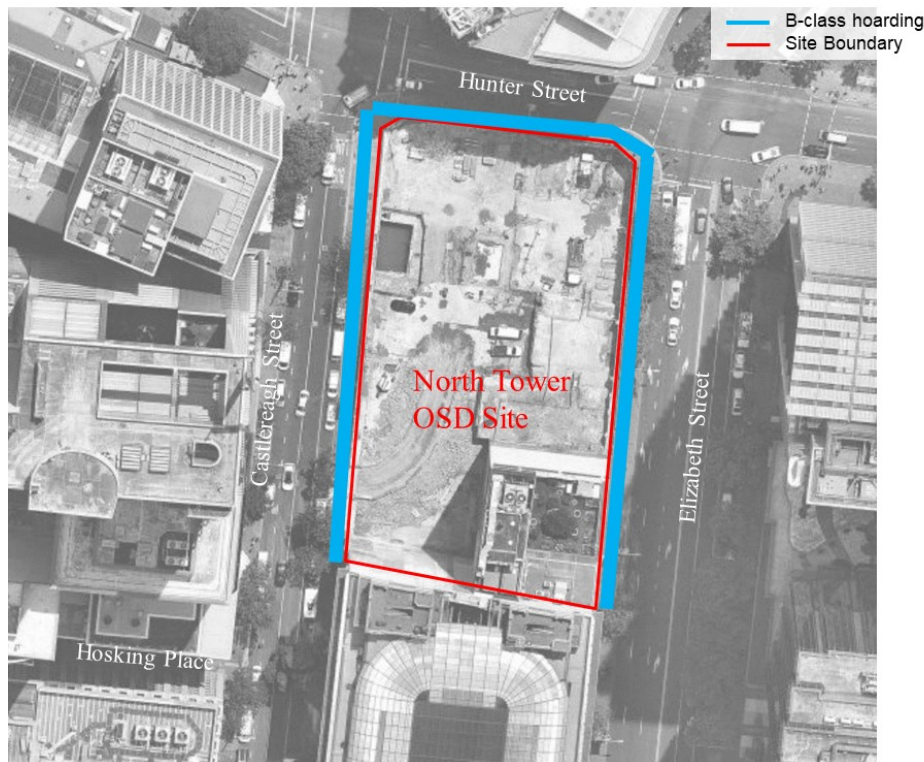


Figure 5 Hoarding plan

Relevant permits required for hoarding installation to be undertaken would be sought prior to any works taking place. Pedestrian access would be maintained along the footpath in Castlereagh Street, Hunter Street and Elizabeth Street.

Qualified traffic controllers with approved clothing would be in place to manage and control pedestrian movements. Concertina gates would be used to manage pedestrian movements at the vehicle crossing.

Pedestrian concertina gates would extend across the footpath on both sides of the vehicle crossing to temporarily contain pedestrians when the vehicle access is in use. When the vehicle crossing is not in use the pedestrian concertina gates would be opened and pedestrian activity along the footpath would be available.

Traffic controllers would not stop pedestrians in anticipation. Pedestrians have the right-of way at all times. Pedestrians may be held only for short periods by the pedestrian concertina gate to ensure safety when trucks are entering and leaving the site. Day time use of the vehicle crossing would be limited to one minute to minimise delay to pedestrians in Castlereagh Street and Elizabeth Street.

Cyclists in Elizabeth Street, Hunter Street and Castlereagh Street would not be affected by the construction works. Cyclists would be required to follow the traffic controller's directions as are other road users.

2.9 Construction vehicle marshalling areas

The need for construction vehicle marshalling areas outside of the CBD will be determined closer to the time of construction when there is more detailed information available regarding the origin of construction vehicle trips.

If required, potential areas will be identified, and their suitability discussed with the relevant stakeholders.

Construction vehicles will not be permitted to use local streets or circulate surrounding streets as a method of ‘marshalling’.

2.10 Special events

There are a number of events throughout the year in Sydney which will result in changes to normal day to day traffic management, including road closures. (e.g. NYE celebrations, during Vivid etc.).

Lendlease will work proactively with the SCO to understand the impact of these special events and any changes or new measures required to mitigate the impact of the works during these time periods.

3 Assessment of impacts

3.1 Impact to emergency service access

Access to the subject site and neighboring sites by emergency vehicles would not be affected by the works as the road and footpath frontage would be unaffected. Emergency protocols on the site would include a requirement for suitably accredited site personnel to assist with emergency access from the street.

Consequently, any potential impacts on emergency access would be effectively managed throughout the works.

Liaison shall be maintained with the police and emergency services agencies throughout construction and a 24-hour contact would be made available for 'out of hours' emergencies and access. The emergency services will be briefed through the appropriate forum.

Lendlease would assist with emergency access along Castlereagh Street and Elizabeth Street as part of the emergency protocols on-site. Thus, there would be no adverse impacts on the provision of existing emergency vehicle access to other neighbouring properties as a result of the proposed construction activities

3.2 Impacts to pedestrians and cyclists

During construction works, pedestrian access adjacent to the site along Elizabeth Street, Hunter Street and Castlereagh Street would be maintained and all footpaths would be kept clear and trafficable at all times. There would be no vehicle access to the site via Elizabeth Street during the TSP 1 arrangement, or via Hunter Street during at any stage.

Qualified traffic controllers would be located at proposed site accesses to separate pedestrian and vehicle movements. No negative impacts are anticipated to be imposed on pedestrians.

Cycle access would be maintained in Castlereagh Street and Elizabeth Street during normal the works. Haulage vehicles would not impose adverse impacts on cyclists travelling along these streets nor any other local streets.

3.3 Impact to bus zones and bus services

A work zone is proposed on Castlereagh Street alongside the North Site where there is currently a part time bus zone. The work zone hours of operation are proposed between 7.00am-7.00pm Monday to Friday while the bus zone hours of operation occur between 3.00pm-8.00pm.

To mitigate the impact of the lost bus zone on the eastside of Castlereagh Street (between 3pm and 8pm), it is proposed to change the hours of the bus zone on the westside of Castlereagh Street (between Hosking Place and Hunter Street). It is proposed to operate the bus zone from 3pm – 6am. The proposed changes to kerbside uses on Castlereagh Street (westside) are summarised again in Table 7.

Table 7 Castlereagh Street (westside) kerbside use

Kerbside Use	Existing times	Proposed times
Bus zone	6pm – 6am, 7 days	3pm – 6am, (Mon-Fri) 6pm-6am (Sat/Sun/Bank Hol)
Loading zone (ticket)	6am - 6pm (Mon-Fri) 6am - 10am (Sat)	6am - 3pm (Mon-Fri) 6am - 10am (Sat)
4P (ticket)	10am - 6pm (Sat) 8am - 6pm (Sun/Bank Hol)	10am - 6pm (Sat) 8am - 6pm (Sun/Bank Hol)

During the TSP 2 arrangement, the proposed exit point from the site onto Elizabeth Street (west side) is expected to impact an existing bus stop ('Martin Place Station, Elizabeth St, Stand C'). The bus stop would need to be relocated south by approximately 10m. A street bench may need to be relocated also. This would have a limited effect on bus operations at this location. All bus services at this location would run as per usual.

3.4 Impact to on-street parking

The proposed work zone on Castlereagh Street (eastside and westside) would not impact weekday on-street parking as the hours of operation would not coincide with one another.

On Saturday, work zone operation (7.00am-5.00pm) would require on-street parking to be amended to 5.00pm-10.00pm. The impact of reduced on-street parking time would be minimal given that on-street parking demand in this area of the CBD on a Saturday is relatively low. There is not impact to on-street parking on Castlereagh Street (westside) at weekends.

3.5 Impact to loading zones

The proposed work zone on Castlereagh Street (eastside) would result in the reduction of the existing loading zones by approximately 35m between 7.00am-3.00pm Monday to Friday.

On Castlereagh Street (westside), the hours of the loading zone would also be shortened to 6am-3pm between Hunter Street and Hosking Street.

It is expected that demand for loading in this area would be reduced during construction works and that the impacts are manageable, with sufficient loading space remaining available during the day.

4 Mitigation measures

4.1 Parking/Loading/Bus Zone signage

Signage would be updated along the Elizabeth Street and Castlereagh Street to reflect

- the approved work zone times
- new parking and loading zone times
- any changes to the extent of bus zones
- any changes to bus stops

4.2 Traffic control plans

TCPs illustrate the arrangement of signage and devices to manage traffic at worksites during construction. The preparation of TCPs for the North Site will consider the following:

- Warning signage for vehicles and pedestrians at the site access to alert them of the presence of heavy vehicle traffic generated by the works, to warn/ inform drivers of changes to the usual road conditions, and to guide drivers through the worksite.
- Qualified traffic controllers to manage pedestrian and control activity at proposed site accesses.
- The movement of trucks to/ from the site access would be under normal traffic conditions.
- Pedestrians and all passing vehicles shall maintain priority at all times.
- Clear definition of the work site boundary to be provided by erection of hoarding around site boundaries adjacent to roads.
- All signage would be clean, clearly visible and not obscured.
- All vehicle movements generated by construction works would be minimised, where possible, during peak periods.
- An example of a TCP which has been prepared previously for the North Site is presented in Figure 6.

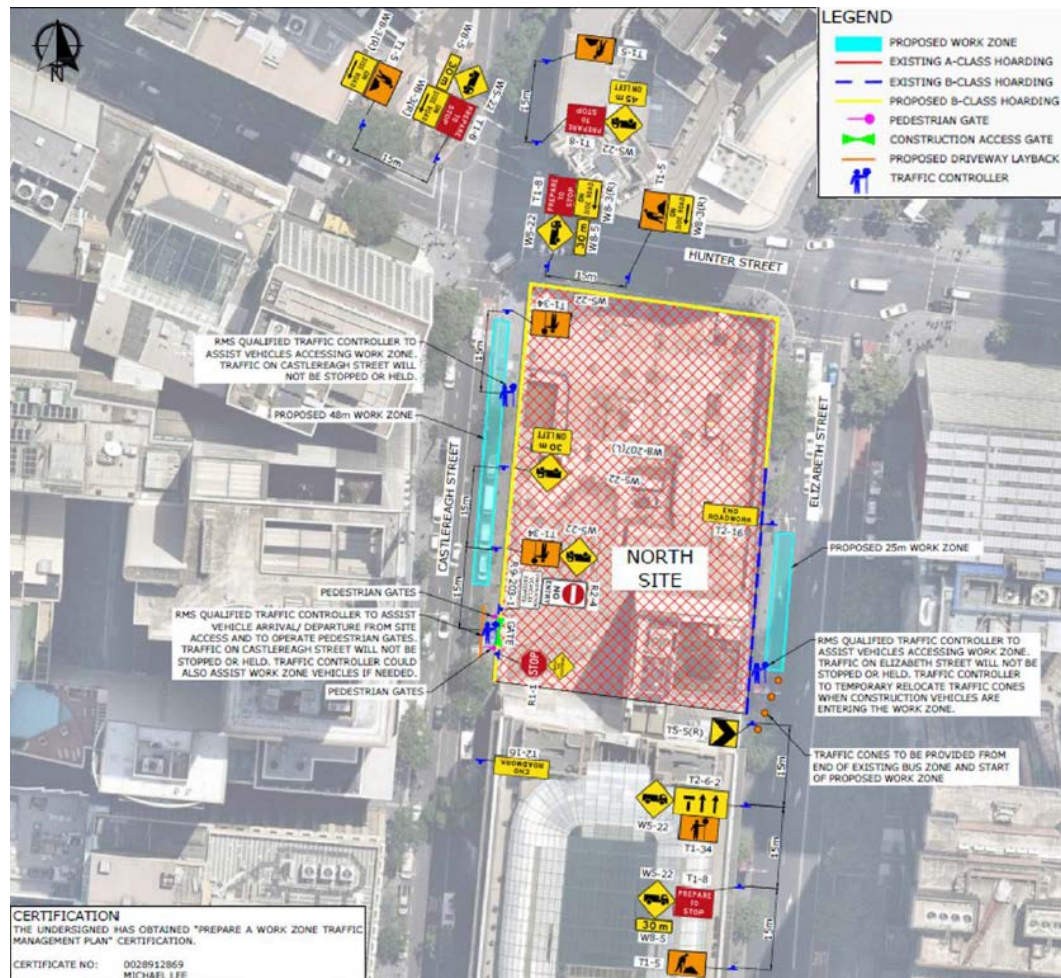


Figure 6 Example TCP for the North Site

4.3 Pedestrian access management

Pedestrian access shall be maintained at all times along the frontage streets. Existing pedestrian crossing movements and facilities are to be maintained at all nearby signalized intersections and mid-block locations on Castlereagh Street, Hunter Street and Elizabeth Street.

B-class hoarding would provide overhead protection above the pedestrian footpath on Castlereagh Street, Elizabeth Street and Hunter Street. All hoardings would feature lighting to ensure pedestrian safety at night and would remain throughout the remaining construction period.

Footpath widths under the B-class hoarding would allow two-way pedestrian flow in line with Austroads requirement to provide sufficient space to accommodate prams and wheelchairs.

Suitable signage including the "Watch for Pedestrians" signs would be provided at egress points for construction vehicles to maintain pedestrian safety when pedestrians travel across the proposed vehicle crossings.

Traffic controllers located at site accesses would be notified by two-way radio whenever there is a heavy vehicle approaching and leaving the subject site. The

traffic controllers would ensure the safe and efficient movement of pedestrians across the site access, while also maintaining awareness of pedestrians crossing Castlereagh Street away from signalized crossing points.

Cyclist access and safety would be managed as would general traffic in Castlereagh Street

4.4 Sydney Coordination Office discussions

A meeting was held on 18 April 2018 with the SCO of TfNSW which discussed the CPTMP for the project. It is proposed to share this revised draft plan with the SCO as requested in the 'Response to Submissions' so that it can be developed further as required.

Another meeting was held on 13 March 2019 with SCO to discuss the draft plan. Comments from SCO regarding traffic generation, vehicle routing and work zones have been incorporated into this revised plan.

Discussions with SCO and other relevant stakeholders will continue in the future on the proposed traffic management measures during the various stages of the works. The potential impacts to road users will be assessed with solutions put forward to mitigate those impacts.

5 Conclusion

This CPTMP has been prepared for the North Tower OSD and outlines:

- a description of the construction works
- the duration of the works and proposed hours of construction
- proposed site access points and traffic staging plans
- proposed haulage routes;
- pedestrian and traffic management measures;
- assessment of impacts; and
- mitigation measures;

Construction of the North Tower OSD will be part of an integrated project which includes the station and South Tower OSD. The traffic impact during peak times is expected to be manageable and not impact on the performance of surrounding intersections.

Ongoing consultation shall be held with SCO and other relevant authorities to ensure that this CPTMP, subject to approval, is implemented in accordance with the requirements.