



PITT STREET NORTH OVER STATION DEVELOPMENT

CONSTRUCTION MANAGEMENT PLAN

State Significant Development, Development Application (SSD DA)

Revision 6 dated 9 July 2020

Prepared for Pitt Street Developer North Pty LTD



Issued for DPIE

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Acronyms

CBD	Central Business District
CCD	Coordination and Collaboration Deed
ISD	Integrated Station Development
PDA	Project Development Agreement
OSD	Over Station Development
ISD	Integrated Station Development I.e. Station and OSDs
SSD	State Significant Development
CSSI	Critical State Significant Infrastructure
PEP	Project Execution Plan
DPIE	NSW Department of Planning, Industry and Environment
PCG	Project Control Group
IC	Independent Certifier
GFA	Gross Floor Area
D&C	Design and Construct
AE	Approved Engineer
SWTC	Scope of Works and Technical Criteria
PDCS	Project Document Control System
EIS	Environmental Impact Statement
ITP	Inspection and Test Plan – for quality assurance
FF&E	Furniture, Fixtures and Equipment
PCA	Principal Certifying Authority
O&M Manuals	Operations and Maintenance manuals
ESD	Environmental Sustainability in Design

DEFINITIONS AND ABBREVIATIONS

Term	Description
Principal Contractor	CPB Contractors
Principal	Pitt Street Developer North Pty Ltd
EH&S	Environmental Health and Safety - refers to the legislation, policies, procedures and activities that aim to protect the health, safety and welfare of all people at the workplace.
OSD	Over Station Development
TSE Contractor	Tunnel and Station Excavation
SWMS	Safe Work Method Statement – Internal Method statements identifying how works will be completed safely
ITP	Inspection and Test Plan – for quality assurance
FF&E	Furniture, Fixtures and Equipment
PCA	Principal Certifying Authority
O&M Manuals	Operations and Maintenance manuals

References and Standards

The Building shall be designed and built in accordance with:

- National Construction Code (NCC) of Australia 2019 and relevant State and Territory amendments Climate Zone 5
- BCA, DDA and regulatory requirements
- PCA Premium Grade as defined by the Property Council of Australia ‘A Guide to Office Building Quality, Office Quality Grade Matrix – 2nd Edition
- 6 Star Green Star Office Design and As Built (v1.2)
- 5.5 Star NABERS Energy
- 3.5 Star NABERS Water

1.0 INTRODUCTION

This report has been prepared to accompany a detailed State Significant Development (SSD) development application (DA) for a commercial mixed-use Over Station Development (OSD) above the new Sydney Metro Pitt Street North Station. The detailed SSD DA is consistent with the Concept Approval (SSD 17_8875) granted for the maximum building envelope on the site, as proposed to be modified.

The Minister for Planning, or their delegate, is the consent authority for the SSD DA and this application is lodged with the NSW Department of Planning, Industry and Environment (NSW DPIE) for assessment.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 25 October 2019.

The detailed SSD DA seeks development consent for:

- Construction of new commercial tower of approximately 38 storeys
- The tower includes maximum GFA, excluding floor space approved in the CSSI.
- Integration with the approved CSSI proposal including though not limited to:
 - Structures, mechanical and electronic systems, and services; and
 - Vertical transfers.
- Use of spaces within the CSSI 'metro box' building envelope for the purposes of:
 - Retail tenancies;
 - Commercial lobby and commercial amenities;
 - Car parking spaces within the podium for the purposes of the commercial premises; and
 - Loading and services access.
- Utilities and services provision.
- Stratum subdivision (staged).

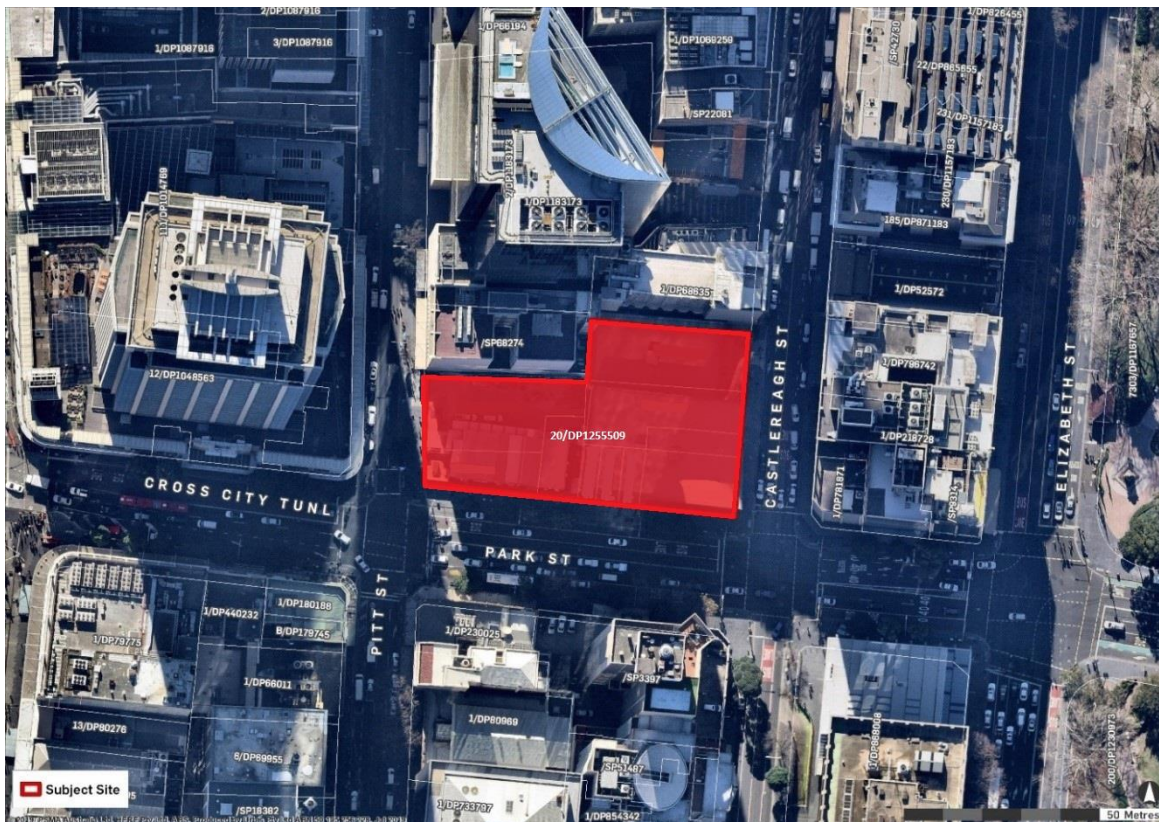
The Site

The site is located within the Sydney CBD. It has three separate street frontages, Pitt Street to the west, Park Street to the south and Castlereagh Street to the east. The area surrounding the site consists of predominantly commercial high-density buildings and some residential buildings, with finer grain and heritage buildings dispersed throughout.

The site has an approximate area of 3,150.1sqm and is legally described as follows:

- 252 Pitt Street (Lot 20 in DP1255509)

Figure 01 – Location Plan



This Report

This Construction Management Plan (CMP) details CPB's overall construction methodology for the delivery of PSISD North OSD. It is envisaged that this CMP will evolve during the detailed design phase and pre-construction phase. Please note the images and Figures contained herein are diagrammatic and indicative and subject to design development.

The relevant SEARS and SSD Conditions of Consent are addressed in the following sections:

Item	Description	Location in Document
Consent Condition B15 - Construction Impact Assessment	<p>Future detailed development application(s) shall provide analysis and assessment of the impacts of construction and include those listed below. The plans referred to below may be prepared as part of a Construction Environmental Management Plan prepared and implemented under the conditions of any consent granted by future development applications, having regard to the Construction Environmental Management Framework and Construction Noise and Vibration Strategy prepared for the City Metro City and Southwest (CSSI 7400).</p> <p>Construction Traffic Management Plan as per condition B18(b):</p> <ul style="list-style-type: none"> (a) Construction Traffic Management Plan as per condition B18(b) (b) Cumulative Construction Impact Assessment (i.e. arising from concurrent construction activity) (c) Noise and Vibration Impact Assessment (d) Cumulative Construction Impact Assessment (i.e. arising from concurrent construction activity) (e) Community Consultation and Engagement Plans (f) Construction Waste Management Plan" (g) Air Quality Management Plan 	Section 4.0 Page 41
Consent Condition B16 - Noise and Vibration	<p>Demonstrate the following noise and vibration requirements consistent with the construction works at the site approved under CSSI 7400 can be met:</p> <ul style="list-style-type: none"> (a) vibration from construction activities does not exceed the vibration limits set out in the British Standard BS 7385-2:1993 Evaluation and measurement for vibration in buildings. Guide to damage levels from groundborne vibration. (b) vibration testing has been conducted before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic damage. In the event that the vibration testing and monitoring shows that the preferred values for vibration are likely to be exceeded, the Applicant must review the construction methodology and, if necessary, propose additional mitigation measures. 	Separate Report by Renzo Tonin
Consent Condition B17/18 - Traffic, Access and Car Parking	<p>Construction Traffic Management Plan (CTMP) prepared in consultation with the Sydney Coordination Office and the City of Sydney, and to the satisfaction of the relevant roads authorities. The CTMP shall include, but not be limited to:</p> <ul style="list-style-type: none"> (i) haulage movement numbers I routes including contingency routing (ii) detailed travel management strategy for construction vehicles including staff movements; (iii) maintaining pedestrian and cyclist links I routes (iv) independent road safety audits on construction-related traffic measures (v) measures to account for any cumulative activities I work zones operating simultaneously. 	Section 4.0 Page 41
SEARS Item 9 - Construction management (including construction traffic)	<ul style="list-style-type: none"> a) Details of vehicle routes, peak hour and daily truck movements, hours of operation, access arrangements and traffic control measures for all demolition / construction activities. b) An assessment of the likely construction traffic impacts, such as required road / lane closures and diversions, impacts on bus and taxi operations, 	This report

	<p>impacts on pedestrian and cycle movement, and taking into account the timing of other construction activities within this part of the CBD precinct.</p> <p>c) An assessment of road efficiency and safety at key intersections and any proposed mitigating measures, including a Construction Pedestrian and Traffic Management Plan. d) Details of temporary cycling and pedestrian access during construction.</p> <p>d) An assessment of potential impacts of the construction on surrounding buildings and the public domain, including noise and vibration, air quality and odour impacts, dust emissions, water quality, stormwater runoff, groundwater seepage, soil pollution and construction and demolition waste, and proposed measures to mitigate any impacts.</p> <p>e) Construction management statement addressing how future stages will manage impacts to pedestrians, rail uses, bus services and taxis</p>	
SEARS Item 13 - Staging	<p>Describe the coordination, timing and implementation of access, landscape and public domain works associated with the CSSI and SSD development.</p> <p>The EIS shall set out the construction staging of the proposed development, including the relationship with the construction / delivery of the Metro station, timing of public domain works and the staging of other relevant works.</p>	Section 3.0 Page 20
SEARS Item 15 - "Plans and Documents Aeronautical Impact Assessment"	<p>Aeronautical Impact Assessment, required documentation:</p> <p>Plans and elevations documenting the proposed location of cranes in plan and section, clearly identifying the offset from adjacent buildings and the maximum height of the crane</p>	Separate report by AV Law

2.0 DESCRIPTION OF PROPOSED WORKS

2.1 PROJECT DESCRIPTION

Sydney Metro

Sydney Metro is Australia's biggest public transport program. A new standalone railway, this 21st century network will revolutionise the way Sydney travels.

There are four core components:

- **Sydney Metro Northwest (formerly the 36km North West Rail Link)**

This project is now complete and passenger services commenced in May 2019 between Rouse Hill and Chatswood, with a metro train every four minutes in the peak. The project was delivered on time and \$1 billion under budget.

- **Sydney Metro City & Southwest**

Sydney Metro City & Southwest project includes a new 30km metro line extending metro rail from the end of Metro Northwest at Chatswood, under Sydney Harbour, through new CBD stations and southwest to Bankstown. It is due to open in 2024 with the ultimate capacity to run a metro train every two minutes each way through the centre of Sydney.

Sydney Metro City & Southwest will deliver new metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new underground metro platforms at Central Station. In addition it will upgrade and convert all 11 stations between Sydenham and Bankstown to metro standards.

In 2024, customers will benefit from a new fully-air conditioned Sydney Metro train every four minutes in the peak in each direction with lifts, level platforms and platform screen doors for safety, accessibility and increased security.

- **Sydney Metro West**

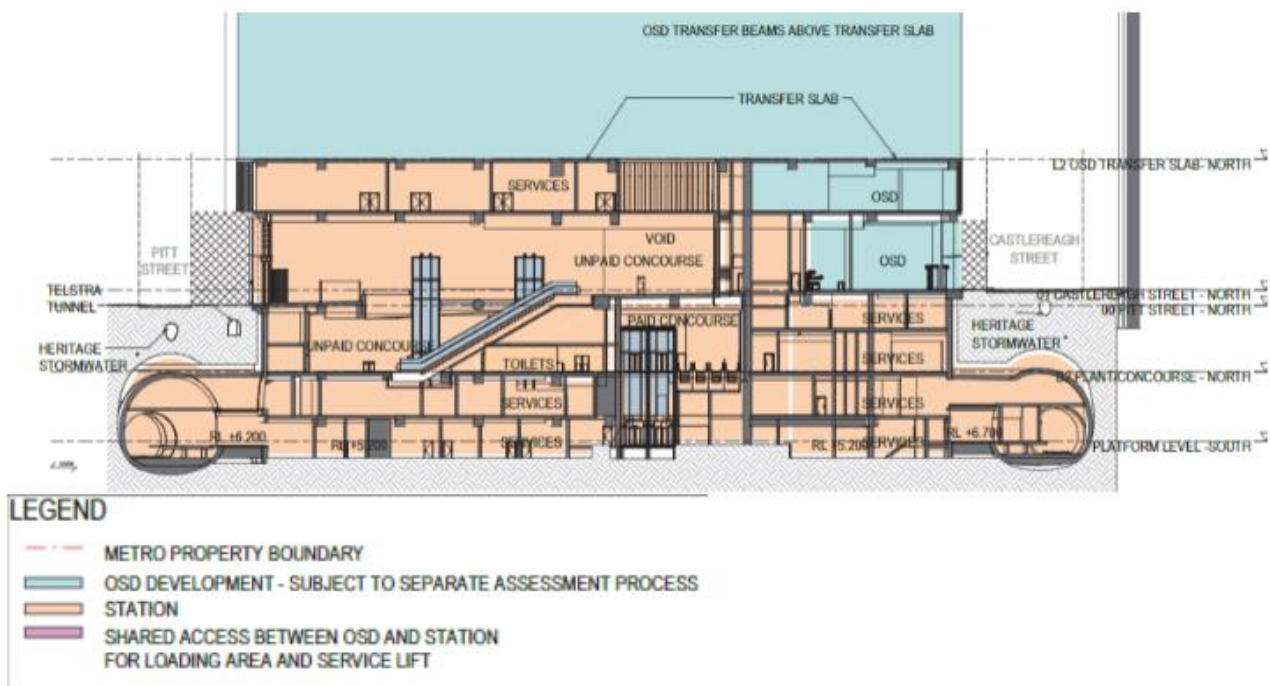
Sydney Metro West is a new underground railway connecting Greater Parramatta and the Sydney CBD. This once-in-a-century infrastructure investment will transform Sydney for generations to come, doubling rail capacity between these two areas, linking new communities to rail services and supporting employment growth and housing supply between the two CBDs.

The locations of seven proposed metro stations have been confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays.

The NSW Government is assessing an optional station at Pyrmont and further planning is underway to determine the location of a new metro station in the Sydney CBD.

- **Sydney Metro – Western Sydney Airport**

Metro rail will also service Greater Western Sydney and the new Western Sydney International (Nancy Bird Walton) Airport. The new railway line will become the transport spine for the Western Parkland City's growth for generations to come, connecting communities and travellers with the rest of Sydney's public transport system with a fast, safe and easy metro service. The Australian and NSW governments are equal partners in the delivery of this new railway.



Source: CSSI Preferred Infrastructure Report (TfNSW)

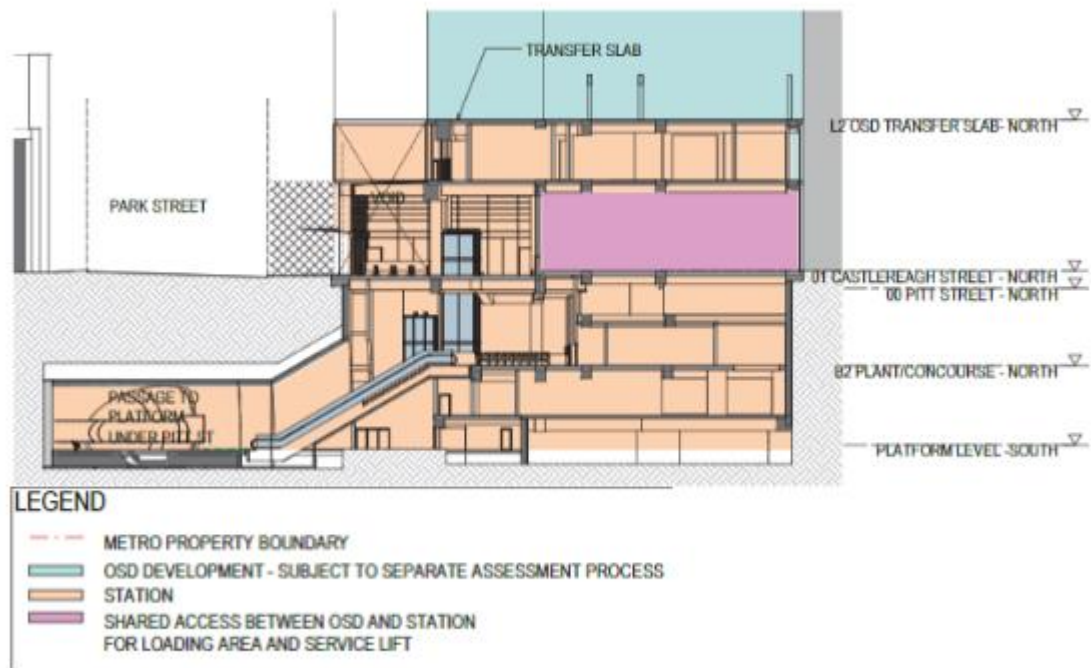
The Preferred Infrastructure Report (PIR) noted that the integration of the OSD elements and the metro station elements would be subject to the design resolution process, noting that the detailed design of the “metro box” may vary from the concept design assessed within the planning approval.

As such in summary:

- The CSSI Approval provides consent for the construction of all structures within the approved “metro box” envelope for Pitt Street North.
- The CSSI Approval provides consent for the fit out and use of all areas within the approved “metro box” envelope that relate to the ongoing use and operation of the Sydney Metro.
- The CSSI Approval provides consent for the embellishment of the public domain, and the architectural design of the “metro box” envelope as it relates to the approved Sydney Metro and the approved Pitt Street North Station Design & Precinct Plan.
- Separate development consent however is required to be issued by the NSW DPIE for the use and fit-out of space within the “metro box” envelope for areas related to the OSD, and notably the construction and use of the OSD itself.

As per the requirements of clause 7.20 of the Sydney Local Environmental Plan 2012, as the OSD exceeds a height of 55 metres above ground level (among other triggers), development consent is first required to be issued in a Concept (formerly known as Stage 1) DA. This is described below.

Figure 04 - Construction Zone Break Up – Overall North-South Section



Source: CSSI Preferred Infrastructure Report (TfNSW)

Figure 05 – Pitt Street North Concept SSD DA – Envelope – South Elevation

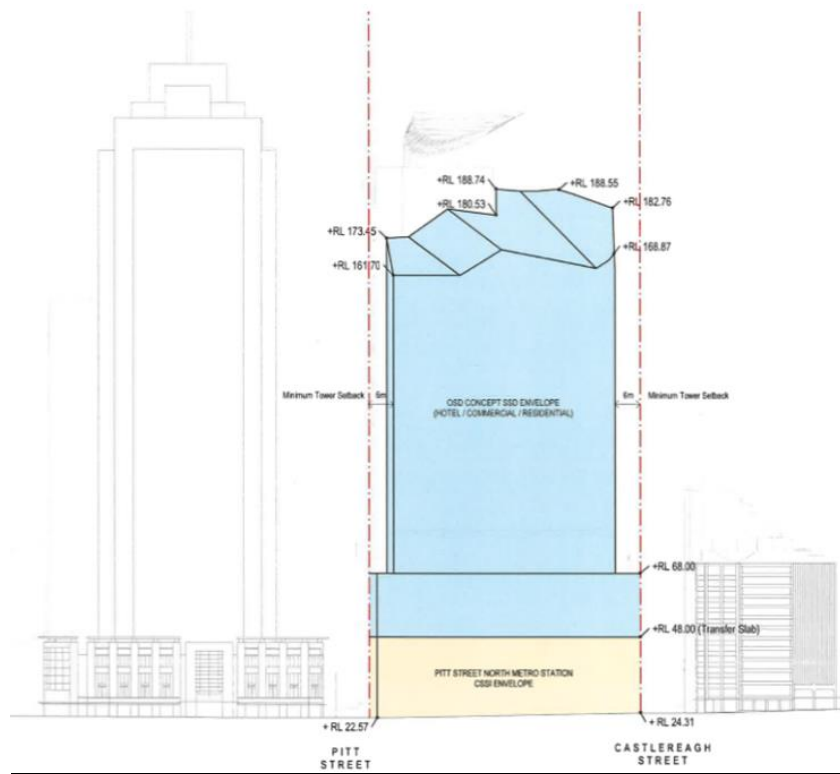


Figure 06 – Pitt Street North Concept SSD DA – Envelope – East Elevation

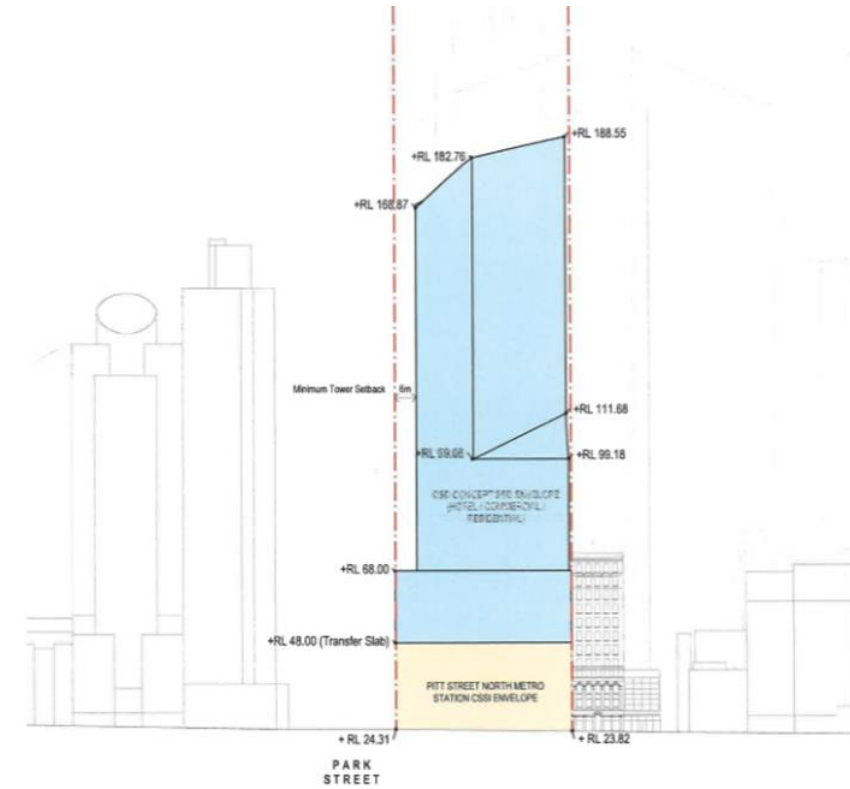
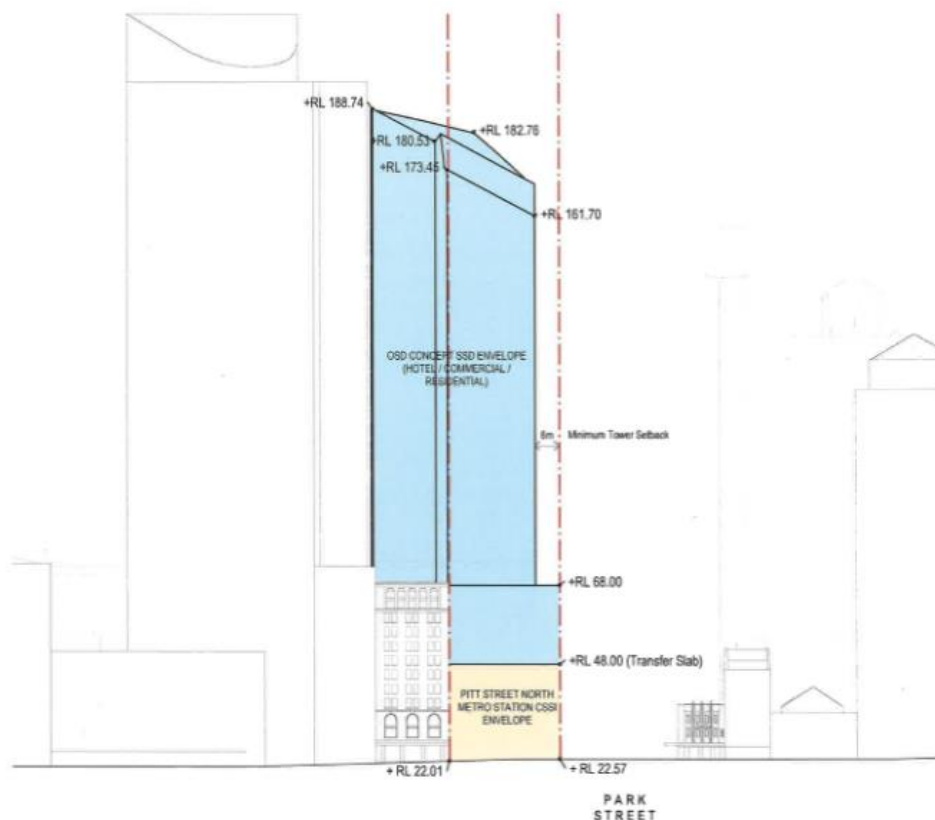


Figure 07 – Pitt Street North Concept SSD DA – Envelope – West Elevation



The Preferred Infrastructure Report (PIR) noted that the integration of the OSD elements and the metro station elements would be subject to the design resolution process, noting that the detailed design of the “metro box” may vary from the concept design assessed within the planning approval.

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As per the requirements of clause 7.20 of the Sydney Local Environmental Plan 2012, as the OSD exceeds a height of 55 metres above ground level (among other triggers), development consent is first required to be issued in a Concept (formerly known as Stage 1) DA. This is shown in images 05, 06 & 07.

2.2 DURATION OF WORKS

Works are to be carried out over a duration of approximately 25 months with a planned start date for the PSISD North OSD in October 2021 and will handover the North Building in Q4 of 2023.

2.3 HOURS OF CONSTRUCTION

Main site working hours will be governed by the final State Significant Development Application (DA) consent conditions. For the purposes of initial construction planning we anticipate these to be:

Monday to Friday: 7am – 6pm

Saturday: 7am – 5pm

Sunday/Public Holidays: No work

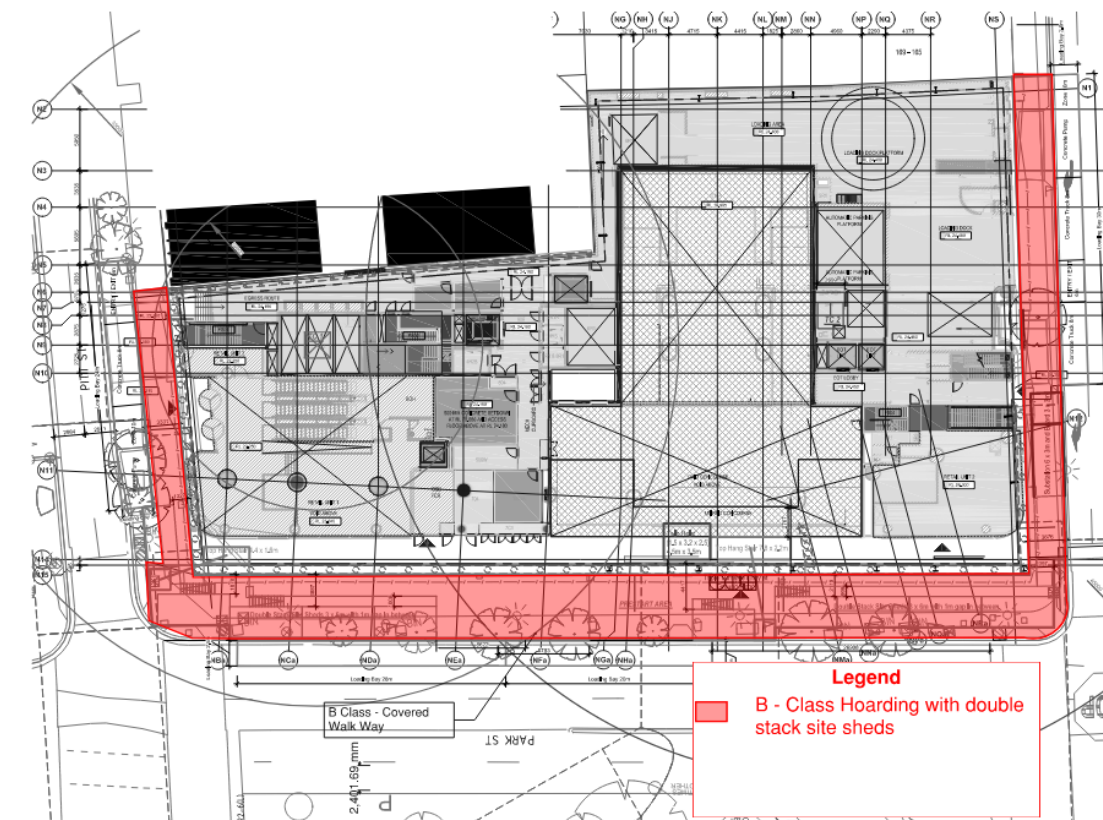
In addition to the above working hours, there will be occasional periods when out of hours works are required. Prior to scheduling any out of hours works, CPB will agree the process with City of Sydney, address the approvals and additional measures required. The nature of these works would typically include erection and dismantling of hoardings, erecting and dismantling tower cranes, works to footpaths, services connections and other works that interface with the surrounding ground plane.

2.4 HOARDINGS

Existing B-Class hoardings will be utilised, ensuring that site security is maintained at all times. Additional gates will also be installed to facilitate access to the loading dock.

B Class hoardings will be erected to the Pitt Street, Castlereagh Street and Park Street frontages of the site in accordance with the Site Establishment Plans. The hoardings may require branding and signage in accordance with City of Sydney or Sydney Metro guidelines.

Figure 08 – Stage 1 Site Accommodation (month 1-7)



B Class hoardings can incorporate City of Sydney, Pitt Street Developer North Pty Ltd and CPB co-branding and may be updated throughout the project in-line with the project requirements.

Hoardings will be designed, installed and maintained to ensure segregation of pedestrians, workforce and vehicles.

Hoardings will be designed for overhead impact load and will comply with lighting requirements at night. Refer to Section 3.0 Site Logistics for B Class hoarding plans.

2.5 SITE SECURITY AND GATES

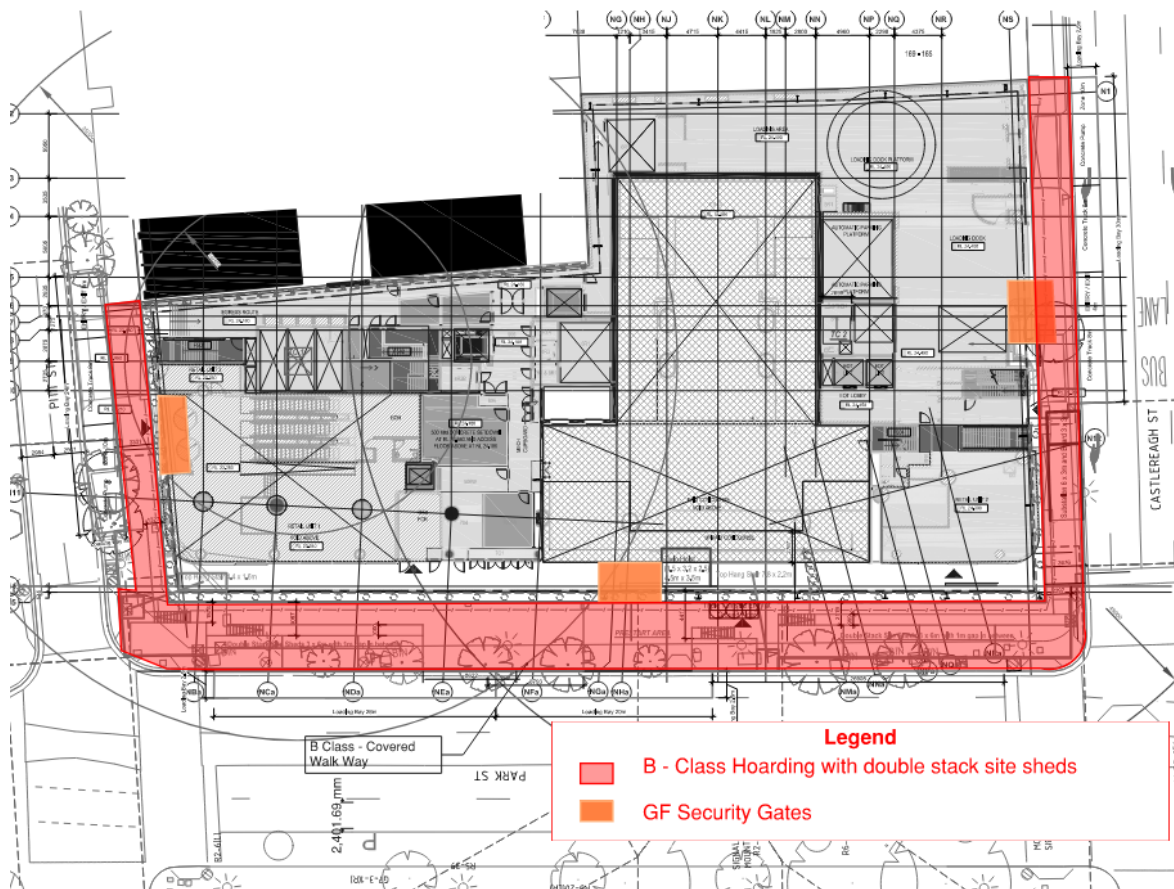
The site perimeter will be secure at all times with no unauthorised access permitted. The site perimeter will be secured with full height plywood to the inside face of all B Class hoardings.

Out of hours security patrols will be utilised strategically during the project. The focus will be on the back end of the project, as the potential for theft and vandalism increases. Shutdown periods (NSW Public Holidays) will also be monitored by external security services.

CCTV with active motion sensors will be used to track any unauthorised access to tower cranes, personnel and materials hoists, and site accommodation.

Construction worker access to the site will be strictly controlled through our secured gate system and individuals will require a personalised identity swipe cards to gain access. This creates a live record of the workers on-site at any given time, and in case of an emergency and during an evacuation.

Figure 09 – North Tower Security Gates



2.6 SITE ACCOMMODATION / AMENITIES AND PROJECT OFFICE

Site accommodation is staged to provide for a peak workforce of 320 workers as follows:

- **Stage 1 – Month 1-6** - Site Accommodation installed on B Class Hoarding.
- **Stage 2 – Month 7 - Completion** – Once Level 2 is stripped of formwork back propping, site accommodation will be installed to Ground Floor and Level 2. Site sheds on the hoarding and Ground Floor / Level 2 site accommodation accommodates 320 workers at peak of North Tower works.

Initial site accommodation sheds will be erected on top of the Class B gantry hoardings with a 10kPa overhead protection capacity to the roof of the sheds. Refer to figure 08.

As construction progresses and back propping is stripped, the capacity of the on-site accommodation and amenities will be further expanded by constructing purpose built undercover accommodation. This will cater for the increase in workforce numbers and facilitate dry access to various workfaces. The North Tower site accommodation will be supplemented from the initial B Class establishment to Ground Floor and L2 retail areas. Refer to Figure 10 & 11.

Figure 10 – Stage 2 Site Accommodation Ground Floor (month 7-completion)

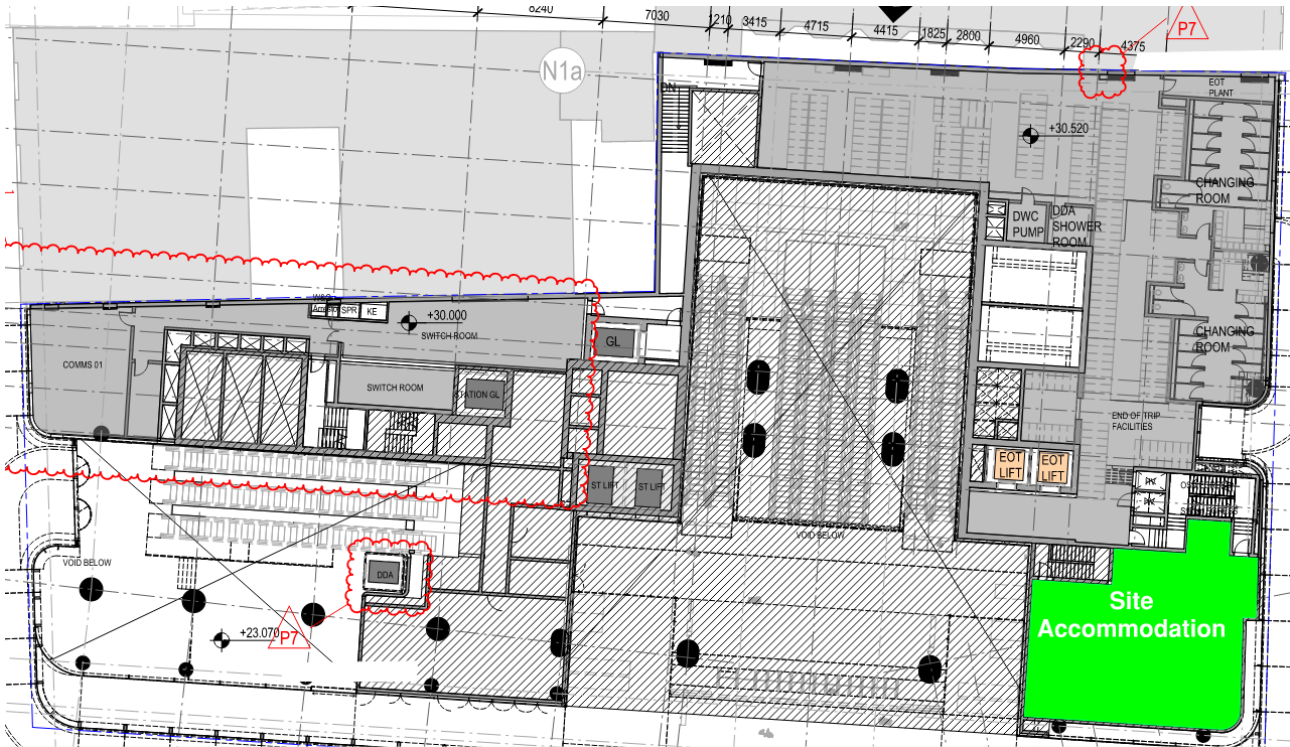
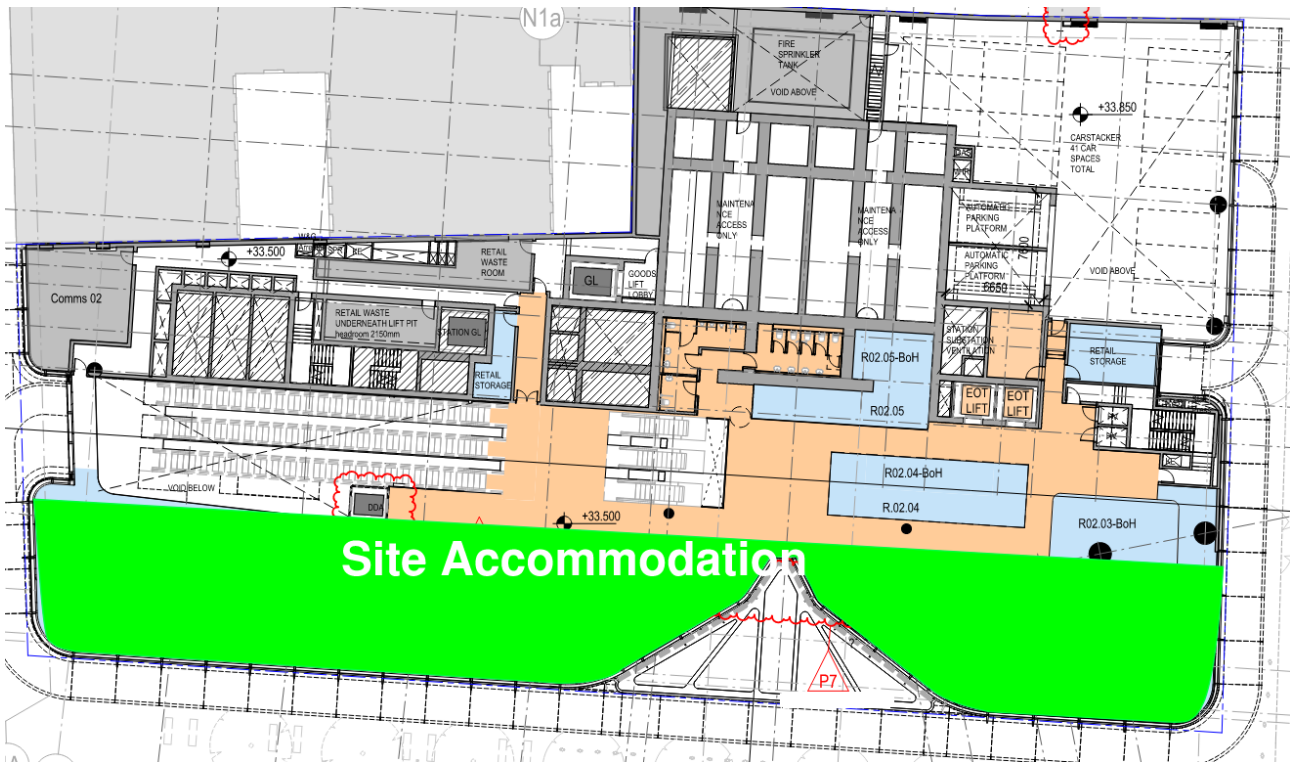


Figure 11 – Stage 2 Site Accommodation Level 2 (month 7-completion)



The project office will be located in a commercial building within close proximity to the site.

2.7 Authorities and Utilities Management

At various stages, external approval of components of the works will be required, including but not limited to:

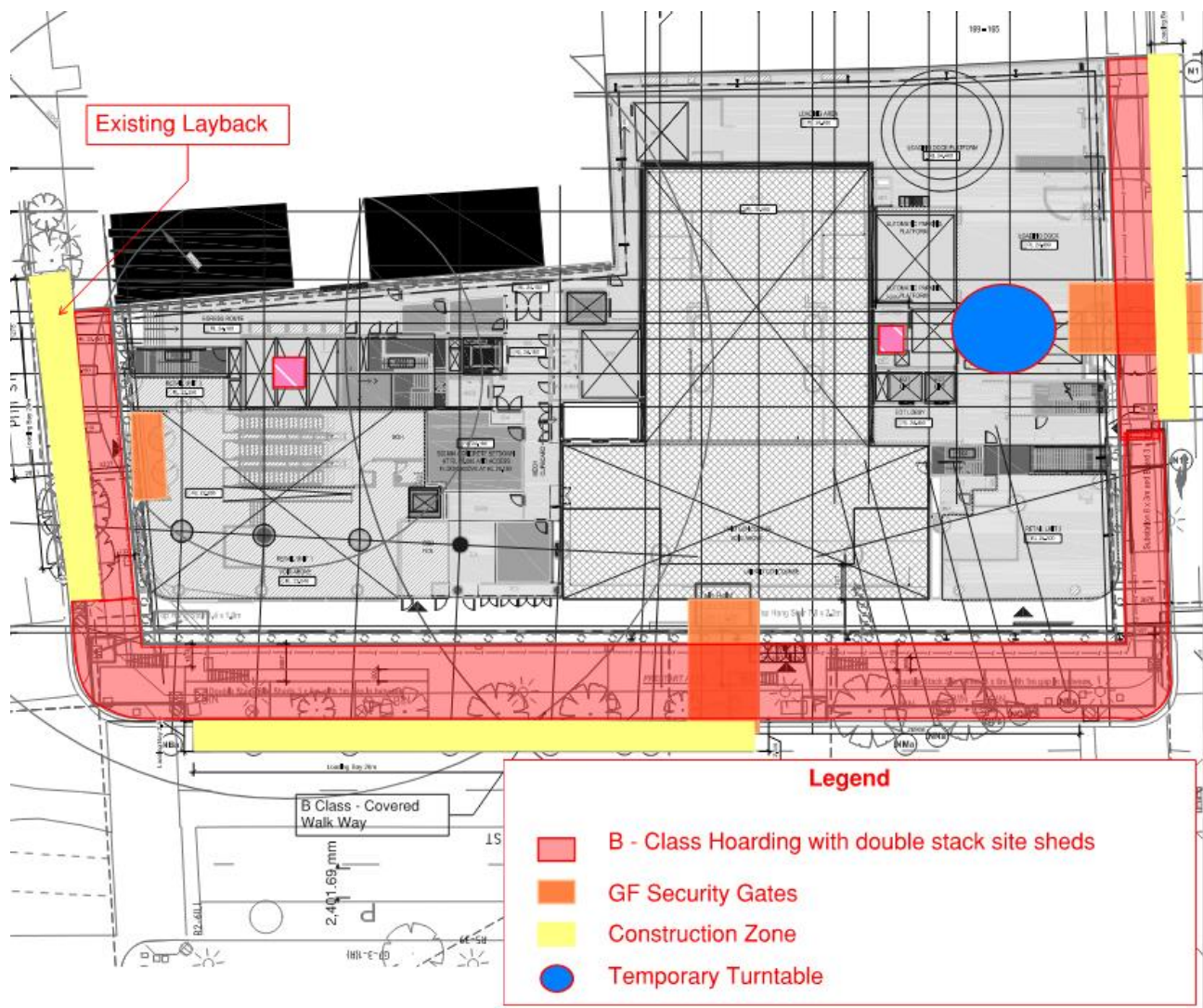
- Sydney Trains;
- Sydney Metro;
- Transport for NSW (TfNSW) which incorporates:
 - Roads Maritime Services (RMS); and
 - NSW Fire & Rescue.
- City of Sydney;
- NSW Fire and Rescue
- Ausgrid;
- Sydney Water;
- Jemena; and
- Other relevant utility providers.

3.0 SITE LOGISTICS STAGING PLANS.

3.1 SITE ESTABLISHMENT

Materials handling, and concrete pumping will be from the Castlereagh Street, Park Street and Pitt Street construction zones. The ground floor slab has been designed to accommodate 20kPa live load for materials handling purposes. A temporary turntable will be installed in the Castlereagh Street loading dock to ensure delivery vehicles enter and leave the site in a forward direction.

Figure 12 – Site Establishment



3.2 MATERIALS HANDLING AND CRANAGE

3.2.1 CRANES

There are two stages involved with the cranage to the North Tower. Stage one involves taking over cranes established by the CSSI approved works, located on Basement 05 of Pitt Street North station.

Tower Crane 1 will be located in the exhaust void on the north-west side of the building and Tower Crane 2 will be located in the stair pressurisation riser located on the western side of the building. (refer to figure 13 & 14).

The size of the jib for crane 1 will be 35m and the size of the jib for crane 2 will be 40m (refer to figure 13 & 14). The tower cranes to the internal floor plate will be erected on site to a height that allows the crane to service the building from B05 through to level 11. The above noted two tower cranes will service the site up until level 11 slab is poured and stripped. Once stage 2 cranes have been erected, the external self-climbing cranes will be utilised to dismantle the internal tower cranes.

Stage 2 involves the two cranes jumping to the external East & South side of the building. These Cranes will be external self-climbing and will be supported via a grillage system on level 10. Due to the size of the site, CPB have proposed Jaso J280 cranes or similar for the North building.

Once the external self-climbing cranes are no longer required, the tower cranes will climb back down to level 11 and a mobile crane will complete the dismantling of the tower cranes.

Figure 13 – North Tower - Internal Tower Crane Located in Lift Shaft (Stage 1)

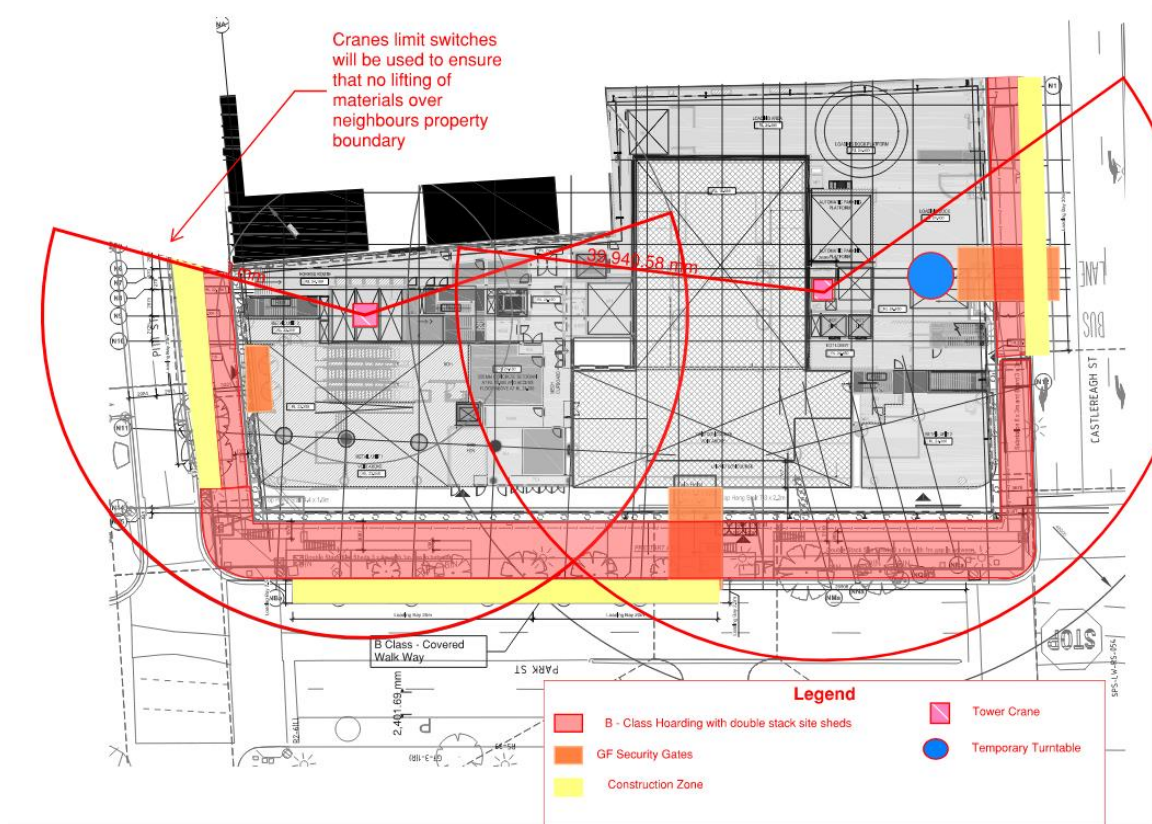


Figure 14 – North Tower – External self-climbing tower crane (Stage 2) with Material landing Platform Locations

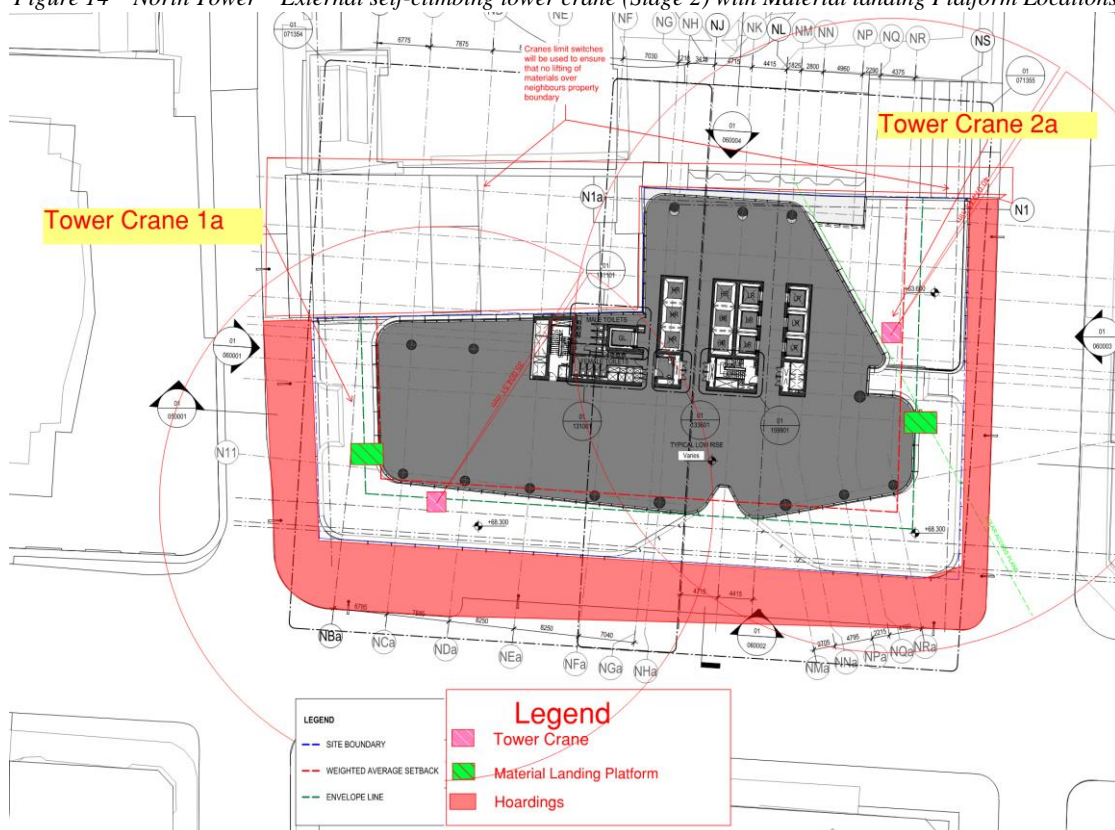


Figure 15 – North Tower – External self-climbing tower crane (Stage 2) Radius Charts

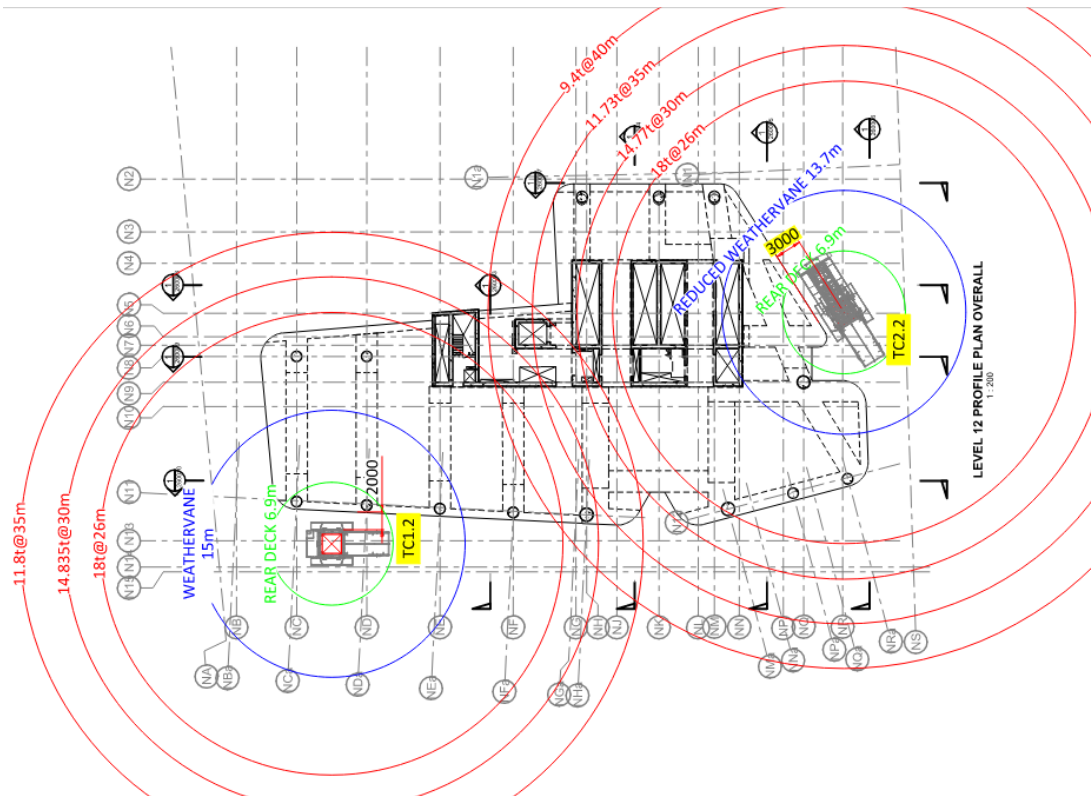
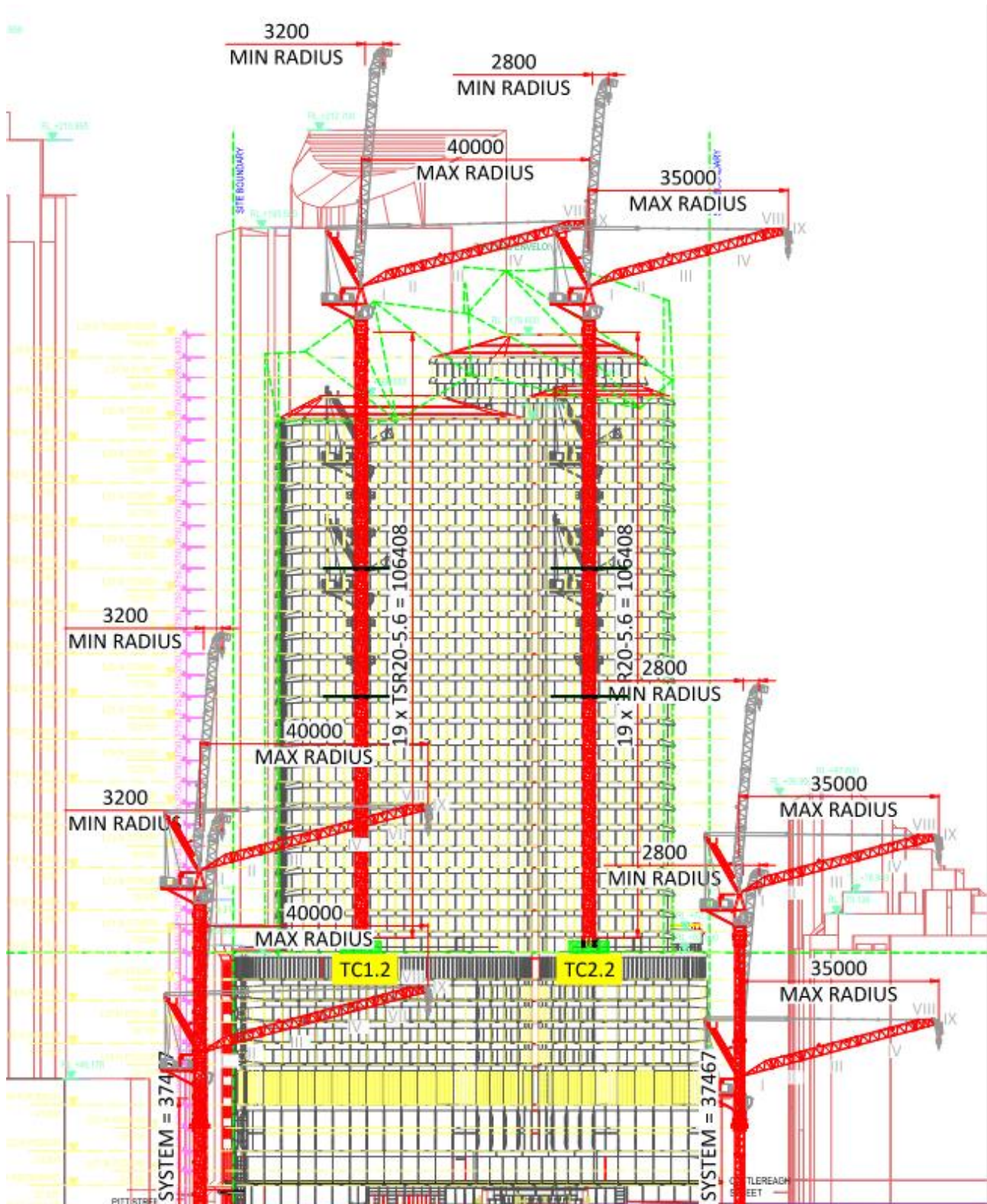


Figure 16– North Tower – Crane Elevation

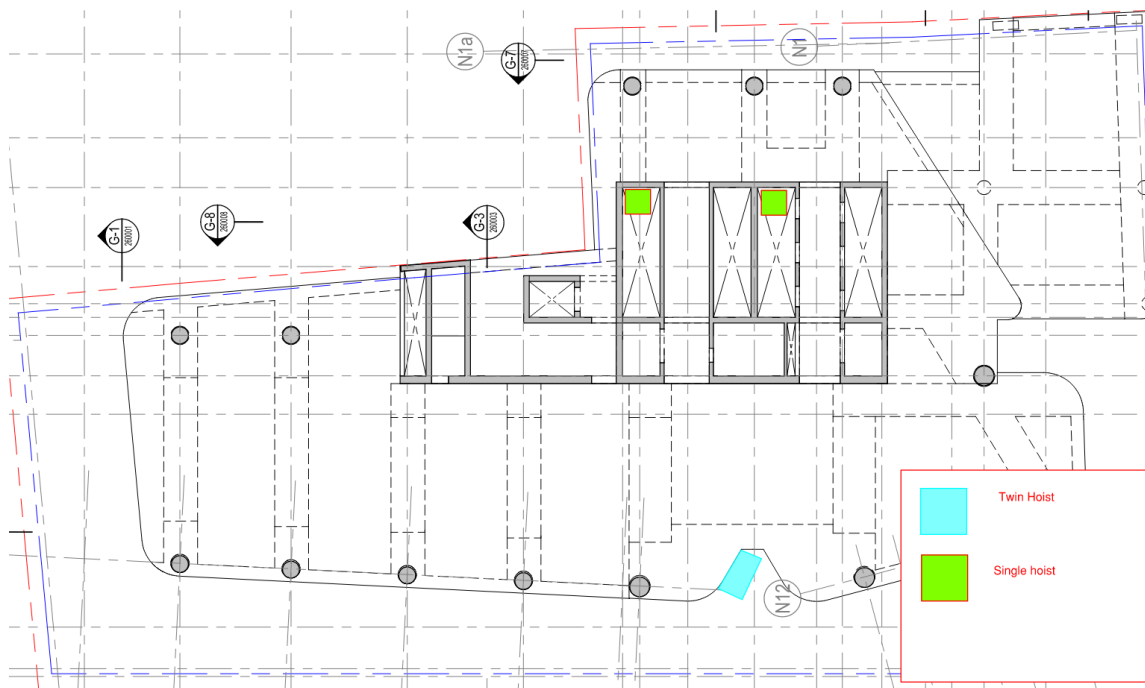


3.2.2 PERSONNEL & MATERIALS HOISTS

Moving materials and workers up and down the structure will be by means of personnel and material hoists as follows:

- Twin hoists will be installed to all levels from Ground – Level 38.
- Single Hoists will be utilised to access the jump from ground floor and continue as the Jump form rises.

Figure 17 – North Tower –hoist location



Hoist gates will be progressively removed once the temporary fit-out and commissioning of the internal builder's lifts are completed.

3.3 TEMPORARY WORKS

CPB will implement a Temporary Works Procedure established for this project.

The typical process for temporary works is as follows:

- Identify all temporary works in a Temporary Works Register and allocate them to the relevant Work Packs.
- All temporary works considered high risk are to be designed by a competent engineer and reviewed by a 3rd Party engineer.
- The works are to be certified on-site by the designer and/or 3rd Party.
- The design must be approved by the Permanent Works Designer if it impacts existing or new permanent works.
- The design and certification must consider installation, loading and removal. This must align with SWMS and ITP Hold Point requirements

- The installation is to be carried out by competent personnel in accordance with the SWMS and sign off provided in conjunction with the Engineer's certification.
- Any modifications to design or equipment are to be referred back to the Temporary Works Designer and 3rd Party (including check against permanent works).

The following temporary work items have been identified:

- B Class Hoardings along site perimeter.
- Self-climbing Perimeter Screens.
- Self-climbing Jump forms to cores.
- Loading bays.
- Placing booms.
- Man & Materials Hoists.
- Crane footings, climbing pockets in core and ties.

3.4 STRUCTURE

The fundamental strategy for the structure will be to maintain continuity for both subcontractor and materials handling resources. To achieve this, CPB have proposed to have 3 concrete placing booms, 1 boom in the jump form and another 2 booms on the internal floor plate.

Figure 18 – Typical Structural Floorplate Low Rise Level 6-10 with Concrete Placing Boom

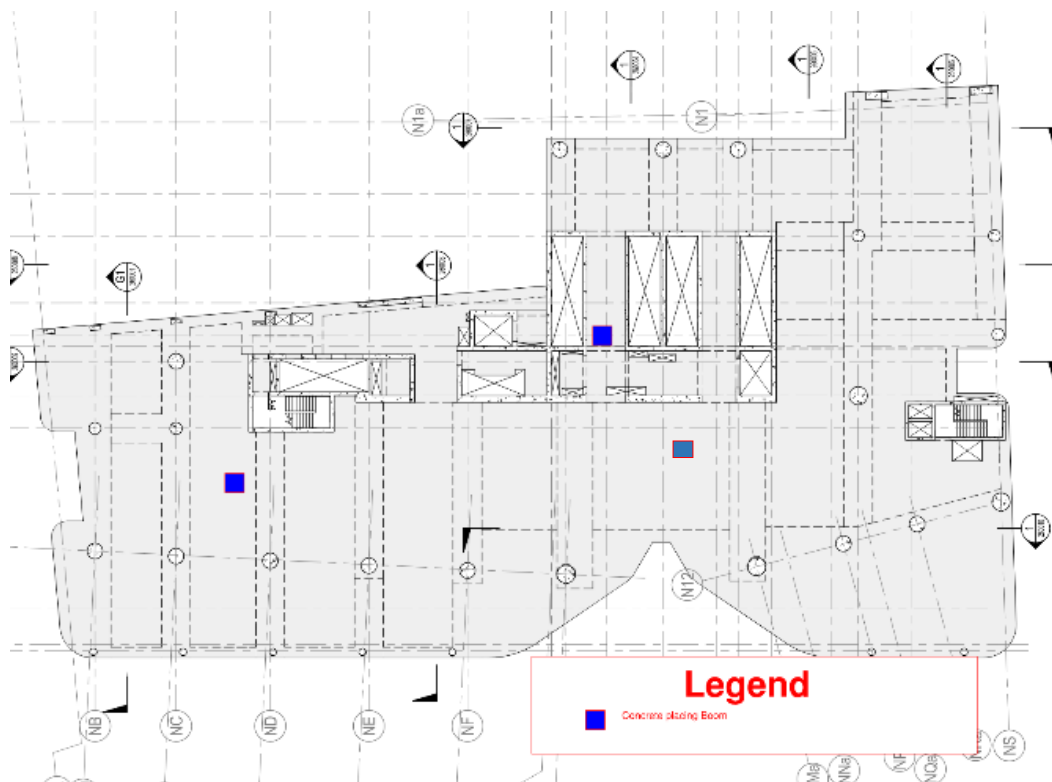
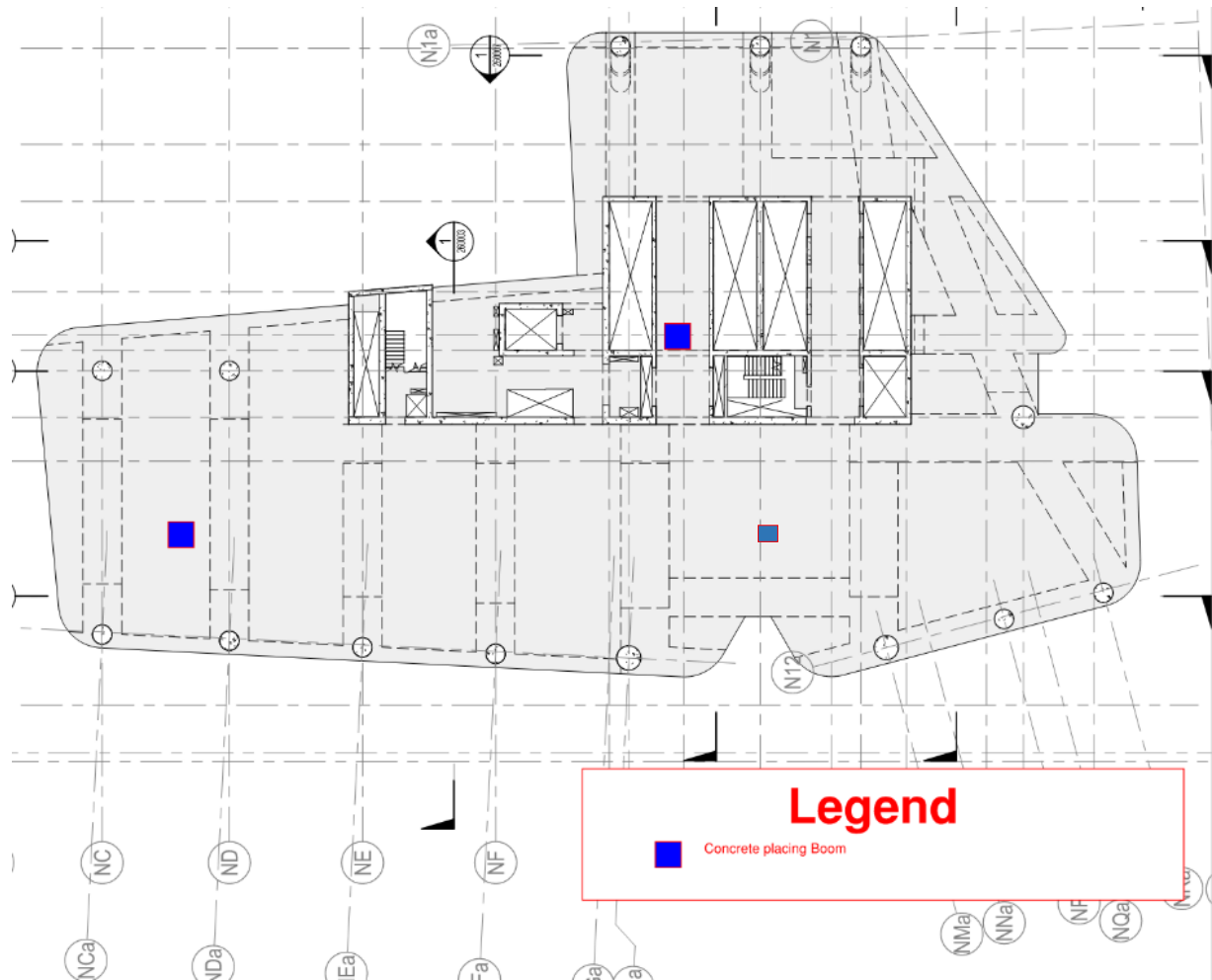


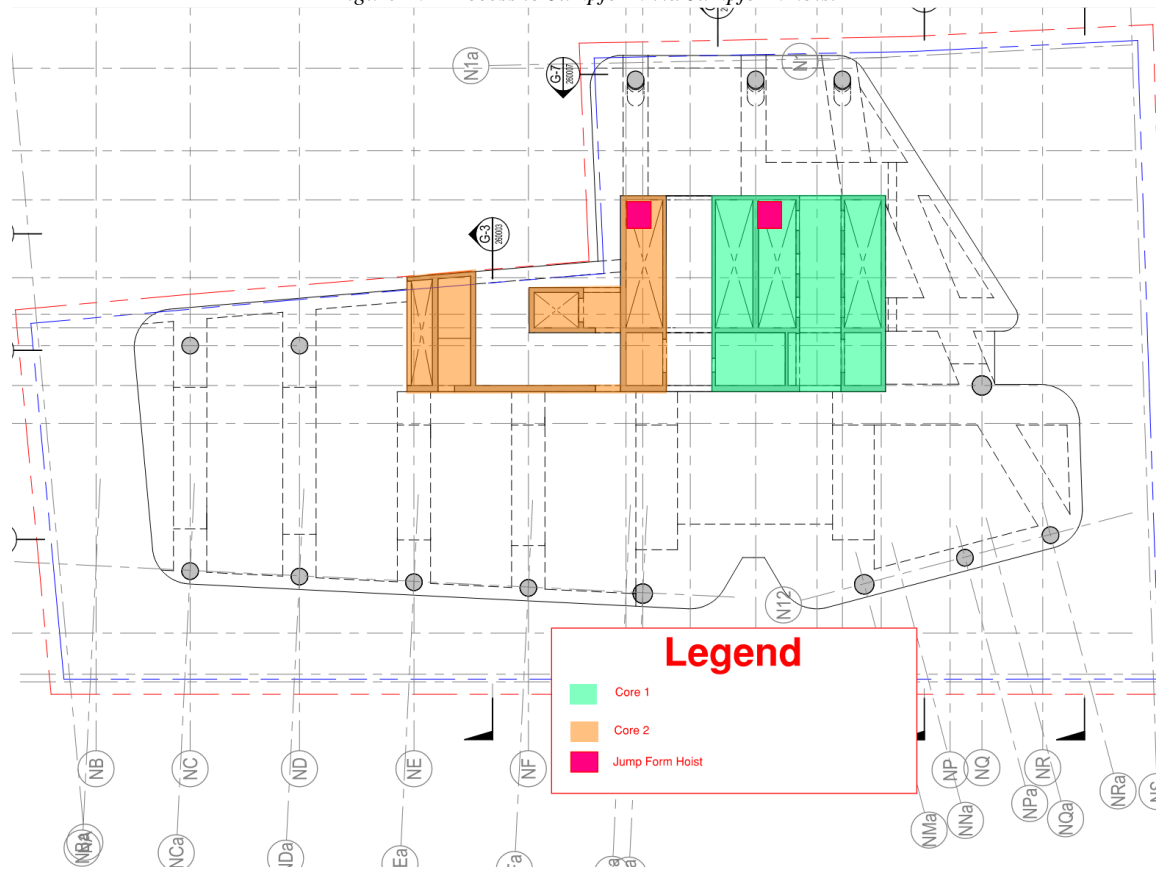
Figure 19 – Typical Structural Floorplate High Rise Level 11 Roof with Concrete Placing Boom



3.4.1 CORE STRUCTURE

The North Tower will be utilising 2 main cores that will be constructed with a jump form system. The core will advance 3-4 levels ahead of the suspended slabs below and will be serviced by both Tower Cranes. The jump form will be designed and certified by an independent Structural Engineer, to provide safe working access and support the structural load of the concrete above.

Figure 20 – Access to Jumpform via Jumpform hoist



3.4.2 PODIUM FLOORS

The podium levels from Ground to Level 4 sit within the Station works which are approved under the CSSI and are subject to a separate Construction Management Plan.

3.4.3 CONCRETE POURS

CPB's concrete pour sequence has been selected to maximise continuity of the structural trades, facilitating resource balancing of trades between multiple work areas and maintaining consistent cycle times. Pours have been sized to ensure pumping, placing and finishing will be completed within the nominated site working hours.

Concrete pours to the main core and floorplates will be carried out with the use of two (2) concrete placing booms set up to provide concrete placement to both the main core and suspended slabs. The placing booms will be located in the jump form and the internal floorplate, which will be climbed progressively, as the structure progresses.

CPB's current methodology has allowed for the podium floors to be broken up into 3 separate pours, while the Highrise floor plate will be broken into 2 pours.

Figure 21 – Typical Podium level pour sequence

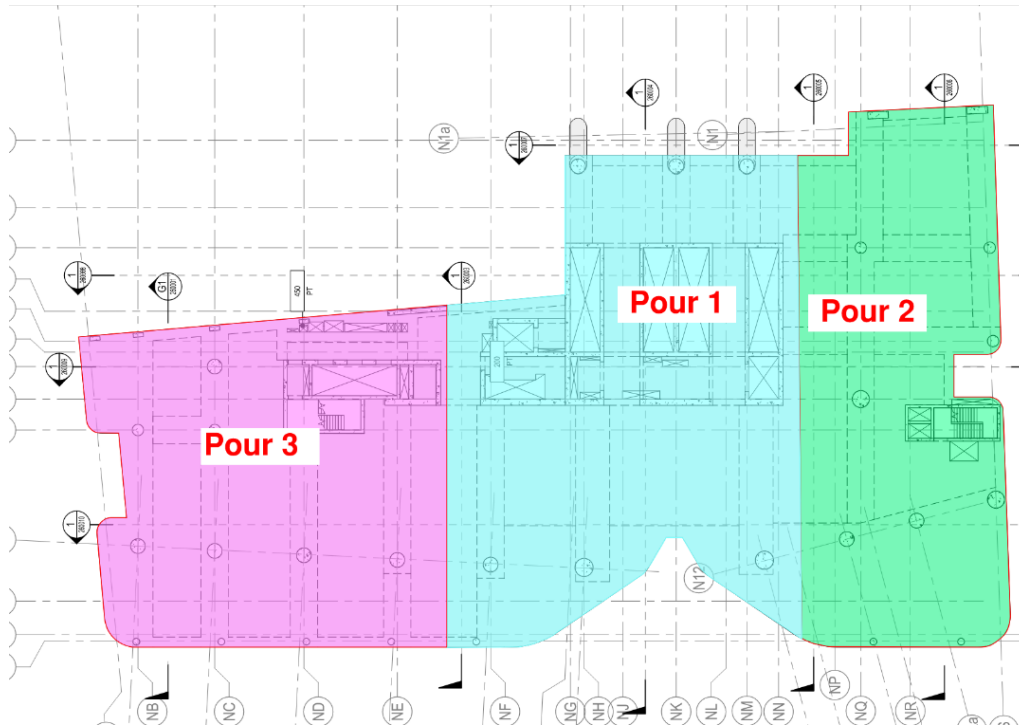
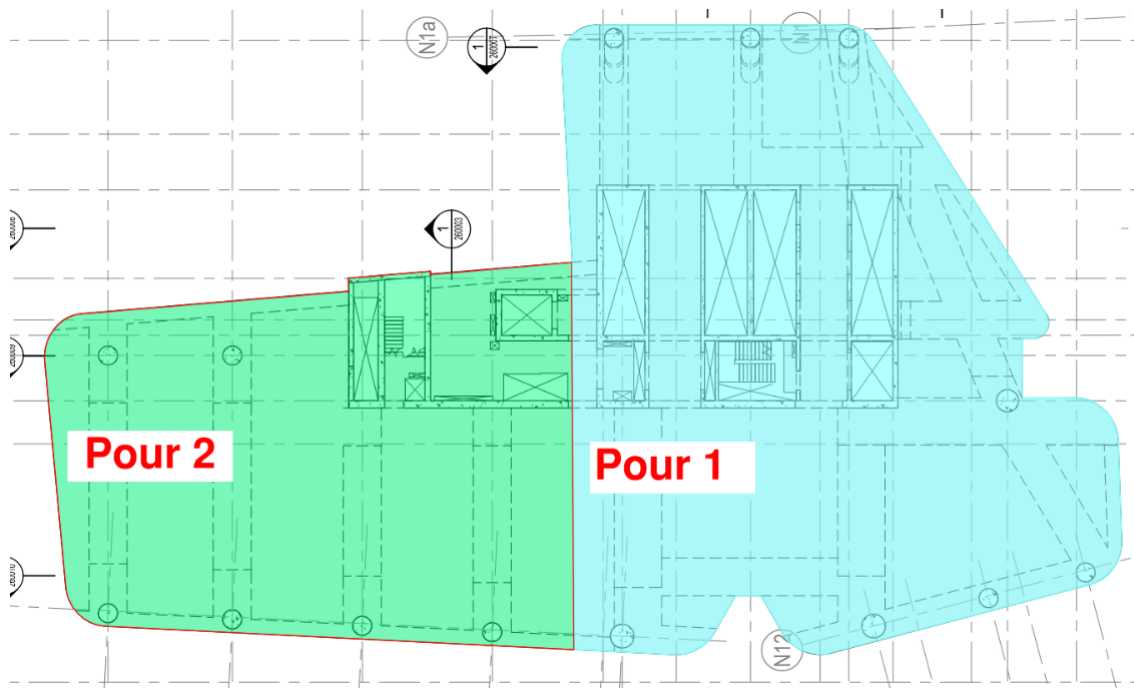


Figure 22 – Typical low-rise level pour sequence



3.4.4 Roof Construction

The following steps outline the roof cladding installation methodology for the roof cladding:

- Edge protection will be extended from the top of the façade to the top of roof level (refer to figure 29)
- Scaffold will be installed to the internal roof structure level (refer to figure 29 for extent of internal roof structure scaffold)
- Pre-fit secondary support framing to the steel structure.
- Roof cladding will be hoisted to the upper roof levels by the tower crane
- Roof cladding to be installed until complete

3.5 FAÇADE

The installation of the typical floor façade panels will be installed using a Panel straddle Stacker (Walkie Reach (WR)) with a jib and winch attached as follows:

- Façade stillages are transferred from the loading platform to the nominated façade panel.
- The façade panel is removed from the stillage by WR and positioned in assembly area.
- Any fins, shading elements can be attached to the panel.
- The façade panel is picked up by the crawler crane. The panel is horizontal on WR tines and transported to the perimeter zone of slab at the install location.
- WR with jib section is positioned two floors above and ropes down to install level.
- The façade panel is connected and weight is slowly taken up from WR above.
- The WR on the install level moves the base of the façade panel out over the handrail and until the full weight is taken from the WR above.
- The façade panel is positioned and bolted off.
- This process is repeated until the typical floor façade installation is complete.

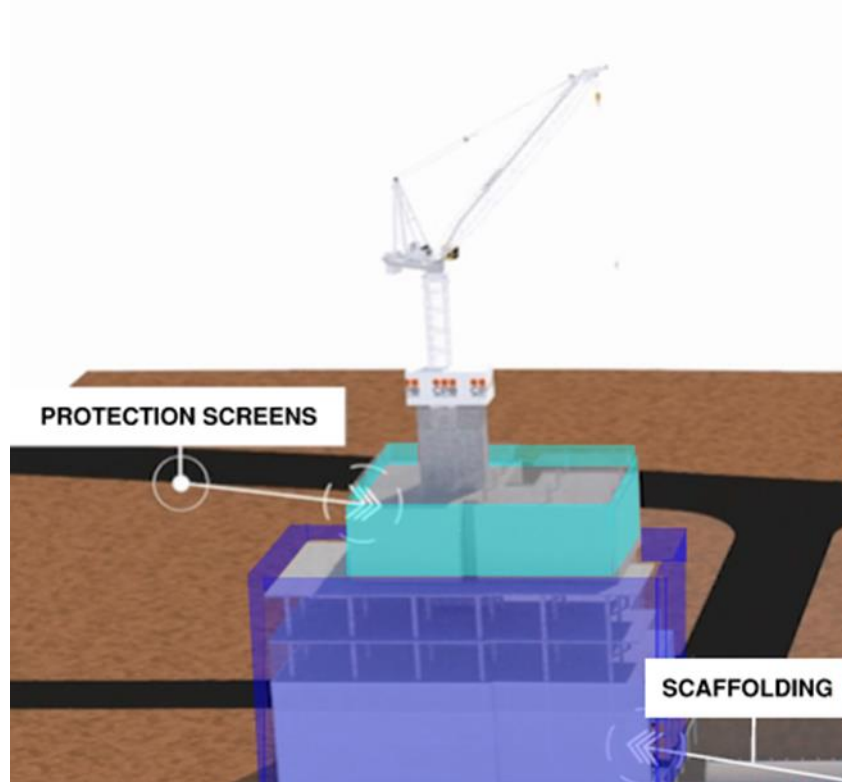
Figure 25 – façade Installation with a Walkie Reach



3.6 PERIMETER SCREENS

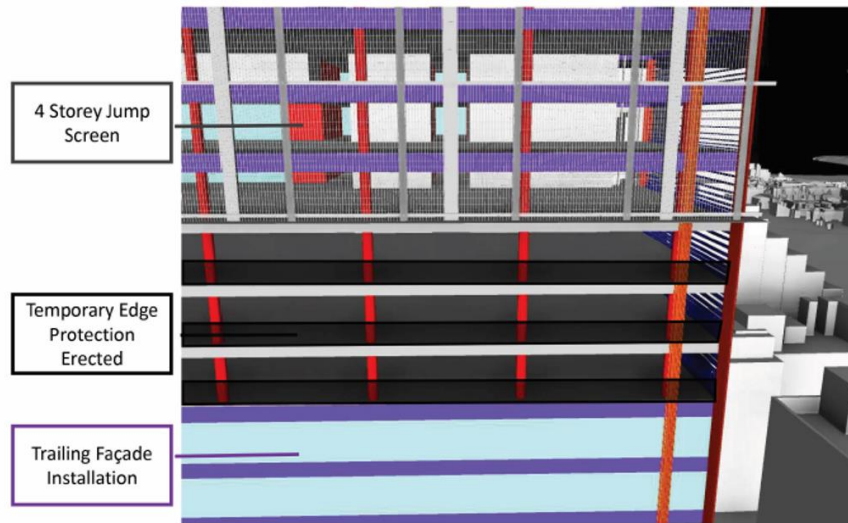
Perimeter captive screens will be erected to provide edge protection for the tower structure from Level 10 to the Roof Levels. To reduce any programme risks associated with the crane being out of service due to weather conditions, screens will be self-climbing. The structure will be designed to take the imposed loads of the self-climbing screens. These screens will only have small apertures on the cladding to reduce the risk of wind-blown materials penetrating the screen cladding.

Figure 26 –Perimeter Protection provided by a combination of Scaffolding and Self-Climbing Screens



These screens will cover three levels of the structure below the leading deck and a floor height above the leading deck for reinforcement, post tensioning and concrete placement works prior to the screen jumping to the next level.

Figure 27 – Section through tower floors showing continuous perimeter protection provided initially by perimeter screens, followed by edge protection proprietary fence to allow façade to be safely installed behind fence at all times.



3.7 SCAFFOLDING

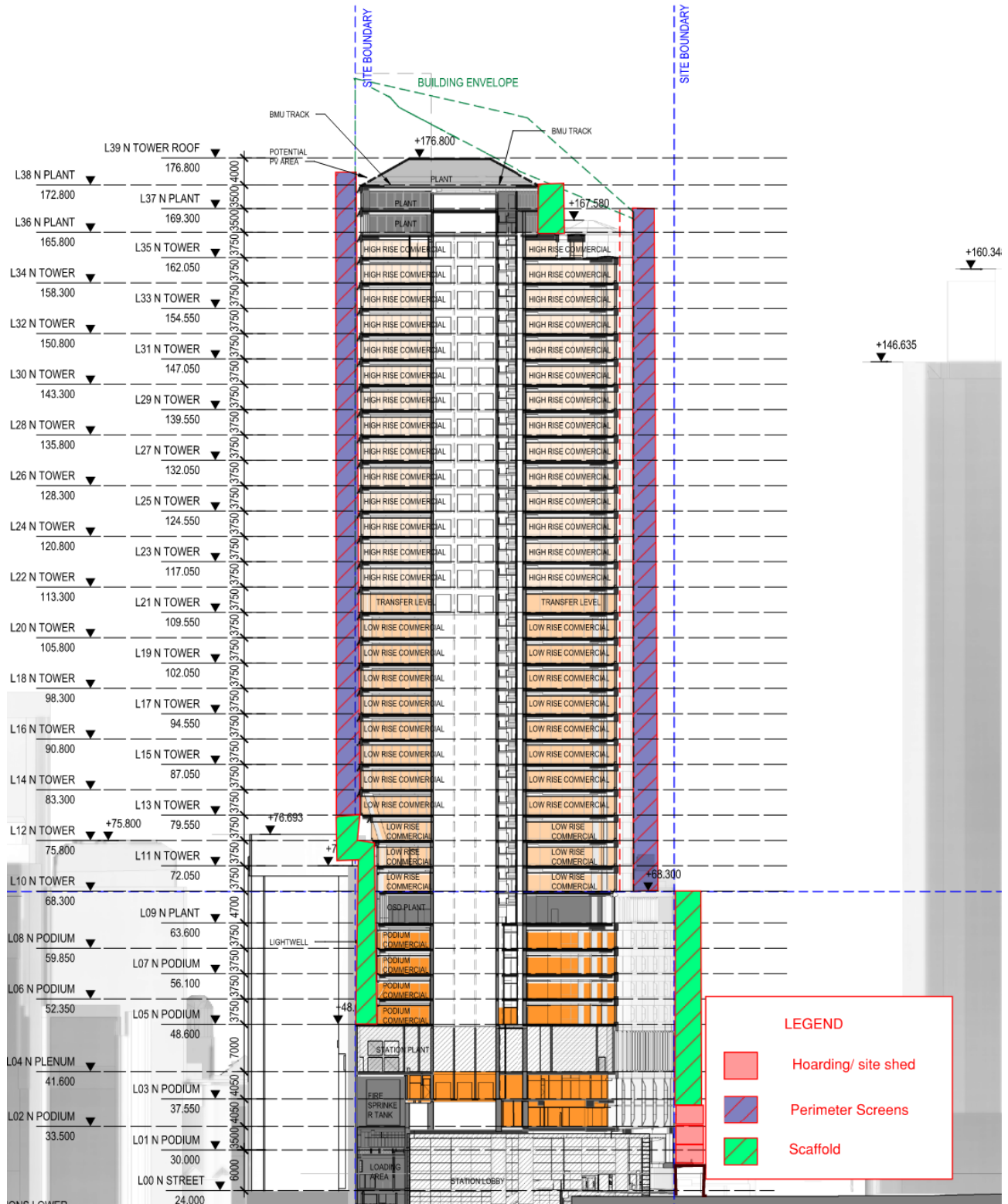
Scaffold will be erected to provide edge protection for the podium structure and a specific location at roof level and will be removed to accommodate façade installation (behind a proprietary edge protection fence system). The majority of the scaffold installation will occur in the following areas/levels:

- Ground Floor to Level 10 (as shown on Figure 11 below), and
- Rooftop Level 36 to Level 38

Figure 30 – Plan View - Scaffolding & Screens Alongside Ashington Place & Masonic Club (levels 5-9)



Figure 31 – Elevation View - Scaffolding & Screens Alongside Ashington Place & Masonic Club



3.9 SERVICES & FITOUT

As formwork back propping is removed from each suspended slab, the rough-in of service risers and high-level services will commence. This process starts with the highest service. The sequence is typically wet and dry fire, hydraulic, mechanical ductwork, cable trays, data, power, security, BMS and lighting cabling.

It is critical to install all services to risers as soon as they are available. This will enable connection of high-level services and will also ensure risers can be completed in time for wall linings. The installation of riser ductwork and other services will be undertaken from elevated working platforms (EWPs) and, if necessary, specialised scaffold. As a safety in design consideration, risers will be constructed where feasible with a 1 metre high concrete upstand during the structure. This will provide edge protection once formwork is stripped.

The fitout works will follow the stripping of the structure and completion of high-level services. Fitout areas will be pre-determined by the boundaries created by fire walls. These walls, in conjunction with wet area walls, will be constructed first. Wet areas are important to commence early due to the extended sequence required to complete, including waterproofing and screeding.

The typical fitout sequence is as follows:

- High level services rough in and riser rough in.
- Façade complete and ceiling margin installation.
- Full height wall framing / blockwork.
- Rough in of services in wall.
- Hold Point inspection and sign offs prior to second side wall sheeting.
- Wall sheeting (Post Façade Completion).
- Wet area fit-out inclusive of all vanities, and FFE and items.
- Specialist finishes to core wall where applicable.
- Access floor installation.
- Services fit-off and part commissioning.
- Painting.
- Install ceiling tiles.
- Builders clean.
- Final Commissioning.

Subcontractor resource management and the ‘locking-off’ of areas will be critical in completing areas for the commencement of the defect process.

3.10 FF&E

The delivery and installation of FF&E will be a multi-staged process that befits the varying quantity, quality, value, suppliers, installers, testing and commissioning and time constraints of the numerous items.

A strategic approach will be implemented to procure and install FF&E items to align with the construction programme.

3.11 COMMISSIONING, TESTING AND WITNESSING

Commissioning, testing and witnessing is an essential element of the project. Comprehensive checklists will be prepared for each system, area and stage of the project. The commissioning requirements and activities associated with the following building services will be fully detailed within the Commissioning Management Plan:

- Mechanical;
- HV, LV electrical and lighting;
- Security;
- Building Management and Energy Monitoring Systems;
- Hydraulics;
- Fire protection systems;
- Essential systems;
- Vertical transport; and
- ICT, communications systems & AV.

A Completion Plan will be developed, documenting the strategy and procedure for commissioning and testing of all work areas including an accurate and detailed timetable showing the sequence of activities aligned to the critical path for timely delivery of the completed project.

3.12 PROJECT HANDOVER

3.12.1 OCCUPATION CERTIFICATE

Once initial services commissioning is complete, essential services certification will commence system by system, including NSW Fire & Rescue and Consultants sign-offs and inspection. Building areas will be inspected by the PCA, fire engineer, access consultant and other relevant consultants.

The preparation will commence 6 months prior to completion and a list of deliverable documents will be agreed upon with the PCA.

PCA and fire engineer inspections will be staggered to ensure consultants inspect the works in progress and are given the opportunity to identify any potential installation non-compliances.

3.12.2 OPERATION AND MAINTENANCE MANUALS

The operations and maintenance manuals will be progressively completed and be submitted in draft form prior to practical completion.

The contents of the O&M Manuals will include:

- Introduction - Section to define the scope of works and general information about the project.
- Assets – Information that describes the equipment, building elements and assets that are completed during the works.
- Maintenance – Information that defines the relevant schedule of tasks required to periodically inspect and maintain the building components described in the Assets Section in order to ensure design life and to comply with the manufacturer's recommendations.

- Operations – Information that describes the operation of building systems including key instructions, methods and tools that may be required to ensure that systems perform as specified. It should also provide the user with sufficient information to trouble shoot minor problems without the need to engage with third party suppliers.
- Warranties and Certification – Reference information that outline specific certifications and warranties relating to the assets. This section also includes for the results of commissioning and verification.
- Spares – Information relating to spare parts including details of suppliers.
- Contact – Information relating to organisations or individuals who should be contacted to offer assistance with the completed project.
- Drawings and References – Information relating to as built documentation, specifications, supplier document's and the like that will assist in the operations and the maintenance of the project works.

The structure of the O&M manuals will be reviewed as the manuals progress to ensure that the content is easy to navigate and concise.

3.12.3 TRAINING

Training of and handover to the building managers will incorporate:

- Final services commissioning and operator training activities.
- Presentation of the electronic O&M information (note that draft O&M documentation will be issued to the building operators prior to completion of the construction works).
- Operational and handover issues including key systems, façade cleaning and maintenance.

CPB encourage early involvement of the building operators as this creates a familiarisation and understanding of the operating building services.

3.13 DEFECT MANAGEMENT

The defect management process begins, with a systematic inspection, record and issue of base defects and incomplete works for each level at completion of base build fit-out trade works. This is carried out by the finishes foreman and respective site engineer and is utilised to ensure early capture of defective works.

Defects identified during Principal inspections will be recorded, rectified and a second inspection will be arranged to close out these items.

4.0 TRAFFIC AND PEDESTRIAN MANAGEMENT

4.1 TRAFFIC MANAGEMENT OVERVIEW

CPB's primary traffic and pedestrian management objectives and principles during construction are to:

- Provide an appropriate, convenient and safe environment for pedestrians.
- Maintain existing levels of safe public transport access.
- Retain, as far as possible, existing kerb space for parking, loading and buses.
- Restrict heavy vehicle movements to designated routes to/ from the site.
- Manage and control heavy vehicle activity in the vicinity of the site.
- Minimise disruption to traffic operation, road users, pedestrians, cyclists and access to adjoining properties.
- Maximise safety for workers by applying low exposure work methods, education and
- Installing appropriate traffic controls.
- Carry out works in accordance with approved hours of work.

To do this CPB will be adopting a number of key traffic management strategies to minimise and mitigate Metro Pitt Street's effects on the surrounding CBD:

- Engagement of a specialist Construction Traffic Management Consultant to compile an overall Traffic Management Plan, specific Traffic Control Plans detailing each management of pedestrian, vehicular construction and operational traffic at each construction stage of works;
- Encouraging staff, consultants and subcontractors to use public transport to and from site.

4.2 EXISTING TRAFFIC MANAGEMENT AND CONTROL

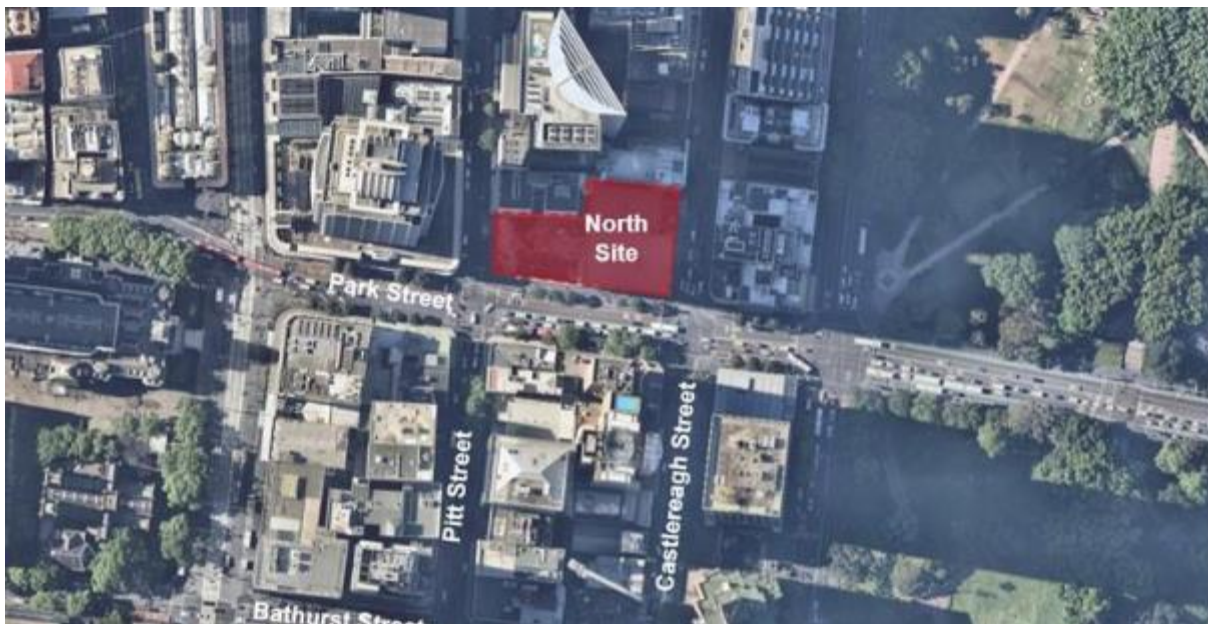
The road network surrounding the subject sites comprises local streets in the CBD road network having a 40 km/h speed zone. These streets are described herein while an aerial photo of the subject sites and the surrounding local road network is shown in Figure 32.

Pitt Street is configured as one-way street in the northbound direction. Near the North Site, Pitt Street has two traffic lanes with restricted off-street parking or loading zones on both sides of the street. It runs in the north-south direction along the western boundary of the North Site. In the vicinity of the subject site, marked pedestrian crossings are provided on all approaches at intersections with Pitt Street.

Castlereagh Street operates as a one-way street in the southbound direction. It has four trafficable lanes with two kerbside lanes used for parking and the two middle lanes used for through traffic movements. One of the middle lanes operates as a bus lane. Wide footpaths exist on both sides of the street and marked pedestrian crossings provided on all approaches at junctions near the subject sites. Castlereagh Street forms the eastern boundary to the North site only.

Park Street is a two-way street with traffic flow in the east-west direction. It is a six-lane road with three lanes, one of which is a Bus Lane, in each direction. Near the subject site, there are bus stops located on both sides of Park Street. There is a loading zone present on the north side of Park street between 6am-6pm with no parking permitted at all other times. Also, on the north side of Park Street are two Australia Post boxes with a signposted space in the kerbside lane which permits stopping by Australia Post vehicles. Wide footpaths are provided on both sides of the street and marked pedestrian crossings provided at all nearby signalised intersections.

Figure 32 – North Site and Surrounding Road Network



4.3 EXISTING PEDESTRIAN FACILITIES

Well established pedestrian paths are provided on both sides of all roads in the vicinity of the subject site. The paths surrounding the subject site provide a good level of connectivity in the area and vary in width between 4m and 5.5m.

Signalised pedestrian crossing facilities are provided at the intersections immediately surrounding the subject sites, respectively, as follows:

- Park Street with Pitt Street
- Park Street with Castlereagh Street

Surrounding the site, the nearest bicycle routes are located on Pitt Street and Castlereagh Street as shown in Figure 33.

Figure 33 - Existing Bicycle Network



4.4 TRAFFIC MANAGEMENT PLAN

During the detailed design phase CPB will develop, in conjunction with the relevant authorities, a detailed Traffic Management Plan to identify, document and implement the strategy for managing pedestrian and traffic construction movements for the precinct. This TMP will also include a Traffic Control Plan for each stage of construction works, across all key work areas.

Traffic management and control will be established across all major roads and interfaces across the project. Traffic control in the form of traffic controllers, warning lights and pedestrian boom gates will be in place at all site access/egress and construction zones to ensure:

- Segregation of the general public from truck movements in and out of the project.
- Segregation of construction worker access from construction vehicular access in and out of the project.
- Materials and deliveries do not impede public roadways or footpaths.
- Streamlining of time taken for truck movements in and out of the project.

4.5 SITE ACCESS

Vehicular access to the North Site is proposed via Pitt Street and Castlereagh Street. An on-street work zone is proposed on Park Street for a length of approximately 30m in the kerbside lane.

Impacts on pedestrians, cyclists, buses, general traffic, parking and loading, access points for each stage of works are described herein.

Traffic controllers employed across all stages of the project will hold an RMS approved Traffic Controller's license (formerly known as the Blue Card – Stop/Slow bat). In addition to the minimum required Personal Protective Equipment (PPE) as specified in the Sydney Metro Principal Contractor Health and Safety Standard traffic controllers will wear high visibility clothing and footwear in accordance with Section 8 of AS 4602. This includes trousers fitted with double-reflective stripes or reflective boot covers.

Traffic controllers working at night will be equipped with illuminated wands to direct traffic. Vehicles would enter and exit the North Site via a driveway located off Pitt Street and Castlereagh Street. Vehicles would enter the site by turning right-in and exit the site by turning right-out. This would not present any conflicts with the general traffic flow given that both Pitt Street and Castlereagh Street are one-way streets. Construction vehicles would enter and exit the Park Street work zone in a forward-in and forward-out manoeuvre in the direction of traffic flow.

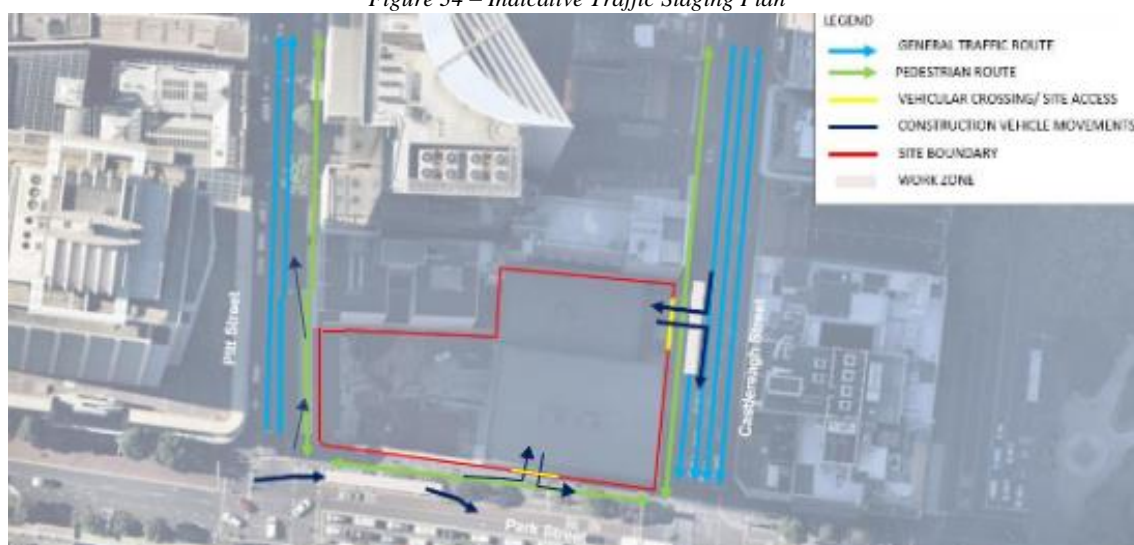
A turntable would be located within the site at all access driveways which would permit heavy vehicles to enter the site forward-in and exit the site forward-out. A work zone is to be proposed at each site access driveway on Pitt Street and Castlereagh Street. All work zones are proposed to be in the kerbside lane except for the Pitt Street work zone at the North Site which would utilise the footpath kerb build-out. However, it would not reduce the width of the footpath along Pitt Street.

The road network capacity would not be reduced as the proposed access points are provided close by to signals which would generate sufficient gaps in traffic to enable heavy vehicles to safely exit the site. A traffic controller would be located on Pitt Street and Castlereagh Street to assist truck egress movements by finding suitable gaps in the traffic stream.

At site access points, visibility towards pedestrians approaching from the north and south directions exceed the 55m desirable sight distance requirement as per AS2890.1:2004. Under any circumstance, pedestrian movements on the footpath across the site access would be managed by traffic controllers and concertina gates (as detailed in Section 8.10). No permanent sight obstruction is located within this sight distance. Therefore, it is deemed as satisfactory.

The largest construction vehicle to enter the North Site would be a rigid heavy vehicle (concrete mixer) with an overall length up to 8.7m. The largest vehicles to access the on-street work zones would be a 22m semi-trailer and 150-tonne mobile crane. Articulated vehicles (including semi-trailers) are not permitted in the CBD unless accepted under a separate approval sought by a Temporary Works Application. A Temporary Works Application would be submitted to the City of Sydney a minimum of 48 hours (2 working days excluding weekends and public holidays) prior to the proposed start date of works.

Figure 34 – Indicative Traffic Staging Plan



4.6 HAULAGE ROUTES

North Site, Pitt Street Site Access

Arrival Routes:

- From North: from the Harbour Bridge continue onto the Western Distributor, take the Bathurst Street exit, turn left onto Bathurst Street, turn left onto Pitt Street and turn right into the site.
- From East: from William Street continue onto Park Street, turn right onto Pitt Street and turn right into the site.
- From South: head north of Pitt Street and turn right into the site.
- From West: from the Western Distributor, take Bathurst Street exit, head east on Bathurst Street, turn left into Pitt Street and turn right into the site.

Departure Routes:

- To North: turn right out of the site, turn left onto Market Street, turn right onto Clarence Street, head north onto the Western Distributor and continue towards the Harbour Bridge.
- To East: turn right out of the site, turn left onto Market Street, turn left onto Sussex Street, turn left onto Bathurst Street, turn right onto Elizabeth Street and turn left onto Liverpool Street.
- To South: turn right out of the site, turn left onto Market Street, head west onto the Western Distributor, take the Harris Street exit and continue south on Harris Street,
- To West: turn right out of the site, turn left onto Market Street, and head west onto the Western Distributor.

Figure 35 – Haulage Route, North Site, Pitt Street Site Access



North Site, Castlereagh Street Site Access

Arrival Routes:

- From North: from the Harbour Bridge continue onto Cahill Expressway, turn left onto Macquarie Street, turn right at St James Road, turn left onto Market Street, turn left onto Castlereagh Street and turn right into the site.
- To East: from William Street continue onto Park Street, turn right onto Elizabeth Street, turn left onto Market Street, turn left onto Castlereagh Street and turn right into the site.
- From South: head north on Elizabeth Street, turn left onto Market Street, turn left onto Castlereagh Street and turn right into the site.
- From West: from the Western Distributor, take King Street exit, head east on King Street, turn right onto Castlereagh Street and turn right into the site.

Departure Routes:

- To North: turn right out of the site onto Castlereagh Street, turn left onto Park Street/ William Street, turn left onto Palmer Street, turn right onto Sir John Young Crescent and continue north onto M1 Motorway.
- To East: turn right out of the site onto Castlereagh Street, turn left onto Park Street and continue east on William Street.
- To South: turn right out of the site onto Castlereagh Street and continue southbound.
- To West: turn right out of the site onto Castlereagh Street, turn right onto Park Street, head west on Druiett Street and continue west onto the Western Distributor

Figure 36 Haulage Route – North Site, Castlereagh Street Site Access



It is acknowledged that the abovementioned haulage routes differ to those presented within the Sydney Metro EIS. Haul routes presented in this CTMP originate and destinate to northern and southern areas of the Sydney Metropolitan as well as eastern and western areas, which is required for the supply of materials for the station construction and fit-out.

The impact caused by abovementioned haulage routes has been assessed qualitatively and is deemed to be minor. Based on amended construction vehicles volumes (as discussed at the end of Section 8.6), the greatest number of heavy vehicles passing through any intersection along these haulage routes would be 36 vehicles which would occur at the intersection of Pitt Street-Bathurst Street. On average, this would equate to one vehicle movement every 1-2 minutes. As per the EIS, this intersection currently operates at a Level of Service B in the AM and PM peak periods, and an additional vehicle movement every 1-2 minutes would not be expected to impact the intersection level of service.

4.7 TRAFFIC MANAGEMENT

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

- Heavy vehicles equipped with systems to improve vehicle safety, visibility and the detection of vulnerable road users.
- 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.

4.8 ON-SITE PARKING

Proposed changes to kerbside uses and associated signage surrounding the Site are illustrated in Figure 37 below.

Figure 37 – Changes to Kerbside Uses



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

4.9 TRAFFIC GENERATION

The North Site is expected to generate up to 12 heavy vehicles per hour. Traffic generation associated with the project during the peak periods and middle of the day would be as follows:

- AM peak period (7am-10am) – One heavy vehicle per hour.
- Middle of the day (10am-4pm) – Up to 12 heavy vehicles per hour.
- PM peak period (4pm-6pm) – One heavy vehicle per hour

Item	Activity	Rationale	Truck Movement Per Hour
Tower Crane Activities 2 cranes	False work	3 trucks per hour with total of 9 lifts per crane per hour	9
	Formwork		
	Reo		
	Façade		
	Services		
	Fitout		
Concrete Pumps	Slab/ Vertical	50m3/hour	8
	Jump form		
Hoist and Loading Dock	Blockwork	Hoist: 3loads per truck at 2 trucks/hour Loads per truck at 2 Trucks/hour	4
	Equipment		
	Rubbish		
	Fit out works		
Sub-total truck movement per hour			21

4.10 TRAFFIC MANAGEMENT RISK ASSESSMENT

Potential Hazards	Consequence	Likelihood	Risk Rating	Controls Implemented	Revised Risk Rating
Traffic on Surrounding Roads					
Traffic controller exposure to road rage/ aggression	Insignificant	Unlikely	C	Traffic controllers will not approach or halt drivers unexpectedly which could have caused drivers to react aggressively due to suddenness. Vehicles already on the road would have the right of way. As such every vehicle leaving the site must wait until a suitable gap in traffic allows them to exit under the direction of qualified traffic and pedestrian controllers.	D
Traffic controller being struck or injured by vehicle running off the road	Major	Rare	B	Surrounding streets are signposted and linemarked as 40km/h (due to the CBD-wide 40km/h speed limit). Site personnel/ traffic controllers will stand on the footpath, clear of roadways and driveways unless when required to manage traffic and pedestrians momentarily. Personnel will be instructed to be cautious of their surroundings and report any errant driver behaviour to Police that is observed on surrounding streets. Drivers travelling at speeds above the enforceable speed limit would be breaking the law and is a matter to be dealt with by the local area command (police) that patrol surrounding streets.	C

Fatigued Workers (Site Personnel/ Traffic Controllers)

Occurrence of micro-sleeps therefore more likely for incidents to occur	Insignificant	Unlikely	C	At morning toolbox talks, the Site Supervisor will look out for unrested site personnel and refuse entry to site for employees who are not fit for work. Throughout work shifts, breaks and rest periods will be allocated to site personnel in-line with awards and enterprise agreements required by the Work Health and Safety Act 2011.	C
Less attentive/ reduced concentration therefore more likely to make mistakes	Insignificant	Unlikely	C	Breaks and rest periods will be allocated to site personnel in-line with awards and enterprise agreements required by the Work Health and Safety Act 2011.	C
Prolonged exposure to noise	Insignificant	Unlikely	C	Site personnel will be equipped with PPE, including ear protection (e.g. ear plugs). Also, breaks and rest periods will be allocated to site personnel in-line with awards and enterprise agreements required by the Work Health and Safety Act 2011.	C

Fatigued Drivers

Less attentive/ reduced concentration therefore more likely to make mistakes	Insignificant	Unlikely	C	Site personnel/ traffic controllers will be equipped with PPE, including high visibility clothing and footwear which will enhance visibility to motorists. Traffic controllers will be equipped with reflective Stop/Slow bat and illuminated wand which would be visible in daytime and night time conditions. Site personnel/ traffic controllers will stand on the footpath, clear of roadways and driveways unless when required to manage traffic and pedestrians momentarily. Personnel will be instructed to be cautious of their surroundings and report any errant driver behaviour to Police that is observed on surrounding streets.	C
Occurrence of micro-sleeps therefore more likely for incidents to occur	Insignificant	Unlikely	C	Site personnel/ traffic controllers will stand on the footpath, clear of roadways and driveways unless when required to manage traffic and pedestrians momentarily. Personnel will be instructed to be cautious of their surroundings and report any errant driver behaviour to Police that is observed on surrounding streets. Driver fatigue is a matter to be dealt with by the local area command (police) that patrol surrounding streets.	C

Night works

Drivers are slower to react to signage, site personnel/ traffic controllers, plant etc.	Minor	Rare	C	Site personnel/ traffic controllers will be equipped with PPE, including high visibility clothing and footwear which will enhance visibility to motorists. Traffic controllers will be equipped with reflective Stop/Slow bat and	D
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				<p>illuminated wand which would be visible in daytime and night time conditions.</p> <p>Work areas and site accesses will be well-lit by lighting installed on hoardings and portable light towers. Existing street lighting will be relied upon for lighting of adjacent roads.</p> <p>Surrounding streets are signposted and linemarked as 40km/h (due to the CBD-wide 40km/h speed limit).</p>	
Lower traffic volumes may lead to higher vehicle speeds on surrounding roads	Major	Rare	B	<p>Surrounding streets are signposted and linemarked as 40km/h (due to the CBD-wide 40km/h speed limit).</p> <p>Site personnel/ traffic controllers will stand on the footpath, clear of roadways and driveways unless when required to manage traffic and pedestrians momentarily.</p> <p>Personnel will be instructed to be cautious of their surroundings and report any errant driver behaviour to Police that is observed on surrounding streets.</p> <p>Drivers travelling at speeds above the enforceable speed limit would be breaking the law and is a matter to be dealt with by the local area command (police) that patrol surrounding streets.</p>	C
Motorists' behaviour on surrounding roads may be impacted by drugs and alcohol	Major	Rare	B	<p>Site personnel/ traffic controllers will stand on the footpath, clear of roadways and driveways unless when required to manage traffic and pedestrians momentarily.</p> <p>Personnel will be instructed to be cautious of their surroundings and report any errant driver behaviour to Police that is observed on surrounding streets.</p> <p>Drivers travelling under the influence of drugs and alcohol would be breaking the law and is a matter to be dealt with by the local area command (police) that patrol surrounding streets.</p>	C
Visibility is reduced for workers, increasing human reaction time if an incident occurs	Insignificant	Unlikely	C	<p>Work areas and site accesses will be well-lit by lighting installed on hoardings and portable light towers. Existing street lighting will be relied upon for lighting of adjacent roads.</p>	D

Environmental factors

Vehicle stopping distance increased on wet roads, reducing recovery opportunity for the driver of an errant vehicle	Moderate	Unlikely	B	<p>Surrounding streets are signposted and linemarked as 40km/h (due to the CBD-wide 40km/h speed limit). It is presumed that surrounding streets have been speed limited appropriately having consideration for various road conditions (dry, wet, day, night etc.).</p> <p>As a general road rule, drivers are also advised to slow down in wet weather conditions.</p>	C
Poor lighting decreases visibility for drivers and	Minor	Rare	C	<p>Site accesses and work areas will be well-lit by lighting installed on hoardings and portable</p>	D

workers which makes it harder to identify and react to hazards.				light towers. Existing street lighting will be relied upon for lighting of adjacent roads.	
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4.11 CURRENT CONSTRUCTION PROJECTS

Major projects under construction that are likely to overlap with the proposed construction works of the Pitt Street North OSD project include the following:

- Pitt Street Station and South OSD development works
- Martin Place Integrated Station Development
- 116 Bathurst Street
- 201 Elizabeth Street
- 338 Pitt Street.

City of Sydney's online development tracker and NSW Department of Planning, Industry and Environment's major projects website have been reviewed for details on construction-related traffic volumes.

CPB understand data is being updated as a result of the light rail project occurring in Sydney CBD. Once this data is made available, CPB will undertake a cumulative assessment to ensure levels of service will not be impacted as a result of the North OSD construction works.

5.0 SUSTAINABILITY

5.1 SUSTAINABILITY IN DELIVERY

Targets for the Pitt street OSD include:

- 6 Star Green Star Office Design and As Built (v1.2)
- 5.5 Star NABERS Energy
- 3.5 Star NABERS Water

5.2 ENERGY SAVING INITIATIVES

The following energy saving initiatives for the site construction facilities will be adopted on the project:

- LED for the majority of temporary lighting.
- High efficiency air conditioning units in site accommodation.
- Improved site metering and load switching.
- Biodiesel and ethanol fuel mixes for all external plant and equipment.

5.3 WASTE MANAGEMENT

Our EH&S Delivery Standards require that all projects minimise Construction and Demolition (C&D) waste with many CBD projects achieving reported recycling rates of more than 90% via the off-site sorting capabilities of our waste contractors.

CPB ensures all waste is correctly handled by utilising only experienced third-party waste disposal contractors who are selected to ensure compliance with all legislative requirements in handling, transport and disposal of waste.

The following waste management initiatives will be provided in our site office to increase recycling rates:

- Paper, bottle, plastic (co-mingle) and printer cartridge recycling.
- 80% recycled paper for photocopiers with default B&W, double-sided printing.
- Reusable cups, utensils and plates to eliminate plastic and paper kitchen supplies.

On site, rubbish bins will be provided to all work areas and will be regularly removed to the central skip bin location by the subcontractors for collection and transport from the site to the waste recycle facility.

Bins will be moved via the man and materials hoists or by the crane, dependant on where they are being loaded from, and the waste material being removed from site. Crane lifted steel bins will be used to service the top floors where structure trades are working, and large Otto bins will service the lower levels where fit-out and service trades are working. The site skips will be centrally located at loading dock zones to ensure an easier pick up by our bin contractor.

Rubbish will be separated at an approved waste management centre. Auditable records will be kept of quantities of all materials both recycled and disposed to landfill. Records will be monitored to ensure recycling targets are achieved.

Waste Management will be documented in further detail in the Construction Waste Management Plan (under development).

5.4 STAKEHOLDER MANAGEMENT

5.4.1 MANAGING ENQUIRIES AND COMPLAINTS

CPB's approach to managing enquiries is to create a consistent and transparent guide to engaging stakeholders throughout both the initial project engagement and Delivery Phase.

Our key Stakeholder Management principles include:

- Maintaining a proactive approach to all potential stakeholder related issues and engagement;
- Establish and maintain transparent and consistent communication channels; and
- Respect, involve and engage stakeholders to ensure their needs are recognised and considered.

5.4.2 EVENTS MANAGEMENT

CPB will coordinate with key stakeholders regarding events occurring within Pitt Street to prevent potential conflicts. It is expected that the majority of events will occur outside of the nominated work hours, either being held at night or on weekends.

A summary of scheduled major special events that was/will be held in the Sydney CBD in the 12-month period between April 2019 – March 2020 is provided in figure 37. Most of the events occur annually, therefore, the dates and affected areas associated with each event are assumed to be similar in successive years (up to the completion of construction works in Q4 2023).

Figure 38– Special Events

Date	Event	Affected Streets Surrounding the Subject Site
Thursday 25 April 2019	Anzac Day Parade	Bent Street, Bligh Street, Castlereagh Street, Elizabeth Street, Hunter Street, King Street
Sunday 12 May 2019	Mothers' Day Classic	Macquarie Street, College Street, Mrs Macquarie Road, The Royal Botanic Garden
May/June 2019	Vivid Sydney	Sydney CBD, Circular Quay
July 2019	Reserve Forces Day	Macquarie Street
Sunday 15 September 2019	Sydney Running Festival	Bent Street, Hunter Street, Phillip Street, Macquarie Street
Sunday in October 2019	Sydney Spring Cycle	Cahill Expressway
Sunday 3 November 2019	Bloody Long Walk	Macquarie Street
December 2019/ January 2020	Sydney New Years Eve	Sydney CBD
January 2020	Australia Day	Circular Quay
February/ March 2020	Chinese New Year Festival	Circular Quay, Haymarket

A Community Consultation and Engagement Plan is under development and will be in place prior to construction commencement.

5.5 AIR QUALITY MANAGEMENT

As works under this CMP do not include excavation, the major source of air emissions from the proposed construction works at the site are primarily associated with traffic movements on site.

Construction phase air quality impacts shall be minimised or avoided by incorporation of appropriate dust suppression and air quality control measures at various stages of the project.

An air quality monitoring equipment diagram will be prepared prior to commencement on site, detailing the locations and type of equipment to be installed and monitored. All equipment used on the site and facilities erected on site shall be designed and operated to control the emission of smoke, dust, fumes and any other air impurity into the atmosphere.

Air monitoring will be conducted at regular intervals to determine that the acceptable air quality thresholds are being met for each of the nominated monitoring parameters. This information will be used to determine the effectiveness of the implemented air quality mitigation measures and provide for any remedial actions if required.

5.6 NOISE AND VIBRATION MANAGEMENT

Noise and vibration from construction activities will be managed to minimise the impact on neighbouring residents and businesses.

Noise generated during the construction works will be primarily associated with vehicle movements, generators, heavy machinery and hand-held machinery and tools.

Potential noise impacts are predicted to be negligible and expected to pose a minor impact (if any) to the nearest adjoining stakeholders.

All noise generating activities are proposed to occur only during the approved site operating hours. Any noise activities proposed outside the nominated site operating hours will require prior written consent from the nominated approval authority. Noise limits during the construction works are to meet the maximum allowable noise contribution.

During construction, CPB will utilise existing noise impact assessment data, where required, to determine noise sources and confirm ambient background levels or alternatively will conduct baseline noise monitoring prior to construction work commencing and may engage an acoustic consultant to monitor construction noise level during its activities.

Routine inspections of plant and equipment will be conducted to ensure performance relative to compliance requirements.

When planning for construction work that will include vibration, all practical efforts to protect vibration sensitive buildings and the amenity of adjoining stakeholders shall be considered and apply a practical and economical combination of vibration control measures to manage vibration impacts such as: substitution by an alternative process; restricting times when work is carried out; screening or enclosures; and consultation with affected residents.