

PITT STREET SOUTH SSD - 10376 MOD 2

Construction Hours and Design Amendments

Prepared for
PITT STREET DEVELOPER SOUTH PTY LTD
September 2022

URBIS

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1. INTRODUCTION

This Modification Report has been prepared by Urbis Pty Ltd on behalf of Pitt Street Developer South Pty Ltd (**the Applicant**) pursuant to section 4.55(1A) of the Environmental Planning and Assessment Act 1979 (**EP&A Act**). The application seeks to modify Development Consent SSD-10376 for the Pitt Street South (**PSS**) Metro Over Station Development (**OSD**) at 125 Bathurst Street, Sydney which is legally described as Lot 10 in Deposited Plan 1255507.

1.1. APPLICANT DETAILS

The applicant details for the proposed modification are listed in the following table.

Table 1 Applicant Details

Descriptor	Proponent Details
Full Name(s)	Pitt Street Developer South Pty Ltd
Postal Address	Level 19, 126 Phillip Street, Sydney NSW 2000
ABN	40 635 396 815
Nominated Contact	Brad Sugar

1.2. PROJECT BACKGROUND

The site is subject to several development applications as listed below:

Table 2 Approvals History

Application number	Development	Date determined
SSD-8876 – Concept SSD DA	Pitt Street (South) Over Station Development – Concept Application.	25/06/2019
SSD-8879 – MOD 1	Modification to SSD-8879 – Minor amendments to conditions to rectify administration error.	28/10/2019
SSD-8879 – MOD 2	Modification to SSD 8879 – Amendment to allow minor protrusions to the approved concept envelope and clarification over the inclusions of retail premises as an approved land use in the Concept Application.	14/4/2021
SSD 10376 – Detailed SSD DA	Pitt Street South Over Station Development – Stage 2 Detailed Design and Construction. Consent was granted for: Construction of the Pitt Street South Over Station Development, including – A residential tower with a maximum building height of RL 165.35 (noted as 165.15 on the description of development on the consent) – 234 dwellings to be used for Build-to-Rent Housing – A maximum gross floor area of 21,995sqm (excluding gross floor area approved under CSSI 7400)	14/4/2021

Application number	Development	Date determined
	– Staged stratum subdivision – Use of podium (approved under CSSI 7400) for: • Residential entry and residential communal spaces • Retail entry and a food and drink premises on level two • Bicycle storage and end of trip facilities • Loading dock and associated facilities • Plant and circulation • Landscaping.	
SSD 10376 – MOD 1	Modification to SSD 10376 – Minor design Amendments - adjustment to building height, relocation of louvers, revise the adaptable apartment floor plans and the addition of a window on Level 7.	24/11/2021

This modification application is seeking consent to make a further amendment (Mod 2) to SSD-10376.

1.3. SITE DESCRIPTION

The site is located at 125 Bathurst Street, Sydney, and is legally described as Lot 10 in Deposited Plan 1255507.

Pitt Street South Over Station Development is located in the central business district of the City of Sydney Local Government Area (**LGA**), on the southeast corner of the Bathurst Street and Pitt Street intersection, as detailed in Figure 3 below.

The Sydney CBD is identified as the "Harbour CBD" within Sydney's overarching strategic plan, a metropolis of Three Cities. It is Sydney's largest commercial precinct, followed by Parramatta CBD and North Sydney CBD, and is part of the eastern economic corridor from Macquarie Park to Sydney Airport functioning as a fundamental component of the state's global economic corridor. The area is characterised by a consolidated commercial core and metropolitan centre (with key public open spaces), contributing to global financial, professional education, and innovation sectors the CBD is supported by surrounding high-amenity residential and mixed-use precincts.

Figure 1 Aerial Photograph of the Site



Source: Urbis

The reverse L-shaped site occupies one allotment of approximately 1,710m^2 and wraps around the heritage listed, Edinburgh Castle Hotel to the northwest. The site also adjoins the Metropolitan Fire Brigade building to the southeast and is on the opposite side of Pitt Street from the Former Sydney Water Head Office, as detailed below.

Figure 2 Surrounding Heritage Items



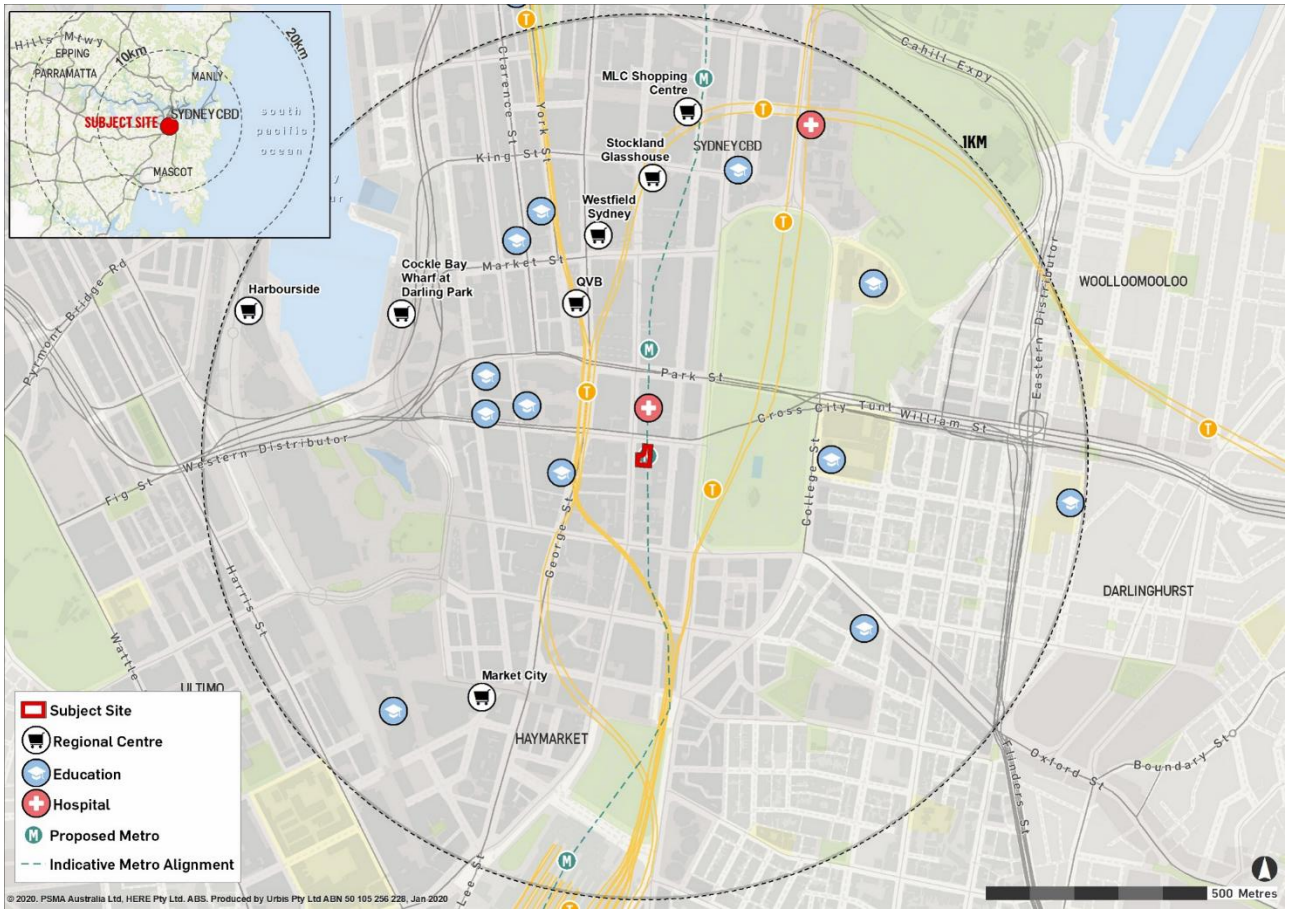
Source: Urbis

The surrounding context is characterised by a mix of mid to high-density commercial and residential developments, interspersed with lower scale heritage items, retail developments, and service providers such as the fire station. A range of residential buildings exist in the surrounding area, however, this is not typical in the broader context of the CBD which is predominantly comprised of commercial, office, and services buildings. The site is generally bound as follows:

- **North** – A high-density serviced apartment development, a medium-density commercial building, and a heritage listed, three-storey pub.
- **South** – High density residential apartments and high-density commercial buildings.
- **East** – High density residential apartment buildings and the heritage-listed, Sydney Fire station.
- **West** – A high density mixed-use building and a medium-density hotel.

The buildings/structures previously on the site have now been demolished for the Pitt Street metro station and construction that is currently underway on the site. The location of the site and the surrounding context is illustrated below.

Figure 3 Location map of the subject site



Source: Urbis

1.4. PROJECT OVERVIEW

This Section 4.55(1A) modification application seeks to facilitate the following:

- Modify the wording of Condition D3 that stipulates the current construction hours parameters, by extending the work hours beyond those already approved.
- Modify the wording of Condition B51(b)(iv)&(v) to include reference to the 'City of Sydney Council Construction Noise Code'. Conditions B51(b)(iv)&(v) identifies the NSW Interim Construction Noise Guideline (ICNG, 2009) when setting construction noise goals. Given the site is located within the City of Sydney CBD, it is proposed to modify conditions B51(iv)&(v) to allow typical City of Sydney construction noise requirements to be adopted for the proposed weekday and Saturday afternoon periods. However if, in certain scenarios, compliance with a numerical goal is unachievable under the City of Sydney Council Construction Noise Code, "reasonable and feasible" noise mitigation (as adopted in the ICNG) should be applied.
- Modify the architectural plans to include a number of incidental and minor design modifications to improve the building's functionality, internal amenity, and operation.

These modifications are outlined in further detail in Section 3 of this report.

On 19 September 2022, the applicant issued a letter to the Planning Secretary as formal notice of the proposed modifications in accordance with B5 of the development consent. Accordingly, the provisions of Condition B5 under SSD - 10376 have been met.

Furthermore, following the receipt of the abovementioned correspondence, we anticipate the Planning Secretary, will confirm that the design changes proposed within this application do not require review by the Sydney Metro Design Review Panel (**DRP**) as they would not have an impact on the Design Excellence of the approved development. As such, we consider the proposed changes can proceed without prior review by the DRP under the provisions of Condition B6.

2. STRATEGIC CONTEXT

The following section provides an assessment of the development, as proposed to be modified, against the following relevant strategic planning policies applicable to the site:

- *Greater Sydney Region Plan: A Metropolis of Three Cities*
- *Eastern City District Plan*
- *Sustainable Sydney 2030*
- *Draft Sustainable Sydney 2030-2050 Continuing the Vision*
- *The Central Sydney Planning Strategy*

Consistency with the relevant objectives contained within the abovementioned strategic policies is discussed in further detail below.

2.1. GREATER SYDNEY REGION PLAN: A METROPOLIS OF THREE CITIES

The *Greater Sydney Regional Plan – 'A metropolis of three cities*' (**A Metropolis of Three Cities**) is a bold vision for three, integrated and connected cities that will rebalance Greater Sydney – placing housing, jobs, infrastructure, and services within greater reach of more residents, no matter where they live. Setting a 40-year vision (to 2056) and establishing a 20-year plan to manage growth and change for Greater Sydney in the context of social, economic, and environmental matters.

The vision for the plan is built on these 30-minute cities within Greater Sydney, the Western Parkland City, Central River City, and Eastern Harbour City, providing improved access through different modes of transport to various job opportunities, services, entertainment, and cultural facilities across the metropolitan area. The Eastern Harbour City is well-established, well-serviced, and highly accessible by its radial rail network, with half a million jobs and the largest office market in the region.

The proposed Pitt Street South station OSD responds to the Harbour CBD's focus on innovation and global competitiveness to underpin its continued growth, backed up by the significant Sydney metro city and southwest project. In accordance with objectives 10 and objective 18, the proposal aligns explicitly with the regional plan by:

- *Providing a considerable amount of high quality, high density residential accommodation in a highly accessible CBD location. The Sydney CBD is an area supported by a concentration of infrastructure, facilities and services to accommodate residential and employment growth. The provision of high-quality residential dwellings in a convenient and accessible location affords future residents the opportunity to live in a high-amenity location.*
- *Maximises opportunities presented by the Pitt Street South station to improve the home and work connections and support the 30-minute city*

2.2. OUR GREATER SYDNEY 2056: EASTERN CITY DISTRICT PLAN

The *Eastern City District Plan* (**District Plan**) is a 20-year plan to manage growth in the context of economic, social and environmental matters to implement the objectives of the Greater Sydney Region Plan. The intent of the District Plan is to inform local strategic planning statements and local environmental plans, guiding the planning and support for growth and change across the district.

The District Plan contains strategic directions, planning priorities, and actions that seek to implement the objectives and strategies within the Region Plan at the district-level. The District Plan identifies the key centres, economic and employment locations, land release and urban renewal areas, and existing and future transport infrastructure to deliver growth aspirations.

The proposal (as amended) continues to align with the Regional Plan in the following ways:

- **Planning Priority E1**: The proposal directly benefits from the development of the Sydney Metro Pitt Street station by locating additional residential dwellings above a transport infrastructure. The development facilitated by the detailed SSD aligns with the place-based infrastructure service which encourages active transit methods such as walking and cycling and the Sydney Metro Pitt Street South station.

- **Planning Priority E5** –The OSD provides residential accommodation within a highly accessible CBD location, close to jobs, services, and public transport.
- **Planning Priority E10** – Delivers an integrated development within a 30-minute city.

Notwithstanding, the District Plan also highlights the tension between residential and commercial uses within the Sydney CBD and highlights the importance of retaining a strong commercial core in order to accommodate the future 45,000-80,000 future jobs forecast for the district. Policy settings are designed to support innovative and creative industries, align growth with infrastructure, and increase the supply of A-grade commercial office space. This highlights the general commercial nature of the CBD and illustrates the need to ensure that residential development does not encroach on the established commercial and business nature of the CBD.

2.3. FUTURE TRANSPORT STRATEGY 2056

The NSW Government's Future Transport Strategy 2056 sets the 40-year vision, directions, and outcomes framework for the transport system and customer mobility in NSW. It will guide transport investment over the longer term delivered through a series of services and infrastructure plans and other supporting plans.

The proposal (as amended) continues to align with the Regional Plan in the following ways:

- encourages the use of active transport options by providing bicycle parking spaces and end-of-trip facilities in lieu of car parking.
- provides residential accommodation above the future Sydney Metro Pitt Street station delivering economic benefits for Sydney by enhancing connectivity between businesses, dwellings, and people.
- provides an opportunity to boost the city's productivity by allowing residents to access jobs faster and more reliably.

2.4. SUSTAINABLE SYNDEY 2030

Sustainable Sydney 2030 is a long-term plan prepared by the City of Sydney to achieve a green, global and connected city. It contains ten strategic directions, of which the following are relevant:

- A globally competitive and innovative city.
- Integrated transport for a connected city.
- A city for walking and cycling.
- A lively and engaging city centre.
- Housing for a diverse community.

The proposal as amended will continue to facilitate the delivery of the Sydney metro infrastructure and additional housing in a highly accessible city centre, encouraging walking and cycling.

2.5. DRAFT SUSTAINABLE SYDNEY 2030—2050 CONTINUING THE VISION

The City of Sydney has released its new Strategic Vision 'Sustainable Sydney - 2030-2050 Continuing the Vision' (**Strategic Vision**), which was advertised from 12 April 2022 to 23 May 2022. It is also accompanied by a draft Community Strategy. The Strategic Vision guides the City's decision-making on strategic policies, their LSPS, planning proposals, and influences their submissions to State Government policies and SSDAs, and their assessments of DAs.

The proposal (as amended) aligns with the Draft Strategic Vision in the following ways:

- **Direction 5**: the proposal encourages the use of the many public transport options surrounding the subject site and enables people to walk, ride a bike or get public transport within the immediate and surrounding context.

2.6. THE CENTRAL SYDNEY PLANNING STRATEGY

The Central Sydney Planning Strategy (2016 – 2036) is the City of Sydney's 20-year strategy to manage the growth of Central Sydney. The strategy seeks to prioritise employment capacity, implement genuine mixed-use development controls, support additional density in some locations, and introduce additional requirements for ESD initiatives and affordable housing contributions.

The 10 key moves and their associated 'actions' were categorised in order of stages: short-term (1-2 years), medium-term (2017 to 2036), and ongoing. The proposal (as amended) satisfies the following key moves:

- The proposal prioritises employment growth and increases employment capacity by locating additional residential dwellings above a transport infrastructure within the Sydney CBD.
- Move towards a more sustainable city by encouraging walking and cycling and facilitating the use of public transport.

3. DESCRIPTION OF MODIFICATIONS

This section of the report describes the proposed modifications to the approved design and relevant conditions of consent. It includes a comparative analysis of the original development and the proposed modifications, justifying the lodgement of the application in accordance with section 4.55(1A) of the EP&A Act.

3.1. OVERVIEW

MOD 2 to the approved SSD-10376 in relation to the Pitt Street South Metro Over Station Development seeks approval to undertake the following changes:

- Modify the wording of Condition D3 that stipulates the current construction hours parameters, by extending the work hours beyond those already approved.
- Modify the wording of Condition B51(b)(iv)&(v) to include reference to the 'City of Sydney Council Construction Noise Code'.
- Modify the architectural plans to include a number of incidental and minor design modifications to improve the building's functionality, internal amenity, and operation.

Each of these modifications is outlined in further detail below.

3.1.1. Extension to Construction Hours

The proposed modifications to the approved development seek consent to modify condition D3 contained within 'Part D – During Construction' section of the development consent to extend the construction work hours. Furthermore, modifications to Condition B51 are proposed to include reference to the City of Sydney Construction Noise Code. The intent of the proposed modifications is to facilitate extended construction hours beyond those currently approved and outside of standard hours of work.

The specific wording of the proposed modifications to Conditions D3 and B51 are shown below by a **red** ~~strike through~~ the deleted text and **blue** text for new text.

Table 3 Proposed Modification to Conditions B11 & B52

#	Original Condition Wording	Proposed Condition Modifications
D3	(a) between 7am and 6pm, Mondays to Fridays inclusive; and (b) between 8am and 1pm, Saturdays.	(a) between 7am and 6pm, Mondays to Fridays inclusive; and (b) between 8am and ~~1pm~~ 5pm, Saturdays; and (c) between 7am and 8am, Saturdays for ▪ site set-up for concrete works ▪ internal fit-out works ▪ material deliveries from work zones ▪ tower crane and hoist operations. And; (d) between 6.00pm and 10pm, Mondays to Fridays for ▪ internal fit-out works ▪ material deliveries from work zones up until 7pm ▪ hoist operations.

#	Original Condition Wording	Proposed Condition Modifications
B51	B51. Prior to the issue of the relevant Construction Certificate, the Applicant shall: … (b) prepare and implement a Construction Noise and Vibration Management Sub-Plan (CNVMP) for the development, independent of the CNVMP approved with the CSSI station works. A copy of the CNVMP must be submitted to the Planning Secretary and Certifying Authority. The Sub-Plan must include: (iv) the construction noise, ground-borne noise and vibration objectives derived from an application of the EPA Interim Construction Noise Guideline (ICNG), as reflected in conditions of approval; (v) prediction and assessment of potential noise, ground-borne noise (as relevant) and vibration levels from the proposed construction methods expected at sensitive receiver premises against the objectives identified in the ICNG and conditions of approval;	B51. Prior to the issue of the relevant Construction Certificate, the Applicant shall: … (b) prepare and implement a Construction Noise and Vibration Management Sub-Plan (CNVMP) for the development, independent of the CNVMP approved with the CSSI station works. A copy of the CNVMP must be submitted to the Planning Secretary and Certifying Authority. The Sub-Plan must include: (iv) the construction noise, ground-borne noise and vibration objectives derived (as relevant) from an application of the EPA Interim Construction Noise Guideline (ICNG)~~,~~ and the City of Sydney Code of Practice: Construction Hours and Noise within the Central Business District, as reflected in conditions of approval; (v) prediction and assessment of potential noise, ground-borne noise (as relevant) and vibration levels from the proposed construction methods expected at sensitive receiver premises against the objectives identified in the ICNG, the City of Sydney Code of Practice: Construction Hours and Noise within the Central Business District and conditions of approval;

The rationale and reasoning for the proposed condition modifications are set out below.

3.1.1.1. Modification to Condition D3

Condition D3 establishes the hours within which construction can be undertaken on the site. The currently approved standard construction hours are 7am to 6pm, Monday to Friday and 8am to 1pm on Saturday.

The proposed extended work hours include:

- **Weekdays**: 6pm to 10pm for internal fit out works once the building façade is completed, material deliveries up until 7pm and and tower crane and hoise operations.
- **Saturday**:
  - 7am to 8am for site set-up, internal fit-out works, material deliveries and tower crane and hoist operations (once the building façade is complete).
  - 1pm to 5pm for general construction including formwork, scaffolding, concrete pours, concrete finishing, façade works, landscaping, and internal works.

The works to be undertaken outside the currently approved hours are generally low impact and largely pertain to construction activities to be undertaken once the building façade is completed. Specific construction works are proposed during the additional work hours as detailed below.

Table 4 Summary of Works Outside of Standard Hours

Stage	Description of works
Weekday evenings (10pm finish)	▪ Internal fit-out works once the building façade is complete. ▪ Material deliveries from work zones up until 7pm ▪ Hoist operations.
Saturday Morning (7am-8am)	▪ Site set-up for concrete works ▪ Internal fit-out works ▪ Material deliveries from work zones ▪ Tower crane and hoist operations.
Saturday Afternoon (1pm-5pm)	▪ General construction works ▪ Formwork installation and dismantling ▪ Scaffolding installation and dismantling ▪ Concrete pour and finishing work including the use of machinery such as a concrete helicopter and a concrete vibrator ▪ Installation of external building façade panels ▪ Landscaping ▪ Internal fit-out works ▪ Material deliveries from work zones ▪ Tower crane, mini crawler crane and hoist operations.

3.1.1.2. Modifications to Condition B51

Conditions B51(iv)&(v) identify the NSW Interim Construction Noise Guideline (ICNG, 2009) when setting construction noise goals. However, given the site is located within the City of Sydney CBD, it is proposed to modify conditions B51(iv)&(v) to include reference to the City of Sydney Council Construction Noise Code in addition to the NSW Interim Construction Noise Guideline.

The City of Sydney Council Construction Noise Codes were developed specifically for construction work in the Sydney CBD. As a result, that policy is more contextually specific and appropriate with regard to setting noise emission goals for the project. It is noted that the standard time periods, noise targets, and noise descriptors contained within the City of Sydney Council Construction Noise Codes are generally less restrictive than the ICNG given the context within the Sydney CBD.

Notwithstanding, the ICNG, 2009 remains useful for guidance, particularly with reference to its commentary on reasonable and feasible noise mitigation methods in the event that strict compliance with a numerical noise emission target is not feasible.

In circumstances where strict compliance cannot reasonably be achieved, the INCG, 2009 typically requires strong justification for work undertaken outside the recommended standard hours. Further, the proponent would be required to apply all feasible and reasonable work practices to meet the noise-affected level.

Where all feasible and reasonable practices have been applied and noise is more than 5dB(A) above the noise-affected level, the proponent should negotiate with the community.

To ensure the above guidelines can be enforced, the reference to ICNG, 2009 within Condition B51 has been retained.

3.1.1.3. Comparative analysis

A comparative analysis has been undertaken of the proposed modifications to the construction hours for the approved development in accordance with the relevant criteria listed in the DPIE *State Significant Development Guidelines – preparing an environmental impact statement*. The analysis has been undertaken with regard to the impact of the modifications on the overall project delivery timing and demonstrates that the modifications to the construction hours have a significant impact on the ability of the project to be delivered within a more timely manner than otherwise achievable.

The ability to complete internal finishes at the proposed hours extended hours between 6.00pm to 10.00pm, Monday to Friday will have a net reduction in the daytime construction activities by approximately 3 weeks over a twelve-month period. The majority of the extended hours to complete internal finishes will have the greatest impact on reducing time once the final façade has been installed. This is scheduled to occur in Late 2023 / early 2024.

The ability to work the full Saturday (7am to 5pm) will allow for concrete pours for the main core structure and several typical floor plate pours to occur on these days that were previously not included in the scheduled works. This includes 6 core wall pours and 12-floor plate pours that are large in volume of concrete (average 100m^3) and could not have been previously completed during the currently approved hours on a Saturday (8am to 1pm). The resultant benefit equates to an 18-day reduction in overall program duration to complete the project or 3 working weeks.

A cumulative reduction of approximately 6 weeks should be realised if the proposed extensions of allowable working hours are approved.

Refer to **Appendix A** for a copy of the updated Construction Framework Environmental Management Plan that outlines and reflects the proposed modifications to the construction hours and construction noise goals.

3.1.2. Design Modifications

This modification application also seeks to modify various aspects of the approved Architectural Plans. The majority of the proposed modifications are internal, will not be visible from the public realm, and will not impact the architectural design intent. The external changes are minor in nature. In accordance with Condition B6 of the consent, we anticipate the DPE will confirm that a review of the proposed design changes by the Sydney Metro Design Revie Panel is not required in this instance.

An overview of the proposed internal and external design modifications is summarised in the table below:

Table 5 Summary of proposed design changes

Level	Proposed Modifications
Internal Design Modifications	
Ground Level	The revised architectural plans allow for a scope delineation to align with the station area requirements.
Level 1	The revised architectural plan allows for a scope delineation to align with the station area requirements.
Level 2	The revised architectural plans allow for a scope delineation to align with the station area requirements.
Level 4	The revised architectural plans allow for: ▪ A scope delineation to align with the station area requirements; and ▪ The removal of a door as it is no longer required.
Level 7	Revised architectural plans to allow for the increased size of bedroom wardrobes to improve amenities.
Level 8	Revised architectural plans to allow for the increased size of bedroom wardrobes to improve amenities.

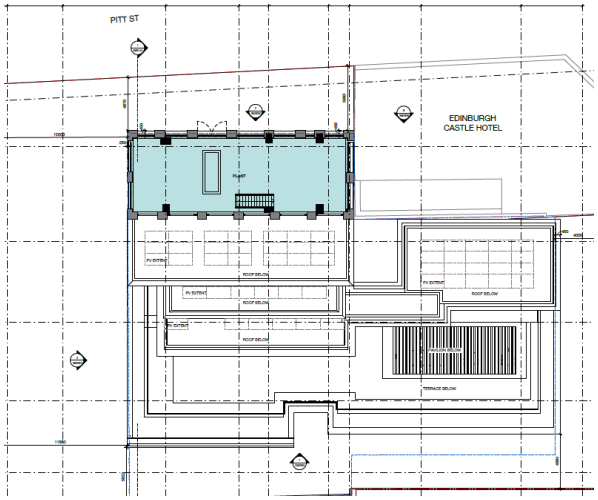
Level	Proposed Modifications
Levels 9 – 10	Revised architectural plans to allow for the increased size of bedroom wardrobes to improve amenities.
Levels 11 – 13	Revised architectural plans to allow for the increased size of bedroom wardrobes to improve amenities.
Levels 14 - 32	Revised architectural plans to allow for the increased size of bedroom wardrobes to improve amenities.
Levels 33 – 34	Revised architectural plans to allow for the increased size of bedroom wardrobes to improve amenities.
Level 35	Revised architectural plans to allow for: ▪ Increased size of the bedroom wardrobe to improve the amenity. ▪ An adjustment has been made to the door adjoining Lift 3 to ensure compliance with the Disability Discrimination Act.
Level 36	Revised architectural plans to allow for: ▪ Increased size of the bedroom wardrobe to improve the amenity. ▪ An adjustment has been made to enclose the fire stairs to ensure servicing requirements can be achieved. ▪ The plant room door is enclosed for NCC compliance requirements.
Level 37	Revised architectural plans to: ▪ Provide service enclosures. ▪ Adjust the slab penetrations for servicing requirements.
Level 38	Revised architectural plans to enclose the stairs to Level 37 for weatherproofing
External Design Modifications	
Level 38	Revised architectural plans to add a gate to the PV modules for façade access requirements and enclose the stairs providing access to Level 37 to provide for weatherproofing.
Level 39	Revised architectural plans allow for an adjustment to the concrete slab openings for mechanical servicing requirements.
West Elevation – Level 6	Revised architectural plans to add drenchers to the level 6 façade to ensure appropriate fire protection can be provided.

Refer to **Appendix B** for a copy of the Updated Architectural Plans outlining the proposed modifications.

Given a majority of the proposed modifications are internal, they are not anticipated to affect the quality of the architectural design and do not impact privacy or interface considerations between the site and adjacent properties. As such, further analysis of these proposed changes has not been provided.

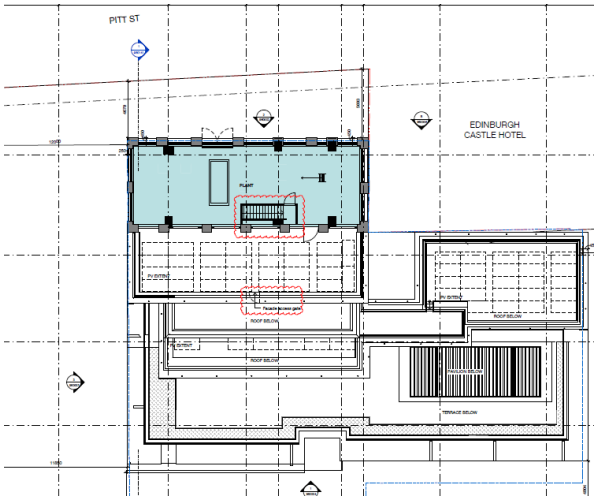
To demonstrate the negligible impact of the proposed external modifications on the architectural design of the building, comparative analyses have been prepared of the existing and proposed design features.

Figure 4 Comparative Analysis of Level 38 Mods



Existing

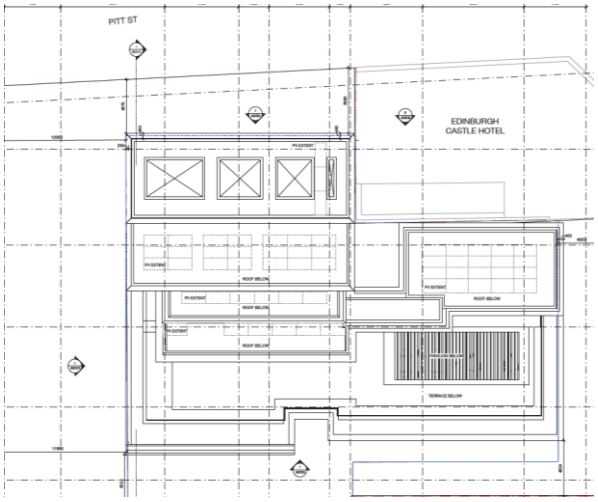
Source: Bates Smart



Proposed

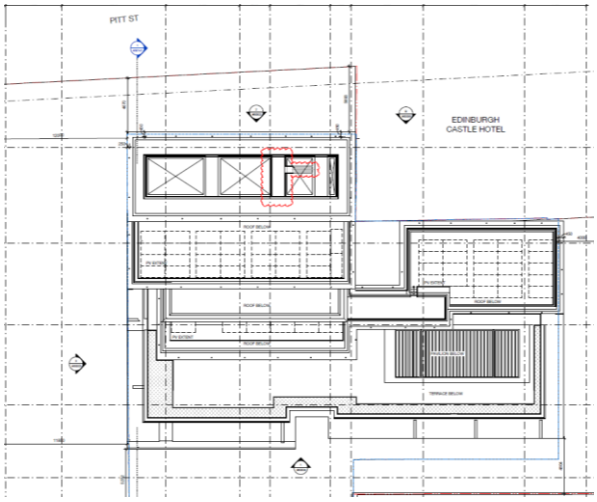
Source: Bates Smart

Figure 5 Comparative Analysis of Level 39 Mods



Existing

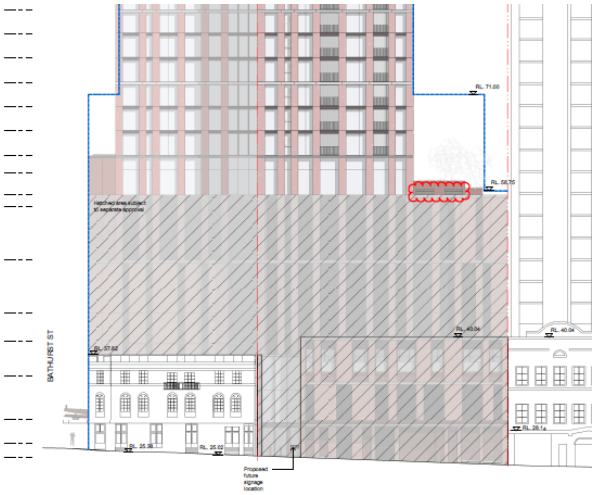
Source: Bates Smart



Proposed

Source: Bates Smart

Figure 6 Comparative Analysis of Level 6 Western Elevation Mods



Existing

Source: Bates Smart



Proposed

Source: Bates Smart

The minor modifications outlined above are unlikely to have any discernible impact on the design integrity of the building and are unlikely to be visible or noticeable from the public domain and surrounding buildings.

3.1.3. Administrative Conditions

As a result of the updated architectural plan detailing the proposed modifications outlined in Section 3.1.2 above, minor updates to the wording of Condition A2 within Schedule 2, Part A of the consolidated consent are required.

The specific wording of the proposed modification to Condition A2 is shown in Table 4 below by a **red** ~~strike through~~ the deleted text and **blue** text for new text.

Table 6 Amendment to Conditions of Consent

Condition	Amendment Proposed
A2	The development may only be carried out: (a) in compliance with the conditions of this consent; (b) in accordance with all written directions of the Planning Secretary; (c) in accordance with the EIS AND RtS; (d) in accordance with the Section 4.55(1A) Application to Amend SSD 10376 | 125 Bathurst Street Sydney, prepared by Urbis, dated 2 August 2021; (e) in accordance with the Section 4.55(1A) Application to Amend SSD-10376 | 125 Bathurst Street Sydney, prepared by Urbis, dated (23 September 2022); ~~(e)~~(f) in accordance with the management and mitigation measures; ~~(f)~~(g) in accordance with the approved plans in the table below (except where modified by the conditions of this consent): **Architectural drawings prepared by Bates Smart**

Drawing Number	Rev	Name on Plan	Date

Condition	Amendment Proposed			
	SMCSWSPS-BAT-OSS-AT-DWG-910041	~~H~~ J	SITE PLAN	~~08.12.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-930041	~~F~~ G	L00 GROUND LEVEL - GENERAL ARRANGEMENT PLAN	~~12.11.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-930141	~~F~~ G	L01 - GENERAL ARRANGEMENT PLAN	~~12.11.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-930241	~~G~~ H	L02 - GENERAL ARRANGEMENT PLAN	~~08.12.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-930441	~~G~~ H	L04 - GENERAL ARRANGEMENT PLAN	~~08.12.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-930741	~~I~~ ~~J~~ K	L07 - GENERAL ARRANGEMENT PLAN	~~08.12.20~~ ~~18.06.21~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-930841 SMCSWSPS-BAT-OSS-AT-DWG-931041	~~I~~ K E G	L08 - GENERAL ARRANGEMENT PLAN L09-10 - TYPICAL LOWRISE GENERAL ARRANGEMENT PLAN	~~08.12.20~~ 22.08.22 08.12.20 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-931141	~~E~~ ~~F~~ G	L11-13 - TYPICAL LOWRISE GENERAL ARRANGEMENT PLAN	~~08.12.20~~ ~~18.06.21~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-931441	~~H~~ J	L14-32 - HIGHRISE GENERAL ARRANGEMENT PLAN	~~08.12.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-933341	~~D~~ ~~E~~ F	L33-34 - HIGHRISE GENERAL ARRANGEMENT PLAN	~~08.12.20~~ ~~18.06.21~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-933541	~~H~~ J	L35 - GENERAL ARRANGEMENT PLAN	~~08.12.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-933641	~~H~~ J	L36 - GENERAL ARRANGEMENT PLAN	~~08.12.20~~ 22.08.22

Condition	Amendment Proposed			
	SMCSWSPS-BAT-OSS-AT-DWG-933741	~~F~~ H	L37 PLANT - GENERAL ARRANGEMENT PLAN	~~12.11.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-933841	~~F~~ H	L38 PLANT - GENERAL ARRANEGMENT PLAN	~~12.11.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-933941	~~F~~ H	L39 ROOF - GENERAL ARRANGEMENT PLAN	~~12.11.20~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-960002	~~H~~ ~~I~~ J	WEST ELEVATION - PITT STREET	~~26.11.20~~ ~~18.06.21~~ 22.08.22
	SMCSWSPS-BAT-OSS-AT-DWG-960004	~~J~~ ~~K~~ L	EAST ELEVATION	~~08.12.20~~ ~~18.06.21~~ 22.08.22

3.2. SUBSTANTIALLY THE SAME DEVELOPMENT

Based on the description of the proposed modifications in Section 3, it is considered the proposal is substantially the same development as that to which consent was originally granted. Section 4.55(1A)(b) requires the consent authority to be "*satisfied that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all)*".

The NSW Land and Environment Court has established several precedents as to what may be considered as being 'substantially the same development', and what should be factored into the consideration of this threshold test.

Principles drawn from the judgments include that:

- The term 'substantially' means 'essentially or materially having the same essence'.
- When a consent authority makes a determination as to whether a development is substantially the same it is a question of fact and degree and is not a question of law.
- The term 'modify' means to 'alter without radical transformation'.
- In comparing the approved development and the development as proposed to be modified it is necessary to undertake a qualitative and quantitative assessment of the developments in their proper context, and
- To undertake a numeric or quantitative assessment of the modification only in the absence of a qualitative assessment would be flawed.

These considerations apply to the modification of development through amendments to conditions that impact the nature of the proposal as well as design modifications. The consideration of the substantially the same development test should not only include the physical characteristics of the approved and modified schemes, but also the nature and magnitude of the impacts of the developments. In these respects, the modified scheme should be 'essentially or materially' the same as that originally approved.

An assessment of the qualitative and quantitative elements of the development approved and as proposed to be modified is provided below.

3.2.1. Quantitative Comparison

The proposal is substantially the same development, in a quantitative sense, as that originally approved because it:

- Does not propose to change the building height or building envelope.
- Does not alter the GFA calculation in any way nor does it alter the appearance of the development.
- Does not alter the parking count/provision. The same number of spaces (cars, motorbikes, bicycles) are provided in accordance with the relevant conditions of consent.
- Does not modify compliance with the applicable planning controls.

3.2.2. Qualitative Comparison

The proposal (as amended) is substantially the same development, in a qualitative sense, as that originally approved because it:

- Does not propose any change of land use, arrangement of land uses, or propose any changes which would have an unacceptable level of detrimental impact on surrounding land uses.
- Does not result in any perceivable visual impact(s) from the public domain, noting the building maintains the same architectural language as approved.
- Maintains the same access arrangement for the site.

In conclusion, the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted.

4. STATUTORY CONTEXT

This section of the report provides an overview of the key statutory requirements relevant to the site and the project as proposed to be modified. It identifies the key statutory matters which are addressed in detail within **Section 4**, including the power to grant consent, permissibility, other approvals, pre-conditions, and mandatory considerations.

4.1. STATUTORY REQUIREMENTS

Table 5 categorises and summarises the relevant requirements in accordance with the DPE *State Significant Development Guidelines*.

Table 7 Identification of Statutory Requirements for the Project

Statutory Relevance	**Action**	**Consistency with Approved Development**
Power to grant approval	In accordance with Schedule 1 of the *State Environmental Planning Policy* (*Planning Systems) 2021 (*previously called State Environmental Planning Policy (State and Regional Development) 2011*), a* development that has a CIV of more than $30 million associated with railway infrastructure is classified as SSD.	The proposed modification to the approval of SSD-10376 will remain consistent with this SEPP and is appropriately characterised as SSD.
Permissibility	The site is zoned B8 Metropolitan Centre in accordance with the *Sydney Local Environmental Plan 2012* (**SLEP 2012**). Residential accommodation and retail premises are permissible with consent in the B8 Zone.	The proposed modification remains permissible within the B8 zone.
Other Approvals	Under sections 4.41 and 4.42 of the EP&A Act, a number of other approvals are either integrated into the SSD approval process and consequently are not required to be separately obtained for the proposal or are required, but must be substantially consistent with any development consent for the proposal.	Given the minor nature of the proposed modifications, consultation with the relevant public authorities responsible for integrated and other approvals is not considered necessary in this particular circumstance. The proposal does not alter the assessment of the major project in light of any other approvals required.

As outlined above, the proposed modifications satisfy the relevant requirements in accordance with the DPE *State Significant Development Guidelines.*

4.2. MANDATORY CONSIDERATIONS

A detailed assessment of the mandatory matters for consideration was conducted by the proponent and Department as part of the original assessment of SSD 10376. The modification application does not result in any significant changes that would alter the mandatory matters for consideration under the EP&A Act and conclusions made as part of the original assessment.

Notwithstanding, Section 4.55(1A) of the EP&A Act outlines the matters that a consent authority must take into consideration when determining an application that seeks to modify an SSD application. The applicable matters for consideration under section 4.55(1A) of the EP&A Act have been considered in the table below.

Table 8 Assessment against section 4.55(1A) of the EP&A Act

Section 4.55 (1A) Evaluation	**Consideration**
a) that the proposed modification is of minimal environmental impact, and	Given the proposed modifications seek approval to increase the construction hours, an operational component of the approval that can produce adverse acoustic and amenity impacts, an Acoustic Report has been prepared to quantify and assess the environmental impact. **Section 6** and **Appendix C** of this report provide an assessment of the impacts associated with the modification application and confirm that the proposed modification is of minimal environmental impact. The proposed design changes are minor in nature and will not result in any impacts on neighbouring properties or the overall design intent of the building.
b) that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all), and	As demonstrated in **Section 3.2** of this report, the modification application is substantially the same development as the development for which the consent was originally granted. An assessment of the qualitative and quantitative elements of the proposed modifications concludes that the physical characteristics of the approved and modified schemes, as well as the nature and magnitude of the impacts of the development, are 'essentially or materially' the same as that originally approved.
c) the application has been notified in accordance with the regulations, and	In accordance with Section 105(4) of the EP&A Regulations, the notification of an SSD modification application involving minimal environmental impact is not required. However, given changes are sought to the approved standard construction work hours, CPB has undertaken pre-lodgement consultation with the surrounding community to seek feedback from community members. Refer to **Appendix D** for a copy of the Community Consultation Plan – Extended Work Hours. Given the proposed design modifications are so minor and will have no discernible change from the approved design when viewed from the public domain, they have not been included in the pre-lodgement community consultation. Formal public notification is subject to the exercise of discretion by the Department, and if the modification is to be notified we consider this

Section 4.55 (1A) Evaluation	Consideration
	could be adequately achieved through the application being made publicly available on the Department's website in accordance with Section 106(2) of the EP&A Regulations.
d) any submission made concerning the proposed modification has been considered.	A total of 23 feedback responses were received during the two-week pre-lodgement consultation period (Friday 15 July to Friday 29 July 2022) for the proposed extended construction work hours. Following the initial consultation period and additional face-to-face sessions with stakeholders who provided a 'do not support' response, a total of 11 stakeholders (48%) supported the weeknight and Saturday proposed extended hours, with 6 stakeholders (26%) not supporting the proposed extended weeknight and Saturday hours. The remaining 6 stakeholders' responses (26%) provided revised extended work hours or were either solely in support of the weeknight or Saturday extended hours. Following initial feedback provided by the community, the proposal was modified to include revised work activities that would take place during the proposed extended hours. Refer to Section 5 for further detail on the community consultation and **Appendix D** for a copy of the Community Consultation Plan – Extended Work Hours. If the Modification application is formally notified post lodgement, DPE will need to consider any submissions received in their assessment of the application.

As demonstrated in the table above, the proposed modification application does not result in any significant changes that would alter the mandatory matters for consideration under the EP&A Act under Section 4.55.

Further to the above, Section 4.55(3) of the EPA Act requires the consent authority to *'take into consideration such of the matters referred to in section 4.15 (1) as are of relevance to the development of the subject of the application*". As such, the table below outlines the relevant mandatory considerations for consideration in the original SSD under section 4.15(1).

Table 9: Section 4.15 Evaluation

Section 4.15 (1) Evaluation	Consideration
(a)(i) Relevant environmental planning instruments	The modified proposal is consistent with the relevant legislation and the Sydney Local Environmental Plan 2012.
(a)(ii) Relevant draft environmental planning instruments	No Draft EPIs apply to the land that triggers the assessment of the proposal.
(a)(iii) Development control plans	Development Control Plans do not apply to SSDs.
(a)(iv) any planning agreement	Not applicable.

Section 4.15 (1) Evaluation	Consideration
(a)(iv) the regulations	The proposal addresses the relevant requirements of the EP&A Regulations.
(b) the likely impacts of that development including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	The likely impacts of the modifications are acceptable and have been appropriately addressed as demonstrated in **Section 6** of this report.
c) the suitability of the site for the development	The site remains suitable for development as assessed in the original application.
(d) any submissions	Community consultation has been undertaken in support of the proposed extension to the construction hours. The feedback and responses have been considered and incorporated into the proposal where possible. If further public notification is undertaken for the proposed modifications any submission received will be addressed and responded to.
(e) the public interest	The modified proposal continues to be in the public interest as the changes are minor and will enable the faster delivery of the Pitt Street Over Station Development.

As demonstrated above, the proposed modification application does not result in any significant changes that would alter the mandatory matters for consideration under the EP&A Act under Section 4.15.

5. ENGAGEMENT

Despite the demonstrated minimal environmental impact of the proposed modifications, pre-lodgement community and stakeholder engagement has been undertaken during the preparation of the Modification Report.

Community consultation was undertaken between Friday 15 July to Friday 29 July 2022. A consultation request for feedback was issued to site-adjacent residential and commercial properties to assess the community sentiment toward the proposed extended construction hours. A further meeting invitation was extended to key stakeholders to discuss details further and address any questions/inquiries. The key stakeholders consulted include:

- *City of Sydney Council*
- *Transport for NSW – Customer Journey Planning*
- *Fire and Rescue NSW, 211-217 Castlereagh Street*
- *Princeton Apartments, 304-308 Pitt Street*
- *EuroTower Apartments, 137-139 Bathurst Street including street level retailers*
- *Edinburgh Castle Hotel, 294 Pitt Street*
- *102-104 Bathurst Street including street level retailers*
- *Greenland Tower, 115 Bathurst Street*
- *Kimpton Margot Hotel Sydney, 339 Pitt Street*
- *Meriton Suites, 329 Pitt Street*
- *Hutchinsons Builders (Castle Residence), 112-118 Bathurst Street*
- *Subscribed email addresses on Pitt Street South site email distribution list (2112 subscribed email addresses*)

The following figure illustrates the properties that were consulted as outlined in yellow.

Figure 7 Properties that were consulted on the proposed extended construction hours.



Source: CPB Contractors

During the two-week consultation period, a total of 23 responses were received. The nature of the responses included:

- Eleven (**11**) responses supporting weeknight and Saturday proposed extended construction hours;
- Six (**6**) responses were not in support of the weeknight and Saturday proposed extended hours; and
- Six (**6**) responses suggested revised extended work hours or were either solely in support of the weeknight or Saturday extended hours.

Following a review of the responses provided by the community, the work activities intended to take place during the proposed extended hours were revised to address the concerns raised. The revised activities included the following:

- Façade installation will no longer take place during weeknights, Monday to Friday from 6pm to 10pm.
- There will be no use of the electric tower crane and mini crawler crane during weeknights, Monday to Friday from 6pm to 10pm.
- Concrete finishing works **will not take place during weeknights, Monday to Friday from 6pm to 10pm**. However, if a concrete pour runs past the standard work hours, the City of Sydney Council and surrounding properties will be notified immediately.

Refer to **Appendix D** for a full copy of the Community Consultation Plan – Extended Work Hours.

6. ASSESSMENT OF IMPACTS

This section provides a comprehensive summary of the updated technical studies undertaken to assess the potential impacts of the proposed modifications and the updated mitigation, minimisation, and management measures recommended to avoid unacceptable impacts.

The detailed technical reports and plans prepared by specialists and appended to the Modification Report are individually referenced within the following sections.

6.1. STANDARD ASSESSMENT IMPACTS

This section of the report addresses the matters which require a standard assessment. It outlines the findings of the assessment and the key mitigation measures used to ensure compliance with the relevant standards or performance measures.

6.1.1. Noise and Vibration

An Assessment of Proposed Work Outside of Standard Working Hours (**Acoustic Report**) has been prepared by Renzo Tonin in support of this modification application. The Acoustic Report has been undertaken with reference to the originally completed Construction Noise and Vibration Management Plan (**CNVMP**) that has been prepared and implemented for the works to date. The updated Acoustic Report only addresses works that were not already addressed and approved in the Original CNVMP, being those proposed outside the standard hours.

This report has been prepared in conjunction with the Community Consultation Plan (**CCP**), Construction Framework Environmental Management Plan (**CMP**), and Acoustic Report, and is based on the activities, equipment, and hand tools that are nominated within Section 3.1.1.1 of this Modification report and Section 6.1 of the Acoustic Report.

The report identifies potential noise impacts from construction activities proposed by the site contractor. The objective of the Acoustic Report is to investigate whether construction works may be undertaken during the after-hours period without having a negative acoustic impact and to protect the amenity of the sensitive receivers surrounding the site.

The report concludes that based on the activities proposed during the extended hours period, construction noise emissions during this period can generally comply with the construction noise emission requirements of the City of Sydney Council and the EPA's Interim Construction Noise Guidelines. Where exceedances do occur, noise mitigation and management measures have been presented to aid in providing additional noise reduction benefits.

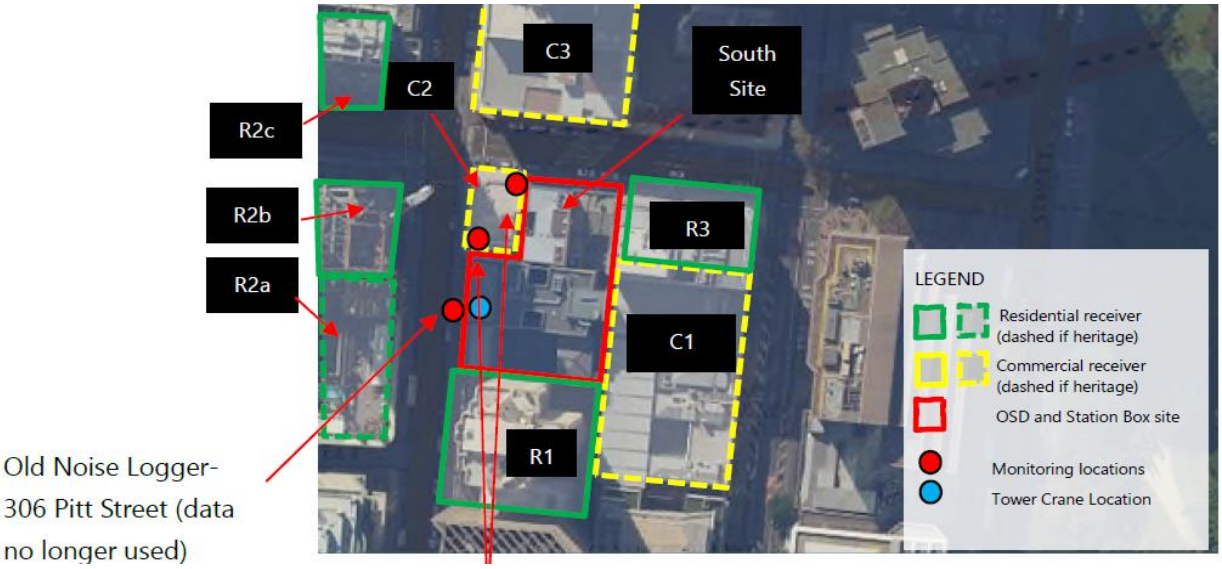
The noise sensitive residential and hotel developments considered and assessed as part of the Acoustic Report include the following properties:

- Receiver R1: Residential (Princeton Apartments) at 304-308 Pitt Street.
- Receiver R2a: Hotel (Princeton Apartments) at 339 Pitt Street.
- Receiver R2b: Residential (Greenland Tower) at 115 Bathurst Street.
- Receiver R2c: Hotel (Meriton Suites) at 329 Pitt Street.
- Receiver R3: Residential at 133-139 Bathurst Street.

The surrounding noise receivers, including commercial receivers, are indicated in the figure below and within the Acoustic Report.

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Figure 8 Surrounding noise receivers



Source: Renzo Tonin

The applicable Noise Emission Assessment (**NEA**) for the proposed 6pm-10pm works, together with the predicted noise levels are shown below.

Figure 9 Noise Emission Assessment – Weekdays (6pm-10pm)

Noise Criteria	*Time*	*Criteria Noise Levels (dB(A)$L_{eq(15min)}$)*					
		Residential			Commercial Receivers		
		R1	*R2*	*R3*	*C1*	*C2*	*C3*
Noise Management Level	*City of Sydney*	*64*	*64*	*64*	*N/A*	*N/A*	*N/A*
	EPA ICNG (for guidance purposes only)	*66*	*66*	*66*	*70*	*70*	*70*
Work Item	**Location / Plant Description**	**Predicted Construction Noise Levels - External (dB(A)$L_{eq(15min)}$)**					
		Residential			**Commercial Receivers**		
		R1	***R2***	***R3***	***C1***	***C2***	***C3***
Internal Works –(Fit out – after façade installation)	Crane – as marked in App F.	63	55	60	60	65	55
	Hand tools – Across Floor Plate	<60	<50	<55	<55	<55	<45
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*70*	*61*	66	*66*	*72*	*61*

*Maximum noise levels occur when vibrator used in close proximity to slab edge. Noise level typically 5dB(A) lower when vibrator used away from slab edge.

**The louder cumulative noise level occurs when mini crawler crane located on southern or eastern façade (immediately adjacent R1 and R3 apartments). When working on the northern and western facades, noise level at R1 and R3 are lower (shown as ** levels)

Source: Renzo Tonin

As demonstrated above, the internal works and crane use are predicted to comply with both EPA and the City of Sydney Evening time construction noise guidelines. Exceedance is only anticipated in the event that hoist use is required in the evening time period and this will be avoided when feasible. Furthermore, a number of mitigation measures are proposed to ensure reasonable noise control solutions to reduce noise

impacts on sensitive receivers can be achieved. Refer to Section 6.1.1.1 of this report and the Acoustic Report (Appendix H) for the proposed mitigation measures.

The applicable Noise Emission Assessment (**NEA**) for the proposed Saturday 7am – 8am and 1pm – 5pm works, together with the predicted noise levels are shown below.

Figure 10 Noise Emission Assessment – Saturday (7am – 8am and 1pm – 5pm)

Noise Criteria	*Time*	*Criteria Noise Levels (dB(A)$L_{eq(15min)}$)*					
		*Residential**			Commercial Receivers*		
		R1	*R2*	*R3*	*C1*	*C2*	*C3*
Noise Management Leve)	*City of Sydney – 7am-8am*	*69*	*69*	*69*	*N/A*	*N/A*	*N/A*
	City of Sydney – 1pm-5pm	*74*	*74*	*74*	*N/A*	*N/A*	*N/A*
	EPA ICNG (For guidance purposes)	*69*	*69*	*69*	*70*	*70*	*70*
Work Item	**Location / Plant Description**	**Predicted Construction Noise Levels - External (dB(A)$L_{eq(15min)}$)**					
		Residential*			**Commercial Receivers***		
		R1	*R2*	*R3*	*C1*	*C2*	*C3*
Erection of Structure - Concrete Pours	Tower Crane – as marked in App F.	62	58	60	60	65	57
	Vibrator – Across Floor Plate	60-80	60-75	60-80	60-80	60-80	60-70
	Alimak – as marked in App F.	70	60	65	65	72	60
	Concrete truck - as marked in App F.	65	65	70	70	75	72
	Cumulative	*62-80**	*60-75**	*60-80**	*60-80**	*65-81**	*60-74**
Erection of Structure - Formworking, Blockwork, Scaffolding	Tower Crane – as marked in App F.	62	58	60	60	65	57
	Hand tools – Across Floor Plate	55-78	50-66	55-75	55-75	55-75	50-66
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*62-79*	*58-67*	*60-75*	*60-75*	*65-75*	*57-66*
External Works – (Façade, External Plant)	Tower Crane – as marked in App F.	62	58	60	60	65	57
	Hand tools – Across Floor Plate	55-78	50-66	50-75	55-75	55-75	55-66
	Alimak – as marked in App F.	70	60	65	65	72	60
	Mini Crawler Crane	55-75	50-63	50-72	55-72	55-72	55-63
	Cumulative	*62-79*	*58-67*	*60-76*	*60-76*	*65-76*	*57-68*
		*62-66***		*60-66***			
Internal Works –(Fit out – after façade installation)	Tower Crane – as marked in App F.	62	58	60	60	65	57
	Hand tools – Across Floor Plate	<60	<50	<55	<55	<55	<45
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*71*	*63*	68	*68*	*73*	*63*

*Maximum noise levels occur when vibrator used in close proximity to slab edge. Noise level typically 5dB(A) lower when vibrator used away from slab edge.

**The louder cumulative noise level occurs when mini crawler crane located on southern or eastern façade (immediately adjacent R1 and R3 apartments). When working on the northern and western facades, noise level at R1 and R3 are lower (shown as ** levels)

Source: Renzo Tonin

As demonstrated above, noise from activities such as the use of hand tools, concrete vibrators, and the use of a crawler crane may intermittently exceed ICNG Noise Management Levels if the work is undertaken close to residential property boundaries.

Furthermore, the noise emissions are typically compliant with the City of Sydney noise guidelines for Saturday (1pm-5pm) periods, with the exception being during the use of a concrete vibrator, mini crawler crane, or powered hand tools on the southern and eastern edge of the floor plate directly adjacent to an apartment in R1 and R3. Apartments that are 1-2 storeys above/below the work zone, or when the work area

is located away from the east/south slab edge will have lower noise levels and achieve compliance with City of Sydney guidelines.

Given the potential intermittent exceedance of the EPA outside of Standard Hours criteria, noise management should be inclusive of consultation with neighbouring properties, and reasonable and feasible noise mitigation is required.

6.1.1.1. Mitigation measures

It is acknowledged that in order for the site to successfully work during extended hours the structured work methodology and recommendations in the Acoustic Report need to be implemented to ensure on site workers understand the conditions (such as keeping all external facade openings closed) which allow for works to be conducted during the extended hours periods. The calculated levels assume that such a noise management plan is implemented.

Approximately 35 noise mitigation measures, which need to be followed, are outlined clearly in Sections 7 and 8 of the Acoustic Report. A summary of the key site-specific noise management practices is outlined below:

Neighbour Notification:

- Developments physically adjoining the site should be notified of the works proposed outside of standard construction hours. The key items should include:
  - Dates of proposed concrete pour(s) (particularly on Saturday afternoon).
  - Dates when slab finishing work is expected to extend after 6pm.
  - Advising that works in evening periods will be constrained to internal areas behind façade or slab finishing work on an “as required” basis.

Construction pours/slab finishing work:

- Slab pours should be sized so that the pour and slab finishing can typically be accommodated within standard work hours when feasible.
- Neighbour notification (as discussed above) is recommended to advise on both the date of the works and the potential completion time of slab finishing works up to 10pm.

Internal Works

- Work in the 6pm-10pm weekday period is only to be conducted on levels where the façade is complete (such that the façade provides noise mitigation to the nearby residences).
- As much as practicable, the use of the crane and internal lifts (once operational) as opposed to the hoist is recommended.
- No use of hoist or crane after 10pm.
- Workers are to be briefed not to take breaks in external areas during evening periods.

Saturday works

- The 7am-8am period on Saturday morning should be used for site set up and work in internal areas. Concreting work and external work using powered tools should not be conducted prior to 8am on a Saturday unless agreed with the residences at R1 and R3.
- In the event of a sustained complaint (more than two complaints, not vexatious and related to the works) - a respite period (or other form of respite such as meal voucher) can be negotiated with the adjoining residents (Receivers R1, R3 for South Site).
- The positioning of a concrete pump truck should be positioned as far from buildings R1 and R3 as possible if used during Saturday afternoon works.
- It is acknowledged that the use of concrete vibrators and powered hand fools (facade work and form working) in very close proximity to residential properties boundaries to R1 and R3 have a risk in creating noise levels exceeding 69-74dB(A) management levels. There are no viable alternative equipment selections.

It is further acknowledged that a programme of Complaints Management and Community Liaison will be established in accordance with Section 9 of the Acoustic Report and will need to be established and maintained throughout the duration of the project.

6.1.2. Construction Management

Construction will be managed in accordance with the updated Construction Framework Environmental Management Plan (**CMP**) prepared by CPB (refer to **Appendix A**).

Specifically the CMP has been updated to include the proposed extended hours of operations as well as the recommendations and findings from the Acoustic Report that was undertaken to assess proposed works outside the standard hours.

The sections of the CMP that have been udpated are highlighted in Appendix A.

6.1.3. Design Excellence and Integrity

In accordance with Section 4.55(1A)(a) of the EP&A Act, the proposed design modifications are of minimal environmental impact noting the following:

- The proposed changes are minor in nature and will have no discernible change from the approved design when viewed from the public domain.
- The modification provides an improved level of functionality, servicing capability, and internal amenity to the design of Pitt Street South Over Station Development as well as ensuring compliance with the appropriate Australian Standards.
- The changes will not result in any additional environmental impacts in terms of overshadowing, view loss, privacy or bulk, and scale impacts.
- The Architectural Design Statement prepared by Bates Smart contained in Appendix E confirms that the proposed modifications are consistent with the design intent developed by Bates Smart for the original SSD-10376 and therefore have a negligible environmental impact.

Conditions B1 – B7 were placed on the development consent to SSD-10376 to ensure Design Excellence and Integrity are achieved throughout the delivery of the project. These condition requirements and assessments against these are outlined below.

Table 10 Assessment Against Relevant Conditions of Consent.

Condition of Consent	Compliance
Condition B1 – B4	Pursuant to Condition B1 – B4, the architectural design team comprising Bates Smart has had direct involvement in the proposed design changes and has verified the submitted design documentation.
Condition B5	In accordance with Condition B5, on 19 September 2022, a letter was issued to the Planning Secretary to provide formal notification of the proposal to modify the approved architectural drawings.
Condition B6	In accordance with Condition B6, a letter has been issued to the Planning Secretary seeking confirmation that the design changes proposed within this application do not require review by the Sydney Metro Design Review Panel (**DRP**) as they would not have an impact on the Design Excellence of the approved development.
Condition B7	We anticipate the Planning Secretary will confirm that further consideration by the DRP is not required.

As demonstrated above, the proposed development satisfies the relevant conditions of consent.

6.2. MINIMAL ENVIRONMENTAL IMPACT

Section 4.55(1A) of the EP&A Act requires that an application to modify a consent under this part, demonstrate that it results in minimal environmental impact. As detailed in **Sections 3, 4, and 6** of this report, the proposal has been accompanied by justification and various consultant reports each attached in the appendix of this report that consider the impacts of the proposed modification.

It is concluded that from the above and accompanying technical reports, the proposed modification is considered to give rise to only a minimal environmental impact in accordance with 4.55(1A) of the EP&A Act.

7. JUSTIFICATION OF MODIFIED PROJECT

This section of the report provides a comprehensive evaluation of the modified proposal having regard to its economic, environmental, and social impacts, including the principles of ecologically sustainable development.

It assesses the potential benefits and impacts of the proposed modifications, considering the interaction between the findings in the detailed assessments and the compliance of the proposal with the relevant controls and policies.

The modification consists of proposed additional hours to complete various construction activities as the building progresses towards completion. It is in the public interest for the building, as a critical piece of public transport infrastructure and commercial premises and residential accommodation to be completed/operational as soon as possible. The cumulative reduction of approximately 6 weeks should be realised if the proposed extensions of allowable working hours are approved.

Furthermore, the flexibility to schedule more deliveries to occur outside of peak traffic and pedestrian periods will result in a reduction in peak hour deliveries.

On balance, the extended hours for select construction activities will lead to a faster construction program, resulting in less long-term community impact. It has been demonstrated through technical analysis (see above) that the works can generally occur in compliance with the relevant noise and vibration criteria. In select circumstances where strict compliance can not be achieved, a number of mitigation measures can be employed to ensure reasonable noise control solutions to reduce noise impacts on sensitive receivers.

The proponent has also demonstrated a commitment to ongoing stakeholder engagement, with the construction program progressing without major issues to date. It is considered that the proposed works have considered and responded to the communities feedback and will retain nearby residents' right to reasonable peace, comfort, and privacy.

7.1. COMMUNITY VIEWS

Following a review of the responses provided during community consultation between Friday 15 July to Friday 29 July 2022, the work activities intended to take place during the proposed extended hours were revised to address the concerns raised. The revised activities included the following:

- Façade installation will no longer take place during weeknights, Monday to Friday from 6pm to 10pm.
- There will be no use of the electric tower crane and mini crawler crane during weeknights, Monday to Friday from 6pm to 10pm.
- Concrete finishing works **will not take place during weeknights**, Monday to Friday from 6pm to 10pm. However, if a concrete pour runs past the standard work hours, the City of Sydney Council and surrounding properties will be notified immediately.

It is acknowledged that submissions arising from any public notification of this application will need to be assessed by DPE.

7.2. LIKELY IMPACTS OF THE MODIFIED PROPOSAL

The modified proposal has been assessed considering the potential environmental, economic, and social impacts as outlined below:

- The proposed modifications will have a negligible impact on the natural environment of the site compared to the assessment completed for SSD 10376.
- The proposed modifications will result in minimal impact on the built environment as outlined in Sections 6 and 7 of this report.
- The proposed modifications will not result in any social impacts compared to that assessment completed for SSD 10376, notably, there is no change in building height, FSR, or use proposed.
- The proposed modifications result in the efficient development of the site in general accordance with the approved development under SSD 10376.

The potential acoustic impacts can be mitigated, minimised, or managed through the measures summarised in **Section 6** of this Modification Report and discussed in detail in **Appendix C**.

7.3. SUITABILITY OF THE SITE

The proposed modifications do not change the suitability of the approved development for the site. The site remains suitable for the approved use, inclusive of the modifications sought by this application.

7.4. PUBLIC INTEREST

The development as modified is considered in the public interest for the following reasons:

- The proposed modifications are consistent with relevant State and local strategic plans and comply with the relevant State and local planning controls.
- No adverse environmental, social, or economic impacts will result from the proposal.
- The proposal will provide a cumulative reduction of approximately 6 weeks should the proposed extensions of allowable working hours be approved.
- The issues identified during the stakeholder engagement have been addressed by reducing the scope of activities that will be undertaken during the extended construction hours. Further, a number of noise and vibration mitigation measures have been recommended by Renzo Tonin to provide reasonable and feasible noise control solutions to reduce noise impacts.

Having considered all relevant matters, we conclude the development as modified is appropriate for the site, and approval is recommended.

DISCLAIMER

This report is dated and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of CBP Contractors **(Instructing Party)** for the purpose of Modification Report **(Purpose)** and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A UPDATED CONSTRUCTION FRAMEWORK ENVIRONMENTAL MANAGEMENT PLAN

Construction Framework Environmental Management Plan

Pitt Street South Over Station Development

Project number:	N01072
Document number:	SMCSWSPS-CPB-OSS-EM-PLN-000001
Revision date:	19/09/2022
Revision:	1

Document Approval

Rev.	Date	Prepared by	Reviewed by	Approved by	Remarks
0	3/11/2021	E Eveleigh	A Zvirzdinas	B Sugar	Approved for Construction
1	19/09/2022	E Eveleigh		B Sugar	Issue to DPE
Signature:					

Details of Revision Amendments

Document Control

The Project Manager is responsible for ensuring that this plan is reviewed and approved. The Project Environmental Manager is responsible for updating this plan to reflect changes to environmental, legal and other requirements, and:

- at each key stage of the works;
- in response to future development consents;
- in response to major changes in site conditions or work methods; and
- in support of license variations as necessary.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed / implemented.

Revision Details

Revision	Details
0	Approved for Construction – DPIE accepted review of Rev E obtained 2/11/2021
1	Issue to DPE to support MOD 2

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Glossary of terms

Abbreviation/ Term	Definition
Adverse weather	Weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter).
Ambient noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
Assessment period	The period in a day over which assessments are made.
Assessment point	A point at which noise measurements are taken or estimated. A point at which noise measurements are taken or estimated.
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation, when extraneous noise is removed. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the L90 noise level (see below).
CAP	Construction Area Plan - The document prepared during the construction planning for each major work area to inform the broader project team, including the relevant functional support teams, of the scope and work overview. It outlines the execution and delivery stages and includes general construction method, risk assessment, constructability reviews, logistics and discipline interfaces.
CPB	CPB Contractors Pty Ltd
CFEMP	Construction Framework Environmental Management Plan
CoA	Condition of Approval
Decibel [dB]	The units that sound is measured in. The following are examples of the decibel readings of everyday sounds: 0dB The faintest sound we can hear 30dB A quiet library or in a quiet location in the country 45dB Typical office space. Ambience in the city at night 60dB CBD mall at lunch time 70dB The sound of a car passing on the street 80dB Loud music played at home 90dB The sound of a truck passing on the street 100dB The sound of a rock band 115dB Limit of sound permitted in industry 120dB Deafening
dB(A)	A-weighted decibels. The A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the “A” filter. A sound level measured with this filter switched on is denoted as dB(A). Practically all noise is measured using the A filter.
dB(C)	C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies.
DPIE	NSW Department of Planning Industry & Environment (formerly Department of Planning and Environment)

Abbreviation/ Term	Definition
ECM	Environmental Control Map
Environmental aspect or hazard	Defined by AS/NZS ISO 14001 as an element of an organisation's activities, products or services that can interact with the environment. The term 'hazard' is used throughout this CEMP and has the same meaning as aspect for the purpose of compliance with ISO 14001 requirement.
Environmental impact	Defined by AS/NZS ISO 14001 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
Environmental incident	An unexpected event that has, or has the potential to, cause harm to the environment and requires some action to minimise the impact or restore the environment
Environmental objective	Defined by AS/NZS ISO 14001 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve.
Environmental policy	Statement by an organisation of its intention and principles for environmental performance.
Environmental risk register	Lists relevant environmental aspects and impacts associated with the project.
Environmental target	Defined by AS/NZS ISO 14001 as a detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.
EIS	Environmental Impact Statement
EMS	Environmental Management System
EP&A Act	Environmental Planning and Assessment Act 1979
Frequency	Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.
Hold point	Activities which are not to proceed without objective review and approval by the nominated authority.
IC	Independent Certifier
Impulsive noise	Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise.
Intermittent noise	The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more.
KPI	Key Performance Indicators
L_{Max}	The maximum sound pressure level measured over a given period.
L_{Min}	The minimum sound pressure level measured over a given period.
L_1	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L_{10}	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L_{90}	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L90 noise level expressed in units of dB(A).

Abbreviation/ Term	Definition
L_{eq}	The “equivalent noise level” is the summation of noise events and integrated over a selected period of time.
Non-compliance	Failure to comply with the requirements of the Project approval or any applicable licence, permit or legal requirements
Non-conformance	Failure to conform to the requirements of Project system documentation including this CEMP or supporting documentation
NSW	New South Wales
NTU	Nephelometric Turbidity Unity
OOHW	Out of Hours Works
OSD	Over Station Development
Project / PSISD	Pitt Street Integrated Station Development
Reflection	Sound wave changed in direction of propagation due to a solid object obscuring its path.
SDS	Safety Data Sheet
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
SEP	Site Environmental Plan
SM	Sydney Metro
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy through its conversion into thermal energy.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound pressure level	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone.
Sound power level	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power.
Tonal noise	Containing a prominent frequency and characterised by a definite pitch.
TSS	Total Suspended Solids
Work Pack (WP)	A Work Pack is a collective set of documents that provides an integrated and planned method of delivering elements of the work with consideration to all necessary factors including safety, environmental, quality, community, legislative, production and cost.

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1. Structure of this Plan

This Construction Framework Environmental Management Plan (CFEMP) outlines how we will achieve acceptable environmental outcomes on the Pitt Street Integrated Station Development – South Over Station Development by the application of the CPB Contractors Environmental Management System (EMS), to protect and prevent damage to property and the Environment.

In addition to the Project Management Plan, other Project Plans that interface with the CFEMP include:

- Construction Management Plan
- Engineering and Design Management Plan
- Quality Management Plan
- Safety and Health Management Plan
- Completion Management Plan

The plan has the following structure:

Part A: Overview	This section clearly defines: ▪ Purpose and Scope of the CFEMP ▪ Environmental Contract Requirements ▪ Objectives and Targets ▪ Structure the Environmental Management System ▪ Summary of the Significant Environmental Hazards, specific client requirements, compliance requirements and project environmental performance targets
Part B: Implementation Plan	This section outlines in detail the key aspects for environmental management on the project including: ▪ Expectations ▪ How they will be met ▪ Responsibilities ▪ Associated deliverables
Part C: Environmental Sub Plans	This section contains the Environmental Sub Plans developed by the project to manage Significant Environmental Hazards and other potential major impacts upon the environment and community
Part D: Appendices	This section provides information supporting the CFEMP including: ▪ Environmental Policy ▪ Environmental Risk Register ▪ Environmental Roles and Responsibilities ▪ Site Environment Plan

This CFEMP has been developed to comply with the requirements of SSD 10376 Condition of Consent B48(b) relating to the preparation of a CFEMP independent of the CEMP approved for the CSSI station works. Condition requirements relating to CoA B489B0 are tabled below:

SSD 10376 Condition Ref	Condition requirements	Where addressed in this CFEMP
B48 (b) (i)	describe the relevant stages and phases of construction including work program outlining relevant timeframes for each stage/phase;	Part A Section 2.1
B48 (b) (ii)	describe all activities to be undertaken on the site during site establishment and construction of the development;	Part A Section 2.1
B48 (b) (iii)	clearly outline the stages/phases of construction that require ongoing environmental management monitoring and reporting;	Appendix E MIRRA Schedule
B48 (b) (iv)	detail statutory and other obligations that the Applicant is required to fulfil during site establishment and construction, including approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;	Part A Table 1 of section 2.3 and Appendix D
B48 (b) (v)	include specific consideration of measures to address any requirements of the EPA during site establishment and construction;	EPA requirements for noise, waste and air quality have been included in the relevant Sub-Plans in Part C.
B48 (b) (vi)	describe the roles and responsibilities for all relevant employees involved in the site establishment and construction of the works;	Appendix B
B48 (b) (vii)	detail how the environmental performance of the site preparation and construction works will be monitored, and what actions will be taken to address identified potential environmental impacts;	section 1.6 of the Soil and Water Management Plan, section 2.5 of the Flora and Fauna Management Plan, section 3.9 and 3.10 of the Noise and Vibration Management Plan, section 4.4 of the Hazardous Substances Management Plan, section 5.6 of the Waste Management Plan and section 6.7 of the Air Quality Management Plan Appendix E MIRRA Schedule
B48 (b) (viii)	document and incorporate all sub environmental management plans (Sub Plans), studies and monitoring programs required under this consent; and	Part C outlines the sub-plans required under this consent.
B48 (b) (ix)	include arrangements for community consultation and complaints handling procedures during construction.	Element 6.

2. Project Overview

2.1 Project Description

CPB Contractors has been contracted by Pitt Street Developer South Pty Ltd (PS Developer) to provide Design & Construct services for the Pitt Street Over Station Development South – Build to Rent. CPB Contractors has been appointed Principal Contractor in accordance with WHS Legislation.

The South Over Station Development (OSD) is a design and construct contract within the Pitt Street Integrated Station Development (PSISD).

Above the southern entry of Pitt Street Station, near the corner of Pitt and Bathurst streets, the Pitt Street south building will incorporate 234 premium Build to Rent apartments. The building is configured as an 'L' shape which wraps around the Edinburgh Castle Hotel, with the access to the OSD provided on Pitt Street.

OSD Works are to be carried out over a duration of approximately 25 months with a planned start date in Q4 2021, and completion in Q4 of 2023 as per the program below:

Construction Phase	Works under construction	Timing
Site establishment	Handover from station, site accommodation and amenities installation, Jump-form reconfiguration, Hoist installation, tower crane handover, access and materials handling provisions installed etc.	Q4 2021 to Q2 2022
Main Structural Works (CC1)	Concrete structure Level 6 to Level 39	Q4 2021 to Q4 2022
Façade Works (CC2)	External Façade & Cladding	Q3 2022 to Q2 2023
Architectural & Service works (CC3)	Internal services and finishes rough in and fit off	Q1 2022 to Q3 2023
Landscaping and external finishing	Landscaped areas and final external finishes	Q1 2023 to Q3 2023
Commissioning & Completion	Final commissioning, defect close out, cleaning and Handover	Q2 2023 to Q4 2023



Figure 1: Over Station Development South (Artists Impression)

Over Station Development – South Tower

The Build to Rent Building will comprise of:

- Residential Building as to Sydney Local Environmental Plan 2012 and to Apartment Design Guidelines minimum sizes approximately 16,178m2 of NLA (PCA) above ground comprising:
    i. Ground Floor – lobby
    ii. Level 2 – Residents Amenity
    iii. Level 6 – Retail & Residents Amenity
    iv. Level 7-36 – Apartments
- Unit mix to comprise of:
    i. 110 no. 1 bed
    ii. 118 no. 2 bed, 2 bath
    iii. 6 no. 3 bed

  The mix may be reviewed during early design stage in order to optimise the mix to meet current market demands
- The following sustainability ratings:
    i. National Construction Code (NCC) of Australia 2019
    ii. 5 Star Green Star Design & As Built v1.3
    iii. BASIX Energy 30%
    iv. BASIX Water 40%



Figure 2: Operational Scope Drawing

2.2 Purpose and Scope

This Plan has been developed to comply with Condition of Approval B48 of Development Consent Application number SSD 10376 and in particular B48(b):

> *B48. (b) prepare a Construction Framework Environmental Management Plan (CFEMP) for the development independent of the CEMP approved with the CSSI station works.*

The Plan is established in accordance with CPB 'The Way We Operate' framework and is the key document that integrates Environmental requirements and client environmental requirements during project delivery.

Implementation of the EMP will:

- Identify the environmental obligations attached to the tender / project and the hazards and risks associated with the works
- Assist in the prevention of unauthorised environmental harm
- Fulfil the Client's environmental requirements as defined in the Contract, including complying with relevant permits and approvals
- Comply with all relevant environmental legislation
- Minimise negative impacts on the community that relate to the Project's environmental impacts
- Identify and implement feasible opportunities to reduce the environmental impact of the Project that are beyond contractual and compliance requirements
- Fulfil CPB Contractors' EMS requirements enabling continued certification to ISO14001 and contribution to CPB Contractors' overall Business Plans.

The Project Manager, with advice and input from senior construction staff, is responsible for the Plan.

2.3 Environmental Contract Requirements

The following table sets out the minimum client requirements as defined in the Pitt Street Integrated Station Development Over Station Development Design and Construction Contract for the South Over Station Development Works and shows where each requirement has been addressed within this Plan.

Table 1: Contract Requirements for Environmental Management

Contract Reference	Content requirements	Where addressed in EMP
DEED: Home Building Act Requirements (D) Quality of Construction	(a) All work under this deed must comply with: (i) the National Construction Code (to the extent required by the Environmental *Planning and Assessment Act 1979* (NSW), including any regulation or other	Part D Appendix D – Environmental Obligations Register

Contract Reference	Content requirements	Where addressed in EMP
	instrument under that Act;	
5.5 Environmental obligations	(a) (**Contamination**) The D&C Contractor bears the risk of all Contamination on, in, over, or about the Construction Site. (b) (**Hazardous Chemicals**) The D&C Contractor must ensure that: (i) Hazardous Chemicals are: (A) handled in a manner that will not cause or create an Environmental Hazard; and (B) not abandoned or dumped on the Construction Site; and (ii) no other substance is released from, deposited to, or emanates from, the Construction Site such that a state of Contamination occurs. (c) (**Environmental responsibility**) The D&C Contractor must, at all times, carry out, and ensure that its Subcontractors carry out, the obligations of the D&C Contractor in an environmentally responsible manner, in accordance with Good Industry Practice, and so as to protect the Environment and keep the Construction Site in a good and safe condition.	Part C Environmental Aspects and Impacts – 6. Contamination Subplan 9. Hazardous Substances Subplan Part B Implementation – Element 8 Subcontractor Relationships
6.1 Care of people, property and the Environment	The D&C Contractor must perform the D&C Contractor's Activities in a manner that: protects and prevents damage to property and the Environment;	Part A Overview – 1. Structure of this Plan
6.5 Incident management	(**D&C Contractor must take action**) Without limiting clause 5.5 (*Environmental obligations*) and clause 7.1 (*Compliance with Laws*), in relation to any environmental or safety Incident involving Contamination or waste, the D&C Contractor must, at its own Cost: (a) promptly take all appropriate action to manage and dispose of all Contamination or waste arising from the Incident; and (b) manage the Incident in a manner which minimises damage to the reputation of the Principal or the PS Developer including complying with any reasonable request of the PS Developer's Representative.	Part B Implementation – Element 9 Incident Management
7.1 Compliance with Laws	The D&C Contractor must, in performing its obligations or exercising any of its rights, including procuring the carrying out of the D&C Contractor's Activities: (a) (**compliance**) comply (and ensure that its Associates comply) with all applicable Laws (including any Environmental Notices) arising out of or in connection with the carrying out of the D&C Contractor's Activities and ensure that at all times prior to and on Completion, the South OSD complies with all applicable Laws;	Part D Appendix D – Environmental Obligations Register
11.3 (b)(v)	ensure that its Subcontractors cooperate, meet with, liaise and share information so that the D&C Contractor and the relevant Interface Contractor each comply with the provisions of the relevant Environment Protection License (if applicable);	Part B Implementation – Element 8 Subcontractor Relationships

Contract Reference	Content requirements	Where addressed in EMP
21.1 Suspension	The PS Developer's Representative may, at any time, direct the D&C Contractor to suspend all or any part of the D&C Contractor's Activities if the D&C Works or the carrying out of the D&C Contractor's Activities or the D&C Works: (i) have caused: (C) any actual damage to the Environment or a significant risk of harm to the Environment;	Part B Implementation – Element 9 Incident Management
Schedule A3 1.2 (h) Strategic Objectives	(h) minimise impacts on the Environment, including but not limited to noise and vibration, air quality, traffic and transport, heritage, waste, water and energy management and embodied environmental impacts;	Part C Environmental Aspects and Impacts – 1. Soil & Water MP 3. Noise & Vibration MP 4. Heritage MP 6. Energy MP 8. Waste MP 9. Air Quality MP 10. CTMP
Schedule A10 NGER Legislation	Compliance with NGER Legislation	Part C Environmental Aspects and Impacts – 6. Energy MP

2.4 Standard Operating Requirements

Hours of Work:

Construction, including the delivery of materials to and from the site, may only be carried out between the following hours:

a) between 7am and 6pm, Mondays to Fridays inclusive; and

b) between 8am and 5pm, Saturdays; and

c) between 7am to 8am, Saturdays for

- site set-up for concrete works
- internal fit-out works
- material deliveries from work zones
- tower crane and hoist operations; and

d) between 6pm and 10pm, Mondays to Fridays for:

- internal fit-out works
- material deliveries from work zones up until 7pm
- hoist operations.

No work may be carried out on Sundays or public holidays.

2.5 Development Consent Requirements

Development Consent Application number SSD 10376 was granted on 14 April 2021, in accordance with Section 4.38 of the Environmental Planning and Assessment Act 1979. This CFEMP has been developed in accordance with Condition of Approval B48(b).

The compliance requirements relating to the Consent are detailed in Appendix D.

Refer to the following for Development Assessment and EIS:
https://www.planningportal.nsw.gov.au/major-projects/project/25471

2.6 Objectives and Targets

The Project has set the following environmental performance targets. These include current business plan environmental targets for the Business Unit and the whole of CPB Contractors:

Table 2: Leading indicators

Key Performance Indicator	Target	Time Frame	Actions to be Taken	Accountability
SHEQ observations	Four observations conducted per member of leadership team per month	Each month	Four observations to be performed by each member of the leadership team per month	Project team
Completion of inspections	100 per cent of scheduled inspections of environmental controls occur	Each month	Inspections of environmental controls to be identified, scheduled and conducted	Project team

Table 3: Lagging Indicators

Key Performance Indicator	Target	Time Frame	Actions to be Taken	Accountability
Level 1, 2 & HPI environmental incidents	Zero	Ongoing	Implementation of the EMP	Project Manager
Number of actions taken by regulators and/or client	Zero	At all times	Implementation of the EMP	Project Manager
Area of land cleared or disturbed without authorisation	Zero ha	At all times	Implementation of the Fauna and Fauna Sub Plan	Site Manager
Number of unauthorised discharges	Zero	At all times	Implementation of Soil & Water Management Sub Plan	Site Manager
Damage to heritage items or places without relevant approvals	Zero		Implementation of Heritage Sub Plan	Project Environmental Representative
100% of all fuel use and GHG emissions generated by the project is captured and entered into JDE (NGER reporting requirement).	All use / emissions entered into JDE System	Monthly	Implementation of Energy Sub Plan	Project Environmental Representative
% of waste reused or recycled	75% of waste generated	12 months	Implementation of Waste Sub Plan	Project Environmental Representative

2.7 Key Environmental Stakeholders

Key environmental stakeholders for the Project include:

Table 4: Environmental stakeholders

Stakeholder Name	Representative	Contact Details
Emma Eveleigh	CPB Environmental Manager	0402 574 943
Constantine Kerpiniotis	CPB Delivery Director - PSISD	0427 459 278
Brad Sugar	CPB Project Manager – OSD South	0447 177 556

Stakeholder Name	Representative	Contact Details
Sarah Power	CPB Communications Manager	0438 157 306
Andrew Zvirzdinas	CPB Environmental Manager – NSW / ACT Building	0480 212 828
Peter Murphy	Building Certifier – Philip Chun	0418 898 977
Ana Maria Munoz	Independent Auditor - Australian Quality Assurance & Superintendence Pty Ltd	0430 314 557

3. Environmental Management System

3.1 System Overview

3.1.1 Governance documentation

The Environmental Management System (EMS) is based on the requirements of the CPB Management System and has been specifically tailored to ensure compliance with Oxford additional Environmental requirements. The Project Management Plan provides more detail about 'The Way We Operate' and the process adopted to deliver against Oxford overall requirements.

The CPB Contractors management system is certified to conform to:

- AS/NZS ISO 14001:2004 Environmental management systems – Requirements with guidance for use.

Evidence of certification is included in Appendix A.

The CPB Management System has been developed and implemented to ensure a consistent approach to project delivery.
The management system comprises the following components:



Figure 3: CPB Contractors Management System

- A Policy is a statement of strategic intent and commitment and defines the minimum mandatory requirements that CPB Contractors expects all levels of the organisation to comply with.
- The Project Management Plan outlines how the Project will be managed and it is supported by a suite of functional management plans.
- Procedures and Work Instruction specify how to undertake and control specific activities. They also list accountable roles and the tools and knowledge to be used. Where appropriate and approved by the respective Business Unit functional manager, project specific procedures may be produced to reflect specific project circumstances.
- Tools are preformatted documents such as forms and templates that are required to be completed as part of a Procedure.
- Knowledge documents are reference material to provide context, additional information or guidance to a Policy or Procedure.
- Business Applications are the software tools used to manage our business and support our operations.

3.1.2 Environmental Management Plans (EMPs)

Each project maintains an EMP (this document) that describes the actions to be taken by that project to comply with each Element and Expectation. The Project's EMP must demonstrate that:

- Contractual environmental requirements are being fulfilled
- The Project is compliant with all relevant environmental legislation
- The effect of environmental impacts on the community is minimised.

3.1.3 Procedures, Knowledge and Tools

A procedure describes the steps to be undertaken to complete an activity, the accountable roles and the tools and knowledge to be used.

Tools are preformatted documents (forms and templates) used to collect specific data or information for a particular purpose.

Knowledge documents are reference material to provide context, additional information or guidance to a Policy or Procedure.

Business Applications are the software tools used to manage and support our operations.

3.2 Improvement

In addition to specifying the day-to-day environmental management of a project, each EMP details activities to be performed to deliver continual improvement in environmental performance.

Continual improvement is achieved through constant measurement and evaluation, audit and review of the effectiveness of EMP and adjustment and improvement, project environmental outcomes, and CPB Contractors EMS.

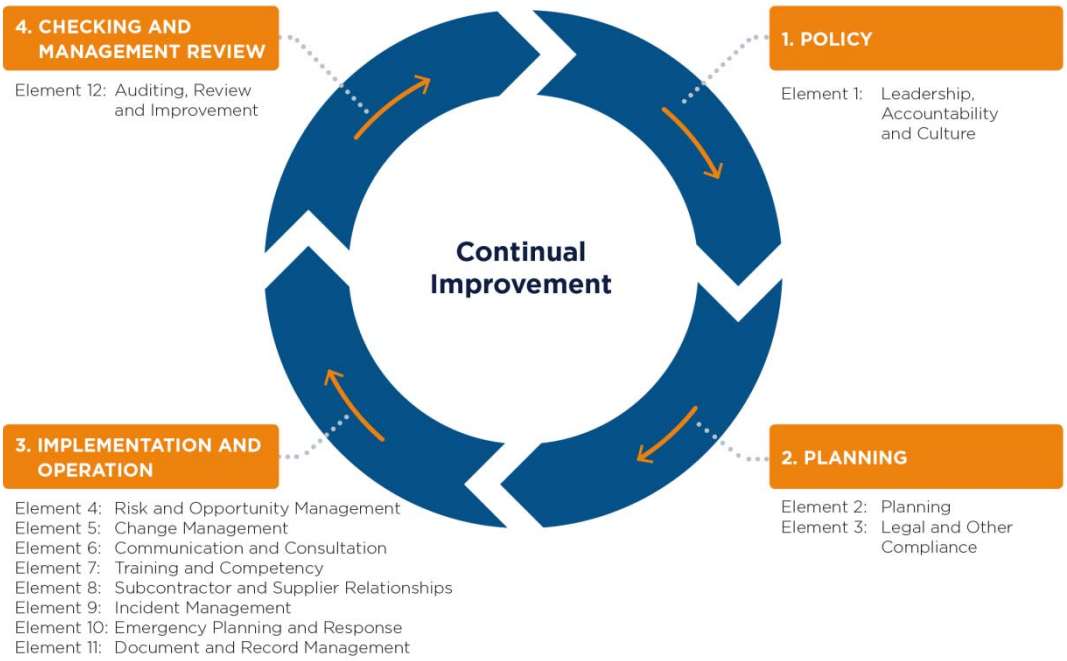


Figure 4 Continual Improvement Mechanism

3.3 Interactions with Other Management Plans

This EMP is part of an integrated set of project management plans. The table below sets out interactions of this EMP with the other management plans implemented on the Pitt Street South Over Station Development. The specific linkages that exist between management plans are addressed thoroughly in Part B of this plan.

		PROJECT MANAGEMENT PLAN				
		ENVIRONMENTAL MANAGEMENT PLAN				
Element of EMP	**Design**	**Construction**	**Safety**	**Commercial**	**Workplace**	**Community & Stakeholder**
Leadership, Accountability and Culture			●		✓	
Planning			●	✓	●	
Legal and Other Compliance	✓	✓	●			●
Risk Management and Controls	✓	✓	✓		●	
Change Management	●	●	●	●	●	●
Communication, Consultation and Participation			✓		✓	✓
Training and Competency			●		✓	
Subcontractor and Supplier Relationships	●		●	✓		
Incident Management			✓			●
Emergency Planning and Response			✓	●	●	●
Document and Records Management	●	●		●	●	●
Auditing, Review and Improvement			✓			

● Element (or subject) also addressed in other management plans
✓ Other plan directly interfaces with the CFEMP

4. Significant Environmental Hazards and Environmental Sub Plans

This EMP also includes Environmental Sub Plans for Significant Environmental Hazards (SEH), and Environmental Sub Plans for Other Environmental Hazards. As with all Environmental Hazards, SEHs have been identified through the review and analysis of environmental reports, contractual documents, community and legal compliance requirements relating to the Project and professional experience. Each of the Sub Plans listed below will be regularly reviewed during construction as the project risks are reviewed.

Table 5: Significant Risks & Sub Plans

Environmental Hazards (Aspect)	Associated Significant Environmental Impact (Risk)	Environmental Sub Plans (Part C)
Impact to natural water courses	Contamination of soil and water including sediment control	Soil & Water Management Sub Plan
Impact to flora and/or fauna	Loss of or harm to flora or fauna and protection of exiting trees	Flora & Fauna Management Sub Plan
Environmental impact of noise	Noise affects to community and residents	Noise & Vibration Management Sub Plan
Environmental impact of vibration	Vibration affects to community and residents	Noise & Vibration Management Sub Plan
Environmental impact of contaminated substances	Uncontrolled spills contaminating soil and water	Hazardous Substances Management Sub Plan
Waste management and reporting	Uncontrolled waste removal and non-conformance to waste reporting to Government	Waste Management Sub Plan
Environmental impact of air pollution	Air pollution including dust affecting people, fauna and water	Air Quality Management Sub Plan
NGER	Non-conformance to Government reporting requirements	Sustainability Management Plan (not included within this CFEMP))

5. Elements and Expectations

The Environmental Management Plan is structured using a common set of Elements and Expectations:

Element	Key aspects for managing this function on the Project
Expectation	The high-level outcomes achieved as part of each Element

This two-level hierarchy provides a consistent structure that is applied across all Management Plans on the Project. Those Elements are:

- Element 1: Leadership, Accountability and Culture
- Element 2: Planning
- Element 3: Legal and Other Requirements
- Element 4: Risk and Opportunity Management
- Element 5: Change Management
- Element 6: Communication and Consultation
- Element 7: Training and Competency
- Element 8: Subcontractor Relationships
- Element 9: Incident Management
- Element 10: Emergency Planning and Response
- Element 11: Document and Record Management
- Element 12: Auditing, Review and Improvement

Element 1: Leadership, Accountability and Culture

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
1.1 Environmental accountabilities, roles and responsibilities for managers, staff, employees and subcontractors are clearly defined, documented and communicated	**Roles and Responsibilities** Environmental responsibilities are included in all Position Descriptions. Roles that carry specific environmental accountabilities (e.g. those that supervise or manage work with specific environmental risks) will contain more detailed environmental content. The environmental responsibilities contained in Position Descriptions are communicated to each person by their immediate supervisor upon commencing in their role.	**P&C Manager** Project Environmental Representative Line managers	Position Descriptions
1.2 Environmental leadership and commitment is demonstrated through measurable participation in environmental management	**Participation and Measurement** All personnel in leadership roles on the Project participate in environmental management activities, including observations, incident reviews and HSE committee meetings. In addition, project management will: Regularly review environmental performance against Project KPIs and raise corrective actions to maintain or improve environmental performance as necessary Address pertinent environmental matters at communication forums.	**Project Manager** Line managers Functional managers Supervisory staff Project Environmental Representative	Measurement system output to include: Observation records, Incident reviews, HSE Committee meeting attendance (minutes), delivering toolbox talks
1.3 Environmental expectations are clearly defined with appropriate reward and disciplinary processes in place.	**Environmental Policy** The CPB Contractors Environmental Policy will be communicated in project inductions and prominently displayed at the Project. **Project Environmental Rules** The Project Manager and Project Environmental Representative will assist in development of “Project Rules” during Project start-up to address key environmental matters. These rules will be documented, communicated and prominently displayed at the Project and will be reviewed at least every six months. Any person who breaches these rules will be managed in accordance with CPB Contractors requirements for counselling, discipline and, if needed, termination.	**Project Manager** All personnel	Environmental policy displayed and communicated in site inductions Project environmental rules KPIs defined (Part A)

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Performance Targets Environmental performance targets for the Project have been identified in Part A of this document. The associated key performance indicators (KPI) include lead and lag indicators. Measurable targets have been set for each KPI and an applicable time frame nominated. The targets are in line with CPB Contractors Corporate and Business Unit targets.	**Project Manager** Project Environmental Representative	Monthly reports
	Managing Personal Performance Environmental performance goals will be set and reviewed for individuals with environmental leadership roles (refer to Element 1.1 above) during the performance and development review process.	**Project Manager** Line Managers	Performance and development reviews

Element 2: Planning

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
2.1 Adequate resources are provided to effectively implement the EMP	**Resources** The Project budget includes sufficient allowances to implement the EMP, including people, technical environmental expertise, equipment, materials, training, plant, and infrastructure. The Project Environmental Representative is consulted in setting and revising (forecasting) the Project budget. Sufficient people are appointed to the Project to implement the EMP.	**Project Manager** Commercial Manager Project Environmental Representative P & C Manager	Project budget Project forecasts Organisational structure Training matrix Training schedule
	Environmental Monitoring The Project Environmental Representative is accountable for developing the Environmental Monitoring Schedule(s) prior to any works commencing on the project. The Project Environmental Representative will identify all equipment, equipment maintenance (including calibration) and personnel required to implement the schedule and ensure necessary allowances in the Project budget and forecasts. All environmental monitoring on the Project is planned according to the requirements of the Knowledge document Environmental Monitoring and is defined where relevant in the Environmental Sub Plans within Part C of this Plan.	**Project Environmental Representative**	Environmental Monitoring Schedule(s) Environmental Sub Plans Environmental input into Project budget Project forecasts
2.2 Business systems are defined and established	**Define and set up IT Systems** Applications required to management environment on the Project are defined and established prior to works commencing. Systems to be used include: ▪ **Synergy** - Reporting and recording all environmental incidents, audit results and corrective actions ▪ **Synergy** - To schedule all inspections and environmental monitoring activities and track completion of scheduled activities ▪ **SHE Risk Register** – To manage environmental risk registers ▪ **JD Edwards** (NGER module) to capture energy use and emissions, and water and waste data ▪ **Incite** – Records and documents management and archiving ▪ **Environmental Monitoring Spreadsheet** – To capture and analyse all environmental monitoring data. ▪ **Aconex** – Records and documents management and archiving ▪ **MTA** – Management of project inductions	**Project Environmental Representative**	Applicable business systems
2.3 Environmental Sub Plans are prepared and maintained for Significant Environmental Hazards	**Identify Significant Environmental Hazards (SEH)** Significant environmental hazards relating to the projects activities have been identified through the review and analysis of environmental reports, contractual documents, and community and legal compliance requirements relating to the Project and supported by professional experience of the assessor. The project SEH list in	**Project Environmental Rep**	Significant Environmental Hazards and Environmental Sub Plans listed in Part A

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Part A is reviewed by the Project Environmental Representative at a minimum of 6 monthly intervals. The review should be supported by the current environmental risk and opportunities identification and analysis assessment and project environmental performance.		Sub Plans contained in Part C
	Environmental Sub Plans Environmental Sub Plans (Part C) are reviewed for on-going relevance and accuracy by the Project Environmental Representative. The frequency of review is triggered by incident history, changes to the project, including contract variations, and management review requirements. Reviews are documented and records retained in the project document management system.	**Project Environmental Rep**	Reviews of SEH and environmental Sub Plans

Element 3: Legal and Other Requirements

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
3.1 Relevant legal, contractual and other requirements are identified and maintained in a legal and other obligations register	**Identifying Environmental Obligations** The Project Environmental Representative has reviewed the Contract, construction methodology and program and identified all: ▪ Contractual conditions specific to environmental management. ▪ Regulatory approvals required and associated conditions. ▪ Specific requirements of local, state and federal laws that are additional to the requirements of Project approvals using CPB Contractors' online subscription to EnviroLaw. ▪ Targets and objectives in CPB Contractors Business Unit or whole of CPB Contractors Business Plans. The sources and details of, and means of compliance with the above, are captured within an Environmental Obligations Register. Documentary evidence must be available to show that all owners of obligations have been informed of their responsibility and are in a position to deliver the obligation.	**Project Environmental Representative** Project Manager	Environmental Obligations Register(s) Business critical environmental obligations included in Project's Rights and Obligations Summary Project Management Plan, insert reference to relevant section
3.2 All necessary environmental approvals are obtained prior to commencing relevant works and surrendered on completion	**Obtaining and Surrendering Environmental Approvals** Approvals required to deliver the project are obtained prior to the commencement of any activities relating to the scope of the approval. The timing to obtain each necessary regulatory approval is determined and included within the Project program linked to relevant activities. Details of all approvals and licenses (including applications and decision notices where appropriate) are maintained in the Project's Environmental Obligations Register.. . All regulatory approvals will be surrendered according to the requirements of the approval or, where not stated, as soon as practical following the completion of the activity to which the approval relates. An Environmental Obligations Register will be updated to include conditions associated with newly received regulatory approvals.	**Project Environmental Representative** Engineers Project Manager	Environmental approvals in program Environmental approval documentation Approval and license conditions entered into Project's Environmental Obligations Register Updated Environmental Obligations Register
3.3 Work is planned and executed to ensure compliance	**Planning for Compliance** The Project Environmental Representative is consulted upon commencement of development of all Construction Area Plans (CAPs) and Work Packs, and throughout their development. All controls necessary to ensure compliance are included in the CAPs and Work Packs and in the Environmental Sub Plans (Part C of this Plan). CAP's and Work Packs should include Site Environmental Plans that clearly shows the controls to be implemented. The Project program is updated to include new approvals determined to be necessary following the review of work plans.	**Construction Manager** Supervisors Engineers Project Environmental Representative Engineering Manager	Reviewed WAPs and Work Packs by Project Environmental Rep Update project program

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	CAPs and Work Packs are reviewed by the Project Environmental Representative prior to the commencement of works described in their scope.		
3.4 Inspections, observations and monitoring are performed to ensure compliance is maintained	**Implementing Controls** Controls required to achieve compliance, as detailed in the CAPs and Work Packs, will be implemented before relevant works commence. The Environmental Obligations Register contains an explanation, or link to an Environmental Sub Plan containing an explanation, of how compliance with each listed requirement is to be achieved and how the project will regularly demonstrate compliance with the requirement (if relevant).	**Supervisors** Engineers Project Environmental Representative	Engineered (physical) and administrative controls (e.g. procedures, forms, training) in place
	Inspections and Observations Controls are to be inspected regularly to ensure their ongoing suitability and effectiveness. Inspections and observations are planned and conducted according to the requirements of the Workplace Hazard Inspections and Observations Procedures. The outcomes of inspections are captured on the inspection checklists. Corrective actions are raised, tracked and closed out in the Synergy – Action Plan Module or through the inspection records (for actions closed out within 72 hours) for all controls found to be inadequate.	**Supervisors** Engineers Project Environmental Representative	Observation records Inspection schedules Inspection checklists Corrective actions in Synergy – Action Plan Module or inspection records
	Environmental Monitoring Environmental monitoring is carried out to confirm compliance with the conditions of environmental approvals and laws, and to provide early indication of potential adverse impacts to the environment or community. All monitoring is planned and conducted according to the requirements of the procedure Environmental Monitoring and as detailed in the Environmental Sub Plans (Part C of this Plan). Environmental monitoring results are interpreted to identify actual and potential non-compliances and events that may result in nuisance, environmental harm, and unacceptable loss of amenity or community complaints. Corrective actions are taken immediately or are raised and managed using Synergy	**Project Environmental Representative**	Environmental Monitoring Schedule Monitoring records Calibration records Corrective actions
3.5 All non-compliances are reported as incidents	**Reporting Non-Compliances** All non-compliances are recorded and reported as incidents in the Synergy. This includes events involving an action being taken against the project by a regulator.	**Project Environmental Representative** All personnel	Incident reports
3.6 All energy and greenhouse data are collected and entered into JDE	**Greenhouse and Energy** *All subcontractor fuel use to be collated and entered into the JDE NGER Module at the site level.* *Projects will track subcontractor energy reporting.*	**Project Environmental Representative** Commercial Manager Project Manager	NGER subcontractor register NGER data checklist Completed NGER subcontractor records

Expectations		How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
		All relevant records relating to the reporting of NGER data will be retained with project records for seven years. *Any NGER data to be reported to the Client will be extracted from JDE using the Business Intelligence Tool.* All energy (fuels, oils, greases, gases, electricity, solvents) purchased by Leighton Contractors and processed through JDE are captured centrally at the Group level. If a project is not using CPB JDE, both invoiced and contractor energy use must be collated and entered into Synergy monthly by the Environment Manager.		Monthly HSE Statistical reports
3.7	Personnel on the site have access to current versions of relevant legislation, standards and codes of practice	**Updates to Legislation, Standards and Codes of Practice** Access to all relevant legislation will be available to personnel via EnviroLaw or other online resources (e.g. state or Commonwealth government websites or www.austlii.edu.au). Updates to legislation, standards and codes of practice will be reviewed to determine relevance. Work practices, the Environmental Sub Plans attached to this EMP, and Environmental Obligations Register will be altered where appropriate to ensure compliance and all affected personnel informed in a timely manner. Regulatory approvals will be obtained or amended as necessary, work practices altered to ensure compliance and all affected personnel informed in a timely manner.	**Business Unit Environmental Representative** Project Environmental Representative	Updates distributed

Element 4: Risk and Opportunity Management

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
4.1 Systematic processes are defined and implemented for identifying environmental risks and opportunities at all stages of the Project	**Identifying Environmental Risks and Opportunities** Environmental risks and opportunities associated with activities, products and services of the project will be identified, recorded and tracked in the Project Environmental Risk and Opportunity Register. The Environmental Risk and Opportunity Register is an excel Spreadsheet contained in the Project Management System. Any environmental risks identified as critical will also be captured and monitored via the Project Risk Register contained in ARM. Environmental risks and opportunities are considered during all subsequent project risk assessments as per the Project Management Plan. This includes: ▪ The Principal Risk Assessment conducted at bid stage for major tangible risks. ▪ Safety/Environment-in-Design workshops conducted throughout the Project ▪ Construction Area Plan (CAP) risk assessments ▪ Work Pack risk assessments ▪ Project Prestart Meeting The Environment Representative is involved in the Principle Risk Assessment and Safety/Environment-in-Design workshops and has approval authorities for all other risk assessment types (except for START/Restart Cards) to ensure environmental risks and opportunities are adequately raised and addressed.	**Project Manager** Project Environmental Representative Engineering Manager Engineers Supervisors	Environmental Risk and Opportunity Register Work Area Plan risk assessments Project Prestart Meeting
4.2 Identified risks and opportunities are analysed and evaluated according to agreed criteria and recorded in a risk register	**Analysing Environmental Risks and Opportunities** Each environmental risk and opportunity will be evaluated and assigned a rating which is determined using the consequence and likelihood criteria in the Risk Management Procedure. The influence of existing controls is considered in determining the risk rating. For each environmental risk: ▪ An owner is assigned by the Project Manager, ▪ Existing controls are recorded, including the owner of that control, and ▪ The residual risk will be evaluated. Opportunities will be assessed to determine whether or not they can be implemented on the project and be based on a cost-benefit business case for the opportunity. Advice is sought from the Project Environmental Representative as necessary by the project team to ensure CAP, Work Pack and SEP risk assessments are as informed and accurate as possible.	**Project Manager** Risk owners Project Environmental Representative Engineers	Environmental Risk and Opportunity Register Work Area Plan risk assessments Project Prestart Meeting
4.3 Environmental controls appropriate to the level of risk are identified, documented and implemented	**Identifying Adequate Controls** If the risk rating returns a result of ‘medium’ or above, then additional controls sufficient to reduce the risk rating to ‘low‘ or an alternative acceptable level using cost effective designs and engineering and/or administrative controls are to be utilised. Residual risks with a high or extreme risk rating will be considered ‘significant’ and	**Risk owners** Project Environmental Representative Project Manager	Controls agreed (engineered or administrative)

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	must be controlled using appropriate systems of work, including Environmental Sub Plans and project work procedure, along with available “hard controls”. Approval to proceed is required prior to commencing Accountability for the implementation of each control is assigned in the respective Sub plan and SEPs and a due date set for its implementation as appropriate. Controls are selected in consultation with the Project Environmental Representative to achieve the following, in order of preference: ▪ Eliminate the risk by not performing the relevant activity ▪ Substitute by performing the relevant activity in a way that presents a lower risk ▪ Implement physical (engineered) controls (e.g. sediment basins, check dams) ▪ Implement administrative controls (e.g. procedures, training, inspections).	Project Engineers	
	Implementing Controls Controls are implemented by the accountable person as specified in the Sub Plan or SEP by the due date. No activity is commenced until all relevant controls are implemented.	**Risk owners**	Controls in place (engineered or administrative)
4.4 Feasible opportunities are implemented	**Implementing Opportunities** Opportunities identified and for which a business case has been developed, are submitted to the appropriate member of the project leadership team for approval. Once approved, accountability for implementation of the opportunity is assigned and the opportunity is implemented. Environmental and cost benefits are recorded and reported in monthly reporting.	**Project Manager** Opportunity Owner	Monthly reports Case studies
4.5 Identified environmental risks and controls are communicated to all relevant personnel	**Communications in line with Construction Planning** The environmental risks, controls and accountabilities identified are communicated to all relevant personnel. This is achieved through the preparation and communication of the construction methodology, CAPs, Work Packs, SEPs, the conduct of Safety/Environment-in-Design workshops.	**Project Manager** Engineers Project Environmental Representative	Toolbox talk content and attendee records Pre-start meeting content Records of communications and meetings
	HSE Communications Environmental risks, controls and accountabilities are also communicated through delivery of HSE communications, including HSE Committee meetings, toolbox talks and pre-start meetings.	**Engineers** Supervisors Project Environmental Representative Project Manager Health and Safety Manager	Site induction content Toolbox talk content and attendee records Pre-start meeting content Records of communications and meetings
	Communication through Training Nominated administrative controls, including procedures and training, will be communicated through the delivery of training in their requirements. The planning	**Project Environmental Representative**	Training schedule Training matrix

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	and delivery of this training is provided according to the requirements of Human Resources Management Plan.	P&C Manager	Training records
4.6 Regular inspections and monitoring are conducted to check effectiveness of controls	**Inspections, Observations and Monitoring** The processes for inspections, observations and monitoring are described in Expectation 3 of this EMP and detailed in Appendix E.	**Project Environmental Representative** Project Manager Engineers Supervisors	Observation records Inspection schedules Inspection checklists Corrective actions in Synergy
4.7 Environmental risks and controls are regularly reviewed.	**Risk Review** The relevance and adequacy of environmental risks and controls identified in this EMP, the Principal Risk Assessment, CAP and Work Pack risk assessments are reviewed and updated according to Project Management Plan.	**Project Manager** Project Environmental Representative Engineers	Environmental Risk Register Updated risk registers in ARM, CAPs and Work Packs

Element 5: Change Management

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
5.1 Changes to planned operations that have potential environmental consequences are identified	**Identifying Change** Personnel promptly report any 'medium' or 'major' changes that could affect the environment and/or community A 'medium' or 'major' change could result from a change to design, plant (fixed and mobile), systems, personnel and work methods such that the absence of a considered review could compromise the project's ability to comply with its obligations and/or result in an inadequate range of controls which could lead to an incident or result in community nuisance. A 'medium' change is one which includes permanent changes to Work Pack methodology or work conditions. A 'major' change is one which is site-wide or requires a revision of CAP's. Personnel have received appropriate training to identify changes and apply change management processes. This includes all supervisory staff being informed of the need to have changes approved prior to commencing relevant works.	**Project Manager** Project Environmental Representative Engineering Manager Engineers Supervisors	Change Requests Training matrix Training records
5.2 Risks associated with identified changes are assessed and controlled before changes are implemented	**Risks Associated with Change** All proposed changes are documented, including the assessment of risks relating to the change. Key personnel affected by the change are involved in the risk assessment. All changes are requested or sponsored by a supervisor or manager, who then becomes the change owner. Input from environmental personnel is sought as necessary. The approach to risk assessment and the implementation of controls will follow the requirements of Element 4 of the EMP.	**Project Manager** Change owner Supervisors Project Environmental Representative	Change Requests Revised risk assessments
5.3 All changes with environmental consequences are authorised before they are implemented	**Approvals of Change** All change requests are approved by the supervisor or manager of the change owner, or as otherwise required by the project delegations, before any relevant work commences and a record is maintained. This must include any approvals associated with revised WAPs and Work Packs by the Project Environmental Representative.	**Project Manager** Construction Manager Engineering Manager Project Environmental Representative	Change Requests
5.4 Controls associated with change are communicated to all affected personnel	**Communication of Change** Affected personnel will be consulted and understand the effects of change before the relevant works commence. This is achieved through toolbox talks, daily pre-start meeting, HSE committees or forums arranged to specifically address changes.	**Change Owner** Supervisors	Toolbox talk material Pre-start meetings Attendance records Meeting minutes

Element 6: Communication and Consultation

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
6.1 External environmental stakeholders are identified	**Identifying External Stakeholders** A comprehensive stakeholder analysis will be performed to identify external stakeholders and their interests in the environmental management of the Project. This will include community members and others who could be affected by the Project works, as well as government and environmental lobby groups. The Environment Representative will be involved in the analysis process.	**Community & Stakeholder Manager** Project Environmental Representative	Stakeholder register or database Stakeholder Analysis
6.2 Relationships with external stakeholders are effectively managed	**Managing Relationships** Activities performed to effectively manage relationships with external stakeholders include: ▪ Identifying environmental risks that relate to stakeholder interests by considering the impacts to stakeholders (documented in Environmental Risk Register) ▪ Determining suitable controls and activities to mitigate risks (general controls and activities documented in Environmental Risk Register, details in Environmental Sub Plans, CAPs, and Work Packs). ▪ Performing inspections, audits, stakeholder engagement and monitoring activities to assess the effectiveness of controls Actively engaging stakeholders through open communication and involvement.	**Project Environmental Representative** Community & Stakeholder Manager Project Manager	Environmental Risk Register Risk assessments in CAPs, Work Packs, Environmental Sub Plans and Procedures Audit reports Monitoring results Communications material Forums and opportunities for stakeholder engagement
6.3 Internal consultative forums are established with regular meetings scheduled, conducted, documented and communicated	**Consultative Forums** A schedule of communication forums will be developed which includes: ▪ Managers' meetings that are to address environmental matters at least monthly; ▪ Environmental Toolbox Talks at least monthly; ▪ Pre-start meetings prior to commencing a shift; The Project Manager will establish appropriate environmental interfaces with the Client and regulatory bodies. Records will be kept of all HSE communication activities (e.g. attendance records). The effectiveness of the meeting outcomes will be reviewed as required.	**Project Manager** Project Environmental Representative H&S Manager	Minutes of meetings Toolbox Talks Pre-Start meetings Attendance records
	Actions from Consultative Forums Actions arising from consultative forums are assigned and communicated to a responsible person and confirmed as being completed. The Project will identify, track and complete environmental related actions using Synergy – Action Plans Module.	**Community & Stakeholder Liaison** Project Environmental Representative	Synergy – Action Plans Module

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	HSE Signs and Notice Boards Dedicated HSE notice boards will be prominently located and maintained with current environmental information.	**Project Environmental Representative**	Signs and notice boards installed with current environmental content
6.4 Environmental complaints and enquiries are recorded and responded to appropriately	**Responding to Complaints and Enquiries** All environmental related complaints will be classified according to the Incident Classification Matrix and recorded in Synergy. Complaints are treated as an incident and managed according to Element 9 of the EMP. Corrective actions are agreed and implemented, with accountabilities and time frames assigned. The complainant or enquirer is notified of the intended Project response once approved by the Project Manager.	**Community & Stakeholder Manager** Project Environmental Representative Project Manager	Incident records Records of communications
	Changes to Environmental Monitoring Environmental monitoring programs will be reviewed to address matters raised through valid complaints and consultations with stakeholders. Amendments to the monitoring program will be adequate to allow early identification of conditions that are likely to result in further complaints and/or exceedances. Data will be analysed to identify actual and potential impacts to the community, and corrective actions implemented.	**Project Environmental Representative** Community & Stakeholder Manager	Monitoring schedule Monitoring records Corrective actions in Synergy
	Client and Internal Notifications The Business Unit Environment Manager and Corporate Communications Manager are notified of complaints that have or are likely to generate media interest. The Client is notified according to the conditions outlined in the Contract.	**Project Manager**	Record of communication

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
6.5 The effectiveness of internal and external stakeholder engagement is evaluated and improved.	**Evaluation of Internal and External Communications** The effectiveness of internal communication and consultation activities will be formally reviewed as required. The effectiveness of external communication and consultation activities will be formally reviewed as required. The Project Environmental Representative participates in both of these reviews, which are led by the Project Manager and include the Community and Stakeholder Manager and Health and Safety Manager. The Project Environmental Representative will also regularly attend and review the effectiveness of forums and recommend changes to the scheduling or style of forum.	**Project Manager** Community & Stakeholder Manager Project Environmental Representative H&S Manager	Meeting minutes

Element 7: Training and Competency

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
7.1 All personnel have completed an induction containing relevant environmental information before they are authorised to work on the Project	**Inductions** All personnel, subcontractors and visitors will undergo an induction before commencing work on-site. The induction addresses general and Project-specific environmental issues, including: ▪ CPB Contractors' environmental policy ▪ How the EMP will be implemented on-site ▪ High-risk environmental activities on the Project and their controls ▪ What to do in the event of an environmental incident. An assessment will be conducted upon completion of the induction. Induction materials are reviewed at least annually and amended to reflect changes to Project environmental risks, the status of community relations and the occurrence of incidents.	**Project Environmental Representative** P&C Manager Health and Safety Manager	Induction materials Training attendance records Completed induction assessments
7.2 A training plan is developed and documented	**Identifying Training Needs** Environmental training needs required to deliver this EMP are identified and documented within the Project's training matrix. In populating the training matrix, the environmental training requirements for each role are addressed, including competency, needs and capability. The Project Environmental Representative will contribute to the development of the training matrix. The performance and development management process provides an opportunity to identify and plan the delivery of training needs not provided in the training matrix, or that are necessary to aid in the development of the individual. Subcontractor training and competency responsibilities will be included in subcontractor agreements.	**Environment Representative** P&C Manager	Training matrix Performance and Development management plans Subcontractor agreements Subcontractor Start-Up Meeting minutes
	Scheduling Training Needs A project training schedule will be developed to plan the delivery of training needs identified in the training matrix. Refresher training intervals will also be stated where applicable.	**P&C Manager** Project Environmental Representative	Training schedule Training records

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
7.3 Personnel are trained and assessed according to the training plan	**Provide Training Resources** All resources to deliver the training schedule, including personnel, equipment, funding and materials, will be allowed for in the Project budget.	**Project Manager** Project Environmental Representative	Project budget
	Delivery of Training All training identified in the training matrix will be delivered according to the training schedule. Training and development needs identified through the performance and development process will be achieved as per time frames nominated in individual plans. Personnel delivering environmental training must be deemed competent by the Project Environmental Representative or Business Unit Environment Manager.	**Project Manager** P&C Manager Project Environment Representative	Training records
	Training Evaluation and Review Training assessments and evaluation forms will be used to assess the effectiveness of training. Training evaluation and feedback will be reviewed and used to improve the quality of environmental training delivered on the Project. The training matrix and schedule will be completely reviewed at least annually or prior to the commencement of major new tasks.	**P&C Manager** Project Environmental Representative	Training evaluation forms Training matrix
7.4 Training records are maintained and accessible to relevant personnel.	**Training Records** Records of all training activities, including inductions, will be maintained. Records will include the name and role of the attendee, the name of the course and, where applicable, reference to the document controlled version of the material presented, and a copy of the assessment completed.	**P&C Manager** Project Environmental Representative	Training records

Element 8: Subcontractor Relationships

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
8.1 Selection processes ensure that subcontractors meet CPB Contractors' minimum environmental requirements	**Subcontractor Selection and Engagement** Subcontractors engaged on the project are required to undergo a thorough assessment prior to selection. The Project Environmental Representative will be consulted on environmental requirements of subcontracts and the adequacy of proposed conditions. Subcontractors will be made aware of CPB Contractors' environmental requirements during the tender process and Start-Up meetings.	**Commercial Manager** Engineers Project Environmental Representative	Subcontractor Agreements
8.2 Planning requirements of all subcontractor work scopes are completed and communicated prior to commencing work	**Identify, Complete and Communicate Planning Requirements and Documentation** The scope of work to be performed by each subcontractor is reviewed to determine whether it includes works for which project planning and environmental risk assessments have been completed. If so, the subcontractor is formally informed of all relevant risks and existing project documents, systems and procedures to be followed prior to commencing works (in addition to having been informed of these during the tendering process). These may include the contents of the construction methodology, CAPs, Work Packs, SEPs, and Environmental Sub Plans in this EMP. If the scope of works includes activities not already addressed in Project planning and risk assessment, then an appropriate risk assessment is performed and either existing documentation is revised or new documentation produced. The Project Environmental Representative should review this new documentation to ensure it meets project requirements. In either case, the subcontractor must be formally informed of all requirements prior to commencing works.	**Engineers** Project Environmental Representative Commercial Manager	Construction Area Plans (CAPs) Work Packs SEPs Records of subcontractor notification
8.3 Compliance requirements for high risk environmental activities are identified and enforced	**Compliance requirements** For high risk environmental activities, the Project Environmental Representative will review the subcontractor's scope of works with the supervising Engineer and: ▪ Identify any new issues relevant to the subcontractor's scope of works; ▪ Identify any additional compliance requirement not captured; ▪ Identify necessary approvals not already in place and obtain those approvals prior to any works commencing; ▪ Update the relevant Environmental Sub Plans, SEPs, and Environmental Obligations Register with details new approvals and their conditions. The Project Environmental Representative will review the CAP and Work Packs, for high risk environmental issues. The subcontractor will be informed of all relevant environmental issues/risks and controls, procedures and documents to be followed and implemented in order to	**Engineers** Project Environmental Representative Commercial Manager	Records of subcontractor notification

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	achieve compliance during the tendering process. This will be reinforced during the Start-Up meeting. The subcontractor will be informed of the requirement to provide all relevant data relating to their works as per the National Greenhouse and Energy Reporting Act 2007 (Cth).		
8.4 Subcontractor documentation is submitted and reviewed to meet Project requirements	**Documentation Preparation and Review** The subcontractor will provide CPB Contractors with all required environmental documentation prior to commencing work on the Project as described in the executed agreement, including any requirement to produce an Environmental Management Plan. Any further requirements will be agreed by the Commercial Manager and the Project Environmental Representative.	**Project Environmental Representative** Engineer Commercial Manager	Subcontractor environmental documentation
8.5 Changes to the scope of work are managed as a Project change	**Manage Changes/Variations** Changes and variations to subcontractor scopes of work will be assessed as a change according to the requirements of Element 5 of the EMP. Documentation will be amended accordingly.	**Commercial Manager** Engineers	Change Requests
8.6 Subcontractors actively participate in environmental management and training on the Project	**Subcontractor Environmental Participation** Subcontractors will participate in HSE communication forums and monitoring activities, as a minimum, including: ▪ Project induction; ▪ Scheduled HSE management meetings, toolbox talks, pre-start meetings, HSE committees (as required); ▪ HSE observations, inspections and audits; ▪ Incident investigations (as required); ▪ Development or review of safe work systems SEPs (as required).	**Commercial Manager** Project Environmental Representative Subcontractors Engineers	Attendance records Monitoring records

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Subcontractor Training Subcontractors will undergo all necessary environmental training including any required by the Project. The required training will be determined by reviewing the training matrix relative to the scope of work and roles being filled or supplied by the subcontractor. The delivery and management of training will be as per Element 7 of the EMP.	**Subcontractor** Project Environmental Representative	Subcontractor training records
8.7 Subcontractors are reviewed to assess their performance and compliance with our minimum environmental requirements.	**Subcontractor Audits and Reviews** Subcontractors will be regularly inspected and observed for environmental performance as per Element 3.4 of this EMP.	**Project Environmental Representative** Engineers Supervisors	Audit reports Inspection and monitoring records

Element 9: Incident Management

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
9.1 All incidents are followed by appropriate response and notification	**Incident Response** The immediate response to all incidents is to make the area safe and undertake measures to prevent further environmental harm. An assessment will be made in consultation with the Project Environmental Representative to ensure that responses do not result in further harm. **Initial Incident Notification** The Project Manager and Project Environmental Representative are to be notified immediately of the following incidents: All Level 1 and Level 2 environmental incidents, and PL1 and PL2. The Project Environmental Representative is also to be notified of any actual Class 3 environmental incident, procedural or legal breach. For Level 1 and Level 2 incidents and PL1 and PL2, the Project Manager will immediately notify the Business Unit General Manager and the Business Unit Environment Manager. The Project Manager will also notify the Business Unit General Manager of the need to activate the Project's Emergency Response Procedure and the Group Crisis Management Plan if necessary. The Client is notified of all environmental incidents as per the agreed contractual arrangements. Environmental incidents will be reported to regulators in accordance with the requirements of local, state and federal government regulations. **Preserve the Incident Scene** Scenes of environmental Level 1 and 2 incidents and PL1's are to be preserved until the incident investigation team has collected relevant data and evidence (see below).	**Project Manager** Project Environmental Representative Community & Stakeholder Manager Engineers Supervisors	Records of incident notifications
9.2 All incidents are entered and managed in Synergy	**Incident Classification and Reporting** Environmental incidents will be classified using the Incident Classification Matrix by the Project Environmental Representative in consultation with the Project Manager. All environmental incidents, including community complaints, will be reported using the Synergy within three calendar days. Root causes will be identified and recorded in Synergy for all Class 1, 2 incidents and HPIs (and optionally for Class 3 incidents). All statutory notices received from regulators, including penalty notices and fines, will be entered as Environmental Legal Issue incidents upon receipt.	**Project Environmental Representative** Project Manager	Incident records Root cause coding
9.3 Incident investigations are conducted appropriate to the type of incident	**Project Incident Investigations** All incidents will be investigated according to company procedures. The level of investigation needed will depend on the incident classification. Corrective actions, including those required to help prevent future incident occurrences, are a key outcome of incident investigations.	**Project Manager** Project Environmental Representative Supervisors Engineers	Incident investigation reports

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
	Incident investigation reports are to be uploaded to Synergy. **Statutory Authority Investigations** Before any staff member is questioned by officers of a statutory authority they will endeavour to consult the Project Manager to determine whether Legal Counsel is needed. Regulatory inspectors must be given appropriate assistance during their own investigations.		
9.4 All personnel conducting incident investigations are trained to competently perform the task	**Incident Investigation Teams Competent and Trained** The selection of the investigation team will be up to the Project Manager and will depend upon the severity of the incident, and the availability of experienced personnel. However, the investigation team does need to have a mix of both Operational and HSE Staff. The following should be considered when selecting an investigation team: ▪ Statutory requirements; ▪ CPB Contractors Corporate requirements; ▪ Technical specialists with an understanding of the work process; ▪ Administrative Support; ▪ Mix of skills and experience; ▪ Potential conflict of interest for any proposed member.	**Project Manager**	
9.5 Corrective and preventive actions are taken after incidents and lessons are shared with other projects	**Corrective & Preventive Actions** Following an incident, corrective and preventive actions will be identified, assigned to the appropriate person/s and closed out according to set time frames. Time frames are set to ensure damage incurred is rectified and any chance of recurrence is eliminated as soon as practicable. Synergy will be used to assign and track corrective actions. All corrective actions will include reference to the relevant incident record for ease of tracking.	**Project Manager** Project Environmental Representative	Corrective action records on Synergy
	HSE Alerts HSE Alerts will be submitted for all Class 1 and 2 incidents and HPIs to the Project Manager and Business Unit Environment Manager for distribution outside of the project team. HSE Alerts will also be raised for all other incident types at the discretion of the Project Environmental Representative, Project Manager or Business Unit Environment Manager.	**Project Environmental Representative** Project Manager	HSE Alerts
9.6 High potential and repeat incidents are regularly reviewed by the project management team	Each month the Project Environmental Representative will, as a minimum, identify trends in incidents (as a minimum, all Class 1 and 2 incidents and HPIs) and trends in root causes to suggest the nature of preventative actions which are warranted. The Project Manager will approve actions to address incident occurrences and incident and root cause trends. Actions will be managed using the Synergy.	**Project Environmental Representative** Project Manager	Monthly project reports Corrective actions

Element 10: Emergency Planning and Response

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
10.1 Potential emergencies are identified using a formal risk assessment process	**Identifying Potential Emergencies** Risk assessments conducted in accordance with Element 4 of the EMP are used to identify potential emergencies on the Project. Activities found to have an environmental consequence of 4 or 5 as per the definitions for environmental consequence contained within the CPB Contractors Risk Management Protocol will be considered potential emergencies.	**Project Manager** Project Environmental Representative	Environmental Risk Register Principal Risk Assessment
10.2 Emergency response plans and procedures are developed and regularly reviewed	**Emergency Response Plan** An Emergency Response Plan that addresses all identified potential environmental emergencies with specific emergency procedures for each different potential emergency will be developed. The plan will address or include the following: ▪ Nominated and trained emergency coordinator and emergency wardens ▪ Explanation of communications to be performed during an emergency ▪ Explanation of what a crisis is as compared to an emergency and what to do in the event of a crisis ▪ The details of emergency services contacts ▪ Emergency assembly locations ▪ A detailed location map showing the site in relation to local public roads ▪ A detailed site layout diagram ▪ Information about personnel and facilities available to help emergency services ▪ Specific emergency procedures for each potential emergency identified that aim to protect human health and environmental values, including assessment of resources required to respond to that emergency ▪ Post-emergency actions. The Emergency Response Plan will be updated at least annually or when there are significant changes to project activities or in response to revised and new risk assessments.	**Project Manager** Project Environmental Representative H&S Manager	Emergency Response Plan and procedures
10.3 Adequate resources are provided to effectively implement emergency response plans and procedures	**Emergency Response Plans Adequately Resourced** Resources required to implement the Emergency Response Plan will be available on the Project and be maintained. Necessary resources include but are not limited to: ▪ An emergency coordinator and emergency wardens; ▪ Spill response kits; ▪ Firefighting equipment; ▪ Barricading; ▪ Vehicles.	**Project Manager** Project Environmental Representative H&S Manager	Project resources for Emergency Response Plan and procedures

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
10.4 Environmental emergency response drills are conducted	**Environmental Emergency Response Drills** Environmental emergency response drills will be conducted at least every six months. The emergency scenario of the drills will be rotated to avoid repetition and be relevant to the activities occurring at the time. Records will be kept of the results for all drills. Where testing and evaluation shows a deficiency in either emergency preparations or the Emergency Response Plan, appropriate corrective and preventive actions are taken and raised and managed using Synergy.	**Project Manager** Project Environmental Representative Health and Safety Manager	Emergency response drill records Corrective action records in Synergy
10.5 Employees, contractors and visitors are given appropriate emergency response training.	**Emergency Training** Emergency coordinators and wardens are trained to implement the emergency response plans. Specific training requirements will be identified and captured within the training matrix and will be delivered according to company procedures. Visitors are informed of requirements during the visitors' induction. **General Workforce Training and Awareness** All personnel and subcontractors will receive training to inform them of their roles and responsibilities in the event of an emergency. This training and awareness will be provided during Project induction.	**P&C Manager** Project Environmental Representative Health and Safety Manager	Training matrix Training schedule Training and induction records

Element 11: Document and Record Management

Expectations	How we will meet the Expectations (minimum requirements)	Responsibilities Key Contributor	Deliverables
11.1 Current versions of all relevant documents and records are available and controlled.	The Project must ensure that all documents and records referred to and required to implement the EMP, including the plan are controlled and maintained according to CPB Contractors requirements. This includes but is not limited to all: ▪ Management plans & Procedures ▪ Knowledge and Tools ▪ Templates (e.g. audit template, training matrix) ▪ All electronic records saved in electronic databases such as Synergy, ChemAlert etc. **Document Types** The types of records to be generated on the Project that are to be stored and maintained include: ▪ Environmental monitoring results - 30 years from the date of any incident or completion of the Project, whichever is later ▪ Complaints and enquiries received - 7 years from completion of the Project ▪ Notifications received by regulators - 30 years after the completion of the project ▪ Audit reports - 7 years from completion of the Project ▪ Completed inspections and observations - 30 years from the creation of the record ▪ Waste tracking certificates - 7 years from the creation of the record ▪ Training records - 7 years from the end of the employee's employment ▪ Incident reports - 30 years from the creation of the record ▪ Calibration records for monitoring equipment ▪ Monthly reports and Meeting minutes - 7 years from completion of the Project or from the date on which work was last performed on the Project ▪ Records as required under the National Greenhouse and Energy Reporting Act 2007 - 7 years from the creation of the record ▪ HSE Alerts Any editing and access restrictions to environmental documents and records and who has authority to dispose of nominated documents and records comprise: ▪ Project Environmental Representative to authorise the disposal of any environmental documents or records.	**Project Environmental Representative** Project Manager	Controlled and maintained documents and records
11.2 Relevant documents and records will be maintained using corporate business applications and systems	Relevant environmental documents and records generated on the Project will be stored and managed using Incite with the following exceptions: ▪ Environmental monitoring data will be managed and stored using the Project drive ▪ Whole of CPB Contractors environmental performance data will be managed and stored in JDE, including Water, Waste and Energy and Greenhouse Gases ▪ Incident reports and corrective actions will be stored and managed using Synergy ▪ Risk registers will be retained in excel spreadsheet.	**Project Manager**	Controlled and maintained documents and records

Element 12: Auditing, Review and Improvement

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
12.1 Environmental performance trends are identified and corrective actions are implemented as required	**Performance Trends** Environmental performance will be reviewed and reported at least monthly to identify trends. Performance will be assessed against both lead and lag measures and relative to specific targets agreed as per Expectation 1.3 of the EMP, and in the sub plans in Part C. Action plans will be developed to improve performance as required, corrective and preventative actions will be managed using the Synergy – Action Plan Module.	**Project Manager** Project Environmental Representative	Monthly reports Corrective & Preventative actions in Synergy – Action Plan Module
12.2 A monthly environmental report is produced and distributed	**Monthly Reporting** A monthly environment report will be prepared for the Project Manager for inclusion in the monthly project report. This report will include the following: ▪ Analysis of performance against project, business unit and corporate environmental targets as per Section 3 Part A of this EMP ▪ Analysis of performance against targets set in the Environmental Sub Plans, including monitoring results ▪ Details of each environmental incident on the project for that period including actions taken and outstanding ▪ Confirmation that the EMP is compliant with the CPB Contractors EMS by referring to the number and results of inspections, audits, observations and monitoring ▪ Confirmation that the NGER procedure has been implemented during the month ▪ Any environmental innovations implemented on the project	**Project Environmental Representative**	Monthly environment report
	The Monthly HSE Statistical Report in Synergy will be completed and approved by the Project Manager. This includes reporting on the currency of the EMP, compliance with the EMP and issues and initiatives arising during the period	**Project Manager**	Monthly HSE Statistical Report
12.3 Regular management reviews are conducted to determine the continuing suitability, adequacy and effectiveness of the Environmental Management System	The Project must conduct formal management reviews to assess the adequacy of the Environmental Management System as part of its annual management system reviews. The outputs of the review will be incorporated into the EMP. That review must take into account the results of: ▪ Audits undertaken; ▪ Communication, participation and consultation; ▪ Relevant communication including complaints from external stakeholders; ▪ The perform of the Project; ▪ The extent to which the objectives and targets have been met; ▪ The outcomes of incident investigations and any corrective actions; ▪ Changes to legislation; ▪ Actions from previous management reviews and recommendations for improvement.	**Project Manager** Project Leadership Group Project Environmental Representative	Management review report Actions in Synergy

Expectations	How we will meet the Expectations (minimum requirements)	Responsible Key Contributor	Deliverables
12.4 Audits are undertaken to ensure compliance with the requirements of the EMP	**Compliance with Environmental Management Plan** Regular audits and reviews will be conducted to confirm compliance with the EMP and associated Obligations. A schedule of audits and reviews will be developed and maintained, and may include: Project planning/Start Up reviews (conducted by Business Unit HSE Manager or delegate) ▪ Project mobilisation audits (conducted by Business Unit HSE Manager or delegate) ▪ Subcontractor audits (for subcontractors performing high risk activities) ▪ High-risk activity audits ▪ Environmental Management Plan audits (conducted by Business Unit Environment Manager or delegate) ▪ Compliance and Legislative audits (conducted by BUEM or competent 3rd party). Action plans will be developed to improve performance as required. Necessary corrective actions will be managed using Synergy. **Compliance with Development Consent Conditions for Approval SSD 10376** Independent Environmental Auditing must be carried out in accordance with the Independent Audit Post Approval Requirements (2020) and Condition of Approval A28 to A33 of SSD 10376.	**Project Manager** Business Unit Environmental Management Representative Business Unit HSE Manager	Audit reports Corrective actions in Synergy Independent Audit Reports
12.5 All audits are undertaken by suitably qualified and experienced personnel	**Auditor Competency** Persons conducting audits and reviews will be suitably experienced and qualified. There are two levels of internal auditor that can be obtained, these being Auditor and Lead Auditor. A mix of general education, specific auditor training and work experience are considered in determining the level of auditor. Auditors must be approved by the Business Unit Environment Manager.	**Business Unit Environmental Management Representative**	Training records

Part C: Sub Plans

1. Soil & Water Management Sub Plan

1.1 Scope

This Plan addresses the use of water on the project and the management of impacts to water quality and/or quantity that may be caused by Project activities and that have the potential to adversely affect water availability, the environment and/or community.

Activities conducted on the project that has the potential to impact water quality and/or quantity is provided below.

Table 1.1 Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Concreting	Discharge of contaminated water	Water quality negatively impacted
Storage and use of flammable and combustible liquids and solids	Spills	Water quality negatively impacted
Dust suppression	Use of water	Unnecessary load on water resources contributing to resource availability
Dewatering	Discharge of contaminated water	Water quality negatively impacted

[Project to insert contextual information relating to water quality and quantity on the project. This to include a description of the pre-existing conditions influencing water quality and quantity, etc. Refer to the project Environmental Impact Statement (or equivalent) and contract for relevant information]

1.2 Project Compliance Requirements

1.2.1 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of water quality include:

Table 1.2 Project environmental approvals

Environmental Approval Document Reference	Relevant Condition	Compliance Requirement
SSD 10376	B55	Prior to the issue of the relevant Construction Certificate, the Applicant shall: (a) amend, or prepare an addendum to, the Construction Waste Management Sub-Plan (CWMP) applicable to the CSSI station works (CSSI 7400) to apply to the development. The amended CWMP must be submitted to the Planning Secretary and Certifying Authority, or (b) prepare a Construction Waste Management Sub-Plan (CWMP) for the development, independent of the CWMP approved with the CSSI station works. A copy of the CWMP must be submitted to the Planning Secretary and Certifying Authority. The Sub-Plan must include, as a minimum, the following elements: (i) require that all waste generated during the project is assessed, classified and managed in accordance with the EPA's "Waste Classification Guidelines Part 1: Classifying Waste"; (ii) demonstrate that an appropriate area will be provided for the storage of bins and recycling containers and all waste and recyclable material generated by the works; (iii) procedures for minimising the movement of waste material around the site and double handling;

Environmental Approval Document Reference	Relevant Condition	Compliance Requirement
		(iv) waste (including litter, debris or other matter) is not caused or permitted to enter the waters of Sydney Harbour; (v) any vehicle used to transport waste or excavation spoil from the site is covered before leaving the premises; (vi) the wheels of any vehicle, trailer or mobilised plant leaving the site and cleaned of debris prior to leaving the premises; (vii) details in relation to the transport of waste material around the site (on-site) and from the site, including (at a minimum): • a traffic plan showing transport routes within the site; • a commitment to retain waste transport details for the life of the project to demonstrate compliance with the Protection of the Environment Operations Act 1997; and •the name and address of each licensed facility that will receive waste from the site (if appropriate).
	D16	The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.
	D17	During construction, the Applicant must ensure that: (a) exposed surfaces and stockpiles are suppressed by regular watering; (b) all trucks entering or leaving the site with loads have their loads covered; (c) trucks associated with the development do not track dirt onto the public road network; (d) public roads used by these trucks are kept clean; and (e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.

1.3 Project Objectives

Based on the requirements defined at Section 1.1.2 (above), the findings of project risk management processes and the potential impacts to the community, the following objectives have been set for managing water quality on the project. Any deviance from the targets will result in Project Management immediately implementing corrective actions:

Table 1.3 Water Objectives

Metric/Measure	Objective	Timeframe	Accountability
Number of non-compliant monitoring results at authorised discharge points and external compliance points	Zero	At all times	Project Manager
Number of enforcement notices / penalties issued by regulators and/or client	Zero	At all times	Project Manager
Water efficiency initiatives identified	<X> initiatives	At all times	
Water use monitored	100% of water use activities metered	At all times	

1.4 Controls Used to Manage Water Quality

Controls that are adequate to minimise water use, to ensure compliance, and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 1.4: Water quality controls

Control	Accountability
CPB shall keep the Site and the Works clean and tidy including all access roads;	Site Manager
Erosion and sediment controls must be designed, developed and implemented in consultation with the construction team and project environmental representative	Project Environmental Representative
Clean water diversions must be installed prior to the commencement of work.	Site Manager
A wash-down area and exit pad are to be provided at the exit point from the construction site to avoid sediment being tracked off the site. All areas used by vehicles are to be adequately drained	Site Manager
Erosion and sediment controls in accordance with Appendix F must be installed prior to or immediately upon any disturbance to vegetation or soil. These controls must remain in place until revegetation, stabilisation or hard scaping has occurred. If these controls require maintenance notify your supervisor. Ensure all works within proximity to storm water drainage have adequate sediment controls that are inspected regularly.	Site Manager/ Supervisors
The body of any vehicle or trailer used to transport excavation spoil must be covered before leaving the premises to prevent any spillage or escape of any dust, waste of spoil.	Supervisors
Cleared areas must be kept to a minimum and be progressively rehabilitated/revegetated as they become available.	Site Manager
All materials must be stockpiled away from water flow paths and sediment fences installed downstream.	Site Manager
Sediment laden water (dirty water) captured onsite must be preferentially reused e.g. dust control.	Site Manager
If dewatering is required during construction, the water would be tested (and treated if necessary) prior to re-use, discharge or disposal. Water discharged from site is in strict accordance with the site's dewatering procedure. No transfer/discharge will be made without a Permit To Dewater approved by the project environmental representative. Dewatering to grassed areas is the preferred method for water discharge. No discharge permitted to storm water system..	Site Manager
An adequate number of concrete washout facilities must be maintained at all times. The washout facilities will be isolated from surface water flows using bunds to prevent contamination of clean surface waters and will be lined to prevent contamination of soil and ground water	Site Manager
All hazardous substances (liquids and solids) are stored and managed according to AS1940.	Site Manager
All refueling points, including refueling trucks, will carry hydrocarbon spill kits.	Site Manager
The quantity of water consumed on the project are reported monthly in Synergy	Project Environmental Representative
Opportunities to minimise the use of high quality water will be continually sought and adopted as appropriate.	Site Manager
Water treatment plants used are designed and constructed by a competent person and to meet the quantity and quality of water predicted to require treatment. The quantity and quality prediction is based on the outcomes of a model that is provided by a suitably qualified person	Project Environmental Representative

Control	Accountability
Water treatment plants are subject to scheduled routine maintenance that as a minimum complies with the requirements of the supplier. Records of water quality discharged through the treatment plants must be retained by the [Water Treatment Plant Operator].	Project Environmental Representative
The quantity of water consumed on the project from each of the following sources are reported monthly: ▪ Potable water, ▪ Water obtained under an extraction license or other regulatory authority, ▪ Recycled water sourced from outside the project. [Excludes water from marine environments and water harvested from within the boundary of the project].	Project Environmental Representative

1.5 Stormwater management

All stormwater from the development and during construction ultimately travels to the nearby stormwater system. Diversion of upslope water shall be carried out where possible. No discharges are to occur without a signed Permit to Dewater and are to be supervised at all times. Where water is pumped into a holding tank it may require flocculation and/or pH correction to hasten the treatment process. Prior to discharge the water must be sampled and tested for the requirements in Table 1.5 Water discharge criteria.

Table 1.5: Water discharge criteria

Parameter	Criteria	Sampling Frequency	Method
pH (units)	**6.5 – 8.5**	<1 hour Prior to discharge to stormwater	Site Probe
Total Suspended Solids (NTUI– mg/L)	**<50**	Prior to discharge to stormwater	Site Probe
Oil and Grease	**No visible oil or odour**	<1 hour Prior to discharge to receiving waterway	Visual and olfactory observation

1.6 Monitoring

The quantity of water used from potable supplies or recycled water obtained from outside the project, will be captured and reported in Synergy.

Water quality monitoring based on the discharge criteria in Table 1.5 will be performed prior to issue of a Permit To Discharge and if so requested by the Project Manager, to identify potential non-compliances before they occur.

The project will use turbidity (NTU) in place of TSS to determine compliance with the Total Suspended Solids criteria. CPB have developed a statistical correlation which identified the relationship between NTU and TSS for water quality in the sediment basins and excavations of the station works confirming a 53 mg/L NTU equivalent of 50 mg/L TSS.

Where monitoring determines non-compliance to be a risk or to have occurred, an incident report and corrective actions are raised in the HSE Reporting System.

Monitoring and analysis of data will be carried out by a competent person.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements.

Meteorological monitoring to allow the forecasting of rainfall will be reviewed daily at:

http://www.bom.gov.au/nsw/forecasts/

1.7 References

Appendix F Erosion and Sediment Controls and Site Environmental Plan

Soils and Construction 4th Ed (March 2004) – Managing Urban Stormwater: https://www.environment.nsw.gov.au/resources/water/BlueBookVol1.pdf

2. Flora & Fauna Management Sub Plan

2.1 Scope

This Plan addresses Flora & Fauna management on the project and the management of impacts to the environment and/or community.

Activities conducted on the project that has the potential to impact flora and fauna is provided below. These have been extracted from project risk assessments.

Table 2.1 Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
General construction works	Birds nesting	Harm to nesting birds

2.2 Project Compliance Requirements

2.2.1 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of Flora & Fauna include:

Table 2.2 Project Environmental Approvals4

Environmental Approval Document Reference	Relevant Condition	Limit/Requirement
SSD 10376	B57	Prior to the issue of the relevant construction certificate, the Applicant must prepare a detailed Landscape Plan, to the satisfaction of the Certifier. The plan must be consistent with the Landscape Plans prepared by Sue Barnsley Design, dated 28 August 2020 and include: (a) details of tree planting, including pot sizes; (b) detail the location, species, maturity and height at maturity of plants to be planted on-site; (c) demonstrate soil depth and volumes to support the proposed plantings consistent with the requirements of the ADG; (d) demonstrate adequate drainage and watering systems for the planters, (e) include details of plant maintenance and watering for the first 12 months and (f) commit to replace plants with the same species should any plant loss occur within the maintenance period

2.3 Project Objectives

Based on the requirements defined at Section 1.1.2 (above), the findings of project risk management processes and the potential impacts to the community, the following targets have been set. Any deviance from the targets will result in Project Management immediately implementing corrective actions:

Table 2.3 KPI's

Metric/Measure	Objective	Timeframe	Accountability
Number of native fauna injured	Zero	At all times	Project Manager

2.4 Controls Used to Manage Flora & Fauna

Controls that are adequate to manage flora & fauna risks and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is

the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 2.4 Controls to manage flora and fauna

Control	Accountability
If a threat to an animal is evident onsite you must contact your supervisor and/or EMR Project Environmental Representative immediately. Works may need to cease if the animal is in danger or harmed until it has been relocated.	Site Manager
Where possible revegetation activities will preferentially use only species that are indigenous to the area	Site Manager

2.5 Monitoring

No additional monitoring is required for flora and fauna in addition to the weekly environmental inspections.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements.

3. Noise & Vibration Management Sub Plan

3.1 Scope

Renzo Tonin & Associates was engaged to prepare a site specific Construction Noise and Vibration Management Sub-Plan (CNVMSP) and assess potential noise and vibration impacts associated with the demolition, excavation and construction phase of the proposed Pitt Street Metro Station Over Station Development South project.

The purpose of this CNVMP is to address condition of consent B51(b).

This plan identifies potentially noisy activities, their impacts on surrounding receivers and outlines management strategies to control the impacts of noise and vibration during the works.

The expected construction noise levels have been predicted and presented in Section 3.6.2. Noise mitigation and management measures have been presented in Section 3.6.3 to aid in providing additional noise reduction benefits where exceedance of the objective occurs.

Vibration impacts and management measures have been presented in Section 3.7 to aid in minimising any potential vibration impacts.

Noise sensitive development in the vicinity of the site are summarised below.

Table 3.1: Summary of nearest sensitive receivers

Receiver ID	Receiver type	Heritage Item?	Address
South site			
Receiver R1	Residential	No	304-308 Pitt Street (Princeton Apartments)
Receiver R2a	Hotel	No	339 Pitt Street (Primus Hotel)
Receiver R2b	Residential		115 Bathurst Street (Greenland Tower)
Receiver R2c	Hotel		329 Pitt Street (Meriton Suites)
Receiver R3	Residential	No	133-139 Bathurst Street
Receiver C1	Commercial	Yes	211 & 217 Castlereagh Street (Fire and Rescue Building)
Receiver C2	Commercial	Yes	294 Pitt Street (Edinburgh Castle Hotel)
Receiver C3	Commercial	Yes	102-104 Bathurst Street
Receiver C4	Commercial/Special Use	No	South Site Station Box.

The site and adjacent noise receivers are indicated in the aerial photo below. Items of heritage significance are indicated with dashed lines.

Figure 5: Site Aerial Photo and Surrounding Noise Receivers



Activities conducted on the project that has the potential to create noise and vibration issues are provided below.

Table 3.2 Works summary5

Stage	Description	Equipment Items
Structural Works	Scaffolding, Formwork, Concrete Pouring, Vibrating and Finishing	Hand Tools, Concrete Truck, Vibrator and Helicopter Float, Tower Crane
External Works	Façade Works, Landscaping	Hand tools, bobcat, Tower Crane + Mobile Crane.
Internal Works	HVAC installation, joinery installation, finishes installation.	Hand Tools, Tower Crane
Deliveries	Material deliveries via work zones.	Truck, Tower Crane
Tower Crane Removal	Dismantling and Removal of Toer Crane	Mobile Crane

The worksite will generate additional traffic movements in the form of:

- Light vehicle movements generated by construction personnel travelling to and from work
- Heavy vehicle movements generated by:
    - Delivery vehicles bringing raw materials, plant, and equipment to the site.
    - Concrete trucks bringing concrete to the site.

During erection of structure, workzones (concrete trucks/deliveries) will be located on Pitt and Bathurst Street (refer to Appendix F).

3.2 Project Compliance Requirements

3.2.1 Conditions of Project Environmental Approvals

This CNVMSP aims to satisfy the requirement of SSD 10376D/2018/1128 and in relation to Condition B51 have provided this Sub-Plan independent of the CNVMP approved with the CSSI station works.

CONSTRUCTION NOISE AND VIBRATION MANAGEMENT SUB-PLAN

B51. Prior to the issue of the relevant Construction Certificate, the Applicant shall:

(a) amend, or prepare an addendum to, the Construction Noise and Vibration Management Sub-Plan (CNVMP) applicable to the CSSI approval (CSSI 7400) to apply to the development. The amended CNVMP must be submitted to the Planning Secretary and Certifying Authority, or

(b) prepare and implement a Construction Noise and Vibration Management Sub-Plan (CNVMP) for the development, independent of the CNVMP approved with the CSSI station works. A copy of the CNVMP must be submitted to the Planning Secretary and Certifying Authority. The Sub-Plan must include:

Conditions of project environmental approvals that specifically address the management of noise and vibration include:

Table 3.3 Project environmental approvals

Environmental Approval Document Reference	Relevant Condition	Limit/Requirement
SSD 10376	B51(b)	(i) identification of the specific activities that will be carried out and associated noise sources at the premises;
		(ii) identification of all potentially affected sensitive residential receiver locations;
		(iii) quantification of the rating background noise level (RBL) for sensitive receivers, as part of the Sub-Plan, or as undertaken in the EIS;
		(iv) the construction noise, ground-borne noise and vibration objectives derived (as relevant) from an application of the EPA Interim Construction Noise Guideline (ICNG) and the City of Sydney Code of Practice: Construction Hours and Noise within the Central Business District, as reflected in conditions of approval;
		(v) prediction and assessment of potential noise, ground-borne noise (as relevant) and vibration levels from the proposed construction methods expected at sensitive receiver premises against the objectives identified in the ICNG, the City of Sydney Code of Practice: Construction Hours and Noise within the Central Business District, and conditions of approval;
		(vi) where objectives are predicted to be exceeded, an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise and vibration impacts;
		(vii) description of management methods and procedures, and specific noise mitigation treatments/measures that can be implemented to control noise and vibration during construction;
		(viii) where objectives cannot be met, additional measures including, but not necessarily limited to, the following should be considered and implemented where practicable; reduce hours of construction, the provision of respite from noise/vibration intensive activities, acoustic barriers/enclosures, alternative excavation methods or other negotiated outcomes with the affected community;
		(ix) where night-time noise management levels cannot be satisfied, a report shall be submitted to the Planning Secretary outlining the mitigation measures applied, the noise levels achieved and justification that the outcome is consistent with best practice;
		(x) measures to identify non-conformances with the requirements of the Sub-Plan, and procedures to implement corrective and preventative action;

Environmental Approval Document Reference	Relevant Condition	Limit/Requirement
		(xi) suitable contractual arrangements to ensure that all site personnel, including sub-contractors, are required to adhere to the noise management provisions in the Sub-Plan;
		(xii) procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity;
		(xiii) measures to monitor noise performance and respond to complaints;
		(xiv) measures to reduce noise related impacts associated with offsite vehicle movements on nearby access and egress routes from the site;
		(xv) procedures to allow for regular professional acoustic input to construction activities and planning;
		(xvi) effective site induction, and ongoing training and awareness measures for personnel (e.g. toolbox talks, meetings etc).
	D3	Construction, including the delivery of materials to and from the site, may only be carried out between the following hours: (a) between 7am and 6pm, Mondays to Fridays inclusive; and b) between 8am and 5pm, Saturdays; and c) between 7am to 8am, Saturdays for • site set-up for concrete works • internal fit-out works • material deliveries from work zones • tower crane and hoist operations; and d) between 6pm and 10pm, Mondays to Fridays for: • internal fit-out works • material deliveries from work zones up until 7pm hoist operations.
	D4	No work may be carried out on Sundays or public holidays.
	D5	Activities may be undertaken outside of these hours if required: (a) by the Police or a public authority for the delivery of vehicles, plant or materials; or (b)in an emergency to avoid the loss of life, damage to property or to prevent environmental harm.
	D6	Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards
	D7	Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours: (a) 9am to 12pm, Monday to Friday; (b) 2 pm to 5pm Monday to Friday; and (c) 9am to 12pm, Saturday.
	D8	To protect the safety of work personnel and the public, the work site must be adequately secured to prevent access by unauthorised personnel, and work must be conducted at all times in accordance with relevant SafeWork requirements.

Environmental Approval Document Reference	Relevant Condition	Limit/Requirement
	D9	The Applicant must ensure the requirements of the Construction Environmental Management Plan, Construction Pedestrian Traffic Management Plan, Construction Noise and Vibration Management Sub-Plan, Air Quality Management Plan and Construction Waste Management Plan required by Part B of this consent are implemented during construction.
	D10	The development must be constructed to achieve the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures identified in the approved CNVMP.
	D11	The Applicant must ensure construction vehicles (including concrete agitator trucks) do not arrive at the subject site or surrounding areas outside of the construction hours of work outlined under condition D3.
	D12	The Applicant must implement, where practicable and without compromising the safety of construction staff or members of the public, the use audible movement alarms of a type that would minimise noise impacts on surrounding noise sensitive receivers.
	D13	The Applicant must ensure that any work generating high noise impact (i.e. work exceeding a NML of LAeq 75dBA) as measured at the sensitive receiver must only be undertaken in continuous blocks of no more than 3 hours, with at least a 1 hour respite between each block of work generating high noise impact, where the location of the work is likely to impact the same receivers. For the purposes of this condition 'continuous' includes any period during which there is less than one hour respite between ceasing and recommencing any of the work the subject of this condition.
	D14	Any noise generated during construction of the development must not be offensive noise within the meaning of the Protection of the Environment Operations Act 1997 or exceed approved noise limits for the site.
	D15	Vibration caused by construction at any residence or structure outside the Site must be limited to: (a)f or structural damage, the latest version of DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures (German Institute for Standardisation, 1999); (b)f or human exposure to vibration, the evaluation criteria set out in the Environmental Noise Management Assessing Vibration: a Technical Guideline (Department of Environment and Conservation, 2006) (as may be updated or replaced from time to time); (c)vibratory compactors must not be used closer than 30 metres from residential or heritage buildings unless vibration monitoring confirms compliance with the vibration criteria specified above; and (d)these limits apply unless otherwise outlined in the amended CNVMP applicable to the CSSI approval (CSSI 7400) or the project specific CNVMP required by condition B51.

3.3 Approved Hours of Construction

3.3.1 Standard Hours of Work

Construction hours are regulated by conditions of consent D3-7, as detailed below.

D3. Construction, including the delivery of materials to and from the site, may only be carried out between the following hours:

(a) between 7am and 6pm, Mondays to Fridays inclusive;

(b) between 8am and 5pm, Saturdays; and

(c) between 7am to 8am, Saturdays for

- site set-up for concrete works
- internal fit-out works
- material deliveries from work zones
- tower crane and hoist operations; and

(d) between 6pm and 10pm, Mondays to Fridays for:

- internal fit-out works
- material deliveries from work zones up until 7pm
- hoist operations.

D4. No work may be carried out on Sundays or public holidays.

D5. Activities may be undertaken outside of these hours if required:

(a) by the Police or a public authority for the delivery of vehicles, plant or materials; or
(b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm.

D6. Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards.

D7. Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours:

(a) 9am to 12pm, Monday to Friday;
(b) 2pm to 5pm Monday to Friday; and
9am to 12pm, Saturday

3.3.2 Outside Standard Hours Work

Outside of hours works are not typically permitted or proposed (refer to condition D5).

The only outside of hours works currently proposed are materials deliveries and crane removal, permitted pursuant to condition D5(a).

3.4 Background Noise Levels

Background noise levels obtained for the EIS stage and Tunneling Station Excavation are between 2 and 10 years old. Renzo Tonin has been conducting on-going noise logging at the site since December 2020. It is appropriate that the noise levels measured from this more recent noise logging be used when determining noise emission goals/noise management levels for the project.

A summary of historical and current ambient noise conditions is presented below.

Table 3.4: Ambient Noise Survey Results – South Site

Logger Location	Use for	Measured Noise Level		
		Day[1]	Evening[2]	Night[3]
*302 - 306 Pitt Street**	*TSE Noise survey (2018 survey)*	*63dB(A)$L_{eq(15min)}$*	*60dB(A)$L_{eq(15min)}$*	*57dB(A)$L_{eq(15min)}$*
		59dB(A)L_{90}	*57dB(A)L_{90}*	*53dB(A)L_{90}*
Pitt Street Metro – South Site (Bathurst Street frontage)	2020 Ambient Noise Survey (10 to 17 December 2020)	71dB(A)$L_{eq(15min)}$	68dB(A)$L_{eq(15min)}$	67dB(A)$L_{eq(15min)}$
		65dB(A)L_{90}	63dB(A)L_{90}	59dB(A)L_{90}
		72dB(A)$L_{eq(15min)}$	67dB(A)$L_{eq(15min)}$	65dB(A)$L_{eq(15min)}$

Logger Location	Use for	Measured Noise Level		
		Day[1]	Evening[2]	Night[3]
Pitt Street Metro – South Site (Pitt Street frontage)	2020 Ambient Noise Survey (23/11 to 29/11 2020)	64dB(A)L_{90}	61dB(A)L_{90}	58dB(A)L_{90}

Notes:
1. Day represents the period from 7am to 6pm, Monday to Saturday and 8am to 6pm, Sunday & Public Holidays.
1. Evening represents the period from 6pm to 10pm, Monday to Sunday & Public Holidays
2. Night represents the period from 10pm to 7am, Monday to Saturday and 10pm to 8am, Sundays & Public Holidays
3. *The 2018 report is based on a noise survey conducted in 2015 (5-13 February) by a logger with microphone at Level 1 at 302-306 Pitt Street (now demolished). Logger was placed just over the street awning. The logger will have been partially screened from street noise (by the Street awning) and is over 5 years old. Current logging data better reflects current traffic conditions, development in the area and is obviously much more recent. For this reason, data gathered in the 2020/2021 period should be used when setting Nosie Management Levels.

3.5 Noise and Vibration Criteria

3.5.1 Hierarchy of Noise Controls

Condition B51(v) identifies the NSW *Interim Construction Noise Guideline* (ICNG, 2009) when setting construction noise goals.

Given the site is located within the City of Sydney CBD, amended condition B51(v) allows typical City of Sydney construction noise requirements to be adopted for the proposed Saturday afternoon periods.

Being a guideline developed specifically for construction work in the Sydney CBD, the City of Sydney Construction Noise Guideline is more appropriate when setting noise emission goals for this project. This is of particular relevance to Saturday afternoon works, which is considered as being within standard construction hours in the Sydney CBD guideline.

3.5.2 Construction noise criteria – City of Sydney Council *Code of Practice: Construction Hours and Noise in the City Centre*

The City of Sydney also has a Construction Noise Code which sets out noise goals specific to the Central Business District. It is noted that the standard time periods, noise targets and noise descriptors differ from the ICNG. A summary of the noise criteria is set out below (time periods relevant to the amended standard hours assessment in **bold**).

Table 3.5: Summary of City of Sydney Noise Criteria

Category	Time Period	Permissible Noise Level [dB(A)] $L_{A(Av\ Max)}$
Mondays To Fridays		
4	00:00 to 07:00	Background + 0
1	07:00 to 08:00	Background + 5
1	**08:00 to 19:00**	**Background + 5 + 5 to be determined on a site basis**
2	**19:00 to 23:00**	**Background + 3**
4	23:00 to 24:00	Background + 0
Saturdays		
4	00:00 to 07:00	Background + 0
1	**07:00 to 08:00**	**Background + 5**
1	**08:00 to 17:00**	**Background + 5 + 5 to be determined on a site basis**
2	17:00 to 23:00	Background + 3

Category	Time Period	Permissible Noise Level [dB(A)] $L_{A(Av\ Max)}$
4	23:00 to 24:00	Background + 0
Sundays & Public Holidays		
4	00:00 to 07:00	Background + 0
3	07:00 to 17:00	Background + 3
4	17:00 to 24:00	Background + 0

3.5.3 Construction noise criteria – EPA ICNG

The NSW EPA *Interim Construction Noise Guideline* (ICNG, 2009) provides guidelines for assessing noise generated during the construction phase of developments.

The key components of the guideline that are incorporated into this assessment include:

- Use of L_{Aeq} as the descriptor for measuring and assessing construction noise.
- Application of reasonable and feasible noise mitigation measures
- As stated in the ICNG, a noise mitigation measure is feasible if it is capable of being put into practice, and is practical to build given the project constraints.
- Selecting reasonable mitigation measures from those that are feasible involves making a judgement to determine whether the overall noise benefit outweighs the overall social, economic and environmental effects.

Table 3.6 reproduced from the ICNG, sets out the noise management levels and how they are to be applied for residential receivers.

Table 3.6: Noise management levels at residential receivers

Time of day	Management level $L_{Aeq\ (15\ min)}$ *	How to apply
Recommended standard hours: Monday to Friday 7 am to 6 pm Saturday 8 am to 1 pm No work on Sundays or public holidays	Noise affected RBL + 10dB	The noise affected level represents the point above which there may be some community reaction to noise. Where the predicted or measured LAeq (15 min) is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly noise affected 75dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise. Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: • times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or mid-morning or mid-afternoon for works near residences • if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.

Time of day	Management level $L_{Aeq\ (15\ min)}$ *	How to apply
Outside recommended standard hours	Noise affected RBL + 5dB	A strong justification would typically be required for works outside the recommended standard hours. The proponent should apply all feasible and reasonable work practices to meet the noise affected level. Where all feasible and reasonable practices have been applied and noise is more than 5dB(A) above the noise affected level, the proponent should negotiate with the community. For guidance on negotiating agreements see section 7.2.2 *[of the ICNG.*

* Noise levels apply at the property boundary that is most exposed to construction noise, and at a height of 1.5 m above ground level. If the property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most noise-affected point within 30 m of the residence. Noise levels may be higher at upper floors of the noise affected residence.

The table below sets out the ICNG noise management levels for other noise relevant receiver locations.

Table 3.7: Noise management levels at other noise sensitive land uses

Land use	Where objective applies	Management level $L_{Aeq\ (15\ min)}$
Classrooms at schools and other educational institutions	Internal noise level	45 dB(A)
Hospital wards and operating theatres	Internal noise level	45 dB(A)
Places of worship	Internal noise level	45 dB(A)
Active recreation areas	External noise level	65 dB(A)
Passive recreation areas	External noise level	60 dB(A)
Commercial premises	External noise level	70 dB(A)

Notes: Noise management levels apply when receiver areas are in use only.

3.5.4 Summary of Construction Noise Goals

The table below presents the construction noise management levels established for the nearest noise sensitive receivers based upon the long-term monitoring outlined in Section 3.9.

The noise goals during the proposed extended hours periods are shown in **bold**.

Table 3.8: Construction noise management levels at receivers1, 2

Receiver type	Time of Day[2]	Noise Management Level	Sleep Disturbance
Residential	Day (Standard – 7am-6pm)	74dB(A)$L_{eq(15min)}$ 75dB(A)$L_{eq(15min)}$ – Highly Noise Affected Threshold	N/A
	Day (Outside of Standard Hours – Saturday Morning/Afternoon)	**69dB(A)$L_{eq(15min)}$ (ICNG)** **74dB(A)$L_{(AvMax)}$ (C of S)**	**N/A**
	Evening (OOH)	**66dB(A)$L_{eq(15min)}$ (ICNG)** **64dB(A)$L_{(AvMax)}$ (C of S)**	**N/A**
	Night (OOH) (after 10pm)	63dB(A)$L_{eq(15min)}$	73dB(A)Lmax
Commercial	When in use	70dB(A)$L_{eq(15min)}$	N/A

1. Noise levels apply at the property boundary that is most exposed to construction noise, and at a height of 1.5m above ground level unless stated otherwise.

2. Noise management levels apply when receiver areas are in use only.
3. Not applicable under Covid-19 extended construction hours direction.

As per the EPA *Interim Construction Noise Guidelines*, a quantitative assessment is required if the works are proposed to extend for more than two consecutive nights.

3.5.5 Sleep Disturbance – Night Time Works

In addition, for assistance, a commonly adopted noise goal in the assessment of sleep disturbance is a "Background +15" test (as per the EPA Noise Policy for Industry). Although not strictly a requirement under the conditions of consent or the EIS, if this test was applied, the outcome will be as follows:

Table 3.9:Sleep Disturbance Criteria (10pm-7am) – Noise Policy for Industry (Guidance Only)

Location	Background Noise Level	Sleep Disturbance Emergence Test (BG+15dB(A)L_{max})
Residential Receivers – South Site (R1, R2, R3)	58dB(A)L_{90}	73dB(A)L_{max}

As per the section 4.3 of the EPA *Interim Construction Noise Guidelines*, a quantitative assessment is required if the works are proposed to extend for more than two consecutive nights.

3.5.6 Construction vibration criteria

3.5.6.1 Disturbance to Buildings Occupants

Assessment of potential disturbance from vibration on human occupants of buildings is made in accordance with the EPA's '*Assessing Vibration; a technical guideline*' (DECC, 2006). The guideline provides criteria which are based on the British Standard BS 6472-1992 'Evaluation of human exposure to vibration in buildings (1-80Hz)'. Sources of vibration are defined as either 'Continuous', 'Impulsive' or 'Intermittent'. Table 3.10 provides definitions and examples of each type of vibration.

Table 3.10:Types of Vibration

Type of Vibration	Definition	Examples
Continuous vibration	Continues uninterrupted for a defined period (usually throughout the day-time and/or night-time)	Machinery, steady road traffic, continuous construction activity (such as tunnel boring machinery).
Impulsive vibration	A rapid build-up to a peak followed by a damped decay that may or may not involve several cycles of vibration (depending on frequency and damping). It can also consist of a sudden application of several cycles at approximately the same amplitude, providing that the duration is short, typically less than 2 seconds	Infrequent: Activities that create up to 3 distinct vibration events in an assessment period, e.g. occasional dropping of heavy equipment, occasional loading and unloading.
Intermittent vibration	Can be defined as interrupted periods of continuous or repeated periods of impulsive vibration that varies significantly in magnitude	Trains, nearby intermittent construction activity, passing heavy vehicles, forging machines, impact pile driving, jack hammers. Where the number of vibration events in an assessment period is three or fewer, this would be assessed against impulsive vibration criteria.

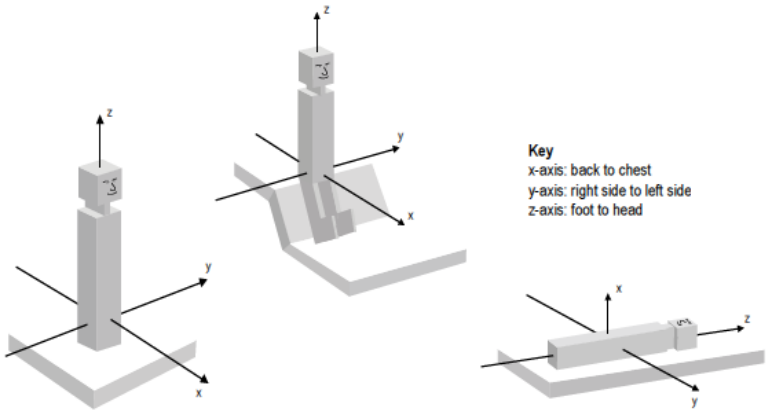
Source: Assessing Vibration; a technical guideline, Department of Environment & Climate Change, 2006

The vibration criteria are defined as a single weighted root mean square (rms) acceleration source level in each orthogonal axis. Section 2.3 of the guideline states:

'Evidence from research suggests that there are summation effects for vibrations at different frequencies. Therefore, for evaluation of vibration in relation to annoyance and comfort, overall weighted rms acceleration values of the vibration in each orthogonal axis are preferred (BS 6472).'

When applying the criteria, it is important to note that the three directional axes are referenced to the human body, i.e. x-axis (back to chest), y-axis (right side to left side) or z-axis (foot to head). Vibration may enter the body along different orthogonal axes and affect it in different ways. Therefore, application of the criteria requires consideration of the position of the people being assessed, as illustrated in Figure 6. For example, vibration measured in the horizontal plane is compared with x- and y-axis criteria if the concern is for people in an upright position, or with the y- and z- axis criteria if the concern is for people in the lateral position.

Figure 6: Orthogonal Axes for Human Exposure to Vibration



The preferred and maximum values for continuous and impulsive vibration are defined in Table 2.2 of the guideline and the locations applicable to receivers surrounding the site are reproduced in Table 3.11 below.

Table 3.11: Preferred and Maximum Levels for Human Comfort

Location	Assessment period[1]	Preferred values		Maximum values	
		z-axis	x- and y-axis	z-axis	x- and y-axis
Continuous vibration (weighted RMS acceleration, m/s^2, 1-80Hz)					
Critical areas[2]	Day- or night-time	0.005	0.0036	0.010	0.0072
Residences	Daytime	0.010	0.0071	0.020	0.014
	Night-time	0.007	0.005	0.014	0.010
Offices, schools, educational institutions and places of worship (Station Box)	Day- or night-time	0.020	0.014	0.040	0.028
Workshops	Day- or night-time	0.04	0.029	0.080	0.058
Impulsive vibration (weighted RMS acceleration, m/s^2, 1-80Hz)					
Critical areas[2]	Day- or night-time	0.005	0.0036	0.010	0.0072
Residences	Daytime	0.30	0.21	0.60	0.42
	Night-time	0.10	0.071	0.20	0.14
Offices, schools, educational institutions and places of worship '(Station Box)	Day- or night-time	0.64	0.46	1.28	0.92
Workshops	Day- or night-time	0.64	0.46	1.28	0.92

Location	Assessment period[1]	Preferred values		Maximum values	
		z-axis	x- and y-axis	z-axis	x- and y-axis

Notes:
1. Daytime is 7:00am to 10:00pm and night-time is 10:00pm to 7:00am
2. Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. There may be cases where sensitive equipment or delicate tasks require more stringent criteria than the human comfort criteria specify above. Stipulation of such criteria is outside the scope of their policy and other guidance documents (e.g. relevant standards) should be referred to. Source: BS 6472-1992

The acceptable vibration dose values (VDV) for intermittent vibration are defined in Table 2.4 of the guideline and the locations applicable to receivers surrounding the site are reproduced in Table 3.12.

Table 3.12:Acceptable Vibration Dose Values for Intermittent Vibration (m/s1.75)

Location	Daytime[1]		Night-time[1]	
	Preferred value	Maximum value	Preferred value	Maximum value
Critical areas[2]	0.10	0.20	0.10	0.20
Residences	0.20	0.40	0.13	0.26
Offices, schools, educational institutions and places of worship	0.40	0.80	0.40	0.80
Workshops	0.80	1.60	0.80	1.60

Notes:
1. Daytime is 7:00am to 10:00pm and night-time is 10:00pm to 7:00am
2. Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. These criteria are only indicative, and there may be a need to assess intermittent values against the continuous of impulsive criteria for critical areas.
Source: BS 6472-1992

3.5.6.2 Building Damage

Potential structural damage of buildings as a result of vibration is typically managed by ensuring vibration induced into the structure does not exceed certain limits and standards, such as British Standard 7385 Part 2 and German Standard DIN4150-3. Currently there is no existing Australian Standard for assessment of structural building damage caused by vibration energy.

Within British Standard 7385 Part 1: 1990, different levels of structural damage are defined:

- **Cosmetic** - *The formation of hairline cracks on drywall surfaces, or the growth of existing cracks in plaster or drywall surfaces; in addition, the formation of hairline cracks in mortar joints of brick/concrete block construction.*
- **Minor** - *The formation of large cracks or loosening of plaster or drywall surfaces, or cracks through bricks/concrete blocks.*
- **Major** - *Damage to structural elements of the building, cracks in supporting columns, loosening of joints, splaying of masonry cracks, etc.*

The vibration limits in Table 1 of British Standard 7385 Part 2 (1993) are for the protection against cosmetic damage, however guidance on limits for minor and major damage is provided in Section 7.4.2 of the Standard:

> *"7.4.2 Guide values for transient vibration relating to cosmetic damage*
>
> *Limits for transient vibration, above which cosmetic damage could occur are given numerically in Table 1 and graphically in Figure 1. In the lower frequency region where strains associated with a given vibration velocity magnitude are higher, the guide values for the building types corresponding to line 2 are reduced.*

Below a frequency of 4 Hz, where a high displacement is associated with a relatively low peak component particle velocity value a maximum displacement of 0.6 mm (zero to peak) should be used.

Minor damage is possible at vibration magnitudes which are greater than twice those given in Table 1, and major damage to a building structure may occur at values greater than four times the tabulated values."

Within DIN4150-3, damage is defined as "*any permanent effect of vibration that reduces the serviceability of a structure or one of its components*" (p.2). The Standard also outlines:

"that for structures as in lines 2 and 3 of Table 1, the serviceability is considered to have been reduced if

- *cracks form in plastered surfaces of walls;*
- *existing cracks in the building are enlarged;*
- *partitions become detached from loadbearing walls or floors.*

These effects are deemed 'minor damage." (DIN4150.3, 1990, p.3)

While the DIN Standard defines the above damage as 'minor', based on the definitions provided in BS7385, the DIN standard is considered to deal with cosmetic issues rather than major structural failures.

British Standard

British Standard 7385: Part 2 'Evaluation and measurement of vibration in buildings', can be used as a guide to assess the likelihood of building damage from ground vibration. BS7385 suggests levels at which 'cosmetic', 'minor' and 'major' categories of damage might occur.

The cosmetic damage levels set by BS 7385 are considered 'safe limits' up to which no damage due to vibration effects has been observed for certain particular building types. Damage comprises minor non-structural effects such as hairline cracks on drywall surfaces, hairline cracks in mortar joints and cement render, enlargement of existing cracks and separation of partitions or intermediate walls from load bearing walls. 'Minor' damage is considered possible at vibration magnitudes which are twice those given and 'major' damage to a building structure may occur at levels greater than four times those values.

BS7385 is based on peak particle velocity and specifies damage criteria for frequencies within the range 4Hz to 250Hz, being the range usually encountered in buildings. At frequencies below 4Hz, a maximum displacement value is recommended. The values set in the Standard relate to transient vibrations and to low-rise buildings. Continuous vibration can give rise to dynamic magnifications due to resonances and may need to be reduced by up to 50%. Table 3.13 sets out the BS7385 criteria for cosmetic, minor and major damage.

Regarding heritage buildings, British Standard 7385 Part 2 (1993) notes that "*a building of historical value should not (unless it is structurally unsound) be assumed to be more sensitive*" (p.5).

To determine whether the site buildings are structurally unsound, we recommend a dilapidation survey be conducted. The results of the survey will determine the adoption of the criteria for major or minor damage, rather than cosmetic damage.

Table 3.13:BS 7385 Structural Damage Criteria

Group	Type of Structure	Damage Level	Peak Component Particle Velocity[1], mm/s		
			4Hz to 15Hz	15Hz to 40Hz	40Hz and above
1	Reinforced or framed structures Industrial and heavy commercial buildings	Cosmetic		50	
		Minor[2]		100	
		Major[2]		200	
2		Cosmetic	15 to 20	20 to 50	50

Group	Type of Structure	Damage Level	Peak Component Particle Velocity[1], mm/s		
			4Hz to 15Hz	15Hz to 40Hz	40Hz and above
	Un-reinforced or light framed structures Residential or light commercial type buildings	Minor[2]	30 to 40	40 to 100	100
		Major[2]	60 to 80	80 to 200	200

Notes:
1. Peak Component Particle Velocity is the maximum peak particle velocity (PPV) in any one direction (x, y, z) as measured by a tri-axial vibration transducer
2. Minor and major damage criteria established based on British Standard 7385 Part 2 (1993) Section 7.4.2

German Standard

German Standard DIN 4150 - Part 3 'Structural vibration in buildings - Effects on Structure' (DIN 4150-3), also provides recommended maximum levels of vibration that reduce the likelihood of building damage caused by vibration and are generally recognised to be conservative.

DIN 4150-3 presents the recommended maximum limits over a range of frequencies (Hz), measured in any direction, and at the foundation or in the plane of the uppermost floor of a building or structure. The vibration limits increase as the frequency content of the vibration increases.

The structural damage vibration criteria adopted for this project is presented in Table 3.14.

Table 3.14:DIN 4150-3 Structural Damage Criteria

Group	Type of Structure	Vibration Velocity, mm/s			
		At Foundation at Frequency of			Plane of Floor Uppermost Storey
		1Hz to 10Hz	10Hz to 50Hz	50Hz to 100Hz	All Frequencies
1	Buildings used for commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40
2	Dwellings and buildings of similar design and/or use	5	5 to 15	15 to 20	15
3	Structures that because of their particular sensitivity to vibration, do not correspond to those listed in Group 1 or 2 and have intrinsic value (eg buildings under a preservation order)	3	3 to 8	8 to 10	8

3.6 Construction Noise Assessment

3.6.1 Proposed construction noise sources

The schedule of items of plant and equipment likely to be used during the construction of the proposed development is presented in the table below.

Table 3.15:Equipment Sound Power Levels – Standard Hours Works

Scenario	Plant Items	Sound power levels – dB(A)L_{eq}
1. Erection of Structure	Formwork:	
	-Tower Crane (electric)	100 95*
	-14T Crawler Crane	105
	-Powered hand Tools	100
	-Alimak	100*
	Scaffolding:	
	-Tower Crane (electric)	100 95*
	-Powered Hand Tools	100
	-Alimak	100*
	Concreting Works:	
	-Tower Crane (electric)	100 95*
	-Vibrator	105
	-Concrete Pump/truck	108 104*
	-Slab Finishing (Helicopter float)	105
	Façade Installation:	
	-Tower Crane (electric)	95*
	- Mini Crawler Crane	97**
	-Powered Hand Tools (no rattle gun)	95
	-Alimak	100*
2. External Works	Crane (Electric)	95*
	Hand Tools (façade)	100
	Alimak	100
3. Internal Works	Crane (Electric)	95*
	Hand Tools (façade)	100
	Alimak	100
4. Site Deliveries	Crane – as marked in App G.	95*
	Forklift	95
	Alimak	100

Table 3.16:Equipment Sound Power Levels – Saturday afternoon and Outside of Standard Hours Works

Scenario	Plant Items	Sound power levels – dB(A)L_{eq}
1. General Construction (Saturday 1pm-5pm) - Erection of Structure	Formwork:	
	-Tower Crane (electric)	95*
	-Powered hand Tools	100
	-Alimak	100*
	Scaffolding:	
	-Tower Crane (electric)	95*
	-Powered Hand Tools	100
	-Alimak	100*
	Concreting Works:	
	-Tower Crane (electric)	95*
	-Vibrator	105
	-Concrete Pump/truck	104*
	-Slab Finishing (Helicopter float)	105
	Façade Installation:	
	-Tower Crane (electric)	95*
	- Mini Crawler Crane	97**
	-Powered Hand Tools (no rattle gun)	95
	-Alimak	100*
2. General Construction (Saturday 1pm-5pm) - External Works	Crane (Electric)	95*
	Hand Tools (façade)	100
	Alimak	100
4. General Construction (Saturday 1pm-5pm) Site Deliveries	Crane – as marked in App G.	95*
	Forklift	95
	Alimak	100*
5. Weekday Evening: Internal Works	Crane (Electric)	95
	Hand Tools (façade)	100
	Alimak	100*

* Based on on-site measured operational noise proposed equipment items.
** Based on equipment sound data and crane engine being under power approximately 40% of 15 minute period.

The sound power levels for the majority of construction plant and equipment presented in the above table are based on maximum noise levels given in Table A1 of Australian Standard 2436 - 2010 '*Guide to Noise Control on Construction, Demolition and Maintenance Sites'* and are generally consistent with the noise levels for equipment items set out in the *Sydney Metro Out of Hours Work Application Form* document.

3.6.2 Predicted noise levels

Noise levels at any receiver location resulting from construction works would depend on the location of the receiver with respect to the area of construction, shielding from intervening topography and structures, and the type and duration of construction being undertaken.

The table below presents noise levels likely to be experienced at the nearby affected receivers based on the construction activities and plant and equipment associated with the proposed site.

Noise levels were calculated taking into consideration the distance between the construction works and the receiver locations using noise prediction software for this project. Intervening structures have been included in the model.

The model presents the cumulative noise level from the plant and equipment items expected to be used during each of the work scenarios identified above.

This then enables a comparison between the predicted noise level and the allowable noise level/trigger level to determine if noise mitigation is required.

Where a range in noise levels is predicted, this is because the proposed work activity will occur in multiple locations (across the site/street frontages). The variation in predicted noise level reflects the fact that the work may be conducted close to the noise receiver, or at the opposite end of the site.

3.6.2.1 Noise Impact Assessment - Standard Hours

Table 3.17:Noise Emission Assessment – Standard Hours

Noise Criteria	*Time*	*Criteria Noise Levels (dB(A)$L_{eq(15min)}$)*					
		*Residential**			Commercial Receivers*		
		R1	*R2*	*R3*	*C1*	*C2*	*C3*
EPA Interim Construction Noise Guideline							
Noise Management Level)	*Daytime – 7:00am to 6:00pm*	*74*	*74*	*74*	*70*	*70*	*70*
	Highly Noise Affected Level	*75*	*75*	*75*	*75*	*75*	*75*
	Evening – 6:00am to 10:00pm	*66*	*66*	*66*	*70*	*70*	*70*
Work Item	**Location / Plant Description**	**Predicted Construction Noise Levels - External (dB(A)$L_{eq(15min)}$)**					
		Residential*			**Commercial Receivers***		
		R1	*R2*	*R3*	*C1*	*C2*	*C3*
Erection of Structure - Concrete Pours (Standard Hours)	Crane – as marked in App F.	68	60	65	65	70	60
	Vibrator – Across Floor Plate	60-80	60-75	60-80	60-80	60-80	60-70
	Alimak – as marked in App F.	70	60	65	65	72	60
	Concrete truck - as marked in App F.	67	65	75	75	75	75
	Cumulative	*75-80*	*70-75*	*75-81*	*75-81*	*80-81*	*75-76*
Erection of Structure - Concrete Pours (Outside Hours)	Crane – as marked in App F.	68	60	65	65	70	60
	Vibrator – Across Floor Plate	60-80	60-75	60-80	60-80	60-80	60-70
	Alimak – as marked in App F.	70	60	65	65	72	60
	Concrete truck - as marked in App F.	67	65	75	75	75	75
	Cumulative	*75-80*	*70-75*	*75-81*	*75-81*	*80-81*	*75-76*
Erection of Structure - Formworking, Blockwork, Scaffolding	Crane – as marked in App F.	68	60	65	65	70	60
	Hand tools – Across Floor Plate	55-80	50-70	50-75	55-75	55-75	55-65
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*75-80*	*66-71*	*70-75*	*71-76*	*78*	*65-67*
External Works –(Façade, External Plant)	Crane – as marked in App F.	68	60	65	65	70	60
	Hand tools – Across Floor Plate	55-80	50-70	50-75	55-75	55-75	55-65
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*75-80*	*66-71*	*70-75*	*71-76*	*78*	*65-67*
Internal Works –(Fit out – after façade installation)	Crane – as marked in App F.	68	60	65	65	70	60
	Hand tools – Across Floor Plate	<60	<50	<55	<55	<55	<45
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*71*	*63*	68	*68*	*73*	*63*

Looking at the table above:

- Noise from activities such as use of hand tools, concrete vibrators will intermittently exceed ICNG Noise Management Levels if the work location is close to residential property boundaries. Reasonable and feasible noise mitigation is required.

- Works with the potential to exceed 75dB(A) EPA ICNG Highly Noise Impacted trigger at residential development:
  - Use of powered hand tools and concrete vibrators in close proximity to southern and western boundary.

- Ground Borne Noise - This is not anticipated to be an issue at the above site:
  - Being over station development, there are no vibration intensive works proposed such as excavation or demolition.
  - The most vibration intensive works would be expected to be used of concrete saws or jackhammers at concrete penetrations or similar.
  - There are no buildings other than the Station Box that are physically connected to the OSD component of the site.
  - While the Station Box is located immediately below, the Levels 4 and 5 of Station Box South consist primarily of ventilation plant rooms, and are not noise and vibration sensitive.

Looking at specific noise receivers:

- For Residential Receivers R1 and R3:
  - These are residential developments directly adjoining the sites.
  - When working adjacent to the residential property boundaries, noise levels are predicted to exceed the Noise Management Level,
  - The noise levels typically do not exceed the 75dB(A) Highly Noise Affected threshold, except. When working close to very property boundaries during concrete pours (use of vibrators) and use of powered hand tools (form working and façade construction).

- For Residential Receivers R2:
  - These are residential receivers separated from the site by a roadway (Pitt Street – a moderately busy road), and noise levels are generally either compliant or only marginally exceeding the Noise Management Level (and do not exceed the Highly Noise Affected Level).

- For Commercial Receivers C1, C2:
  - These are commercial developments directly adjoining the site.
  - When working on the adjoining property boundaries, noise levels are predicted to exceed the Noise Management Level (70dB(A)),
  - The noise levels typically do not exceed the 75dB(A) Highly Noise Affected threshold, except when working within approximately 10m of the common property boundary.

- For Commercial Receiver C3:

- These are commercial receivers separated from the site by a roadway and are generally either compliant or only marginally exceeding the Noise Management Level.

Taking the above into account - refer to section 3.6.3 for recommended noise mitigation measures.

3.6.2.2 Noise Impact Assessment – Outside Standard Hours

These works consist of:

- Internal works (behind building façade). For the purpose of calculation, for internal works, it is assumed that a 20dB(A) noise reduction occurs as a result of the noise loss through the completed building façade.

Table 3.18: Noise Emission Assessment – Weekdays (6pm-10pm)

Noise Criteria	*Time*	*Criteria Noise Levels (dB(A)$L_{eq(15min)}$)*					
		Residential			Commercial Receivers		
		R1	*R2*	*R3*	*C1*	*C2*	*C3*
Noise Management Level	*City of Sydney*	*64*	*64*	*64*	*N/A*	*N/A*	*N/A*
	EPA ICNG (for guidance purposes only)	*66*	*66*	*66*	*70*	*70*	*70*
Work Item	**Location / Plant Description**	**Predicted Construction Noise Levels - External (dB(A)$L_{eq(15min)}$)**					
		Residential			**Commercial Receivers**		
		R1	***R2***	***R3***	***C1***	***C2***	***C3***
Internal Works –(Fit out – after façade installation)	Crane – as marked in App F.	63	55	60	60	65	55
	Hand tools – Across Floor Plate	<60	<50	<55	<55	<55	<45
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*70*	*61*	*66*	*66*	*72*	*61*

Looking at the table above:

- Internal Works - Internal works and crane use are predicted to comply with both EPA and City of Sydney Evening time construction noise guidelines. Exceedance is only anticipated in the event that hoist use is required in the evening time period – this will be avoided when feasible.

Consideration of both reasonable and feasible noise mitigation is required, as is detailed in section 3.6.3.

3.6.3 Construction noise mitigation measures

3.6.3.1 Noise Mitigation Methods - Generally

Implementation of noise control measures, such as those suggested in Australian Standard 2436-2010 'Guide to Noise Control on Construction, Demolition and Maintenance Sites', are expected to reduce predicted construction noise levels.

Australian Standard 2436-2010, Appendix C, Table C1 suggests possible remedies and alternatives to reduce noise emission levels from typical construction equipment. Table C2 in Appendix C of AS2436 presents typical examples of noise reductions achievable after treatment of various noise sources.

Mitigation measures identified in AS2436 include:

- Location of fixed equipment (eg concrete pumps) and work zones. Increased distance to a noise receiver will reduce noise levels.

- Equipment selection. In some situations, quieter equipment may be selected to undertake a given process. For example, using electric cranes in place of diesel cranes. In some instances, reselection of of equipment may reselect in prolonged construction periods.

- Noise screens around work areas. Noise screens (plywood hoardings or similar) can be effective provided that they break the line of sight between the noise source and the noise receiver. This may not be practicable in situations where the noise receiver is a multi-storey building, making any noise screen impractically high in order to break the line of sight.

- Equipment enclosures. This can typically only be applied to fixed equipment items, such as ventilation fans, pumps or generators.

3.6.3.2 Site Specific Mitigation Methods

The following recommendations provide feasible and reasonable noise control solutions to reduce noise impacts to sensitive receivers.

The advice provided here is in respect of acoustics only. Supplementary professional advice may need to be sought in respect of fire ratings, structural design, buildability, fitness for purpose and the like.

General noise management measures

The following general noise management measures are recommended for all receiver locations:

- Plant and equipment must be properly maintained.

- Strategically position plant on site to reduce the emission of noise to the surrounding neighbourhood and to site personnel where feasible and reasonable. This includes positioning concrete pump trucks as far from buildings R1 and R3 as possible if used during Saturday afternoon works.

- Avoid any unnecessary noise when carrying out manual operations and when operating plant.

- Any equipment not in use for extended periods during construction work must be switched off. Plant used intermittently to be throttled down or shut down when not in use where practicable.

- Non-tonal reversing beacons for trucks and bobcats will be considered if feasible (depending on OH&S requirements).

- In addition to the noise mitigation measures outlined above, a management procedure will need to be put in place to deal with noise complaints that may arise from construction activities. Each complaint will need to be investigated and appropriate noise amelioration measures put in place to mitigate future occurrences, where the noise in question is in excess of allowable limits.

- Good relations with people living and working in the vicinity of a construction site should be established at the beginning of a project and be maintained throughout the project, as this is of paramount importance. Keeping people informed of progress and taking complaints seriously and dealing with them expeditiously is critical. The person selected to liaise with the community must be adequately trained and experienced in such matters.

Site Specific Noise Management Measures

The following site specific noise management practices are required:

- Neighbour notification:
    - Notification (letterbox drop) to be made to developments physically adjoining the site.
    - The notification will advise of expected dates of concrete pours, particularly on Saturday afternoons (as this will be the activity with the highest risk of a sustained period if high noise levels) and advising that works in evening periods will be constrained to internal areas behind the façade.
    - CPB will ensure that the City of Sydney are kept up to date with progress of works with regular communication.
- Respite periods:
    - There is no rock breaking, rock hammering, sheet piling, pile driving or similar activities proposed. The automatic respite period required of condition of consent D7 is not expected to apply.
    - Use of concrete vibrators and powered hand fools (facade work and form working) in very close proximity to residential properties boundaries have a risk in creating noise levels exceeding 75dB(A) at residential property boundaries when working immediately adjacent to the site east and south boundary. There are no viable alternative equipment selections. Introduction of respite periods for other works is not recommended, initially, because:
        - In the case of a concrete pour, scaffolding and formworking - , there will be only a small number of pours that will bring the construction work to close proximity to a given residence. Other pours will typically be further way on the floor plate, or two or more levels above or below the apartment, and the exceedance of the 75dB(A) Highly Nosie Affected Trigger would not occur.
        - In the case of powered hand tools (form working and façade work) – this work is typically intermittent in nature in any event. The benefits in respite would be relatively small and need to be balanced with the prolonging of the work period that will occur if they are introduced for this activity. Further, as is the case with concrete pours, the duration of work immediately adjacent to a particular apartment would be expected to be quite small.
        - In the event of sustained complaint (more than two complaints, not vexatious and related to the works) - a respite period can be negotiated with the adjoining residents (Receivers R1, R3) . Potential respite periods may limit work on residential property boundaries before 8am. (This is suggested given that after 8am it would be likely that many residents would no longer be at home. However negotiation is required given the possibility that more occupants maybe home at this time compared to typical as a result of increased numbers working at home as a result of Covid-19).
        - The 7am-8am period on Saturday morning should be used for site set up and work in internal areas. Concreting work and external work using powered tools should not be conducted prior to 8am on a Saturday unless agreed with the residences at R1 and R3.

- Saturday afternoon works:
    - Use of concrete vibrators and powered hand fools (facade work and form working) in very close proximity to residential properties boundaries to R1 and R3 have a risk in creating noise levels exceeding 69-74dB(A) management levels. There are no viable alternative equipment selections.
    - In the case of a concrete pour, scaffolding and formworking - there will be only a small number of pours that will bring the construction work to close proximity to a given residence. Other pours will typically be further way on the floor plate, or two or more levels above or below the apartment, and the exceedance of the Noise Management Levels is less likely to occur.
    - In the case of powered hand tools (form working and façade work) – this work is typically intermittent in nature in any event. The benefits in respite would be relatively small and need to be balanced with the prolonging of the work period that will occur if they are introduced for this activity.
    - In the event of sustained complaint (more than two complaints, not vexatious and related to the works) - a respite period (or other form of respite such as meal voucher) can be negotiated with the adjoining residents (Receivers R1, R3 for South Site).
- Outside of Hours Works:
    - Materials deliveries (eg – oversized equipment) and tower crane removal that cannot be conducted during typical construction hours.
- Internal works:
    - Work in the 6pm-10am weekday period is only to be conducted on levels where the façade is complete (such that the façade provides noise mitigation to the nearby residences).
    - As much as practicable, use of crane and internal lifts (once operational) as opposed to hoist is recommended.
    - No use of hoist or crane after 10pm.
    - Workers to be briefed not to take breaks in external areas during evening time periods.
- Non-tonal reversing beacons for trucks and bobcats will be considered if feasible (depending on OH&S requirements).
- In the event that a generator is required to operate outside of standard work hours, manufacturers details of any proposed generator will be provided to determine if any form of acoustic enclosure is required,
- Use of electric cranes, as opposed to diesel, is proposed.
- All employees, contractors and subcontractors are to receive site induction and toolbox talks and ongoing training so that the above noise management measures are implemented accordingly. Content within toolboxes will include, location of nearest sensitive receivers; relevant project specific and standard noise and vibration mitigation measures; permissible hours of work, truck route and truck loading restrictions and construction employee parking areas.

3.6.3.3 Verification measurements/noise monitoring

- An on-site attended noise measurement will be conducted at Receivers R1 and R3 of:
  - Typical noise levels generated during form working
  - Typical noise level generated during a concrete pour.

  to verify if the noise impact is consistent with what has been predicted in this report. In the event that noise levels are significantly higher than anticipated (3dB(A) or higher), further mitigation is to be investigated. This will involve:
  - Identification if a higher than expected noise level is expected to be consistent or a one off event.
  - If expected to be ongoing, identification of additional mitigation measures such as alternative equipment or respite periods.
  - Results of measurement and recommendations to be included in measurement report (see reporting requirements in Section 3.9).
- On-going unattended noise monitoring is not recommended in the first instance as:
  - The noise impact of the works is expected to be relatively small, and the highest noise impacts (structural work in close proximity to east and south boundaries) will not impact a given resident for extended periods.
  - Attended noise measurements will be more effective in determining suitable mitigation options compared to long term monitoring.
- In the event that either attended or long term noise monitoring is conducted, the procedures outlined in Section 3.9 are to be adopted.

3.7 Construction vibration assessment

The vibration generated from construction works will vary depending on the level and type of activity carried out at each site during each activity.

Potential vibration generated at receivers for this project will be dependent on separation distances, the intervening soil and rock strata, dominant frequencies of vibration and the receiver building's construction and structure. Unlike noise, vibration cannot be 'predicted' due to many variables from site to site, for example soil type and conditions; sub surface rock; building types and foundations; and actual plant on site. The data relied upon in this assessment (tabulated above) is taken from a database of vibration levels measured at various sites or obtained from other sources (eg. BS5228-2:2009). They are not specific to this project as final vibration levels are dependent on many factors including the actual plant used, its operation and the intervening geology between the activity and the receiver.

Tactile vibration is not anticipated to be an issue at the above site:

- Being over station development, there are no vibration intensive works proposed such as excavation or demolition.
- The most vibration intensive works would be expected to be used of concrete saws or jackhammers at concrete penetrations or similar.

- There are no buildings other than the Station Box that are physically connected to the OSD component of the site.

- While the Station Box is located immediately below, the Levels 4 and 5 of Station Box South consist primarily of ventilation plant rooms, and are not noise and vibration sensitive.

In the event that machine mounted percussive demolition equipment is required within the development (eg – for slab penetrations), vibration monitoring should be conducted on Level 5 of the Station Box. Refer to Section 3.10).

3.7.1 Vibration Mitigation Measures

The following vibration mitigation measures are recommended to minimise vibration impact from construction activities to the nearest affected receivers:

1. Penetrations or rectification work to slabs to be conducted using rotary equipment (saws) whenever feasible. If this is not feasible - percussive hand held equipment (jackhammer) should be used. Machine mounted percussive equipment should only be used in the event the other options are not viable. If machine mounted percussive equipment is required, refer to Section 3.10 for vibration monitoring requirements.

2. A management procedure must be implemented to deal with vibration complaints. Each complaint must be investigated and where vibration levels are established as exceeding the set limits, appropriate amelioration measures must be put in place to mitigate future occurrences.

3. Where vibration is found to be excessive, management measures must be implemented to ensure vibration compliance is achieved. Management measures may include modification of construction methods such as using smaller equipment, establishment of safe buffer zones and if necessary, time restrictions for the most excessive vibration activities. Time restrictions are to be negotiated with affected receivers.

4. Where construction activity occurs in close proximity to sensitive receivers or on material that will cause vibration to all identified receivers, vibration testing of actual equipment on site must be carried out prior to their commencement of site operation to determine acceptable buffer distances to the nearest affected receiver locations.

3.8 Complaints Management and Community Liaison

3.8.1 Communication with Nearby Land Users

3.8.1.1 Communication Generally

Communication with nearby land users to be conducted as follows:

- It is to include interested parties from adjacent developments.

- Conduct a meeting prior to commencement of works and agree as to the frequency of ongoing meetings from that point on. This consultation will typically update interested parties of upcoming works and get ongoing feedback on noise/vibration impacts.

- Provide interested parties of 24 hour contact details to enable complaints to be made.

3.8.1.2 Activity Specific Communication

Notification of upcoming concrete pours and any works anticipated to extend outside of standard hours is recommended.

This should be done by letter box drop (or other method agreed) to R1, R2, R3, C1 and C2.

3.8.2 Complaints Management

Complaints handling will be addressed by implementing the procedures in the CPB *Community Communications Strategy.* Section 3.11 outlines the complaints handling flow chart, escalation procedures and mediation process to be adopted.

A complaint is defined as any communication received from a stakeholder expressing dissatisfaction. This is a purposely broad definition and is used to ensure that matters of concern to stakeholders are addressed promptly.

Stakeholders will be able to register enquiries and complaints through several channels including:

- 24-hour, 1800 community information line (1800 171 386 which is run by Sydney Metro for the Project as a whole)
- Dedicated website www.sydneymetro.info
- Post
- Sydney Metro systems.

In the event that Sydney Metro Complaint records are available to CPB, these will be utilised when reviewing any complaint.

Specific details on the above communication channels are made available within the project CPB *Community Communications Strategy* . Complaints may be received directly or referred by Sydney Metro or other contractors.

All calls to the 1800-number will be answered and responded to 24 hours a day, seven days a week. A call centre reception service managed by Sydney Metro records contact details and basic information about the nature and location of the complaint. The complainant is made aware that an on-call officer will contact them shortly to address the issue. With this approach, the caller is not placed on hold or referred to a recorded message. If the rostered officer cannot receive a call (e.g. they are on the phone responding to another caller), calls can be directed to an alternate rostered on-call officer. Translators will be arranged if a stakeholder or community member is unable to communicate their concerns in English. Email and other contact options will assist those with disabilities.

Specific protocols and procedures have been arranged to ensure a consistent approach to managing enquires and complaints, including systems for recording and monitoring stakeholder contact. All staff and work crews will be informed that all contact from the community must be referred to the community relations team for action. To facilitate this everyone will be provided with community contact cards to direct enquiries to the community information line or email address.

Each stakeholder contact is an opportunity to build understanding about the Project and allay concerns. Complaints provide important feedback to improve project processes and mitigation measures to avoid or minimise further complaints. All reasonable measures will be taken to prevent the reoccurrence of stakeholder and community complaints. The strategic approach to managing complaints consists of:

- Courtesy
- Accessibility
- Responsiveness

- Delegation of authority to resolve the issue
- Access to accurate information.

All employees and subcontractors are required to respond to stakeholders with courtesy and professionalism. This will be reinforced during Project inductions. Specific toolbox talks will further consolidate the approach.

The Contractor will immediately report all environmental complaints to the Project Environment Manager and relevant Environment Co-ordinator to confirm any required action, including but not limited to:

- Noise, and/or vibration monitoring.
- Subject to monitoring results consideration of options to reduce impacts including:
    - Scheduling activities to minimise impacts
    - Targeted inspection to determine if it is reasonable and to install additional controls (i.e. noise barriers)
    - Respite offers (for example, coffee vouchers, movie tickets, meal vouchers or alternative accommodation)
- Site visit with complainant to assist in understanding our operations and mitigation strategies.

3.9 Specification for Construction Noise Monitoring

3.9.1 Scope

This document specifies methods for undertaking noise monitoring during the construction phase of the project.

3.9.2 Referenced Standards and Guidelines

- Australian Standard AS IEC 61672.1 2004 '*Electroacoustics - Sound Level Meters - Specifications*'
- Australian Standard AS 1259.2-1990 '*Acoustics - Sound Level Meters*'
- Australian Standard AS 1055-1997 '*Acoustics - Description and Measurement of Environmental Noise*'
- NSW EPA '*Interim Construction Noise Guideline*' (Department of Environment and Climate Change 2009)
- NSW '*Industrial Noise Policy*' (Environment Protection Authority 2000)

3.9.3 Testing Procedures

The following procedures are to be followed by personnel suitably qualified and experienced in undertaking acoustic measurements.

All noise monitoring equipment used must be at least Type 2 instruments as described in AS 1259.2-1990 and calibrated to standards that are traceable to Australian Physical Standards held by the National Measurement Laboratory (CSIRO Division of Applied Physics). The calibration of the monitoring equipment shall also be checked in the field before and after the noise measurement period, and in the case of long-term noise monitoring, calibration levels shall be checked at minimum weekly intervals.

Long-term noise monitoring equipment or Noise Loggers, consist of sound level meters housed in weather resistant enclosures. The operator may retrieve the data at the conclusion of each monitoring period in person or remotely if the logger is fitted with mobile communications.

All environmental noise measurements shall be taken with the following meter settings:

- Time constant: FAST (ie 125 milliseconds)
- Frequency weightings: A-weighting
- Sample period: 15 minutes

All outdoor noise measurements shall be undertaken with a windscreen over the microphone. Windscreens reduce wind noise at the microphones.

Measurements of noise should be disregarded when it is raining and/or the wind speed is greater than 5m/s (18km/h).

3.9.4 Long-Term (Unattended) Noise Monitoring

If long-term (unattended) noise monitoring is required it shall be undertaken in accordance with the environmental noise measurement requirements stipulated in the reference standards and documents listed above.

Noise monitoring equipment shall be placed at positions which have unobstructed views of general site activities, while acoustically shielded as much as possible from non-construction site noise (eg. road traffic, rail noise and other surrounding noise).

Noise levels are to be recorded at a minimum rate of 10 samples per second. Every 15 minutes, the data is to be processed statistically and stored in memory. The minimum range of noise metrics to be stored in memory for later retrieval is the following A-weighted noise levels: L_{min}, L_{90}, L_{eq}, L_{10}, L_1 and L_{max}.

Where the noise monitors are placed within 3.5 metres of building facades, walls or cliffs, then a reflection correction of up to -2.5dB(A) shall be applied to remove the effect of increased noise due to sound reflections from such structures. Presence of impulsive and tonal noise, and subsequent penalty, is to be determined in accordance with the provisions of Table 4.1 Modifying Factor Corrections of INP. Attended measurements may be required to determine modifying factor corrections in the first instance.

Meteorological conditions including wind velocity, wind direction and rainfall shall be monitored over the entire noise monitoring period, either on site or recorded from the nearest weather station to the project site.

Reporting of results to be provided monthly.

Reporting to present:

- Monitoring Location
- Relevant equipment details such as make, model, serial number, photo, date of last NATA accredited laboratory calibration, photo of equipment in use.
- Details of baseline data (L_{90} and $L_{eq(15min)}$).
- Details of ambient (L_{90} and $L_{eq(15min)}$) and construction noise ($L_{eq(15min)}$) as measured during the construction monitoring period. Commentary with respect to other (non-construction) noise source if relevant (to the extent that they impact any construction noise measurement).
- Assess noise levels with respect to the criteria identified in section 3.5.
- In the event of exceedances of criteria, and if the exceedances are expected to be ongoing, identify further noise mitigation measures to be implemented.

3.9.5 Short-Term (Attended) Monitoring

Where noise complaints or requests from relevant authorities are received, attended short-term noise monitoring shall also be conducted at the requested location and at any other relevant noise receiver location with closest proximity to the construction activities.

Short-term noise monitoring shall be used to supplement long-term noise monitoring undertaken at nearby locations, and to establish whether noise levels measured by the long-term noise monitors are determined by construction activities carried out on site.

All attended short-term noise monitoring shall be recorded over 15 minute sample intervals. Noise levels are to be recorded at a minimum rate of 10 samples per second. Every 15 minutes, the data is to be processed statistically and stored in memory. The minimum range of noise metrics to be stored in memory and reported is the following A-weighted noise levels: L_{min}, L_{90}, L_{eq}, L_{10}, L_1 and L_{max}.

In addition to measuring and reporting overall A-weighted noise levels, statistical L_{90}, L_{eq}, L_{10} noise levels shall be measured in third-octave band frequencies from 31.5Hz to 8kHz.

Where the noise monitors are placed within 3.5 metres of building facades, walls or cliffs, then a reflection correction of up to -2.5dB(A) shall be applied to remove the effect of increased noise due to sound reflections from such structures. Presence of impulsive and tonal noise, and subsequent penalty, is to be determined in accordance with the provisions of Table 4.1 Modifying Factor Corrections of INP.

Outdoor noise monitoring is to be undertaken with the microphone at a height of 1.2 – 1.5m from the ground, unless noise measurements are taken from a balcony or veranda, in which case the same microphone height shall apply off the floor.

Noise measurements inside buildings should be at least 1m from the walls or other major reflecting surfaces, 1.2 m to 1.5m above the floor, and 1.5m from windows.

3.10 Specification of Construction Vibration Monitoring

3.10.1 Scope

This document specifies methods for undertaking vibration monitoring during the construction phase of the project, where it may be deemed to be required. The vibration monitoring shall be conducted in accordance with DIN 4150.3 Structural Vibration in Buildings – Effects on Structures.

3.10.2 Referenced Standards and Guidelines

- AS 2775 Mechanical Mounting of Accelerometers
- AS 2670.2 Part 2: Evaluation of human exposure to whole body vibration
- DECC NSW Assessing Vibration: A Technical Guideline
- DIN 4150.3 Structural Vibration in Buildings – Effects on Structures
- BS 7385:1 Evaluation and Measurement for Vibration in Buildings – Part 1: Guide for measurement of vibrations and evaluation of their effects on buildings
- BS 7385:2 Evaluation and Measurement for Vibration in Buildings – Part 2: Guide to Damage Levels from Groundborne Vibration
- ISO 4866 Mechanical Vibration & Shock – Vibration of Buildings – Guidelines for the Management of the Vibrations and Evaluation of their Effects on Buildings

3.10.3 Testing Procedures

The following procedures are to be followed by personnel suitably qualified and experienced in undertaking vibration measurements.

All vibration monitoring equipment used must be calibrated at least once every two years to standards that are traceable to Australian Physical Standards held by the National Measurement Laboratory (CSIRO Division of Applied Physics). The monitoring system should also have a measurement frequency range down to 1Hz.

3.10.3.1 Short-Term (Attended) Monitoring

Vibration monitoring shall be undertaken:

- at the commencement of operation for each plant or activity on site, which has the potential to generate significant vibration levels, so to refine the indicative minimum working distances and provide a site-specific table of minimum working distances
- vibration sensitive locations determined to fall within the 'buffer distances' established for each item of plant. Areas likely to require vibration monitoring are identified in this report; and
- where vibration complaints or requests from relevant authorities, at the requested location and at any other relevant vibration receiver location with closest proximity to the construction activities.

Vibration monitoring shall be undertaken over the following period(s):

- for plant operating within the 'buffer distances', during the commencement of use of each plant on site until site-specific minimum working distances are established; and
- for complaints or requests from relevant authorities, during the of use of requested plant until site-specific minimum working distances are established.

All attended short-term vibration monitoring shall be recorded over 15 minute sample intervals. The magnitude of vibration is to be recorded at a minimum rate of 10 samples per second. The minimum range of vibration metrics to be stored in memory and reported are the following:

- Vibration Dose Values (VDVs)
- root-mean-square (rms) – maximums and statistical levels
- peak-particle velocity (ppv) – maximums and statistical levels.

In addition to measuring and reporting overall vibration, statistical vibration shall also be measured and reported in third-octave band frequencies from 1Hz to 250Hz.

Vibration monitoring shall be undertaken in accordance with the vibration measurement requirements stipulated in the reference Standards and documents listed above. The following notes of importance are included here:

- vibration monitoring equipment shall be placed outside at the footings or foundations of the building of interest, closest to the vibrating plant;
- the surface should be solid and rigid in order to best represent the vibration entering the structure of the building under investigation;
- the vibration sensor or transducer shall not be mounted on loose tiles, loose gravel or other resilient surfaces;

- the vibration sensor or transducer shall be directly mounted to the vibrating surface using either bees wax or a magnetic mounting plate onto a steel washer, plate or bracket which shall be either fastened or glued to the surface of interest; and
- where a suitable mounting surface is unavailable, then a metal stake of at least 300mm in length shall be driven into solid ground adjacent to the building of interest, and the vibration sensor or transducer shall be mounted on that.

The following information shall be recorded:

- Date and time of measurements;
- Type and model number of instrumentation;
- Description of the time aspects of each measurement (i.e. sample times, measurement time intervals and time of day);
- Sketch map of area;
- Measurement location details and number of measurements at each location;
- Operation and load conditions of the vibrating plant under investigation; and
- Possible vibration influences from other sources (eg domestic vibrations, other mechanical plant, traffic, etc).

3.10.3.2 Long-Term (Unattended) Monitoring

If long-term (unattended) vibration monitoring is required it shall be undertaken at vibration sensitive locations determined to fall within the 'minimum working distances' established for each item of plant during the commencement of use of each plant on site.

Vibration monitoring shall be undertaken over the following period(s):

- continuously whilst the vibrating plant is operational within the pre-determined 'minimum working distance' from the potentially affected building.

Vibration monitoring equipment shall be placed outside at the footings or foundations of the building of interest, closest to the vibrating plant.

Vibration is to be recorded at a minimum rate of 10 samples per second. The data is to be processed statistically and stored in memory. The minimum range of vibration metrics to be stored in memory for later retrieval is the following:

- Vibration Dose Values (VDVs)
- vector-sum root-mean-square (rms) – maximums and statistical metrics; and
- vector-sum peak-particle velocity (ppv) – maximums and statistical metrics.

Vibration monitoring shall be undertaken in accordance with the vibration measurement requirements stipulated in the reference Standards and documents listed above. The following notes of importance are included here:

- vibration monitoring equipment shall be placed outside at the footings or foundations of the building of interest, closest to the vibrating plant;

- the surface should be solid and rigid in order to best represent the vibration entering the structure of the building under investigation;
- the vibration sensor or transducer shall not be mounted on loose tiles, loose gravel or other resilient surfaces;
- the vibration sensor or transducer shall be directly mounted to the vibrating surface using bees wax or a magnetic mounting plate onto a steel plate or bracket either fastened or glued to the surface of interest;
- where a suitable mounting surface is unavailable, then a metal stake of at least 300mm in length shall be driven into solid ground adjacent to the building of interest, and the vibration sensor or transducer shall be mounted on that; and
- a flashing light alarm should be attached in a visible position from the construction work area. When vibration exceeds the set threshold, the light will flash notifying the operator that works in that area should cease immediately.

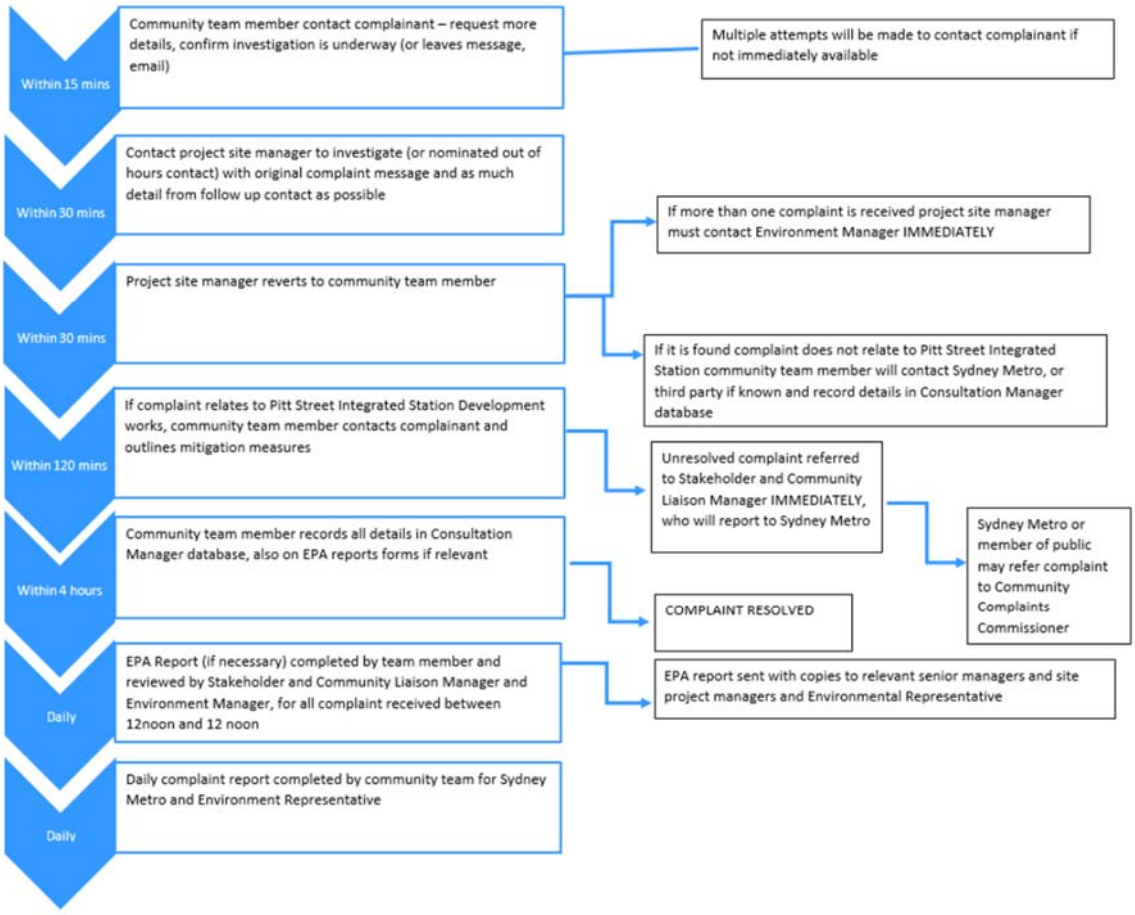
Vibration Monitor Set up and Reporting

- This is recommended only in the event that there is significant use excavator mounted hydraulic hammer or a vibratory roller and would be conducted on Level 5 of the Station Box Building.
- In the event that the construction works produce vibration levels well below the triggers outlined above, and there is no more vibration intensive equipment proposed, monitoring can cease (to be determined by Acoustic Consultant.
- Vibration monitoring results are to be made available in real time to CPB.
- Monitors will have real time SMS warning capability. SMS warning notification will be sent to the Contractor and their Acoustic Consultant in the event that the following thresholds are reached:
  - 3mm/s Peak Particle Velocity for monitors at a Heritage Building.
  - 8mm/s Peak Particle Velocity for monitors on other buildings, including Station Box.
- Reporting of results to be provided monthly. Report to be provided to CPB within 1 week of the end of the monthly monitoring period.
- Reporting to present:
  - Monitoring Location.
  - Relevant equipment details such as make, model, serial number, photo, date of last NATA accredited laboratory calibration, photo of equipment in use.
  - Graphs of Peak Particle Velocity as measured during the construction monitoring period.
  - Assess noise levels with respect to the criteria identified in section 3.5.
  - In the event of exceedances of criteria, and if the exceedances are expected to be ongoing, identify further noise mitigation measures to be implemented.

3.11 Noise/Vibration Complaint Management Procedure

Complaints management procedures as set out in the CPB *Community Communications Strategy Rev 1 (19/01/2021)* document are to be adopted. Relevant sections are extracted below:

Enquiries / Complaints Management Flowchart:


Within 15 mins
Community team member contact complainant – request more details, confirm investigation is underway (or leaves message, email)
Multiple attempts will be made to contact complainant if not immediately available
Within 30 mins
Contact project site manager to investigate (or nominated out of hours contact) with original complaint message and as much detail from follow up contact as possible
Within 30 mins
Project site manager reverts to community team member
If more than one complaint is received project site manager must contact Environment Manager IMMEDIATELY
If it is found complaint does not relate to Pitt Street Integrated Station community team member will contact Sydney Metro, or third party if known and record details in Consultation Manager database
Within 120 mins
If complaint relates to Pitt Street Integrated Station Development works, community team member contacts complainant and outlines mitigation measures
Unresolved complaint referred to Stakeholder and Community Liaison Manager IMMEDIATELY, who will report to Sydney Metro
Sydney Metro or member of public may refer complaint to Community Complaints Commissioner
Within 4 hours
Community team member records all details in Consultation Manager database, also on EPA reports forms if relevant
COMPLAINT RESOLVED
Daily
EPA Report (if necessary) completed by team member and reviewed by Stakeholder and Community Liaison Manager and Environment Manager, for all complaint received between 12noon and 12 noon
EPA report sent with copies to relevant senior managers and site project managers and Environmental Representative
Daily
Daily complaint report completed by community team for Sydney Metro and Environment Representative

Complaint Escalation:

Complaints should be escalated when:

- The complaint cannot be resolved using the procedure outlined in figure 4 or within a timeframe agreed to by the complainant.
- The nature of the complaint falls into one of the following categories:
  - an activity generates three complaints within a 24-hour period (separate complainants)
  - any construction site receives three different complaints within a 24-hour period
  - a single complainant reports three or more complaints within the 3 days period
  - a complainant threatens to escalate their issue to the media or government representative
  - the complaint was avoidable
  - the complaint relates to a compliance matter.

Complaints would first be escalated to the Sydney Metro Director, Communications (for Sydney Metro City & Southwest) as the designated complaints handling management representative for the relevant project.

Complaint Mediation:

In some circumstances where the complaints handling management representative for the project is unable to resolve the complaint, the complaint may be escalated to the project Community Complaints Mediator.

The role of the Community Complaints Mediator (CCM) is to facilitate communication between parties in conflict with the view to guiding/assisting these parties to reach a voluntary mutually agreeable outcome to the dispute. It is acknowledged that the role of the community complaints mediator is to mediate and not arbitrate. The mediator can actively encourage and facilitate discussion to move toward an outcome, however cannot order or decide an outcome for the parties.

The Community Complaints Mediator will provide information as to the mediation process during initial consultation, these actions will be dependent upon the complaint escalated, however may include;

- Through facilitation or other process(es) provide guidance, skills transfer and other services that aim to assist with any internal escalation mechanism

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- Meet with aggrieved parties to understand concerns and suggest/implement methods as appropriate with the view to provide an opportunity to resolve and/or work through issues
- Seek involvement of various internal and external subject matter experts such as, but not limited to the Environmental Representative and/or the acoustic advisor (in relation to SSI_7400 projects only).
- Provide a proposal, developed by the parties which is facilitated by the mediator that clearly reflects a narrative that all parties agree upon in regard to the complaint mediation with due consideration to confidentiality requirements.

In instances where a complainant remains unsatisfied, the Secretary will be advised.
The CCM will not act before;

- Sydney Metro has provided an initial response to an escalated complaint.

The CCM will not consider issues such as:

- Property acquisition where other dispute processes are provided for
- Where clear Government policy and associated resolution processes are available
- Where matter are not within the scope of the CSSI Project.

If the complainant states that the Department of Planning, Industry and Environment, NSW Environment Protection Authority, other TfNSW agencies and/or a local council have contributed to, or have a role in a particular complaint, the CCM may refer back to Sydney Metro for guidance and utilise their established interface pathways to liaise with either party.

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4. Hazardous Substances Management Sub Plan

4.1 Scope

This Plan addresses Hazardous substances management on the project and the management of impacts to the environment and/or community.

Activities conducted on the project that has the potential to create risks associated with hazardous substances are provided below. These have been extracted from project risk assessments:

Table 4.1 Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Refuelling of plant	Handling of diesel and petrol	Skin/ eye irritation
General construction works	Use of hazardous substances such as paints, glues, solvents, cleaning agents, water treatment chemicals, materials containing silica from work involving stone, rock, concrete, masonry	Organ toxicity, carcinogenic

4.2 Project Objectives

Based on the requirements defined above, the findings of project risk management processes and the potential impacts to the community, the following targets have been set. Any deviance from the targets will result in Project Management immediately implementing corrective actions:

Table 4.2 Project objectives

Metric/Measure	Objective	Timeframe	Accountability
Environmental Spills reported	All	At all times	Site Manager
No Class 1 or 2 Incidents in relation to Hazardous Materials or Chemicals	Zero	At all times	Site Manager
No noticeable impact in water quality as identified through water quality monitoring	Zero impact to water quality	At all times	Site Manager
All spills are reported to the HSE Database within 3 days of occurring, and all actions closed out in a timely manner	All spills reported on HSE Database	Within 3 days	Environmental Manager

4.3 Controls Used to Manage Hazardous Substances

Controls that are adequate to manage Hazardous substances and to reduce risk to the lowest acceptable rating achievable are implemented before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this project include:

Table 4.3

Control	Accountability
Prior to bringing new chemicals to Site, the Project must be provided with the current (Safety Data Sheet) (SDS).	Safety Manager
Storage and handling of hazardous substances must be in strict accordance with the applicable Standards and SDS.	Site Manager
Hazardous substances must be stored in a bunded area with a minimum holding capacity of 110% of the largest container within the bund or 25% of the total capacity of all containers within it, whichever is the greatest.	Site Manager

Control	Accountability
Spill kits must be located adjacent to all hazardous substance storage units, in refueling and maintenance areas and at designated locations as per the Site Environment Plan (SEP).	Site Manager
Type and size of spill kits must be selected based on the type and volume of materials stored. Aquatic spill kits shall be available at worksites in close proximity to waterways.	Site Manager
Training in the use of spill kits must be provided.	Environmental Manager
Refueling must not occur within 30m of a waterway (without appropriate controls in place).	Site Manager
Management of hazardous materials will be covered in the site induction. Relevant workers will undergo spill response training, as well as safe handling and storage training	Environmental Manager
Containment devices, including bunds, separators and catch trays, will be used where ever there is a risk of spillage.	Site Manager
Inspections will be carried out weekly to assess the storage and handling of hazardous materials as a part of the HSE inspection program.	Environmental Manager
Undertake routine maintenance of plant and equipment for prevention of fuel leaks, visible exhaust emissions or other maintenance issues.	Site Manager
An Emergency Response Plan which incorporates a spill response procedure shall be maintained for the project	Safety Manager

4.4 Monitoring

Hazardous substances monitoring will be performed during weekly environmental site inspections to ensure legal and contract requirements are complied with and which is sufficient to identify potential non-compliances before they occur.

Where monitoring determines non-compliance to be a risk or to have occurred, an incident report and corrective actions are raised in the Synergy.

Monitoring will be carried out by a competent person. Evidence of competence must be retained.

It is the accountability of the Environmental Manager to ensure all monitoring is performed according to these requirements.

4.5 References

Hazardous Chemical Information System (HCIS) published by Safe Work Australia

5. Construction Waste Management Sub Plan

5.1 Scope

This Plan addresses the management and reporting of waste streams generated on the project.

Activities conducted on the project that have the potential to generate waste are provided below. These have been extracted from the project work flow, including activities and materials used.

Table 5.1 Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Construction and operational processes	Generation of waste product	Soil and water contamination
Plant maintenance	Generation of waste oil	Soil and water contamination
Operation and maintenance of offices, crib huts and camp facilities	Generation of general wastes	Unnecessary load on landfill availability

5.2 Project Compliance Requirements

5.2.1 Conditions of Project Environmental Approvals

Conditions of project environmental approvals that specifically address the management of waste include:

Table 5.2 Project environmental approvals

Environmental Approval Document Reference	Relevant Condition	Limit/Requirement
SSD 10376	B55	Prior to the issue of the relevant Construction Certificate, the Applicant shall: (a) amend, or prepare an addendum to, the Construction Waste Management Sub-Plan (CWMP) applicable to the CSSI station works (CSSI 7400) to apply to the development. The amended CWMP must be submitted to the Planning Secretary and Certifying Authority, or (b) prepare a Construction Waste Management Sub-Plan (CWMP) for the development, independent of the CWMP approved with the CSSI station works. A copy of the CWMP must be submitted to the Planning Secretary and Certifying Authority. The Sub-Plan must include, as a minimum, the following elements: (i) require that all waste generated during the project is assessed, classified and managed in accordance with the EPA's "Waste Classification Guidelines Part 1: Classifying Waste"; (ii) demonstrate that an appropriate area will be provided for the storage of bins and recycling containers and all waste and recyclable material generated by the works; (iii) procedures for minimising the movement of waste material around the site and double handling; (iv) waste (including litter, debris or other matter) is not caused or permitted to enter the waters of Sydney Harbour; (v) any vehicle used to transport waste or excavation spoil from the site is covered before leaving the premises; (vi) the wheels of any vehicle, trailer or mobilised plant leaving the site and cleaned of debris prior to leaving the premises; (vii) details in relation to the transport of waste material around the site (on-site) and from the site, including (at a minimum):

Environmental Approval Document Reference	Relevant Condition	Limit/Requirement
		• a traffic plan showing transport routes within the site; • a commitment to retain waste transport details for the life of the project to demonstrate compliance with the Protection of the Environment Operations Act 1997; and • the name and address of each licensed facility that will receive waste from the site (if appropriate).
	D9	The Applicant must ensure the requirements of the Construction Environmental Management Plan, Construction Pedestrian Traffic Management Plan, Construction Noise and Vibration Management Sub-Plan, Air Quality Management Plan and Construction Waste Management Plan required by Part B of this consent are implemented during construction.
	E8	Prior to the commencement of operation, the Applicant must prepare an Operational Waste Management Plan for the development and submit it to the Certifying Authority. The Waste Management Plan must: (a) be prepared in consultation with Council (b) confirm the location of waste collection and establish appropriate routes to the collection point (c) provide confirmation of the engagement of a qualified private waste collection contractor (d) detail the type and quantity of waste to be generated during construction and operation of the development; (e) describe the handling, storage and disposal of all waste streams generated on site, consistent with the Protection of the Environment Operations Act 1997, Protection of the Environment Operations (Waste) Regulation 2014 and the Waste Classification Guideline (Department of Environment, Climate Change and Water, 2009); (f) detail the materials to be reused or recycled, either on or off site; and (g) include the Management and Mitigation Measures included in the EIS
	E9	Prior to the occupation or commencement of the use, whichever is the earlier, the building owner must ensure that there is a contract with a licensed contractor for the removal of all trade waste and residential waste. No garbage is to be placed on the public way e.g. the roadways, footpaths, plazas, and reserves at any time.

5.3 Waste Streams

The following waste streams and waste classifications have been identified on Pitt Street South Over Station Development. Waste has been classified in accordance with Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014).

Table 5.3 Waste streams

Waste Stream	Waste Classification
Excavated material	General Solid Waste (Non-Putrescible)
Concrete	Recyclable
Timber (formwork and construction)	Recyclable

Waste Stream	Waste Classification
General waste	General Solid Waste (Non-Putrescible)
Mixed Recyclables	Recyclable
Separated recyclables including Drink bottles & Secure Waste paper	Recyclable
Waste metals	Recyclable
Groundwater from excavation/potholing	Liquid Waste
General office waste – paper, cardboard, used printer cartridges.	Recyclable
Asbestos or Asbestos Containing Material	Special Waste
Hydrocarbons	Special Waste

5.4 Project Objectives

Based on the requirements defined above, the findings of project risk management processes and the potential impacts to the community, the following targets have been set for managing waste on the project. Any deviance from the targets will result in Project Management immediately implementing corrective actions:

Table 5.4 Project objectives

Metric/Measure	Objective	Timeframe	Accountability
% of waste quantified in waste management reports	100%	At all times	Environmental Manager
% of regulated/hazardous wastes for which transfer certificates are retained	100%	At all times	Project Manager
Number of enforcement notices and penalties received from regulators and/or client	Zero	At all times	Project Manager

5.5 Controls Used to Manage Waste

Controls that are adequate to ensure compliance and to reduce risk to the lowest acceptable rating achievable are planned before any relevant works commence. Elimination of the waste is the first preference of control, followed by reuse and recycling. Controls used on this project include:

Table 5.5 Controls to manage Waste

Control	Accountability
All wastes need to be classified, stored, tracked, transported and treated in accordance with contractual and regulatory requirements, including the use of licensed transporters and treatment facilities	Site Manager
The relevant licenses of waste facilities utilised for the disposal or handling of waste will be obtained to ensure they are legally compliant.	Environmental Manager
Storage containers (bins, skips, tanks, etc) are provided at each work area in sufficient numbers to facilitate segregation of waste at the source of generation, where ever possible. It is noted that co-mingled waste will be removed from site for sorting at a licensed facility off-site to ensure maximum opportunity for recycling. Wherever possible, container locations to be selected in order to minimize the movement of waste materials around the site or potential double handling of wastes. The correct bin type must be used to avoid contamination.	Site Manager
Containers are clearly sign posted to inform all project personnel of the correct material to be placed within each bin type. Containers are emptied at a frequency that is sufficient to ensure their correct use. If a bin needs to be collected contact your supervisor or project environmental representative	Site Manager
Measures are to be taken to minimize the potential for waste materials from entering the stormwater system and ultimately entering into Sydney Harbour. This may include the use of lidded skip bins and stormwater drain inlet filters. Where such filters are used, they are not to restrict drain inflow and are to be maintained regularly.	Site Manager
High level of housekeeping to be maintained on site during construction.	Site Manager
Burial or burning of waste is not permitted.	Site Manager
Excess concrete and concrete washout is not to be discharged to land or stormwater; a concrete washout facility must always be used.	Site Manager
All waste data must be collated and tracked using Material Tracking Forms.	Environmental Manager
An adequate number of fully maintained concrete washout pits will be maintained on the site at all times.	Site Manager

5.6 Monitoring

Waste data is collected on the project to allow monthly reporting of the following:

- The quantity of each type of waste sent to landfill
- The quantity of each type of waste recycled
- The quantity of each type of waste reused
- The quantity of each type of hazardous/regulated waste generated on the project and:
  - Its method of treatment and disposal
  - The location of treatment and disposal
  - Copies of records confirming the legal transport, treatment and disposal
- Measurement of any reduction in waste generation that has been achieved

The quantity of waste in each solid waste stream is measured by weight and liquid waste stream by volume, with records provided by the waste transport contractor. Alternative measures may only be used when an economical alternative is not available.

All relevant information is included in the project environmental monthly report.

6. Air Quality Management Plan

6.1 Scope

This Air Quality Management Plan (AQMP) sub-plan has been produced for the Pitt Street South Over Station Development (OSD) development, located at 125 Bathurst Street, Sydney NSW 2000 (the site) by Property Risk Australia Pty Ltd to meet Conditions B52, B53 and B54 of the Development Consent (SSD10376). This sub-plan incorporates the requirements of the Reactive Air Quality and Odour Management Plan incorporating an Ambient Air Monitoring Program and Reactive Management Strategy.

6.1.1 Mission Statement

CPB is committed to managing the air quality associated with the works to protect the environment, local community and worker safety.

6.1.2 Project Objectives and Scope

The objective of this AQMP is to provide guidance, mitigation measures and reactive management strategies to minimise and control the generation of dust and emissions to the environment during the redevelopment works on site. These practices will be implemented to meet Conditions B52, B53 and B54 of the Planning Approval (SSD 10376) and provide compliance with regulatory requirements. The Development Consent conditions are further detailed in **Table 6.1** below.

Table 6.1 – Relevant Construction Approval Conditions

Condition No.	Requirement	Reference
B52a	Amend, or prepare an addendum to, the Air Quality Management Sub-Plan (AQMP) applicable to the CSSI station works (CSSI 7400) to apply to the development. The amended CNVMP must be submitted to the Planning Secretary and Certifying Authority, or	See Condition B52b below.
B52b	Prepare an Air Quality Management Sub-Plan (AQMP) for the development, independent of the AQMP approved with the CSSI station works. A copy of the AQMP must be submitted to the Planning Secretary and Certifying Authority.	This Plan
B52a (i)	Be prepared by a suitably qualified and experienced expert in accordance with the EPA's Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (the Approved Methods).	This Plan Prepared by: Wayne Duffy Certified Environmental Practitioner No. 1389
B52a (ii)	Relevant environmental criteria to be used in the day-to-day management of dust and volatile organic compounds (VOC/odour).	Section 6.7 and Tables 6.4
B52a (iii)	Mission statement.	Section 6.1.1
B52a (iv)	Dust and VOCs/odour management strategies consisting of objectives and targets; risk assessment; suppression improvement plan.	This Sub- Plan Sections 6.1.2, 6 6, Appendix C and Table 6.2
B52a (v)	Monitoring requirements including assigning responsibility (for all employees and contractors).	Section 6.7 and Table 6.2 CFEMP, Element 12
B52a (vi)	Communication strategy.	Section 6.2 CFEMP, Element 6
B52a (vii)	System and performance review for continuous improvements.	Section 6.3 CFEMP, Element 12

Condition No.	Requirement	Reference
B53	The Sub-Plan must detail management practices to be implemented for all dust and VOC/odour sources at the site. The Sub-Plan must also detail the dust, odour, VOC and semi-volatile organic compounds (SVOC) monitoring program (eg. frequency, duration and method of monitoring) to be undertaken for the project.	Section 6.7 and Table 6.4
B54	The Applicant must also develop and implement an appropriate comprehensive Reactive Air Quality and Odour Management Plan which will incorporate an Ambient Air Monitoring Program and Reactive Management Strategy to ensure that the assessment criteria are met during the works.	Section 6.7 and Appendix C
D9	The Applicant must ensure that requirements of the Construction Environmental Management Plan, Construction Pedestrian Traffic Management Plan, Construction Noise and Vibration Management Sub-Plan, Air Quality Management Plan and Construction Waste Management Plan required by Part B of this consent are implemented during construction.	This Sub-Plan
D16	The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	Table 6.4
D17	During construction, the Applicant must ensure that: (a) Exposed surfaces and stockpiles are suppressed by regular watering; (b) All trucks entering or leaving the site with loads have their loads covered; (c) Trucks associated with the development do not track dirt onto the public road network; (d) Public roads used by these trucks are kept clean; and (e) Land stabilisation works are carried out progressively on site to minimise exposed surfaces.	Table 6.4 (where applicable)

6.2 Communication Strategy

The AQMP will be supplied to each Sub-contractor as part of the procurement process (including tendering and contract award).

The AQMP will be made available to, and understood by, all persons involved in the management and operation of the site.

Consultation and complaints handling will be managed in accordance with Element 6 of the CFEMP.

6.3 Continuous Improvement

The AQMP should be referred to regularly and updated/maintained by the Management Plan Controller when major project changes could impact on the air quality.

Additional controls identified while rectifying incidents associated with air quality will be incorporated into the next revision of the Management Plan (where appropriate).

Appendix E of the CFEMP outlines the overall project schedule for monitoring, inspections, reporting, reviewing, and auditing. Element 12 of the CFEMP also details the project expectations related to auditing, reviewing and improving the project systems.

6.4 Regulatory Compliance

Legislation relevant to air quality management includes, but is not limited to the following:

- *Environmental Planning and Assessment Act 1979* (EP&A Act);

- *Protection of the Environment Operations Act 1997* (POEO Act);
- *Protection of the Environment Operations (Clean Air) Regulation 2010*; and
- *National Greenhouse and Energy Reporting Act 2007*;
- *Protection of the Environment Operations (Waste) Regulation 2014*;
- National Environment Protection (Ambient Air Quality) Measure 2003 (NSW); and
- National Environment Protection (Diesel Vehicle Emissions) Measure 2009 (NSW).

6.4.1 Guidelines and Standards

The primary guidelines, specifications and policy documents relevant to this AQMP include, but are not limited to the following:

- National Environment Protection Council's (NEPC) – National Environment Protection Measure (NEPM) for Ambient Air Quality;
- AS 3580.1.1:2007 Methods for sampling and analysis of ambient air: Part 1.1: Guide to siting air monitoring equipment;
- AS 3580.10.1:2003 Methods for sampling and analysis of ambient air: Method 10.1: Determination of particulate matter – Deposited matter – Gravimetric method;
- AS/NZS 3580.12.1:2001 Methods for sampling and analysis of ambient air - Determination of light scattering - Integrating Nephelometer method;
- Action for Air (NSW EPA, 1998); and
- Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (Department of Environment and Conservation NSW (DEC), 2005).

6.5 Environmental Aspects and Impacts

6.5.1 Potential Sources of Air Emissions

The primary source of air pollution likely to be expected from the redevelopment works on site are as follows:

- Particulates and dust – dust assumed to be of low inherent toxicity:
  - Generated by most construction activities; and
  - May cause dust deposition on surfaces, visible dust plumes and temporary elevation of particulate matter (PM10) concentrations.
- Exhaust emissions – carbon monoxide (CO), sulphur dioxide (SO_2), oxides of nitrogen (NO/NO_2) and particulates:
  - Generated by machinery and vehicles used on site as well as delivery vehicles; and
  - May cause elevation of atmospheric concentrations of greenhouse gases, visible smoke plumes, odours, temporary elevation of exhaust gas and fine particulate concentrations.
- Volatile organic compounds (VOC) – including but not limited to benzene, toluene, xylenes, formaldehyde and polycyclic aromatic hydrocarbons:
  - Generated during use of liquid solvents, paints, coatings, membranes and adhesives; and
  - May cause nuisance odours or exposure of people exceeding health-based exposure limits.
- Odour – Unlikely to be a primary source of air pollution during the OST redevelopment works.

6.5.2 Contaminating Activities

Contractor activities that have the potential to affect air quality are outlined below:

- General construction;
- Concrete cutting;
- Drilling, crushing, scraping, blasting and sanding;
- Masonry activities (Preparation of concrete and cements);
- Surface finishing;
- Vehicle and plant movement/activity;
- Transferring of materials on and off site; and
- The use of paints, sealants, coatings, solvents and any materials that emit VOCs.

6.5.3 Factors Affecting Construction Air Quality Impacts

Factors affecting air quality are expected as a result of the following impacts detailed below:

- The type of activities being undertaken;
- The duration of the activity being undertaken;
- The size of the subject site;
- The ambient air quality and meteorological conditions;
- The number, duration, and type of plant equipment being used (i.e. exhaust emissions from vehicles and machinery); and
- The condition (maintenance), environmental performance (emission footprint) and operation of plant equipment.

6.5.4 Sensitive Receptors

The sensitive receptors likely to be impacted by the redevelopment works on site are as follows:

- People – As the works are being undertaken within the Central Business District, here are high numbers of people in close proximity to the site including pedestrians, people in outdoor spaces such as parks and restaurants, road users, people in indoor spaces such as commercial buildings, hotels, education and childcare facilities, medical facilities and residences. Likely to include the very young and elderly people;
- Property – Private and public buildings and facilities surround the site on all sides; and
- Environmental receptors – Darling harbour approximately 630m to the North-west, Hyde Park approximately 120m to the East and more broadly the local atmosphere and climate.

6.5.4.1 Impacts on Receptors

The dominant air quality impacts expected from the redevelopment works on site are as follows:

- Potential effects on receptors include; nuisance, adverse health effects, damage to property;
- Dust deposition and visible dust plumes;
- Complaints from the public about odours and visible smoke and dust plumes; and
  Elevation of atmospheric concentrations of greenhouse gases, visible smoke plumes, odours, temporary elevation of exhaust gas and fine particulate concentrations.

6.6 Risk Assessment

Effective environmental management should be proactive rather than reactive. In order to facilitate a proactive style of environmental management, a risk management style of assessment has been utilised to identify and assess air quality aspects associated with the project, and to implement appropriate mitigation strategies to minimise the likelihood of environmental risks associated with each aspect. This process involves:

1. Identifying the risk/aspect.
2. Analysing the risk/aspect (determining likelihood and consequence).
3. Evaluating the risk/aspect.
4. Treating the risk.

All identified aspects are assessed based on the risk assessment defined in Appendix C of the CFEMP. The risk assessment is based on (1) the consequences of the impact if the event occurred; and (2) the likelihood of an impact occurring as a result of the aspect. The definition of consequence and likelihood are detailed in Steps 1 and 2 of Appendix C of the CFEMP.

Following this assessment, each impact is assigned a risk category which range from “Low” to “Extreme”.

A risk category identified as having an extreme or higher risk may be downgraded if appropriate environmental controls and measures are implemented and maintained. Proactive planning, installation and maintenance of appropriate environmental controls, and ongoing monitoring will reduce the risks associated with each environmental impact identified for the project. The Environmental Risk Register found in Appendix C of the CFEMP details the air quality aspects identified for the project, and the risk with management strategies applied.

6.7 Controls, Monitoring and Reactive Management Strategies

Responsibility for implementation, management and response belongs to CPB and the relevant sub-contractors.

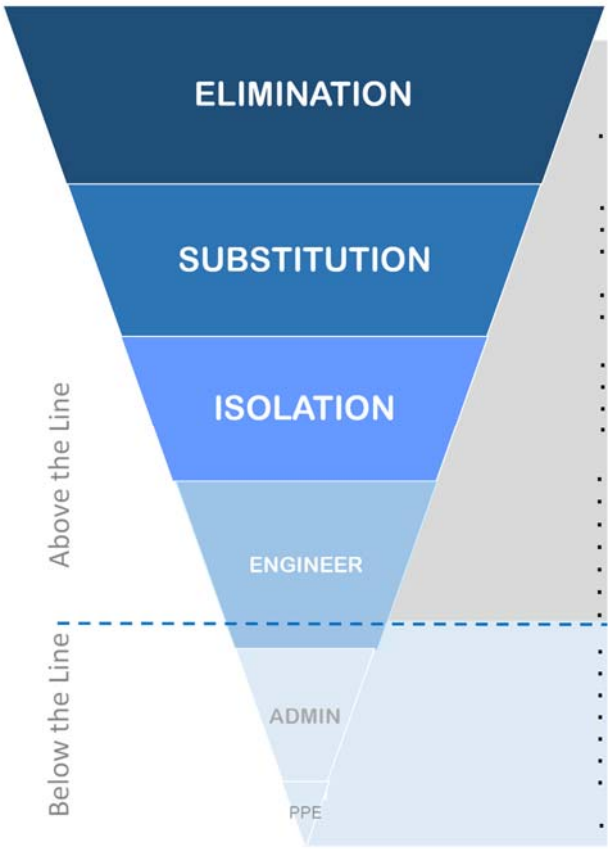
Site specific controls, monitoring, reporting and performance measurements have been identified in this AQMP to minimise and where possible, prevent air quality impacts resulting from construction on the environment and community. These “Mitigation Measures” are described in Table 6.2 below.

As noted in the risk assessment above, the risk to the local air quality associated with the over station development is low to moderate. This is mostly since the higher air quality risk tasks, such as basement excavation into sandstone, are now complete. Given the lower risk profile monitoring is limited to a qualitative approach, which includes visual inspections and the use of complaints to provide triggers for reactive management.

Although the risk is generally low, Table 6.2 below also outlines the Reactive Management Strategies to be employed on site should there be visible dust generated, offensive odours at the boundary or complaints about air quality from adjacent stakeholders.

6.7.1 Suppression improvement plan

Dust and VOC/ odour suppression will be implemented based on the following hierarchy of controls:



Elimination: Replace disease-related materials where possible; turn off engines when not in use; replace diesel/petrol equipment with electric powered

Substitution: Wet mopping instead of dry sweeping; wet cutting and clean-up; substitute disease-related materials

Isolation: ventilated worker enclosures for cutting

Engineer: hand-held cutting (or similar tools) shall have dedicated dust suppression or extraction ventilation systems, where possible; specifications call for low VOC paints; use vacuum class M; covers to loads; maintenance of equipment; ventilation systems

Admin: Mask fit-testing and monitoring; assessments by Project Occupational Hygienist; toolbox talks; maintain housekeeping – dust capture

PPE: masks; protective clothing and ventilation equipment

.

Table 6.2 – Controls, Monitoring and Reactive Management

Ref.	Mitigation Measure	Relevant Stages of Works			Responsibility	Monitoring and Reporting	Targets	Reactive Management Strategy
		Set-up	Structural Trades	Fit-out				
AQ1.	Use solid hoardings at the site perimeter.	✓			Site Supervisor Environmental Manager	Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports	Hoardings installed	Install hoardings
AQ2.	Cover all loads coming onto the site and departing site to prevent spillage / dust emissions. Immediately clean up any spills.		✓	✓	Sub-contractors Site Supervisor Environmental Manager	Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports	No visible dust beyond site boundary Dust related complaints	Re-assess and implement dust controls in accordance with the suppression improvement plan
AQ3.	Close gates between vehicle movements, and fit them with shade cloth (or equivalent).	✓	✓	✓	Sub-contractors Site Supervisor Environmental Manager	Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports	No visible dust beyond site boundary Dust related complaints	Re-assess and implement dust controls in accordance with the suppression improvement plan
AQ4.	Sweep and water haul routes, materials handling areas site entry points and other areas as needed.		✓		Sub-contractors Site Supervisor Environmental Manager	Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports	No loose dust and debris No visible dust beyond site boundary Dust related complaints	Clean areas with deposited dust and debris

Ref.	Mitigation Measure	Relevant Stages of Works			Responsibility	Monitoring and Reporting	Targets	Reactive Management Strategy
		Set-up	Structural Trades	Fit-out				
AQ5.	Manage vehicle paths to minimise potential for tracking out debris and ensure they are cleaned in the event that tracking out is present.		✓		Sub-contractors Site Supervisor Environmental Manager	Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports	No loose dust and debris No visible dust beyond site boundary Dust related complaints	Clean areas with deposited dust and debris
AQ6.	Operate plant in a proper and efficient manner.	✓	✓	✓	Sub-contractors Site Supervisor Environmental Manager	Plant onboarding procedure Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports	Emissions not visible for >10secs (as a general rule).	Perform maintenance on plant or remove from site
AQ7.	Regularly maintain equipment, plant and machinery to minimise visible smoke / emissions.	✓	✓	✓	Sub-contractors Site Supervisor Environmental Manager	Plant onboarding procedure Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports	Emissions not visible for >10secs (as a general rule).	Perform maintenance on plant or remove from site
AQ8.	Turn engines off while parked on site.	✓	✓	✓	Sub-contractors Site Supervisor Environmental Manager	Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist	Limited engine idling Complaints related to idling	Toolbox talk drivers regarding requirement

Ref.	Mitigation Measure	Relevant Stages of Works			Responsibility	Monitoring and Reporting	Targets	Reactive Management Strategy
		Set-up	Structural Trades	Fit-out				
						– Environmental Inspection Reports		
AQ9.	Use mains power where available and suitable.	✓	✓	✓	Sub-contractors Site Supervisor Environmental Manager	Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports	Complaints related to particulate matter associated with generator use	Convert generator to mains power or limit operation of the generator
AQ10.	In the event of visible dust generation being observed onsite, additional controls are to be implemented to minimise the dust being generated.	✓	✓	✓	Sub-contractors Site Supervisor Environmental Manager	Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports	No visible dust beyond site boundary Dust related complaints	Re-assess and implement dust controls in accordance with the suppression improvement plan
AQ11.	Air quality associated with silica will be managed and monitored in accordance with the project Occupational Hygiene Management Plan.		✓	✓	Sub-contractors Site Supervisor Environmental Manager	Refer to the Occupational Hygiene Management Plan.	Refer to the Occupational Hygiene Management Plan.	Refer to the Occupational Hygiene Management Plan.
AQ12.	Contracts to specify low VOC paints, adhesives, sealants and carpets as per the project Green Star Pathway.			✓	Site Supervisor Environmental Manager Sustainability Manager Sub-contractors	Daily surveillance – Site Diary Entries Weekly/monthly inspection checklist – Environmental Inspection Reports Greenstar Reporting	low VOC products to be used. No odours to be present at the site boundary. Odour related complaints.	Contractors to specify that low VOC products are to be used during the development.

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Appendix A: CPB Contractors Environment Policy and Certification

Environment Policy

Purpose

This Policy sets out the minimum mandatory requirements for the management of environmental risks and impacts from our construction activities.

Application

This Policy applies to all business entities controlled by the business, including alliances, joint ventures and consortia where the business exerts management control. It applies at all levels of the organisation including Corporate, Business Unit and Project.

Minimum Requirements

- Senior leaders must demonstrate a personal visible commitment to our SH&E Cultural Framework and ensure all workers understand the requirements of the Management System as it applies to the work they are undertaking, so that work is undertaken to minimise our environmental impact.
- Environment Management Plans (EMP) must be developed and implemented for each Project to outline how the project environmental risk will be managed and controlled.
- Environmental objectives, targets and key performance indicators must be established at all levels of the organisation, with performance against these monitored and analysed to provide a baseline for continual improvement.
- The Environment Procedures must be used to eliminate or minimise environmental risk from construction activities.
- Construction Area Plans and Work Packs must be developed and include an assessment of environmental risk and associated controls.
- Site Environment Plans must be developed for Work Packs where environmental risk dictates; these must be used to inform as content of Daily Pre Starts.
- As part of the risk management process, personnel and teams at the Project, Business Unit and Corporate level should seek to identify opportunities for improving efficiency in the use of natural resources, enhancing positive environmental impacts and driving innovation.
- All environmental incidents must be reported in accordance with the incident notification requirements. They must be thoroughly investigated and appropriate corrective action undertaken with the aim of preventing recurrence of the incident.
- Reporting of energy consumption, water use and waste generation, as well as reporting on initiatives and environmental achievements must be completed by projects and business units as requested.
- All levels of the organisation must be prepared to respond to an emergency and in the event of an emergency, plans and capabilities are in place to eliminate or minimise damage to the environment, preserve ongoing operations and our reputation.
- Effective communication, cooperation and consultation channels must be in place to consult with workers who may impact upon the environment.
- All project personnel responsible for environmental risk shall be appropriately trained and competent and understand their legal obligations with regard to environment management.

Certificate AU14/4487

The management system of

CPB Contractors Pty Limited

Level 18, 177 Pacific Highway, North Sydney, NSW 2060
Australia

has been assessed and certified as meeting the requirements of

ISO 14001:2015

For the following activities

The provision of project management and related services including design, procurement, construction, traffic management at roadworks, completion, commissioning and maintenance of civil Infrastructure (including site preparation, road and bridge construction, non-building construction, plant hire and leasing), building, rail, water, utilities, tunnelling, energy, marine, mine infrastructure, structural, mechanical, piping and electrical engineering and related industries delivered under varying forms of contract including joint ventures and alliances. The scope of registration also includes the maintenance and repair of fixed and mobile plant and the manufacture of precast concrete units for major infrastructure works.

This certificate is valid from 06 July 2020 until 30 November 2022
and remains valid subject to satisfactory surveillance audits.
Certified activities performed by additional sites listed on subsequent pages.
Recertification audit due a minimum of 60 days before the expiration date.
Issue 10. Certified since 06 December 1995

Authorised by

SGS Systems & Services Certification Australia Pty Ltd
10/585 Blackburn Road, Notting Hill VIC 3168, Australia
t(61-3) 9574 3200 f (61-3) 9574 3399 www.au.sgs.com

Page 1 of 2

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CPB Contractors Pty Limited

ISO 14001:2015

Issue 10

Certified activities are performed by the sites on the list.
Sites:

Business Unit Operation
Level 2, 177 Pacific Highway, North Sydney, NSW 2060
Level 6, 567 Collins Street, Melbourne, VIC 3000
Level 6, HQ South Tower, 520 Wickham Street, Fortitude Valley, QLD 4006
202 Pier Street, Perth, WA 6000
Level 1, 167 Denham Street, Townsville, QLD 4810
Level 2, 19 Hargreaves Street, Auckland, 1011, New Zealand
Ground Level, 62 Cavenagh Street, Darwin, NT 0800

Plant Facilities
8a Hereford Street, Berkeley Vale, NSW 2261
Lot 804 (SubLot 5) Elmsfield Road, Midvale, WA 6056
67 Bernoulli Street, Darra, QLD 4076
158 Cherry Lane, Laverton North, VIC 3026

Pre-Cast Facility
Corner Engineering & Industrial Drive, North Boambee, NSW 2450

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Appendix B: Environmental Roles and Responsibilities

Listed project-specific roles, after responsibilities in Part B have been assigned

		Project Manager	Project Environmental	Engineering Manager	Engineers	Construction Manager	Supervisors	Line Manager	P&C Manager	Commercial Manager	Comm & S' hold	H&S Manager	Other positions
Element 1:	**Leadership, Accountability and Culture**												
1.1.	Environmental accountabilities, roles and responsibilities for managers, staff, employees and subcontractors are clearly defined, documented and communicated		C					C	R				
1.2.	Environmental leadership and commitment is demonstrated through measurable participation in environmental management	R	C				C	C					
1.3.	Environmental expectations are clearly defined with appropriate reward and disciplinary processes in place.	R	C					C					
Element 2:	**Planning**												
2.1.	Adequate resources are provided to effectively implement the EMP	R	C						C	C			
2.2.	Business systems are defined and established		R										
2.3.	Environmental Sub Plans are prepared and maintained for Significant Environmental Hazards		R										
Element 3:	**Legal and Other Requirements**												
3.1.	Relevant legal, contractual and other requirements are identified and maintained in a legal and other obligations register	C	R										
3.2.	All necessary environmental approvals are obtained prior to commencing relevant works and surrendered on completion	C	R		C								
3.3.	Work is planned and executed to ensure compliance		C	C	C	R	C						
3.4.	Inspections, observations and monitoring are performed to ensure compliance is maintained		C		C		R						
3.5.	All non-compliances are reported as incidents		R										
3.6.	All energy and greenhouse data are collected and entered into JDE	C	R							C			
3.7.	Personnel on the site have access to current versions of relevant legislation, standards and codes of practice		C										R
Element 4:	**Risk and Opportunity Management**												
4.1.	Systematic processes are defined and implemented for identifying environmental risks and opportunities at all stages of the Project	R	C	C	C		C						
4.2.	Identified risks and opportunities are analysed and evaluated according to agreed criteria and recorded in a risk register	R	C		C								C
4.3.	Environmental controls appropriate to the level of risk are identified, documented and implemented	C	C		C								R
4.4.	Feasible opportunities are implemented	R											C
4.5.	Identified environmental risks and controls are communicated to all relevant personnel	R	C		C		C		C			C	
4.6.	Regular inspections and monitoring are conducted to check effectiveness of controls	C	R		C		C						
4.7.	Environmental risks and controls are regularly reviewed.	R	C		C								
Element 5:	**Change Management**												
5.1.	Changes to planned operations that have potential environmental consequences are identified	R	C	C	C		C						
5.2.	Risks associated with identified changes are assessed and controlled before changes are implemented	R	C				C						C
5.3.	All changes with environmental consequences are authorised before they are implemented	R		C		C	C						
5.4.	Controls associated with change are communicated to all affected personnel						C						R
Element 6:	**Communication and Consultation**												
6.1.	External environmental stakeholders are identified		C								R		
6.2.	Relationships with external stakeholders are effectively managed		R								C		
6.3.	Internal consultative forums are established with regular meetings scheduled, conducted, documented and communicated	R	C								C	C	
6.4.	Environmental complaints and enquiries are recorded and responded to appropriately	C	C								R		
6.5.	The effectiveness of internal and external stakeholder engagement is evaluated and improved.	R	C								C	C	

	Project Manager	Project Environmental	Engineering Manager	Engineers	Construction Manager	Supervisors	Line Manager	P&C Manager	Commercial Manager	Comm & S' hold	H&S Manager	Other positions
Element 7: Training and Competency												
7.1. All personnel have completed an induction containing relevant environmental information before they are authorised to work on the Project		R						C			C	
7.2. A training plan is developed and documented		R						C				
7.3. Personnel are trained and assessed according to the training plan	R	C						C				
7.4. Training records are maintained and accessible to relevant personnel.		C						R				
Element 8: Subcontractor Relationships												
8.1. Selection processes ensure that subcontractors meet CPB Contractors' minimum environmental requirements		C		C					R			
8.2. Planning requirements of all subcontractor work scopes are completed and communicated prior to commencing work		C		R					C			
8.3. Compliance requirements for high risk environmental activities are identified and enforced		C		R					C			
8.4. Subcontractor documentation is submitted and reviewed to meet Project requirements		R		C					C			
8.5. Changes to the scope of work are managed as a Project change				C					R			
8.6. Subcontractors actively participate in environmental management and training on the Project		C		C					R			C
8.7. Subcontractors are reviewed to assess their performance and compliance with our minimum environmental requirements.		R		C		C						
Element 9: Incident Management												
9.1. All incidents are followed by appropriate response and notification	R	C		C		C				C		
9.2. All incidents are entered and managed in Synergy	C	R										
9.3. Incident investigations are conducted appropriate to the type of incident	R	C		C		C						
9.4. All personnel conducting incident investigations are trained to competently perform the task	R											
9.5. Corrective and preventive actions are taken after incidents and lessons are shared with other projects	R	C										
9.6. High potential and repeat incidents are regularly reviewed by the project management team	C	R										
Element 10: Emergency Planning and Response												
10.1. Potential emergencies are identified using a formal risk assessment process	R	C										
10.2. Emergency response plans and procedures are developed and regularly reviewed	R	C									C	
10.3. Adequate resources are provided to effectively implement emergency response plans and procedures	R	C									C	
10.4. Environmental emergency response drills are conducted	R	C									C	
10.5. Employees, contractors and visitors are given appropriate emergency response training.		C						R			C	
Element 11: Document and Record Management												
11.1. Current versions of all relevant documents and records are available and controlled.	C	R										
11.2. Relevant documents and records will be maintained using corporate business applications and systems	R											
Element 12: Auditing, Review and Improvement												
12.1. Environmental performance trends are identified and corrective actions are implemented as required	R	C										
12.2. A monthly environmental report is produced and distributed	C	R										
12.3. Regular management reviews are conducted to determine the continuing suitability, adequacy and effectiveness of the Environmental Management System	R	C										C
12.4. Audits are undertaken to ensure compliance with the requirements of the EMP	R	C										C
12.5. All audits are undertaken by suitably qualified and experienced personnel												R

R = Responsible, **C** = Key Contributor

Appendix C: Environmental Risk Register

The risk assessment criteria has been developed in line with the CPB Management System (CMS). Qualitative measures are used to estimate the consequence or impact of an event, along with the estimate of likelihood, to produce consistent risk rankings across the identified risks using Steps 1 – 3 as outlined below.

Step 1 - What is the Most Credible Consequence?

Consequence Rating	1 Negligible	2 Minor	3 Moderate	4 Major	5 Substantial
Safety and Health	First Aid Treatment (or No treatment)	Medical Treatment Injury	Lost Time Injury	Permanent Injury (Paraplegia, Amputation)	Fatality (Single or multiple)
Environment and Heritage	Small, contained localised impact / Low level repairable damage	Short lived, well contained environmental impact / Minor remedial action required	Medium term, contained impact / Significant remedial action required	Impacts extend off-site / external ecosystem. Considerable remediation required	Lonr Term irreversible damage / Long Term Remediation required
Plant Damage	Little or No Damage	Damage less than $15,000	Damage between $15,000 and $50,000	Damage between $50,000 and $100, 000	Damage greater than $100, 000
Reputation	Brief local negative media coverage.	Local negative media coverage. Site or project problem.	Regional/short negative media coverage. Loss of Client / project.	Sustained national negative media coverage. Loss of long term key client.	International negative media coverage. Loss of business from key sector.
Time	Delay / Business interruption <1% of program days	Delay / Business interruption between 1%-3% of program days	Delay / Business interruption between 4%-6% of program days	Delay / Business interruption between 7%-10% of program days	Delay / Business interruption >10% of program days
Cost	Additional cost to the business / project <1% revenue	Additional cost to the business / project between 1%-3% revenue	Additional cost to the business / project between 4%-6% of revenue	Additional cost to the business / project between 7%-10% of revenue	Additional cost to the business / project >10% of revenue

Step 2 - What is the likelihood of that Consequence occurring in the circumstances?

Likelihood Ranking				
Score	Description		Percentage	Expected Frequency
5	Almost Certain	Common / Frequent Occurrence	Can be expected to occur 75% - 99%	More than 1 event per month
4	Likely	Is known to occur or "It has happened regularly"	Can quite commonly occur 50% - 75%	More than 1 event per year
3	Possible	Could occur or "I've heard of it happening"	May occasionally occur 25% - 50%	1 event per 1 to 10 years
2	Unlikely	Not likely to occur very often	May infrequently occur 10% - 25%	1 event per 10 to 100 years
1	Rare	Conceivable but only in exceptional circumstances	May occur in exceptional circumstances 0% – 10%	Less than 1 event per 100 years

Step 3 – Determine the Risk Level

Determine the risk score by combining most credilble consequence with likelihood

Likelihood \ Consequence	Rating	Negligible	Minor	Moderate	Major	Substantial
		1	2	3	4	5
Almost Certain	5	5 (Low)	10 (Moderate)	18 (Very High)	23 (Extreme)	25 (Extreme)
Likely	4	4 (Low)	9 (Moderate)	17 (Very High)	20 (Very High)	24 (Extreme)
Possible	3	3 (Low)	8 (Moderate)	13 (High)	19 (Very High)	22 (Very High)
Unlikely	2	2 (Low)	7 (Low)	12 (High)	15 (High)	21 (Very High)
Rare	1	1 (Low)	6 (Low)	11 (Moderate)	14 (High)	16 (High)

Risk ID	Category	Activity	Hazard/Aspect	Cause	Consequence /Impact	Current Controls	Risk Score
E1	Environment	Planning Approvals and Licences	Non Compliance with Regulatory instruments or Legislation (incl. Planning Approval conditions)	Inadequate management practices; Lack of competency/knowledge; Contractor management gaps	Regulatory action (prosecution, pins). Delay to subsequent approval requests, (delay to program) Contractual Breach Reputation Damage Non-compliance with sustainability certification	▪ Implementation of CEMP ▪ Induction included summary of regulatory obligations ▪ Supplier contracts included details of regulatory obligations ▪ Suitably qualified environment representative in delivery team	13 (High)
E2	Environment	Planning Approvals and Licences	Commencing work without approvals	Inadequate planning	Regulatory action (prosecution, pins). Delay to subsequent approval requests, (delay to program) Contractual Breach	▪ Approvals on master program ▪ Low impact / early works approval Procedure ▪ Change Management Procedure ▪ Suitably qualified environment representative in delivery team	13 (High)
E3	Environment	Planning Approvals and Licences	New approvals requirements due to scope change	New approvals requirements due to scope change	Regulatory action (prosecution, pins). Delay to subsequent approval requests, (delay to program) Contractual Breach	▪ Approvals on master program ▪ Low impact / early works approval Procedure ▪ Change Management Procedure ▪ Suitably qualified environment representative in delivery team (in design review)	11 (Moderate)
E4	Environment	Biodiversity and Ecology	Clearing or trimming without a permit, approval and/or pre-clearance survey	Inadequate management of environmental aspects; Lack of competency/knowledge	Regulatory action (prosecution, pins); Contractual Breach; Non-compliance with sustainability certification; Impact to existing flora and fauna communities	▪ Flora and Fauna Management Sub Plan and Procedure ▪ Inductions included details of flora and fauna management requirements ▪ Toolbox training on management of flora and fauna during construction ▪ Site Environment Plans (SEP) ▪ Suitably qualified environment representative in delivery team ▪ Specialist consultant for Flora/ Fauna Management ▪ Tree report prepared by arborist required for all tree trimming or removal.	7 (Low)

Risk ID	Category	Activity	Hazard/Aspect	Cause	Consequence /Impact	Current Controls	Risk Score
E5	Environment	Biodiversity and Ecology	Damage to existing flora	Construction activities impacting existing vegetation due to poorly demarcated site	Regulatory action (prosecution, PINs) Breach of deed requirements Reputation Non-compliance with sustainability certification Impact to existing flora and fauna communities	▪ No-go fencing is to be installed and clearly defined on SEP ▪ Flora and Fauna Management Sub Plan and Procedure ▪ Inductions included details of flora and fauna management requirements ▪ Toolbox training on management of flora and fauna during construction ▪ Trees to be retained to be protected in accordance with Australian Standard AS4970 (200–) - Protection of Trees on Development Sites and Adjoining Properties	7 (Low)
E6	Environment	Biodiversity and Ecology	Unexpected flora and fauna finds	Pre-clearance checks not undertaken Inadequate site delineation	Impact to flora and fauna communities	▪ Flora and Fauna Management Sub Plan and Procedure ▪ Inductions included details of flora and fauna management requirements ▪ Toolbox training on management of flora and fauna during construction	3 (Low)
E7	Environment	Transport and Traffic	Changed traffic conditions in the neighbourhood or increased traffic	Traffic entering/leaving construction sites and compounds	Increased local traffic Changes to local traffic conditions Air quality impacts Noise impacts	▪ Construction Traffic Management Plan and TCP's ▪ Community Communications Strategy ▪ Project induction included Traffic management obligations ▪ Site Inductions and Truck Driver training included site specific requirements ▪ Road Act Approvals ▪ Air Quality Management Sub Plan ▪ Construction Noise and Vibration Management Sub Plan	9 (Moderate)

Risk ID	Category	Activity	Hazard/Aspect	Cause	Consequence /Impact	Current Controls	Risk Score
E8	Environment	Transport and Traffic	Increased heavy vehicles traffic	Haulage	Increased local traffic Changes to local traffic conditions Air quality impacts Noise impacts	▪ Construction Traffic Management Plan ▪ TCP's and VMPs ▪ Community Communications Strategy ▪ Road Act Approvals ▪ Air Quality Management Sub Plan ▪ Construction Noise and Vibration Management Sub Plan ▪ Site Inductions and Truck Driver training included site specific haulage routes	10 (Moderate)
E9	Environment	Transport and Traffic	Road closure - for heavy delivery	Heavy deliveries	Changes to local traffic conditions Increased local traffic Community complaints	▪ Construction Traffic Management Plan ▪ Community Communications Strategy ▪ Site Induction and tool box training included any requirements for road closure	9 (Moderate)
E10	Environment	Noise and Vibration	Unapproved works outside hours	Inadequate planning Not complying with the out of hours approval process and requirements	Regulatory action (prosecution, pins). Contractual Breach Reputation Community complaints	▪ Out of Hours Works on delivery program ▪ Construction Noise and Vibration Management Sub Plan ▪ Construction Noise and Vibration Impact Statements (CNVIS) ▪ OOHW Procedure ▪ Induction included reference to obligations for management of OOHW ▪ Tool box training on management OOHW ▪ Suitably qualified environment representative in delivery team to assess and monitor	13 (High)
E11	Environment	Noise and Vibration	Cumulative / daytime construction noise	Construction activities not allowing for respite periods; Inadequate planning and consultation; Not complying with the noise management requirements	Community complaints Reputation	▪ Out of Hours Works on delivery program ▪ Construction Noise and Vibration Management Sub Plan ▪ Construction Noise and Vibration Impact Statements (CNVIS) ▪ OOHW Procedure ▪ Induction included reference to obligations for management of noisy activities, standard working times and OOHW.	13 (High)

Risk ID	Category	Activity	Hazard/Aspect	Cause	Consequence /Impact	Current Controls	Risk Score
						▪ Tool box training on management of noise and vibration ▪ Suitably qualified environment representative in delivery team to assess and monitor ▪ Community Communications Strategy	
E12	Environment	Noise and Vibration	Vibration impacts of heavy plant	Heavy plant movements and activities Use of percussive machinery	Community complaints Damage to existing infrastructure Damage to heritage buildings	▪ Construction Noise and Vibration Management Sub Plan ▪ Construction Noise and Vibration Impact Statements (CNVIS) ▪ Heritage Management Sub Plan ▪ Induction included reference to obligations for vibration management ▪ Tool box training on management of vibration ▪ Suitably qualified environment representative in delivery team to assess and monitor vibration ▪ Community Communications Strategy	12 (High)
E13	Environment	Heritage and Archaeology	Unexpected archaeological finds	Unexpected find(s) Inadequate demarcation of site Location of known site(s) not referenced in site plans and communicated to personnel. Not following unexpected finds protocol	Delay to program Damage to relics	▪ Heritage Management Sub Plan ▪ Unexpected Finds Heritage and Human Remains Procedure ▪ Inductions included reference to obligations with regard to unexpected finds ▪ Tool box training on management of unexpected finds ▪ Specialist consultant to manage unexpected finds	7 (Low)

Risk ID	Category	Activity	Hazard/Aspect	Cause	Consequence /Impact	Current Controls	Risk Score
E14	Environment	Soil and Water	Sediment run-off	Inadequate sediment control Not complying with sediment control plans	Pollution of water Impact on aquatic ecology Sedimentation of waterways Regulatory action Delay to program Community impacts	▪ Soil, Water and Groundwater Management Sub Plan and associated Procedures ▪ Erosion and Sediment Control Plans ▪ Induction includes reference to obligations associated with management of spoil and water during construction ▪ Toolbox training on management of ERSED and de-watering ▪ Suitably qualified environment representative in delivery team ▪ Specialist consultant for ERSED development and review	13 (High)
E15	Environment	Soil and Water	Unapproved discharge of water from site	Poor planning of construction activity Not obtaining or working in accordance with an issued water discharge permit (as per de-watering procedure)	Pollution of water Impact on aquatic ecology Sedimentation of waterways Regulatory action Delay to program Community impacts	▪ Soil, Water and Groundwater Management Sub Plan and associated Procedures ▪ Erosion and Sediment Control Plans ▪ Induction includes reference to obligations associated with management of spoil and water during construction ▪ Toolbox training on management of ERSED and de-watering ▪ Suitably qualified environment representative in delivery team	13 (High)
E16	Environment	Soil and Water	Unexpected finds of contaminated soil, hazardous materials or acid sulfate soils	Unexpected finds during construction activities Not following unexpected finds protocol	Additional cost for assessment and disposal Program delay Soil contamination from inadequate disposal	▪ Soil, Water and Groundwater Management Sub Plan ▪ Unexpected Finds Soil Contamination and Asbestos Procedure ▪ Waste Management and Recycling Procedure ▪ Induction includes reference to obligations associated with management of waste, unexpected finds, contamination, acid sulfate soils and hazardous materials. ▪ Toolbox training on management of contamination and unexpected finds ▪ Suitably qualified environment representative in delivery team ▪ Specialist consultant for contamination management	7 (Low)

Risk ID	Category	Activity	Hazard/Aspect	Cause	Consequence /Impact	Current Controls	Risk Score
E17	Environment	Soil and Water	Chemical / hazardous materials storage and use	Unapproved use of materials on-site Inappropriate use or storage Inadequate storage and containment controls	Pollution of water Pollution of soil	▪ Project Health and Safety Management Plan ▪ Emergency Response Plan/Spill Management Procedure ▪ Site Environment Plans include designated storage areas ▪ Refuelling procedures ▪ Tool box training substance storage and management ▪ Induction reference substance storage obligations	12 (High)
E18	Environment	Soil and Water	Interception of ground water	Not following soil and water management plan Insufficient geotechnical data	Pollution of waters Delay to program Salinity impacts on infrastructure	▪ Soil, Water and Groundwater Management Sub Plan and associated Procedures ▪ Induction included reference to groundwater management obligations ▪ Toolbox training delivered included management of Groundwater during construction	8 (Moderate)
E19	Environment	Visual Amenity	Visual impacts	Not cordoning off the worksite with fencing, shade cloth in accordance with contract requirements	Light pollution Temporary hoarding Graffiti	▪ Visual Amenity Management Sub Plan ▪ Community Communications Strategy	7 (Low)
E20	Environment	Social and Economic Impacts	Local economy	Construction activities impacting local businesses	Impact on businesses Local employment	▪ Sustainability Management Plan ▪ Sustainable Workforce Target	7 (Low)
E21	Environment	Greenhouse Gas and Climate Change	Increased energy usage	Poor planning of construction activity Not following greenhouse gas management plans	Increased costs Increased greenhouse GHG emissions Contributing to climate change	▪ Sustainability Management Plan Construction programming	7 (Low)

Risk ID	Category	Activity	Hazard/Aspect	Cause	Consequence /Impact	Current Controls	Risk Score
E22	Environment	Air Quality	Dust generation	Poor planning of construction activity Not complying with the air quality, management plan, working in windy conditions, not covering loads Delays in stabilisation of disturbed land	Community impacts Regulatory action Air pollution	▪ Air Quality Management Sub Plan and Procedures ▪ Water Management Procedures (for dust suppression) ▪ Induction includes air quality management requirements ▪ Toolbox Training of workforce on management of air quality during construction	8 (Moderate)
E23	Environment	Air Quality	Exhaust emissions	Poor planning of construction activity Not complying with the air quality management plan; Inadequate plant management	Community impacts Regulatory action Air pollution	▪ Air Quality Management Sub Plan ▪ Induction included air quality management requirements ▪ Toolbox Training of workforce on management of air quality during construction;	7 (Low)
E24	Environment	Waste	Incorrect disposal of waste	Poor planning of construction activity Not following waste management plan	Regulatory action (prosecution, PINs)	▪ Waste and Recycling Management Sub Plan and Procedures ▪ Induction included waste management requirements ▪ Toolbox training of workforce on waste management	8 (Moderate)
E25	Environment	Waste	Excess waste generation	Poor planning of construction activity Not following waste management plan	Non-compliance with sustainability certification	▪ Waste and Recycling Management Sub Plan ▪ Sustainability Management Plan ▪ Induction included waste management requirements ▪ Toolbox training of workforce on waste management ▪ Waste reduction initiatives to be implemented as per the Sustainability Management Plan	7 (Low)

Risk ID	Category	Activity	Hazard/Aspect	Cause	Consequence /Impact	Current Controls	Risk Score
E26	Environment	Noise and Vibration	Settlement	Construction activities impacting on surrounding buildings structural integrity	Structural damage to surrounding buildings	▪ Pre construction building condition surveys ▪ Settlement monitoring ▪ Specialist consultant structural engineer engaged	11 (Moderate)
E27	Environment	Air Quality	Dust generation during site establishment and structural work.	Dust associated and emissions associated with construction vehicles.	Community impacts Regulatory action Air pollution	AQ1, AQ2, AQ3, AQ4, AQ5, AQ6, AQ7, AQ8, AQ9, AQ10 and AQ11.	8 (Moderate)
E28	Environment	Air Quality	VOC generation during site fit-out.	Excessive VOC off-gassing from products used during fit-out stages (e.g., floor covering products).	Regulatory action Air pollution	AQ12	3 (Low)
E29	Environment	Air Quality	Offensive odour generation at the boundary of the site during site fit-out.	Excessive VOC off-gassing from products used during fit-out stages (e.g., water-proofing products) generates odours.	Community impacts Regulatory action Air pollution	AQ12	2 (Low)

Stage of Work	Source	Pathway	Receptor	Hazards	Likelihood	Consequence	Hazard Risk Level	Risk Control Measures Found in Table 6.2
Site Set-up	Dust	Airborne dust	Workers External receptors	Dust generation	3	1	3 (Low)	AQ1, AQ3, AQ6, AQ7, AQ8, AQ9 and AQ10
Structural Trades	Dust	Airborne dust	Workers External receptors	Exposure of workforce or public to dust.	3	2	8 (Moderate)	AQ2, AQ3, AQ4, AQ5, AQ6, AQ7, AQ8, AQ9, AQ10 and AQ11
Fit out	Dust	Airborne dust	Workers External receptors	Exposure of workforce or public to dust.	1	1	1 (Low)	AQ2, AQ3, AQ10 and AQ15
	VOCs	Airborne VOCs	Workers	Exposure of workforce to VOCs. Odour generation	2	2	7 (Low)	AQ12

Appendix D: Environmental Obligations Register

Condition No.	Condition Requirement:	Responsibility
Part A Administrative Conditions		
A1	In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.	PSD CPB
A2	The development may only be carried out: (a) in compliance with the conditions of this consent; (b) in accordance with all written directions of the Planning Secretary; (c) in accordance with the EIS and RtS; (d) in accordance with the management and mitigation measures; (e) in accordance with the approved plans in the table below (except where modified by the conditions of this consent):	PSD CPB
A3	Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to: (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and (b) the implementation of any actions or measures contained in any such document referred to in condition A3(a).	Note
A4	The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2(c). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.	Note
A5	This consent will lapse five years from the date of consent unless the works associated with the development have physically commenced.	Note

Condition No.	Condition Requirement:	Responsibility
A6	This consent does not approve the following: (a) the above awning-level signage zone on the Bathurst Street facade (b) the components of the detailed design and construction of the station box being delivered under the CSSI approval (c) the detailed fit-out and operation of the Level 2 food and drink premises (d) the fit-out and use of commercial premises being delivered under the CSSI approval (e) the installation of signage (f) strata subdivision Where required, separate approvals shall be obtained from the relevant consent authority (except where exempt and/or complying development applies).	Note, PSD Responsibility, with exception of A6(b) & (f) which is to be carried out by the PS Contractor under the SDD. The PSD is to ensure the PS Contractor carries out these activities required under the PDA.
A7	The Applicant must comply with all relevant prescribed conditions of development consent under Part 6, Division 8A of the EP&A Regulation.	CPB
A8	In the event of a dispute between the Applicant and a public authority, in relation to an applicable requirement in this approval or relevant matter relating to the Development, either party may refer the matter to the Planning Secretary for resolution. The Planning Secretary's resolution of the matter must be binding on the parties.	Note
A9	Any advice or notice to the consent authority must be served on the Planning Secretary.	D&C Contractor to provide necessary information in order for the PSD to satisfy requirements of this condition, where required.
A10	Where conditions of this consent require consultation with an identified party, the Applicant must: (a) consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and (b) provide details of the consultation undertaken including: (i) the outcome of that consultation, matters resolved and unresolved; and (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.	CPB - construction-related consultation PSD - planning-related consultation
A11	All new buildings and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the BCA.	D&C Contractor responsibility

Condition No.	Condition Requirement:	Responsibility
A12	All plant and equipment used on site, or to monitor the performance of the development must be: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	Prior to Completion - CPB Post Completion - PSD
A13	References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent.	Note
A14	However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.	Note
A15	Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification and independent environmental auditing. Note: For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an “environmental audit” is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.	Note
A16	The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident.	CPB to notify PSD PSD to notify DPIE
A17	Subsequent notification must be given and reports submitted in accordance with the requirements set out in Appendix 1.	CPB to notify PSD PSD to notify DPIE
A18	The Department must be notified in writing to compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of any non-compliance. The Certifying Authority must also notify the Department in writing to compliance@planning.nsw.gov.au within seven days after they identify any non-compliance.	CPB to notify PSD PSD to notify DPIE
A19	The notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.	CPB to notify PSD PSD to notify DPIE

Condition No.	Condition Requirement:	Responsibility
A20	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	CPB to notify PSD PSD to notify DPIE
A21	Within three months of: (a) the submission of a compliance report under conditions A24-A26; (b) the submission of an incident report under conditions A16 and A17; (c) the approval of any modification of the conditions of this consent (excluding modifications made under section 4.55(1) of the EP&A Act); or (d) the issue of a direction of the Planning Secretary under condition A3 which requires a review, the strategies, plans and programs required under this consent must be reviewed, and the Department must be notified in writing that a review is being carried out.	CPB to issue to PSD PSD to issue to DPIE
A22	If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review. Note: This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.	CPB to issue to PSD PSD to issue to DPIE
A23	For work costing $25,000 or more, a Long Service Levy must be paid. For further information please contact the Long Service Payments Corporation Helpline on 131 441.	CPB
A24	Compliance Reports of the project must be carried out in accordance with the Compliance Reporting Requirements outlined in the Compliance Reporting Post Approval Requirements (2020).	D&C Contractor
A25	Compliance Reports must be submitted to the Department in accordance with the timeframes set out in the Compliance Reporting Post Approval Requirements (2020), unless otherwise agreed to by the Planning Secretary.	D&C Contractor
A26	The Applicant must make each Compliance Report publicly available 60 days after submitting it to the Planning Secretary, unless otherwise agreed by the Planning Secretary.	D&C Contractor
A27	Notwithstanding the requirements of the Compliance Reporting Post Approval Requirements (2020), the Planning Secretary may approve a request for ongoing annual operational compliance reports to be ceased, where it has been demonstrated to the Planning Secretary's satisfaction that an operational compliance report has demonstrated operational compliance.	D&C Contractor
A28	Independent Audits of the development must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020).	D&C Contractor

Condition No.	Condition Requirement:	Responsibility
A29	Proposed independent auditors must be agreed to in writing by the Planning Secretary prior to the commencement of an Independent Audit.	PSD will engage and manage Audit Consultant, and submit to Planning Secretary. D&C Contractor's responsibility to complete and provide compliance evidence to PSD. PSD responsible for compliance with PSD DA Conditions.
A30	The Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified above, upon giving at least 4 weeks' notice (or timing) to the Applicant of the date upon which the audit must be commenced.	PSD will engage and manage Audit Consultant, and submit to Planning Secretary. D&C Contractor's responsibility to complete and provide compliance evidence to PSD. PSD responsible for compliance with PSD DA Conditions.
A31	In accordance with the specific requirements in the Independent Audit Post Approval Requirements (2020), the Applicant must: (a) review and respond to each Independent Audit Report prepared under condition A28 of this consent, or condition A30 where notice is given by the Planning Secretary; (b) submit the response to the Planning Secretary; and (c) make each Independent Audit Report, and response to it, publicly available 60 days after submission to the Planning Secretary.	PSD will engage and manage Audit Consultant, and submit to Planning Secretary. D&C Contractor's responsibility to complete and provide compliance evidence to PSD. PSD responsible for compliance with PSD DA Conditions.
A32	Independent Audit Reports and the Applicant's response to audit findings must be submitted to the Planning Secretary within 2 months of undertaking the independent audit site inspection as outlined in the Independent Audit Post Approvals Requirements (2020) unless otherwise agreed by the Planning Secretary.	PSD will engage and manage Audit Consultant, and submit to Planning Secretary. D&C Contractor's

Condition No.	Condition Requirement:	Responsibility
		responsibility to complete and provide compliance evidence to PSD. PSD responsible for compliance with PSD DA Conditions.
A33	Notwithstanding the requirements of the Independent Audit Post Approvals Requirements (2020), the Planning Secretary may approve a request for ongoing independent operational audits to be ceased, where it has been demonstrated to the Planning Secretary's satisfaction that independent operational audits have demonstrated operational compliance.	PSD will engage and manage Audit Consultant, and submit to Planning Secretary. D&C Contractor's responsibility to complete and provide compliance evidence to PSD. PSD responsible for compliance with PSD DA Conditions.
Part B Design Excellence and Integrity		
B1	The architectural design team comprising Bates Smart is to have direct involvement in the design documentation, contract documentation and construction stages of the project.	CPB
B2	The architectural design team is to have full access to the site, following safety induction, and is to be authorised by the Applicant to respond directly to the consent authority where information or clarification is required in the resolution of any design issues throughout the project.	CPB
B3	Evidence of the architectural design team's commission is to be provided to the Planning Secretary prior to the release of the relevant Construction Certificate.	CPB issues evidence to PSD PSD issues evidence to DPIE
B4	The architectural design team is not to be changed without prior written notice and approval of the Planning Secretary.	CPB
B5	To ensure the scheme retains, or is an improvement upon, the approved design excellence qualities, the Applicant shall notify the Planning Secretary of any proposed modifications to the approved architectural drawings.	PSD
B6	The Planning Secretary is to determine whether any proposed modifications to the approved architectural drawings require review by the Sydney Metro Design Review Panel (DRP) or other appropriate person(s).	PSD

Condition No.	Condition Requirement:	Responsibility
B7	If the DRP is reconvened to review any proposed design changes, a Design Integrity Report (DIR) is to be prepared and submitted to the Planning Secretary with the lodgement of any section 4.55 modification application. The DIR shall include a summary of feedback provided by the DRP and responses by the Applicant to this advice.	PSD
~~B8~~	~~To ensure the proposal integrates with the approved Metro Station under the CSSI approval, prior to the issue of a construction certificate, the Applicant is to confirm that the Metro Station will be constructed in accordance with the plans and details submitted with this application including the plans identified in Condition A2.~~	~~PSD~~
B8	Should any changes be made to the Metro Station box, including any changes to massing, facade detailing or services that could affect physical or visual integration with the approved OSD development, the Applicant must advise of any amendments to the design of the OSD development to ensure appropriate integration of the two developments. The Applicant must consult with the DRP and lodge a section 4.55 modification application as necessary	PSD
B9	Prior to the issue of a construction certificate, the plans are to be modified to the satisfaction of the Certifying Authority to: (a) All windows in the southern façade (including kitchen and living rooms) must be provided with external privacy screen to direct views from the site away from the adjoining site to the south or fixed obscured glazing must be used (b) Incorporation of wind mitigation screening to the balconies of the south-eastern unit on each level, to achieve the recommended outcomes of the Wind Impact Assessment prepared by CPP and dated 16 May 2020, unless otherwise verified as not being required to the satisfaction of the Planning Secretary. (c) Relocate 12 retail bike parking spaces for customers and staff from Level 3 to Level 2 in proximity to the retail end of trip facilities (d) Incorporate a courier bike parking space within the site at the Pitt Street residential entrance.	PSD to provide instruction on (a) and (b) required design changes, for D&C to coordinate as a Modification under Contract. Condition B9 (c) and (d) are D&C Contractor responsibility.
B10	Prior to the issue of any occupation certificate, a documentary restrictive covenant is to be registered on the Title of residential stratum subdivision that requires: (a) all affected windows and balconies adjacent to the common boundary with the adjoining Edinburgh Castle Hotel site must be sealed or otherwise enclosed prior to the construction of any building abutting, adjoining or adjacent to such windows and/or balconies; (b) all affected one-bedroom apartments must be internally reconfigured into studio apartments in accordance with the indicative layout provided in the plan titled “1BT3 Converted Studio Plan”, Rev A, prepared by Bates Smart, dated 09 February 2021, prior to the construction of any building abutting, adjoining, or adjacent to such affected apartments; and The covenant is to the created appurtenant to the City of Sydney and at no cost to the City of Sydney	PSD
B11	The maximum height of the approved building must not exceed RL 165.15 m AHD, including plant and lift overruns, communication devices, antennas, satellite dishes, masts, flagpoles, chimneys, flues and the like. Details confirming compliance with this condition must be submitted to the Certifying Authority prior to the issue of the relevant Construction Certificate.	CPB Bates Smart

Condition No.	Condition Requirement:	Responsibility
B12	The gross floor area of the development must not exceed 21,995 m². Details confirming compliance with this condition must be submitted to the Certifying Authority prior to the issue of the relevant Construction Certificate. Note: The GFA approved under this consent excludes any GFA attributed to development approved under the Sydney Metro City and Southwest station works (CSSI 7400).	CPB Bates Smart
B13	Prior to the issue of the first Construction Certificate that would permit overall floor space on the site to exceed 13,680 m², the Applicant must purchase 4,451 m² of Heritage Floor Space in accordance with the requirements of Clause 6.10 and 6.11 of the City of Sydney Local Environmental Plan 2012. The Applicant must submit to the satisfaction of the Certifying Authority certification from Council that the requirements for Heritage Floor Space transfer have been met.	PSD
B14	Prior to the issue of the relevant Construction Certificate, the Applicant must submit to the satisfaction of the Certifying Authority structural drawings prepared and signed by a suitably qualified practising Structural Engineer that demonstrates compliance with: (a) the relevant clauses of the BCA; and (b) this development consent.	CPB TTW
B15	The external walls of all buildings including additions to existing buildings must comply with the relevant requirements of the BCA.	D&C Contractor Bates Smart Inhabit
B16	Before the issue of a relevant Construction Certificate, the Applicant must provide the Certifying Authority with documented evidence that the products and systems proposed for use or used in the construction of external walls including finishes and claddings such as synthetic or aluminium composite panels comply with the requirements of the BCA.	D&C Contractor. Bates Smart Inhabit PSD to provide instruction on any costs associated.
B17	The Applicant must provide a copy of the documentation given to the Certifying Authority to the Planning Secretary within seven days after the Certifying Authority accepts it.	D&C Contractor to provide documentation PSD to submit to DPIE
B18	The premises must be ventilated in accordance with the BCA and AS1668.1 and AS1668.2.	CPB D&C Mechanical Contractor
B19	Details of any mechanical ventilation and/or air conditioning system complying with AS1668.1, AS1668.2, the BCA, AS/NZS 3666.1:2011 Air handling and water systems of buildings – Microbial control and relevant Australian Standards must be prepared by a suitably qualified person certified and certified in accordance with Clause A2.2(a)(iii) of the BCA to ensure adequate levels of health and amenity to the occupants of the building and to ensure environment protection. Details shall be submitted to the Certifying Authority prior to the issue of the relevant Construction Certificate	CPB D&C Mechanical Contractor
B20	The visible light reflectivity from building materials used on the facades of any buildings or structures shall not exceed 20 per cent so as to minimise glare. A report/documentation demonstrating compliance with these requirements is to be submitted to the Certifying Authority prior to the issue of the relevant Construction Certificate.	CPB Bates Smart Inhabit

Condition No.	Condition Requirement:	Responsibility
B21	A report must be obtained from a suitably qualified and experienced professional engineer/s, which includes the following details, and submitted to the Certifying Authority for the development: (a) geotechnical details which confirm the suitability and stability of the site for the development and relevant design and construction requirements to be implemented to ensure the stability and adequacy of the development and adjacent land (b) details to demonstrate that the proposed methods of support and construction are suitable for the site and should not result in any damage to the adjoining premises, buildings or any public place, as a result of the works and any associated vibration (c) the adjoining land and buildings located upon the adjoining land must be adequately supported at all times throughout building work (d) written approval must be obtained from the owners of the adjoining land to install any ground or rock anchors underneath the adjoining premises (including any public roadway or public place) and details must be provided to the Certifying Authority.	PSD to obtain through PS Contractor. D&C Contractor can satisfy (a) and (b) through reports that the PS Contractor has obtained. PSD retain responsibility (c) and (d).
B22	Prior to the issue of the relevant Construction Certificate, details of final materials and finishes must be lodged to the satisfaction of the Planning Secretary. The details must include: (a) specifications and sample boards for all external finishes, colours and glazing including annotated drawings and computer-generated imagery of their application (b) confirmation of the process and methods in arriving at the final choice for all materials and finishes (c) detailed architectural drawings of the façade details, including glazing specification and any sun shading. This must include snapshots at different points in the facade in plan, elevation and section to a scale of 1:20 or 1:50 as necessary.	CPB - issue to PSD PSD - issue to DPIE
B23	Prior to the issue of the relevant Construction Certificate, the Applicant shall submit evidence to the Certifying Authority demonstrating that the design of the development has incorporated the relevant CPTED management and mitigation measures included within the CPTED report prepared by Integral Group, dated 16 May 2020.	CPB
B24	The development must incorporate all design, construction and operation measures as identified in the Ecologically Sustainable Development Report and Sustainability Strategy prepared by Cundall, dated November 2019 and Response to Submissions Letter prepared by Cundall dated 19 November 2020. Details demonstrating compliance are to be submitted to the Certifying Authority prior to the issue of the relevant Construction Certificate.	CPB
B25	The Applicant shall demonstrate that Ecologically Sustainable Development is being achieved by achieving a minimum 5 Star Green Star rating in accordance with the Green Star Design and As-Built V.1.3 (Green Building Council Australia). Details demonstrating compliance with this condition must be submitted to the Certifying Authority prior to the issue of a Construction Certificate.	CPB
B26	The development must be implemented, and all BASIX commitments thereafter maintained in accordance with BASIX Certificate No 1081183M_03 or in accordance with any updated certificate if amendments are made. The BASIX certificate must be submitted to the Certifying Authority with all commitments clearly shown on the relevant Construction Certificate plans.	CPB
B27	The following water fixtures and fittings must be provided within the non-residential parts of the development: (a) All toilets installed must be of water efficient dual-flush capacity with at least a 4-star rating under the Water Efficiency and Labelling Scheme (WELS). The details must be submitted for approval by the Certifying Authority, prior to the issue of the relevant Construction Certificate. (b) All taps and shower heads installed must be water efficient with at least a 4-star rating under the Water Efficiency and Labelling Scheme	CPB

Condition No.	Condition Requirement:	Responsibility
	(WELS). The details must be submitted for the approval of the Certifying Authority, prior to issue of the relevant Construction Certificate. (c) New urinal suites, urinals and urinal flushing control mechanisms must use waterless technology. Where it is submitted that this is not feasible, it must be demonstrated that products have been selected with at least a 4-star rating under the Water Efficiency and Labelling Scheme (WELS). The details must be submitted to the Certifying Authority prior to the issue of a Construction Certificate. (d) Systems must include "smart controls" to reduce unnecessary flushing. Continuous flushing systems are not approved. Details are to be submitted to and approved by the Certifying Authority, prior to the issue of the relevant Construction Certificate.	
B28	Prior to the commencement of construction, the Applicant must submit to the Certifying Authority evidence that sufficient off-street parking has been provided for heavy vehicles and for site personnel, to ensure that construction traffic associated with the development does not utilise on-street parking or public parking facilities.	CPB
B29	Details of noise mitigation measures for all mechanical plant are to be detailed on relevant Construction Certificate drawings. Certification from an appropriately qualified acoustic engineer that the proposed measures will achieve compliance with the Noise Policy for Industry and the project amenity noise levels established by the Acoustic Report prepared by Renzo Tonin and Associates and dated 17 May 2020, must be submitted to the Certifying Authority prior to the issue of the relevant Construction Certificate.	CPB
B30	Prior to the issue of the relevant Construction Certificate, the Certifying Authority is to ensure that the building has been designed to accommodate a minimum of 5 adaptable residential apartments and a minimum of 47 apartments that would achieve the Liveable Housing Guideline's silver level universal design features and that the requirements are referenced on the relevant Construction Certificate drawings. In addition, information shall be provided confirming (a) the required number of apartments are able to be adapted for people with a disability in accordance with the BCA; and (b) compliance with Australian Standard AS2499 – Adaptable Housing	CPB
B31	The works that are the subject of this application must be designed and constructed to provide access and facilities for people with a disability in accordance with the BCA. Prior to the commencement of above ground works, the Certifying Authority must ensure that evidence of compliance with this condition from an appropriately qualified person is provided and that the requirements are referenced on any certified plans	CPB
B32	All building, plumbing and drainage work must be carried out in accordance with the requirements of the Sydney Water Corporation. The approved plans must be submitted to the Sydney Water Tap in™ online service, to determine whether the development will affect Sydney Water's wastewater and water mains, stormwater drains and/or easements, and if any further requirements need to be met. Note: Sydney Water's Tap in™ in online service is available at: https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm	CPB
B33	All loading and unloading operations associated with servicing the site must be carried out within the signposted loading spaces at all times and must not obstruct other properties/units or the public way.	D&C Contractor during construction, PSD during operation.
B34	The service vehicle docks and access driveways must be kept clear of goods at all times and must not be used for storage purposes, including garbage storage.	D&C Contractor during construction, PSD during operation.

Condition No.	Condition Requirement:	Responsibility
B35	B35. Prior to the issue of a Construction Certificate, the applicant shall either: (a) Amend the plans and details to ensure all residential cyclist access is via the main residential entry / lobby; or (b) Undertake a Stage 3 (Detailed Design) Road Safety Audit for the Loading Dock arrangement including cyclist movements within the loading dock. This audit shall be undertaken in accordance with Austroads Guide to Road Safety Part 6: Managing Road Safety Audits and Austroads Guide to Road Safety Part 6A: Implementing Road Safety Audits by an independent TfNSW accredited road safety auditor. Based on the results of the road safety audit, the applicant shall review the design drawings and implement safety measures in consultation with TfNSW as required, prior to the issue of the relevant Construction Certificate. Safety measures may not include flashing lights and alarms within the loading dock. If the audit demonstrates that adequate safety measures cannot be implemented to ensure the safety of all residents, including children, traversing the loading dock with bicycles, the plans must be amended so that all residential cyclist access is via the main residential entry / lobby.	PSD to obtain planning confirmation and provide instruction to D&C Contractor.
B36	If pedestrians and cyclists are proposed to have access to the loading dock, the Applicant shall also prepare a Pedestrian and Cyclists Safety Plan in consultation with Customer Journey Planning within TfNSW to manage pedestrian and cyclist movements within the Loading Dock. This Plan shall include proposed pedestrian and traffic control measures needed to be provided by Loading Dock Manager and details of the responsibility of the Loading Dock Manager in relation to allowing cyclists and pedestrians within the Loading Dock and management of any incidents within and access to the Loading Dock.	PSD
B37	Plans demonstrating compliance with the following traffic and parking requirements for the loading dock shall be submitted to the satisfaction of the Certifying Authority prior the issue of the issue of the relevant Construction Certificate: (a) all vehicles should enter and leave the subject site in a forward direction; (b) all vehicles are to be wholly contained on site before being required to stop, (c) appropriate pedestrian advisory signs are to be provided at the egress from parking areas; (d) all works/regulatory signposting associated with the proposed developments shall be at no cost to the relevant roads authority; and (e) the swept path of the longest vehicle (including garbage trucks) entering and exiting the Site, as well as manoeuvrability through the subject Site, shall be in accordance with AUSTROADS.	CPB
B38	A minimum of 210 resident bike storage lockers and 12 residential visitor bike parking spaces shall be provided on Level 3. Details shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate	CPB
B39	12 retail bike parking spaces for customers and staff are to be provided on Level 2 in proximity to the retail end of trip facilities. Details shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate.	CPB
B40	Minimum retail end of trip facilities are as follows: (a) 12 personal lockers; and (b) 1 shower.	CPB
B41	The layout, design and security of bicycle facilities must comply with the minimum requirements of Australian Standard AS 2890.3 – 1993 Parking Facilities Part 3: Bicycle Parking Facilities.	CPB
B42	Storage, change room and shower facilities shall be provided and designed in accordance with the details provided within the application. Details shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the relevant Construction Certificate.	CPB

Condition No.	Condition Requirement:	Responsibility
B43	Unless already carried out under CSSI 7400 for all relevant affected adjoining buildings, infrastructure and roads, the Applicant is to engage a suitably qualified person to prepare a Pre-Construction Dilapidation Report. The Report is to detail the current structural condition of all adjoining buildings, infrastructure and roads (including the public domain site frontages, the footpath, kerb and gutter, driveway crossovers and laybacks, kerb ramps, road carriageway, street trees and plantings, parking restrictions and traffic signs, and all other existing infrastructure along the street) within the 'zone of influence'. Any entry into private land is subject to the consent of the owner and any inspection of buildings on privately affected land shall include details of the whole building where only part of the building may fall within the 'zone of influence'. The report shall be submitted to the satisfaction of the Certifying Authority prior to the issue of the Construction Certificate. A copy of the report is to be forwarded to the Certifying Authority and each of the affected property owners.	CPB
B44	In the event that access for undertaking a Pre-Construction Dilapidation Report is denied by an adjoining owner, the Applicant must demonstrate, in writing, to the satisfaction of the Planning Secretary that all reasonable steps have been taken to obtain access and advise the affected property owner of the reason for the report and that these steps have failed.	CPB
B45	Any damage to the public way including trees, footpaths, kerbs, gutters, road carriageway and the like must be made safe and functional by the Applicant. Damage must be fully rectified by the Applicant in accordance with the Council's standards prior to the final Occupation Certificate is issued for Public Domain Works or before the final Occupation Certificate is issued for the development, whichever is the sooner.	CPB
B46	Prior to the issue of any Construction Certificate the Applicant shall demonstrate, to the satisfaction of the Sydney Coordination Office within TfNSW, the following: (a) loading and servicing facilities within the subject site adequately accommodate the forecast demand of the development (including long dwell time service vehicles) so as to not rely on the kerbside restrictions to conduct the development's business, including any necessary provision of greater loading bay capacity; and (b) provision of space for secure on-site storage of goods both to reduce peak demand on loading dock use and to support freight consolidation and alternative last mile delivery modes.	CPB
B47	Prior to the issue of any Construction Certificate or any works, whichever is the earlier, the Applicant shall: (a) amend, or prepare an addendum to, the Construction Pedestrian and Traffic Management Plan (CPTMP) applicable to the CSSI approval (CSSI 7400) to apply to the development. The amended CPTMP must be prepared in consultation with the Sydney Coordination Office within TfNSW, and submitted to the Planning Secretary and Certifying Authority; or (b) Prepare a final CPTMP in consultation with the Sydney Coordination Office within TfNSW. The CPTMP needs to specify matters including, but not limited to, the following: (i) a description of the development; (ii) location of any proposed work zone(s); (iii) details of crane arrangements including location of any crane(s) and crane movement plan; (iv) haulage routes; (v) proposed construction hours; (vi) predicted number of construction vehicle movements, detail of vehicle types and demonstrate that proposed construction vehicle movements can work within the context of road changes in the surrounding area, noting that construction vehicle movements are to be minimised during peak periods; (vii) construction vehicle access arrangements; (viii) construction program and construction methodology, including any construction staging; (ix) a detailed plan of any proposed hoarding and/or scaffolding; (x) measures to avoid construction worker vehicle movements within the precinct; (xi) consultation strategy for liaison with surrounding stakeholders, including other developments under construction and Sydney Metro City and Southwest; (xii) identify any potential impacts to general traffic, cyclists, pedestrians, bus services within the vicinity of the site from construction vehicles	CPB

Condition No.	Condition Requirement:	Responsibility
	during the construction of the proposed works. Proposed mitigation measures should be clearly identified and included in the CPTMP; and (xiii) identify the cumulative construction activities of the development and other projects within or around the development site, including the Sydney Metro City and Southwest and private development. Proposed measures to minimise the cumulative impacts on the surrounding road network should be clearly identified and included in the CPTMP. (c) Submit a copy of the final development specific CPTMP to Sydney Coordination Office within TfNSW for endorsement; (d) Provide the builder's direct contact number to small businesses adjoining or impacted by the construction work and the Transport Management Centre and Sydney Coordination Office within Transport for NSW to resolve issues relating to traffic, public transport, freight, servicing and pedestrian access during construction in real time. The Applicant is responsible for ensuring the builder's direct contact number is current during any stage of construction; and (e) A copy of the final development specific CPTMP must be submitted to the Planning Secretary and Certifying Authority.	
B48	Prior to the issue of the relevant Construction Certificate, the Applicant shall: (a) amend, or prepare an addendum to, the Construction Environmental Management Plan (CEMP) applicable to the CSSI approval (CSSI 7400) to apply to the development. The amended CEMP must be submitted to the Planning Secretary and Certifying Authority, or (b) prepare a Construction Framework Environmental Management Plan (CFEMP) for the development, independent of the CEMP approved with the CSSI station works. A copy of the final CFEMP must be submitted to the Planning Secretary and Certifying Authority. The CFEMP must: (i) describe the relevant stages and phases of construction including work program outlining relevant timeframes for each stage/phase; (ii) describe all activities to be undertaken on the site during site establishment and construction of the development; (iii) clearly outline the stages/phases of construction that require ongoing environmental management monitoring and reporting; (iv) detail statutory and other obligations that the Applicant is required to fulfil during site establishment and construction, including approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies; (v) include specific consideration of measures to address any requirements of the EPA during site establishment and construction; (vi) describe the roles and responsibilities for all relevant employees involved in the site establishment and construction of the works; (vii) detail how the environmental performance of the site preparation and construction works will be monitored, and what actions will be taken to address identified potential environmental impacts; (viii) document and incorporate all sub environmental management plans (Sub Plans), studies and monitoring programs required under this consent; and (ix) include arrangements for community consultation and complaints handling procedures during construction.	CPB
B49	B50. In the event of any inconsistency between the consent and the CFEMP, the consent shall prevail.	CPB
B50	The CFEMP and any associated Sub Plans should be revised: (a) at each key stage of the works; (b) in response to future development consents; (c) in response to major changes in site conditions or work methods; and (d) in support of licence variations as necessary.	CPB
B51	Prior to the issue of the relevant Construction Certificate, the Applicant shall: (a) amend, or prepare an addendum to, the Construction Noise and Vibration Management Sub Plan (CNVMP) applicable to the CSSI approval (CSSI 7400) to apply to the development. The amended CNVMP must be submitted to the Planning Secretary and Certifying Authority, or (b) prepare and implement a Construction Noise and Vibration Management Sub Plan (CNVMP) for the development, independent of the CNVMP approved with the CSSI station works. A copy of the CNVMP must be submitted to the Planning Secretary and Certifying Authority. The Sub Plan must include: (i) identification of the specific activities that will be carried out and associated noise sources at the premises;	CPB

Condition No.	Condition Requirement:	Responsibility
	(ii) identification of all potentially affected sensitive residential receiver locations; (iii) quantification of the rating background noise level (RBL) for sensitive receivers, as part of the Sub Plan, or as undertaken in the EIS; (iv) the construction noise, ground-borne noise and vibration objectives derived (as relevant) from an application of the EPA Interim Construction Noise Guideline (ICNG) and the City of Sydney Code of Practice: Construction Hours and Noise within the Central Business District, as reflected in conditions of approval; (v) prediction and assessment of potential noise, ground-borne noise (as relevant) and vibration levels from the proposed construction methods expected at sensitive receiver premises against the objectives identified in the ICNG, the City of Sydney Code of Practice: Construction Hours and Noise within the Central Business District, and conditions of approval; (vi) where objectives are predicted to be exceeded, an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise and vibration impacts; (vii) description of management methods and procedures, and specific noise mitigation treatments/measures that can be implemented to control noise and vibration during construction; (viii) where objectives cannot be met, additional measures including, but not necessarily limited to, the following should be considered and implemented where practicable; reduce hours of construction, the provision of respite from noise/vibration intensive activities, acoustic barriers/enclosures, alternative excavation methods or other negotiated outcomes with the affected community; (ix) where night-time noise management levels cannot be satisfied, a report shall be submitted to the Planning Secretary outlining the mitigation measures applied, the noise levels achieved and justification that the outcome is consistent with best practice; (x) measures to identify non-conformances with the requirements of the Sub Plan, and procedures to implement corrective and preventative action; (xi) suitable contractual arrangements to ensure that all site personnel, including sub-contractors, are required to adhere to the noise management provisions in the Sub Plan; (xii) procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity; (xiii) measures to monitor noise performance and respond to complaints; (xiv) measures to reduce noise related impacts associated with offsite vehicle movements on nearby access and egress routes from the site; (xv) procedures to allow for regular professional acoustic input to construction activities and planning; and (xvi) effective site induction, and ongoing training and awareness measures for personnel (e.g. toolbox talks, meetings etc).	
B52	Prior to the issue of the relevant Construction Certificate, the Applicant shall: (a) amend, or prepare an addendum to, the Air Quality Management Sub Plan (AQMP) applicable to the CSSI station works (CSSI 7400) to apply to the development. The amended CNVMP must be submitted to the Planning Secretary and Certifying Authority, or (b) prepare an Air Quality Management Sub Plan (AQMP) for the development, independent of the AQMP approved with the CSSI station works. A copy of the AQMP must be submitted to the Planning Secretary and Certifying Authority. The Sub Plan must include, as a minimum, the following elements: (i) be prepared by a suitably qualified and experienced expert in accordance with the EPA's Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (the Approved Methods); (ii) relevant environmental criteria to be used in the day-to-day management of dust and volatile organic compounds (VOC/odour); (iii) mission statement; (iv) dust and VOCs/odour management strategies consisting of: • objectives and targets; • risk assessment; • suppression improvement plan. (v) monitoring requirements including assigning responsibility (for all employees and contractors); (vi) communication strategy; and (vii) system and performance review for continuous improvements.	CPB

Condition No.	Condition Requirement:	Responsibility
B53	The Sub Plan must detail management practices to be implemented for all dust and VOC/odour sources at the site. The Sub Plan must also detail the dust, odour, VOC and semi-volatile organic compounds (SVOC) monitoring program (eg. frequency, duration and method of monitoring) to be undertaken for the project.	D&C Contractor
B54	The Applicant must also develop and implement an appropriate comprehensive Reactive Air Quality and Odour Management Plan which will incorporate an Ambient Air Monitoring Program and Reactive Management Strategy to ensure that the assessment criteria are met during the works.	D&C Contractor
B55	Prior to the issue of the relevant Construction Certificate, the Applicant shall: (a) amend, or prepare an addendum to, the Construction Waste Management Sub Plan (CWMP) applicable to the CSSI station works (CSSI 7400) to apply to the development. The amended CWMP must be submitted to the Planning Secretary and Certifying Authority, or (b) prepare a Construction Waste Management Sub Plan (CWMP) for the development, independent of the CWMP approved with the CSSI station works. A copy of the CWMP must be submitted to the Planning Secretary and Certifying Authority. The Sub Plan must include, as a minimum, the following elements: (i) require that all waste generated during the project is assessed, classified and managed in accordance with the EPA's "Waste Classification Guidelines Part 1: Classifying Waste"; (ii) demonstrate that an appropriate area will be provided for the storage of bins and recycling containers and all waste and recyclable material generated by the works; (iii) procedures for minimising the movement of waste material around the site and double handling; (iv) waste (including litter, debris or other matter) is not caused or permitted to enter the waters of Sydney Harbour; (v) any vehicle used to transport waste or excavation spoil from the site is covered before leaving the premises; (vi) the wheels of any vehicle, trailer or mobilised plant leaving the site and cleaned of debris prior to leaving the premises; (vii) details in relation to the transport of waste material around the site (on-site) and from the site, including (at a minimum): • a traffic plan showing transport routes within the site; • a commitment to retain waste transport details for the life of the project to demonstrate compliance with the Protection of the Environment Operations Act 1997; and • the name and address of each licensed facility that will receive waste from the site (if appropriate).	CPB
B56	B57. Development Contributions Plan 2013, must be paid to Council prior to the issue of any Construction Certificate. The City of Sydney Council should be contacted for calculation of required contributions.	PSD
B57	Prior to the issue of the relevant construction certificate, the Applicant must prepare a detailed Landscape Plan, to the satisfaction of the Certifier. The plan must be consistent with the Landscape Plans prepared by Sue Barnsley Design, dated 28 August 2020 and include: (a) details of tree planting, including pot sizes; (b) detail the location, species, maturity and height at maturity of plants to be planted on-site; (c) demonstrate soil depth and volumes to support the proposed plantings consistent with the requirements of the ADG; (d) demonstrate adequate drainage and watering systems for the planters, (e) include details of plant maintenance and watering for the first 12 months and (f) commit to replace plants with the same species should any plant loss occur within the maintenance period	CPB
B58	Prior to the issue of a construction certificate, the Applicant must design an operational stormwater management system for the development and submit it to the satisfaction of the Certifier. The system must: (a) be designed by a suitably qualified and experienced person(s); (b) be generally in accordance with the conceptual design in the EIS; (c) be in accordance with applicable Australian Standards; and	CPB

Condition No.	Condition Requirement:	Responsibility
	(d) ensure that the system capacity has been designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Council Handbook (EPA, 1997) guidelines;	
Part C Prior to Commencement of Works		
C1	The Department must be notified in writing of the dates of commencement of physical work at least 48 hours before those dates.	CPB to notify PSD PSD to notify DPIE
C2	If the construction of the development is to be staged, the Department must be notified in writing at least 48 hours before the commencement of each stage, of the date of proposed commencement and the development to be carried out in that stage.	CPB to notify PSD PSD to notify DPIE
C3	A copy of the approved and certified plans, specifications and documents incorporating conditions of approval and certification must be kept on Site at all times and must be readily available for perusal by any officer of the Department, Council or the Certifying Authority.	CPB
C4	At least 48 hours before the commencement of construction until the completion of all works under this consent, or such other time as agreed by the Planning Secretary, the Applicant must: (a) make the following information and documents (as they are obtained or approved) publicly available on its website: (i) the documents referred to in condition A2 of this consent; (ii) all current statutory approvals for the development; (iii) all approved strategies, plans and programs required under the conditions of this consent; (iv) regular reporting on the environmental performance of the development in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent; (v) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; (vi) a summary of the current stage and progress of the development; (vii) contact details to enquire about the development or to make a complaint; (viii) a complaints register, updated monthly; (ix) audit reports prepared as part of any independent environmental audit of the development and the Applicant's response to the recommendations in any audit report; (x) any other matter required by the Planning Secretary; and (b) keep such information up to date, to the satisfaction of the Planning Secretary. (c) any other matter relating to compliance with the terms of this consent or requested by the Planning Secretary.	CPB
C5	Before the commencement of construction, the Applicant must: (a) consult with the relevant owner and provider of services that are likely to be affected by the development to make suitable arrangements for access to, diversion, protection and support of the affected infrastructure; (b) prepare a dilapidation report identifying the condition of all public infrastructure in the vicinity of the site (including roads, gutters and footpaths); and (c) submit a copy of the dilapidation report to the Certifying Authority and Council.	CPB Contractors

Condition No.	Condition Requirement:	Responsibility
C6	Before the construction of any utility works associated with the development, the Applicant must obtain relevant approvals from service providers.	D&C Contractor
C7	Prior to the commencement of above ground works written advice must be obtained from the electricity supply authority, an approved telecommunications carrier and an approved gas carrier (where relevant) stating that satisfactory arrangements have been made to ensure provisions of adequate services.	D&C Contractor and PSD Refer to OSD Enabling Works, Appendix 2 Utilities Matrix
C8	Before the commencement of construction, the Applicant must either: (a) amend, or prepare an addendum to, the Community Consultation Strategy (CCS) applicable to the CSSI approval (CSSI 7400) to apply to the development; or (b) prepare a CCS for the development, independent of the CCS applicable to the CSSI approval, to provide mechanisms to facilitate communication between the Applicant, the relevant Council and the community (including adjoining affected landowners and businesses, and others directly impacted by the development), during the design and construction of the development and for a minimum of 12 months following the completion of construction. The CCS for the development must: (i) identify people to be consulted during the design and construction phases; (ii) set out procedures and mechanisms for the regular distribution of accessible information about or relevant to the development; (iii) provide for the formation of community-based forums, if required, that focus on key environmental management issues for the development; (iv) set out procedures and mechanisms: • through which the community can discuss or provide feedback to the Applicant; • through which the Applicant will respond to enquiries or feedback from the community; and • to resolve any issues and mediate any disputes that may arise in relation to construction and operation of the development, including disputes regarding rectification or compensation.	CPB
C9	The CCS must be submitted to the Planning Secretary for approval no later than one month before the commencement of construction.	CPB to issue to PSD PSD to issue to DPIE
C10	Construction must not commence until the CCS has been approved by the Planning Secretary, or within another timeframe agreed with the Planning Secretary.	CPB
C11	The CCS, as approved by the Planning Secretary, must be implemented for a minimum of 12 months following the completion of construction.	D&C Contractor responsibility to carry out. PSD to provide instruction on any associated costs.
C12	Unless the CCS applicable to the CSSI approval (CSSI 7400) has been amended in accordance with condition C8(a), before the commencement of construction, a Community Consultative Committee (CCC) must be established for the development in accordance with the Department's Community Consultative Committee Guidelines: State Significant Projects. The CCC must begin to exercise functions in accordance with such Guidelines before the commencement of construction and continue to do so for the duration of construction and for at least six months following the completion of construction. Notes: • The CCC is an advisory committee only. • In accordance with the Guidelines, the Committee should comprise an independent chair and appropriate representation from the Applicant, Council and the local community.	D&C Contractor responsibility to carry out. PSD to provide instruction on any associated costs.

Condition No.	Condition Requirement:	Responsibility
C13	The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.	PSD & D&C Contractor joint responsibility
C14	Where construction/building works require the use of a public place including a road or footpath, approval under section 138 of the Roads Act 1993 for a Barricade Permit is to be obtained from the relevant authority prior to the commencement of work. Details of the barricade construction, area of enclosure and period of work are required to be submitted to the satisfaction of the relevant authority.	CPB
C15	Unless already carried out under CSSI 7400 for the relevant street frontages and duration of the development, a separate application under section 138 of the Roads Act 1993 is to be made to the relevant road authority to erect a hoarding and/or scaffolding in a public road (if required) and such application is to include: (a) architectural, construction and structural details of the design as well as any proposed artwork (b) structural certification prepared and signed by an appropriately qualified practising structural engineer.	CPB
C16	Evidence of the issue of a Structural Works Inspection Certificate and structural certification will be required prior to the commencement of construction works on site.	CPB
C17	All mechanical ventilation systems must be installed in accordance with the BCA and must comply with the AS 1668.2-2012 The use of air-conditioning in buildings – Mechanical ventilation in buildings and AS/NZS 3666.1:2011 Air handling and water systems of buildings – Microbial control to ensure adequate levels of health and amenity to the occupants of the building and to ensure environment protection. Details must be submitted to the satisfaction of the Certifying Authority prior to the relevant Construction Certificate.	CPB
C18	Prior to commencement of any lighting installation, evidence must be submitted to the satisfaction of the Certifying Authority that all outdoor lighting within the site has been designed to comply with AS 1158.3.1:2005 Lighting for roads and public spaces – Pedestrian area (Category P) lighting – Performance and design requirements and AS 4282-2019 Control of the obtrusive effects of outdoor lighting.	CPB
C19	The Applicant must advise Airservices Australia at least three business days prior to the controlled activity commencing by emailing ifp@airservicesaustralia.com and quoting SY-CA-563 P2.	CPB
C20	Separate approval must be sought under the Airports (Protection of Airspace) Regulations 1996 for any construction equipment (i.e. cranes) required to construct the building. Construction cranes may be required to operate at a height significantly higher than that of the proposed controlled activity and consequently, may not be approved under the Airports (Protection of Airspace) Regulations. Therefore, it is advisable that approval to operate construction equipment (i.e. cranes) be obtained prior to any commitment to construct.	CPB
Part D During Construction		
D1	A copy of the approved and certified plans, specifications and documents incorporating conditions of approval and certification must be kept on the Site at all times and must be readily available for perusal by any officer of the Department, Council or the Certifying Authority.	CPB
D2	A site notice(s) shall be prominently displayed at the boundaries of the site for the purposes of informing the public of project details including, but not limited to the details of the Builder, Certifying Authority and Structural Engineer. The notice(s) is to satisfy all but not be limited to, the following requirements: (a) minimum dimensions of the notice are to measure 841 mm x 594 mm (A1) with any text on the notice to be a minimum of 30-point type size; (b) the notice is to be durable and weatherproof and is to be displayed throughout the works period (c) the approved hours of work, the name of the site/project manager, the responsible managing company (if any), its address and 24-hour	CPB

Condition No.	Condition Requirement:	Responsibility
	contact phone number for any inquiries, including construction/noise complaint are to be displayed on the site notice; and (d) the notice(s) is to be mounted at eye level on the perimeter hoardings/fencing and is to state that unauthorised entry to the site is not permitted.	
D3	Construction, including the delivery of materials to and from the site, may only be carried out between the following hours: (a) between 7am and 6pm, Mondays to Fridays inclusive; and (b) between 8am and 5pm, Saturdays; and (c) between 7am to 8am, Saturdays for • site set-up for concrete works • internal fit-out works • material deliveries from work zones • tower crane and hoist operations; and (d) between 6pm and 10pm, Mondays to Fridays for: • internal fit-out works • material deliveries from work zones up until 7pm • hoist operations.	CPB
D4	No work may be carried out on Sundays or public holidays.	CPB
D5	Activities may be undertaken outside of these hours if required: (a) by the Police or a public authority for the delivery of vehicles, plant or materials; or (b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm.	CPB
D6	Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards	CPB
D7	Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours: (a) 9am to 12pm, Monday to Friday; (b) 2 pm to 5pm Monday to Friday; and (c) 9am to 12pm, Saturday.	CPB
D8	To protect the safety of work personnel and the public, the work site must be adequately secured to prevent access by unauthorised personnel, and work must be conducted at all times in accordance with relevant SafeWork requirements.	CPB
D9	The Applicant must ensure the requirements of the Construction Environmental Management Plan, Construction Pedestrian Traffic Management Plan, Construction Noise and Vibration Management Sub Plan, Air Quality Management Plan and Construction Waste Management Plan required by Part B of this consent are implemented during construction.	CPB
D10	The development must be constructed to achieve the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures identified in the approved CNVMP.	CPB
D11	The Applicant must ensure construction vehicles (including concrete agitator trucks) do not arrive at the subject site or surrounding areas outside of the construction hours of work outlined under condition D3.	CPB

Condition No.	Condition Requirement:	Responsibility
D12	The Applicant must implement, where practicable and without compromising the safety of construction staff or members of the public, the use audible movement alarms of a type that would minimise noise impacts on surrounding noise sensitive receivers.	CPB
D13	The Applicant must ensure that any work generating high noise impact (i.e. work exceeding a NML of LAeq 75dBA) as measured at the sensitive receiver must only be undertaken in continuous blocks of no more than 3 hours, with at least a 1 hour respite between each block of work generating high noise impact, where the location of the work is likely to impact the same receivers. For the purposes of this condition 'continuous' includes any period during which there is less than one hour respite between ceasing and recommencing any of the work the subject of this condition.	CPB
D14	Any noise generated during construction of the development must not be offensive noise within the meaning of the Protection of the Environment Operations Act 1997 or exceed approved noise limits for the site.	CPB
D15	Vibration caused by construction at any residence or structure outside the Site must be limited to: (a) for structural damage, the latest version of DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures (German Institute for Standardisation, 1999); (b) for human exposure to vibration, the evaluation criteria set out in the Environmental Noise Management Assessing Vibration: a Technical Guideline (Department of Environment and Conservation, 2006) (as may be updated or replaced from time to time); (c) vibratory compactors must not be used closer than 30 metres from residential or heritage buildings unless vibration monitoring confirms compliance with the vibration criteria specified above; and (d) these limits apply unless otherwise outlined in the amended CNVMP applicable to the CSSI approval (CSSI 7400) or the project specific CNVMP required by condition B51.	CPB
D16	The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	CPB
D17	During construction, the Applicant must ensure that: (a) exposed surfaces and stockpiles are suppressed by regular watering; (b) all trucks entering or leaving the site with loads have their loads covered; (c) trucks associated with the development do not track dirt onto the public road network; (d) public roads used by these trucks are kept clean; and (e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.	CPB
D18	All construction vehicles are to be contained wholly within the Site, except if located in an approved on street work zone, and vehicles must enter the Site before stopping.	CPB
D19	A Road Occupancy Licence must be obtained from the relevant transport authority for any works that impact on traffic flows during construction activities.	CPB
D20	The public way must not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances. Non-compliance with this requirement will result in the issue of a notice by the Planning Secretary to stop all work on site.	CPB
D21	The Applicant shall ensure that the 24-hour contact telephone number is continually attended by a person with authority over the works for the duration of the development.	CPB
D22	All vehicles involved in the excavation and / or demolition process and departing from the property with materials, spoil or loose matter must have their loads fully covered before entering the public roadway.	CPB
D23	Prior to the commencement of work, suitable measures are to be implemented to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the Site. It is an offence to allow, permit or cause materials to pollute or be placed in a position from which they may pollute waters.	CPB
Part E Prior to Occupation or Commencement of Use		

Condition No.	Condition Requirement:	Responsibility
E1	An Occupation Certificate must be obtained from the Certifying Authority prior to commencement of occupation or use of the whole or any part of a new building, an altered portion of, or an extension to an existing building.	PSD and CPB - refer individual responsibilities below
E2	A Registered Surveyor is to certify that the development does not exceed the approved gross floor area and building height. Details shall be provided to the Certifying Authority demonstrating compliance with this condition prior to the issue of the final Occupation Certificate. Note: The GFA approved under this consent excludes any GFA delivered under the Sydney Metro City and Southwest station works (CSSI 7400).	D&C Contractor
E3	The date of commencement of the occupation of the development must be notified to the Department in writing, at least one month before proposed occupation. If the operation of the development is to be staged, the Department must be notified in writing at least one month before the commencement of each stage, of the date of commencement and the development to be carried out in that stage.	CPB to notify PSD PSD to notify DPIE
E4	Prior to the issue of any Occupation Certificate, evidence shall be submitted to the Certifying Authority demonstrating all external walls of the new building, including cladding, comply with the relevant requirements of the BCA, consistent with the requirements of condition B17.	CPB
E5	The Applicant must provide a copy of the documentation given to the Certifying Authority to the Planning Secretary within seven days after the Certifying Authority accepts it.	D&C Contractor to provide documentation to PSD PSD to notify DPIE
E6	Unless the Applicant and the applicable authority agree otherwise, the Applicant must: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the development; and (b) relocate, or pay the full costs associated with relocating any infrastructure that needs to be relocated as a result of the development.	CPB
E7	Prior to commencement of operation, the Applicant must provide evidence to the Certifying Authority that the installation and performance of the mechanical ventilation systems complies with: (a) AS 1668.2-2012 The use of air-conditioning in buildings – Mechanical ventilation in buildings and other relevant codes; and (b) any dispensation granted by Fire and Rescue NSW.	CPB
E8	Prior to the commencement of operation, the Applicant must prepare an Operational Waste Management Plan for the development and submit it to the Certifying Authority. The Waste Management Plan must: (a) be prepared in consultation with Council (b) confirm the location of waste collection and establish appropriate routes to the collection point (c) provide confirmation of the engagement of a qualified private waste collection contractor (d) detail the type and quantity of waste to be generated during construction and operation of the development; (e) describe the handling, storage and disposal of all waste streams generated on site, consistent with the Protection of the Environment Operations Act 1997, Protection of the Environment Operations (Waste) Regulation 2014 and the Waste Classification Guideline (Department of Environment, Climate Change and Water, 2009); (f) detail the materials to be reused or recycled, either on or off site; and (g) include the Management and Mitigation Measures included in the EIS	D&C Contractor to engage waste consultant to complete
E9	Prior to the occupation or commencement of the use, whichever is the earlier, the building owner must ensure that there is a contract with a licensed contractor for the removal of all trade waste and residential waste. No garbage is to be placed on the public way eg. the roadways, footpaths, plazas, and reserves at any time.	PSD
E10	Unless otherwise carried out under the requirements of CSSI 7400, prior to the issue of the relevant Occupation Certificate: (a) the Applicant shall engage a suitably qualified person to prepare a post-construction dilapidation report at the completion of the construction works. This report is to ascertain whether the construction works created any structural damage to adjoining buildings, infrastructure and roads; (b) the report is to be submitted to the Certifying Authority. In ascertaining whether adverse structural damage has occurred to adjoining buildings, infrastructure and roads, the Certifying Authority must:	CPB

Condition No.	Condition Requirement:	Responsibility
	(i) compare the post-construction dilapidation report with the pre-construction dilapidation report required by these conditions; and (ii) have written confirmation from the relevant authority that there is no adverse structural damage to their infrastructure and roads. (c) a copy of this report is to be forwarded to the Planning Secretary and each of the affected property owners.	
E11	The cost of repairing any damage caused to Council or other public authority's assets in the vicinity of the site as a result of construction works associated with the approved development is to be met in full by the Applicant prior to the occupation or commencement of the use.	CPB
E12	Prior to the issue the relevant Occupation Certificate, a Fire Safety Certificate shall be obtained for all the relevant Essential Fire or Other Safety Measures forming part of this consent. A copy of the Fire Safety Certificate must be submitted to the relevant authority and Certifying Authority and be prominently displayed in the building.	CPB
E13	Prior to the commencement of occupation of the relevant parts of any new or refurbished buildings, a Structural Inspection Certificate or a Compliance Certificate must be submitted to the Certifying Authority. A copy of the Certificate with an electronic set of final drawings (contact approval authority for specific electronic format) must be submitted to the approval authority and the Council after: (a) the site has been periodically inspected and the Certifying Authority is satisfied that the structural works is deemed to comply with the final design drawings; and (b) the drawings listed on the Inspection Certificate have been checked with those listed on the final Design Certificate/s.	CPB
E14	The operation and maintenance of warm water systems and water cooling systems (as defined under the Public Health Act 2010) must comply with the Public Health Act 2010, Public Health Regulation 2012 and Part 2 (or Part 3 if a Performance-based water cooling system) of AS/NZS 3666.2:2011 Air handling and water systems of buildings – Microbial control – Operation and maintenance and the NSW Health Code of Practice for the Control of Legionnaires' Disease.	CPB
E15	Prior to the commencement of operation, the Applicant must submit evidence from a suitably qualified practitioner to the Certifying Authority that demonstrates that installed lighting associated with the development achieves the objective of minimising light spillage to any adjoining or adjacent sensitive receivers and: (a) complies with the latest version of AS 4282-2019 - Control of the obtrusive effects of outdoor lighting (Standards Australia, 1997); and (b) has been mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network..	CPB
E16	Prior to occupation, compliance with the following requirements for secure bicycle parking and end-of-trip facilities must be submitted to the satisfaction of the Certifying Authority: (a) the provision bicycle parking spaces in accordance with conditions B42 and B43; (b) the layout, design and security of bicycle facilities must comply with the minimum requirements of the latest version of AS 2890.3:2015 Parking facilities - Bicycle parking, and be located in easy to access, well-lit areas that incorporate passive surveillance; (c) the provision of end-of-trip facilities, which include at least 12 lockers and a shower; (d) appropriate pedestrian and cyclist advisory signs are to be provided; and (e) all works/regulatory signposting associated with the proposed developments shall be at no cost to the relevant road authority.	CPB
E17	Prior to the commencement of operation, bicycle way-finding signage must be installed within the site to direct cyclists from footpaths to designated bicycle parking areas	CPB
E18	Prior to the issue of any Occupation Certificate, works-as-executed drawings signed by a registered surveyor demonstrating that the stormwater drainage has been constructed as approved, must be submitted to the Certifier.	CPB
E19	Prior to the issue of any Occupation Certificate, an Operation and Maintenance Plan (OMP) to ensure the proposed stormwater quality measures remain effective is to be submitted to the satisfaction of the Certifier. The OMP must contain the following: (a) maintenance schedule of all stormwater quality treatment devices; (b) record and reporting details; (c) relevant contact information; and (d) Work Health and Safety requirements.	CPB

Condition No.	Condition Requirement:	Responsibility
E20	A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation. The Section 73 Certificate must be submitted to the Certifying Authority prior to issue of an Occupation Certificate.	CPB
E21	Prior to occupation or commencement of the use, written advice shall be obtained from the relevant water supply authority, wastewater disposal authority, electricity supply authority, an approved telecommunications carrier and an approved gas carrier (where relevant) stating that satisfactory arrangements have been made to ensure provision of adequate services.	PS Contractor is to complete in accordance with the OSD Enabling Works, Appendix 2 Utilities Matrix.
E22	Prior to occupation or commencement of the use, the Applicant is to provide documentation to the Certifying Authority demonstrating the development has incorporated, and would operate in accordance with, the environmental sustainability objectives, measures and initiatives required under Conditions B25 to B31.	CPB
E23	Prior to the issue of any Occupation Certificate, the Applicant shall implement the commitments outlined in BASIX Certificate No. 1081183M_03 or in accordance with any updated certificate.	CPB
E24	The Applicant shall prepare a comprehensive Travel Plan in consultation with the Customer Journey Planning within TfNSW to increase the mode share of public transport and active transport for residents, staff and visitors. The plan needs to specify matters including, but not limited to, the following: (a) nominate a specific party or parties responsible for the implementation of each of the actions in the Travel Plan, and for its ongoing implementation, monitoring and review; (b) identify the parties responsible for delivery of each element of the Travel Plan throughout various stages of the development lifecycle; (c) provide clear identification and delineation of the actions, contributions and resourcing to be provided by each party and when, as well as identification of when responsibility of functions in the Travel Plan are handed over between Developer, Building Manager and Tenant; (d) include a mechanism to monitor the effectiveness of the plan (e) include of a high-quality Travel Access Guide developed in consultation with the Customer Journey Planning which provides information to occupants about how to travel to the site by sustainable transport modes. This should include information about public transport connectivity, end of trip facilities, and local pedestrian and cycling connections. It should also include: (i) Information regarding lack of off-street car parking and passenger pick-up and set-down areas at the development site; (ii) Suitable nearby drop-off/pick-up locations; (iii) Identify areas where drop-off/pick-up is prohibited and instruct visitors to avoid use of these areas; (iv) Suitable nearby Taxi Zones The Applicant shall provide evidence to the Certifying Authority that a copy of the final plan has been submitted to the Coordinator General, Transport Coordination for endorsement, prior to the issue of the Occupation Certificate. A copy of the final plan is to be provided to the Planning Secretary.	PSD
E25	Prior to the issue of any Occupation Certificate, the Applicant shall prepare a Loading and Servicing Management Plan in consultation with the Customer Journey Planning within TfNSW by updating the Service Delivery Plan. This plan shall ensure that any potential traffic and safety impacts associated with the loading dock operation are mitigated. The Applicant shall submit a copy of the final plan to the Coordinator General, Transport Coordination for endorsement. The plan shall include, but not be limited to, the following: (a) details of the development's loading and servicing profile, including the forecast loading and servicing traffic volumes by vehicle size, frequency, time of day and duration of stay; (b) details of loading and servicing facilities within the subject site which adequately accommodate the forecast demand of the development so as to not rely on the kerbside restrictions to conduct the development's business; (c) details measures to manage any potential traffic and safety impacts of the loading dock operation in particular potential queuing on Pitt Street and safety incidents between cyclists an service vehicles; (d) details of how a service vehicle larger than 6.4m SRV would be managed, if it approached the site; (e) loading bay management details including controls of duration of delivery vehicle stay;	PSD

Condition No.	Condition Requirement:	Responsibility
	(f) management details to ensure all long-term loading and servicing is accommodated within the loading dock; (g) procedures for tradesman access and parking; (h) provision of space for secure on-site storage of goods both to reduce peak demand on loading dock use and to support freight consolidation and alternative last mile delivery modes; (i) details on how the loading area will be managed and used by all building tenants; and (j) details of a pre-booking system. The Loading and Servicing Management Plan shall be implemented by the Applicant following the issue of the Occupation Certificate. A copy of the final Loading and Servicing Management Plan must be submitted to the Planning Secretary and Certifying Authority.	
E26	Prior to an Occupation Certificate being issued that would enable use of the loading dock, convex mirrors are to be installed wholly within the property boundary that would allow for clear lines of site between vehicles exiting the loading dock and pedestrians using the footpath adjacent to the site.	CPB
E27	For the purpose of airspace protection, the building must not exceed a maximum height of RL 171 metres Australian Height Datum, inclusive of all lift over-runs, vents, chimneys, aerials, antennas, lightning rods, any roof top garden plantings, exhaust flues etc. At the completion of the construction of the building, and prior to occupation, a certified surveyor is to notify (in writing) Sydney Airport Corporation Limited of the finished height of the building.	CPB
E28	A Landscape Practical Completion Report is to be submitted to the PCA by the consultant responsible for the landscape design plan prior to the issue of the Final Occupation Certificate. The report is to verify that all landscape works have been carried out in accordance with the comprehensive landscape design plan and specifications that were required to be included in documentation for a Construction Certificate application and is to verify that an effective maintenance program has been commenced.	D&C Contractor
E29	A design verification statement from a qualified designer shall be submitted to the Principal Certifying Authority prior to the issue of an Interim or Final Occupation Certificate, whichever occurs first. The statement shall confirm the development has been constructed in accordance with the quality principles set out in Part 2 of State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development. Note: 'Qualified Designer' means a person registered as an architect in accordance with the Architects Act 2003. This condition is imposed in accordance with Clauses 154A of the Environmental Planning and Assessment Regulation 2000.	CPB
E30	Prior to the commencement of operation, the Applicant must submit a Site Audit Report and Site Audit Statement from the accredited Site Auditor. The Site Audit Report and Site Audit Statement must verify the site is suitable for the residential and commercial land use and be provided for the information of the Planning Secretary and the Certifier.	PSD to request for Site Audit Statement from Sydney Metro. PS Contractor may have access to reports under CSSI.
E31	Archival recording is to be carried out in accordance with Photographic Recording of Heritage Items Using Film or Digital Capture guideline (Heritage Office, Department of Planning, 2006) for the development site and surrounds. The recording should include key views on Pitt Street, to show the development site's relationship to the former Sydney Water Head Office Building located opposite. Where appropriate recording of the precinct should be carried out before, during and after any major changes and this record may be used in the site's interpretation. The Proponent should submit a digital copy of the archival recording to Heritage NSW and City of Sydney.	PSD
E32	A detailed Heritage Interpretation Plan should be prepared for the site, generally in accordance with the Heritage Interpretation Plan prepared by GBA Heritage dated 15 May 2020, and as appropriate, including any additional material having regard to the archival recording prepared under condition E31. Heritage NSW and /or Heritage Council (or its Delegate) should be consulted in the finalisation, adoption and implementation of the Heritage Interpretation Plan	PSD
E33	The Heritage Interpretation Plan is to be implemented prior to the issue of an occupation certificate.	PSD

Condition No.	Condition Requirement:	Responsibility
Part F Post Occupation		
F1	All loading and unloading operations associated with the site must be carried out: (a) in accordance with the Loading and Servicing Management Plan approved under condition E25; (b) under the supervision of a loading dock manager to be on-site at all times the loading dock is in use (c) within the confines of the site, at all times and must not obstruct other properties or the public way; and (d) in a manner so as not to cause inconvenience to the public or detrimentally impact the amenity of the locality	PSD
F2	The service vehicle docks, car parking spaces and access driveways must be kept clear of goods at all times and must not be used for storage purposes, including garbage storage	PSD
F3	All vehicular movements to and from the site are to be in a forward direction. To ensure this occurs, all vehicles accessing the site must not exceed 6.4 metres in length. The applicant is to ensure all delivery services and service providers that require access to the site are aware of this requirement.	PSD
F4	An annual Fire Safety Statement must be given to Council and the NSW Fire Brigade commencing within 12 months after the date on which the initial Interim/Final Fire Safety Certificate is issued or the use commencing, whichever is earlier.	PSD
F5	The development shall operate in accordance with the Fire Safety Certificate obtained in accordance with condition E12.	PSD
F6	All waste collection services must be undertaken in accordance with conditions E8 and E9.	PSD
F7	No waste must be placed for collection in a public place e.g. footpaths, roadways and reserves under any circumstances.	PSD
F8	Adequate provisions are to be made within the premises for the storage, collection and disposal of waste and recyclable materials, to the satisfaction of Council.	PSD
F9	All waste must be collected by a waste contractor authorised by the Waste Service of New South Wales and details of the proposed waste collection and disposal service are to be submitted to the Council prior to commencing operation of the business.	PSD
F10	External lighting to the premises must be designed and located so as to minimise light-spill beyond the property boundary or cause a public nuisance.	CPB - Design and construction PSD - operation
F11	The use and operation of the premises shall not give rise to an environmental health or public nuisance.	PSD
F12	There are to be no emissions or discharges from the premises which give rise to a public nuisance or result in an offence under the Protection of the Environment Operations Act 1997 and Regulations.	PSD
F13	Noise associated with the operation of any plant, machinery or other equipment on the site, shall not give rise to any one or more of the following: (a) transmission of “offensive noise” as defined in the Protection of the Environment Operations Act 1997 to any place of different occupancy (b) a sound pressure level at any affected residential property that exceeds the background (LA90, 15 minute) noise level by more than 5dB(A). The background noise level must be measured in the absence of noise emitted from the premises. The source noise level must be assessed as a LAeq, 15 minute (c) notwithstanding compliance with a) and b) above, the noise from mechanical plant associated with the premises must not exceed 5dB(A) above the background noise level between the hours of 12 midnight and 7 am. (d) exceedance of the project amenity noise levels established by the Acoustic Report prepared by Renzo Tonin and Associates and dated 17 May 2020.	PSD

Condition No.	Condition Requirement:	Responsibility
F14	Within 3 months of the commencement of full operation on the site, the Applicant must undertake short term noise monitoring in accordance with the Noise Policy for Industry. The monitoring program must be carried out by an appropriately qualified person and a monitoring report must be submitted to the Planning Secretary to verify that operational noise levels do not exceed the recommended noise levels for mechanical plant identified Condition F13. Should the noise monitoring program identify any exceedance of the recommended noise levels referred to above, the Applicant is required to implement appropriate noise attenuation measures so that operational noise levels do not exceed the recommended noise levels or provide attenuation measures at the affected noise sensitive receivers.	PSD
F15	All plant and equipment used in the development, or to monitor the performance of the development must be: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	CPB - during construction PSD - during operation
F16	The CCS, as approved by the Planning Secretary, must be implemented for a minimum of 12 months following the completion of construction.	PSD
F17	Any future external top of building signage must consistent with the approved signage strategy.	PSD
F18	Notwithstanding condition E15, should any outdoor lighting result in any residual impacts on the amenity of surrounding sensitive receivers, the Applicant must provide mitigation measures in consultation with affected landowners to reduce the impacts to an acceptable level.	PSD
F19	Unless otherwise agreed by the Planning Secretary, within six months of commencement of operation, Green Star certification must be obtained demonstrating the development achieves a minimum 5 Star Green Star As-Built rating in accordance with condition B26. Evidence of the certification must be provided to the Certifying Authority and the Planning Secretary.	CPB
F20	The Level 6 external area is to be non-trafficable and is not to be accessed by residents or staff, with the exception of landscaping and maintenance staff.	CPB - design and construct area to be non-trafficable PSD - to manage operationally
F21	All residents of the development are to have access to all communal areas including: (a) Level 2 balcony, co-working, meeting and social spaces (b) Level 3 storage (c) Level 6 pool, amenity areas and sundeck (d) Level 35 rooftop lounge, rooftop terrace and associated amenities	PSD
F22	The Green Travel plan approved under condition E24 shall be implemented following occupation of the development. The plan is to be reviewed and updated annually and implemented by the applicant for the life of the development..	PSD
F23	The Transport Access Guide approved under condition E24 is to be made available to residents, staff, customers and visitors at all times.	PSD
Part G Prior to Issue of Subdivision Certificate		
G1	In undertaking the subdivision approved under this consent, the Applicant must comply with the requirements of Part 6 of the EP&A Act in relation to the issue of a Subdivision Certificate. For the purpose of this approval, the issue of a Subdivision Certificate/s is restricted to the subdivision defined by condition A2.	PS Contractor under the SDD. The PSD is to ensure the PS Contractor carries out these activities required under the PDA. D&C

Condition No.	Condition Requirement:	Responsibility
		Contractor required to provide inputs as necessary.
G2	Before granting any Subdivision Certificate for stratum subdivision, the Certifying Authority must be satisfied that the Applicant has complied with all conditions of this consent that are required to be complied with before a Subdivision Certificate may be issued in relation to the plan of subdivision	PS Contractor under the SDD. The PSD is to ensure the PS Contractor carries out these activities required under the PDA. D&C Contractor required to provide inputs as necessary.
G3	Prior to the issue of a Subdivision Certificate for the stratum subdivision, a Building Management Statement must be prepared in the approved form prescribed by Schedule 8A of the Conveyancing Act 1919 or a Strata Management Statement must be prepared in the approved form prescribed by Part 6 of the Strata Schemes Development Act 2015 and submitted to the Certifying Authority.	PSD
G4	The Building Management Statement or Strata Management Statement (as applicable) is to apply to the development as a 'united building'. The Building Management Statement or Strata Management Statement (as applicable) must include details of the following: (a) the use, operation and arrangements for the supply of services, maintenance and upgrading of infrastructure of each stratum lot within the subdivision (b) the ongoing maintenance, upgrading, redevelopment and structural adequacy of each stratum lot within the subdivision (c) any other matters which the Certifying Authority considers relevant and pertinent to the issue of a Subdivision Certificate.	PS Contractor under the SDD. The PSD is to ensure the PS Contractor carries out these activities required under the PDA. D&C Contractor required to provide inputs as necessary.
G5	Easements for services, drainage, support and shelter, use of plant, equipment, loading areas and service rooms, repairs, maintenance or any other encumbrances and indemnities required for joint or reciprocal use of part or all of the proposed lots as a consequence of the subdivision, must be created over the appropriate lots in the subdivision pursuant to section 88B of the Conveyancing Act 1919	D&C Contractor responsible for providing Registered Surveyor survey to enable the PSD to create easements as required.
G6	Prior to the issue of a Subdivision Certificate, the Applicant shall provide to the Certifying Authority evidence that all matters required to be registered on title, including easements noted on the draft subdivision plans listed in Part A, are contained within the subdivision plan to be lodged for registration at the NSW Land Registry Services.	D&C Contractor responsible for providing Registered Surveyor draft plans of subdivision to enable the PSD to create easements as required.
G7	Any pipes, service lines or the like servicing each lot shall be contained within their respective lots or, if service lines encroach upon adjoining lots within the subdivision, or are shared by more than one lot, appropriate easements must be created, pursuant to section 88B of the Conveyancing Act 1919, over the service lines where any such encroachment occurs.	D&C Contractor responsible for providing Registered

Condition No.	Condition Requirement:	Responsibility
		Surveyor survey to enable the PSD to create easements as required.
G8	Prior to, or upon, the registration of the stratum plan for the site, appropriate ground level access easement/s are to be created to provide access to the building from the public domain for each respective building owner/s, tenant/s and visitors, as relevant to the stratum lot/s the subject of the stratum plan to the satisfaction of the Certifying Authority. Each easement is to address construction staging, including any restrictions to access as a result of the construction activities, including erecting hoardings as relevant.	D&C Contractor responsible for providing Registered Surveyor survey to enable the PSD to create easements as required.
G9	Suitable easements for access or rights-of-way benefiting the public are to be created over the public domain areas of the residual lot at each stage in the stratum subdivision to ensure public access to the public domain areas. The rights of public access are to be triggered by an occupation certificate for the relevant public domain areas (temporary or permanent) within the site.	PS Contractor under the SDD. The PSD is to ensure the PS Contractor carries out these activities required under the PDA. D&C Contractor required to provide inputs as necessary.
G10	Prior to issue of any Subdivision Certificate, a Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water and shall be provided to the Certifying Authority demonstrating that the development has satisfied the detailed requirements of Sydney Water in respect to water and wastewater.	D&C Contractor
G11	Prior to the issue of a Subdivision Certificate (as relevant), a Compliance Certificate is to be issued certifying that a registered surveyor has confirmed that the parcel boundary of the stratum plan corresponds with floors, external walls and ceilings of the relevant building/structures as constructed or alternatively, has the benefit of an appropriate easement or is the subject of appropriate provisions in the Building Management Statement, required by condition G3, to enable the registration of the plan.	D&C Contractor
G12	Prior to the issue of a Subdivision Certificate for stratum subdivision, a Statement of Compliance shall be provided to the Certifying Authority demonstrating that the approved subdivision is consistent with relevant conditions of development consent.	D&C Contractor to provide necessary documentation and support to enable the PSD to obtain a Statement of Compliance

Appendix E: MIRRA Schedule

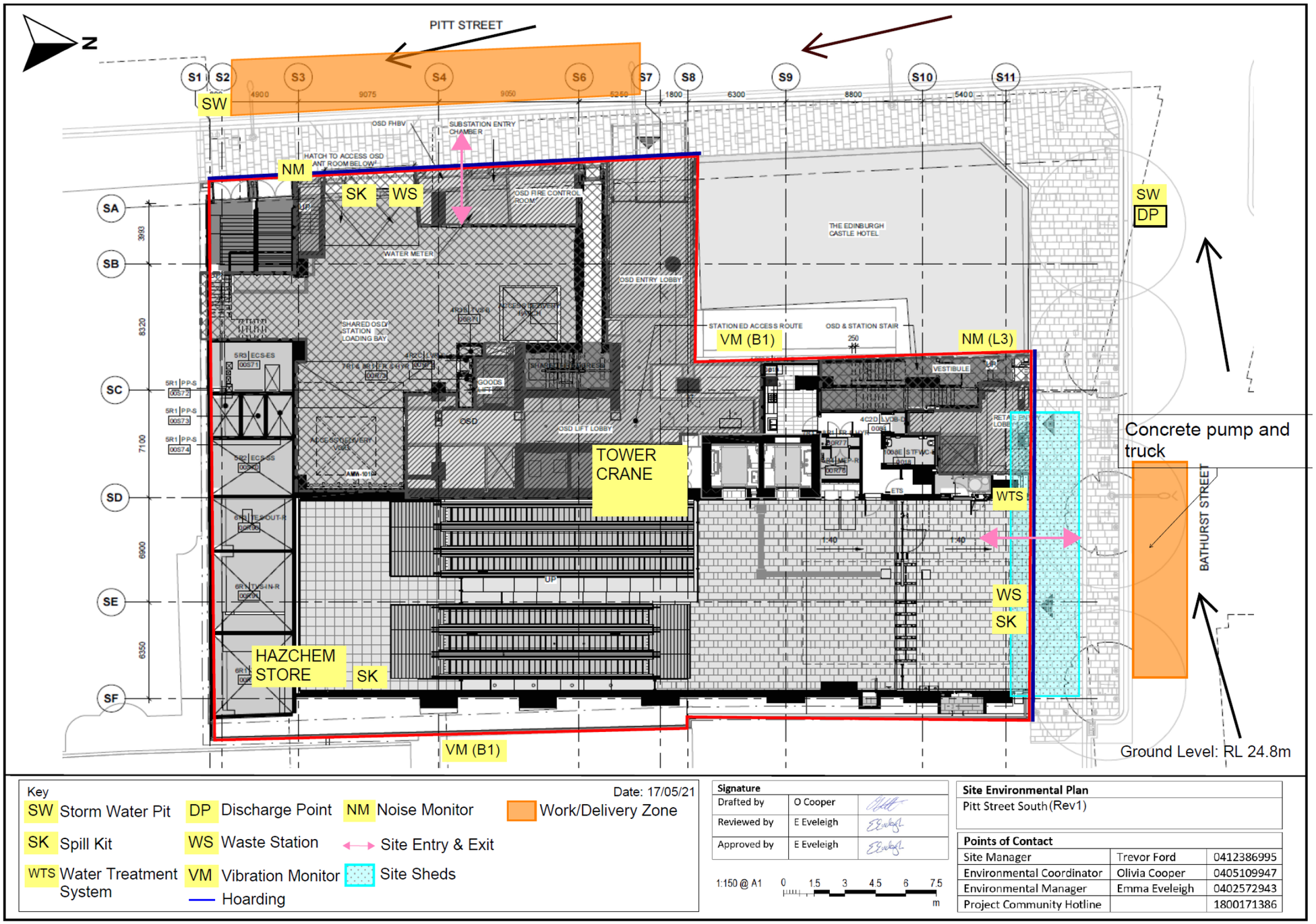
(Monitoring, Inspections, Reporting, Review, Audit) Schedule

Name	Detail	Frequency	When - Project Stage						By Whom	Resources
			Site Establishment	Main Structural Works	Façade Works	Architectural & Services Works	Landscaping & external finishes	Commissioning & Completion		
MONITORING										
Water Quality	Dewatering activities - Water quality parameters including pH, NTU, Oil and grease	Prior to discharge	✓	✓	✓	✓	✓		Site Environmental Representative	Permit to Dewater
Weather	Check weather and rainfall forecasts	Daily	✓	✓	✓	✓	✓		Site Environmental Representative	Aconex Site Diary
Noise & Vibration	On-site attended noise measurement will be conducted at Receivers R1 and R3 to confirm typical noise levels are consistent with the CNVMP at: - commencement of form working - commencement of concrete pour. On-site attended vibration monitoring will only be conducted at the commencement of operation for each plant or activity on site, which has the potential to generate significant vibration levels. Additional attended monitoring will only be conducted following a complaint.	Initial attended noise/vibration monitoring at commencement otherwise following a complaint.	✓	✓	✓	✓	✓	✓	Site Environmental Representative	Verification Record
Air Quality	Daily surveillance – Site Diary Entries Weekly inspection checklist – Environmental Inspection Reports	Daily visual Weekly inspections	✓	✓	✓	✓	✓		Site Environmental Representative	Site Environment Inspection Checklist Site Diaries
INSPECTIONS										

Name	Detail	Frequency	When - Project Stage						By Whom	Resources
Site Inspection	Environmental inspections including: Flora & fauna Hazardous materials Noise and vibration Waste management Air Quality	Weekly	✓	✓	✓	✓	✓		Site Environmental Representative/ Environmental Manager	Site Environmental Inspection Checklist
REPORTING										
Environmental Report	Detail on Environmental achievements, monitoring results, incidents, audit outcomes	Monthly	✓	✓	✓	✓	✓	✓	Environmental Manager	As part of Monthly Project Report to Client
Water	Quantity of water used	Monthly	✓	✓	✓	✓	✓	✓	Site Environmental Representative	Synergy Monthly Report
Waste	Total quantity of material purchased, the quantity purchased with recycled content, the total quantity of waste generated, the total quantity recycled, the total quantity disposed of and the method and location of disposal.	Monthly	✓	✓	✓	✓	✓	✓	Site Environmental Representative	Synergy Monthly Report
Energy	Energy usage will be managed and minimised by: 1. Avoid or reduce energy use 2. Improve energy efficiency 3. Source low carbon energy (onsite) 4. Source low carbon energy (offsite) 5. Purchase carbon offsets.	Monthly	✓	✓	✓	✓	✓	✓	Site Environmental Representative	JDE power usage reporting
REVIEW										
CEMP Review	Review of CEMP, Sub Plans and Appendices	Annual							Environmental Manager/ Project Manager	Project Management Review Schedule
Management Reviews	• Identification of areas of opportunity for improved environmental performance	As per Project management review schedule							Environmental Manager	Project Management Review Schedule

Name	Detail	Frequency	When - Project Stage						By Whom	Resources
	• Analysis of the causes of non-compliances and deficiencies • Environment inspections and audits • Verification of the effectiveness of corrective and preventative actions Highlighting any changes in procedures resulting from process improvement.									
Risk Register Review	Review risks in relation to changes to work activity onsite	6-Monthly							Environmental Manager	MATRIX
Site Environmental Plans (SEP)	Review site environmental controls in relation to work activity onsite to ensure reflective of site conditions	Monthly							Environmental Manager	SEP
AUDIT										
CPB Contractors Internal SHEQ Audit	Review of EMP compliance to CPB Contractors EMS/ ISO14001	6-monthly							BU Environmental team	Auditor's template

Appendix F: Site Environment Plans



Key

SW Storm Water Pit	DP Discharge Point	NM Noise Monitor	Work/Delivery Zone
SK Spill Kit	WS Waste Station	↔ Site Entry & Exit	
WTS Water Treatment System	VM Vibration Monitor	Site Sheds	
	Hoarding		

Date: 17/05/21

Signature		
Drafted by	O Cooper	
Reviewed by	E Eveleigh	
Approved by	E Eveleigh	

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Site Environmental Plan
Pitt Street South (Rev1)

Points of Contact		
Site Manager	Trevor Ford	0412386995
Environmental Coordinator	Olivia Cooper	0405109947
Environmental Manager	Emma Eveleigh	0402572943
Project Community Hotline		1800171386

Appendix G: Legal Requirements

Legislation	Key requirements	Relevance to PS
Commonwealth Requirements		
Environment Protection and Biodiversity Conservation Act, 1999	This Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. These matters are referred to as matters of national environmental significance (NES). The EPBC Act requires the assessment of whether the Project is likely to significantly impact on matters of NES or Commonwealth land. Heritage places are listed on the National Heritage List (NHL) for their 'outstanding heritage value to the nation' which are owned by a variety of constituents	The EPBC Act requires the assessment of whether the Proposal is likely to significantly impact on matters of NES or Commonwealth land. These matters were considered in the project REF. The REF ecology assessment determined that it would not impact on any matters of NES or on Commonwealth land. Accordingly, a referral to the Commonwealth Minister for the Environment was not required. A further ecological assessment was undertaken by Area Environmental in September 2019, which identifying an EEC on the site that is listed under the EPBC Act. The EEC is White Box - Blakely's Red Gum - Yellow Box grassy woodland of the NSW South Western Slopes which .is listed as critically endangered. A MNES assessment was however undertaken and the EEC did not meet the criteria. Accordingly, a referral to the Commonwealth Minister for the Environment was not required.
National Greenhouse and Energy Reporting (NGER) Act 2007 (Cth)	This Act provides data and accounting in relation to greenhouse gas emissions and energy consumption and production and: ▪ Underpin the carbon price mechanism ▪ Inform policy-making and the Australian public ▪ Meet Australia's international reporting obligations, and Provide a single national reporting framework for energy and emissions reporting.	CPB will undertake reporting of the PS greenhouse gas emission and energy production and consumption under the NGER Act, inclusive of 'material' and Subcontractor works. The emissions and energy produced and consumed as part of the Project will be reported in accordance with CPB's management system requirements.
NSW Requirements		
Biodiversity Conservation Act 2016	For the purposes of the EP&A Act, the Minister for Planning and Infrastructure is the consent authority for any development application made under that Act for any clearing of native vegetation that requires development consent because of this Act. Requires any threatened plant or animal species, populations or ecological communities associated with a proposed development to be identified and that acceptable recovery and management strategies are implemented if a likely significant impact would occur.	Impacts on native vegetation have been assessed under Part 5.1 of the EP&A Act and Part C Flora and Fauna Sub Plan in Part C of the CEMP identifies areas of potential impact and mitigation measures associated with management of Flora and Fauna. No impacts on threatened plant or animal species, populations or ecological communities are identified in the EIS (as relevant to PS contract scope).

Legislation	Key requirements	Relevance to PS
Contaminated Land Management Act, 1997	Provides a regime for investigating and, where appropriate, remediating land affected by contamination, which represents a significant risk of harm to human health or the environment. Under this Act EPA has the power to ▪ Declare an investigation site and order an investigation ▪ Declare a remediation site and order remediation to take place Agree to a voluntary Project to investigate or remediate a site.	CoA 32 requires a stage 2 detailed site investigation be undertaken prior to Construction commencing. If contamination is identified within the Site, CPB will determine whether there is a duty to report under section 60 of the *Contaminated Land Management Act 1997* (NSW) and the ESSG guidelines.
Dangerous Goods (Road and Rail Transport) Act 2008	The purpose of this Act is to regulate the transport of Dangerous Goods by road and rail in order to promote public safety and protect property and the environment. A licence is required for the storage (SafeWork NSW) and/or transport (EPA) of prescribed quantities of dangerous goods. Both vehicle and driver are required to be appropriately licenced. Depending on the quantities being transported, the Act outlines specific requirements for including appropriate placards on the transport vehicle, emergency procedures, PPE, manifest documentation and fire extinguishers.	**The Project is unlikely to trigger exceedance of licensable quantities of dangerous goods. In the event that this changes, the appropriate licence shall be obtained.**
Environmental Planning and Assessment Act, 1979	Planning Approval granted under Part 5.1 of the Environmental Planning and Assessment Act 1979. Approval of reports, studies and plans as required by the Project Planning Approvals.	Environmental approvals will be applied for if needed.
Heritage Act, 1977	The Heritage Act makes provisions for the conservation of NSW's non Aboriginal environmental heritage. Section 146 requires that the Heritage Council be notified if a relic is uncovered, where it is reasonable to believe that the Heritage Council is unaware of the location of the relic.	Heritage impact in accordance with the Heritage Act 1977 is assessed under Part 5.1 of the EP&A Act, therefore permits are not required. The Heritage Management Plan identifies areas of potential impact and mitigation measures. The Heritage Council would be notified in writing (by SM) of relics uncovered during construction, in accordance with the requirements of section 146.
National Parks and Wildlife Act, 1974	The National Parks and Wildlife Act provides for the protection of Aboriginal objects (sites, objectives and cultural material) and Aboriginal places. Aboriginal Heritage sites are managed under this Act by the Office of Environment and Heritage (OEH). Unexpected finds of Heritage require stop work proceedings and approval through OEH to disturb site.	As the project is assessed under Part 5.1 of the EP&A Act, it is exempt from approvals (under Part 4) and permits (under section 90). The Project is unlikely to disturb any Indigenous objects. If unexpected archaeological items or items of Indigenous heritage significance are discovered during the Construction of the Project, all works would cease, and appropriate advice sought. The Construction Heritage Management Plan identifies controls and mitigation measures.

Legislation	Key requirements	Relevance to PS
Native Vegetation Act 2003	The Native Vegetation Act provides for the protection and improvement of the value of native vegetation.	As the project is assessed under Part 5.1 of the EP&A Act, it is exempt from section 12 authorisation to clear native vegetation. No native vegetation to be affected by PSISD works.
Protection of the Environment Administration Act 1991	Outlines principles of Ecologically Sustainable Development.	The project and all associated activities must be consistent with the principles of Ecologically Sustainable Development – refer to Sustainability Management Plan (SMC&SSPS-CPB-ALL-SU-PLN-000001)
Protection of the Environment Operations Act 1997 (POEO Act)	The POEO Act establishes the regulatory framework which includes licensing requirements for certain activities. The POEO Act also establishes the EPA. The objective of the EPA is to protect, restore and enhance the quality of the environment in NSW, having regard to the need to maintain ecologically sustainable development. The EPA is a statutory body representing the Crown and is generally subject to Ministerial control, but not in relation to: ▪ the making of a report or recommendation to the Minister; ▪ the release of a state of the environment report (although the Minister can require more information in the report); and ▪ the making of a decision to institute criminal or related proceedings. The POEO Act also outlines offences regarding the willful or negligent disposal, transport or storage of waste at a facility that cannot lawfully accept the waste	The PSISD scope of works does not require an EPL. CPB to ensure waste is disposed of, transported and stored in accordance with legislation.
Protection of the Environment Operations (General) Regulation 2009;	This Act provides for the administration of EPL's and prescribes requirements in respect of pollution incident response management plans as well as the appropriate regulatory authority for certain activities.	Any environmental approvals will be applied for if needed.
Protection of the Environment Operations (Waste) Regulation 2014;	This POEO relating to waste outlines the reporting and record keeping requirements for the transportation of waste and the tracking of certain types of waste classifications.	CPB will record and track waste as required for PS works.
Sydney Water Act 1994	Approval to discharge wastewater to sewer under a Trade Waste Agreement.	CPB will obtain approval to connect to sewer for any construction site.
Transport Administration Act 1988	This Act created TfNSW and defines its principal role. TfNSW is the	TfNSW (Sydney Metro) is the proponent of the project.

Legislation	Key requirements	Relevance to PS
	proponent of the project under the EP&A Act.	
Waste Avoidance and Recovery Act, 2001	Establishes the waste hierarchy. Promotes waste avoidance and resource recovery by developing waste avoidance and resource recovery strategies.	Provides requirements for waste avoidance and resource recovery which are addressed in the Waste Management and Recycling Management Plan. Waste targets are established under the Sustainability Management Plan and the Waste and Recycling Management Sub Plan.
Water Management Act 2000 and Water Act, 1912	The Water Management Act 2000 (WM Act) provides for the sustainable and integrated management of water resources. Aquifer interference approval requirements under the WM Act have not yet commenced, and regulation is managed under Part 5 of the Water Act 1912.	As the project is assessed under Part 5.1 of the EP&A Act, the project is exempt from obtaining water use approval (under section 89), a water management work approval (under section 90) or an activity approval (other than an aquifer interference approval under section 91). Groundwater is unlikely to be encountered during the works, and the works are therefore unlikely to impact upon water resources. Part C Soil, Water and Groundwater Management Sub Plan the CEMP addresses management of interaction with groundwater.

APPENDIX B UPDATED ARCHITECTURAL PLANS

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/ SMCSWSPS-BAT-OSS-AT-DWG-910041-J: concrete slab openings adjusted for mechanical services requirements

/ SMCSWSPS-BAT-OSS-AT-DWG-930041-G: scope delineation updated to align with station requirements

/ SMCSWSPS-BAT-OSS-AT-DWG-930141-G: scope delineation updated to align with station requirements

/ SMCSWSPS-BAT-OSS-AT-DWG-930241-H: scope delineation updated to align with station requirements

/ SMCSWSPS-BAT-OSS-AT-DWG-930441-H: scope delineation updated to align with station requirements; door deleted as not required

/ SMCSWSPS-BAT-OSS-AT-DWG-930741-K: bedroom wardrobe size increased for improved amenity

/ SMCSWSPS-BAT-OSS-AT-DWG-930841-K: bedroom wardrobe size increased for improved amenity

/ SMCSWSPS-BAT-OSS-AT-DWG-931041-G: bedroom wardrobe size increased for improved amenity

/ SMCSWSPS-BAT-OSS-AT-DWG-931141-G: bedroom wardrobe size increased for improved amenity

/ SMCSWSPS-BAT-OSS-AT-DWG-931441-J: bedroom wardrobe size increased for improved amenity

/ SMCSWSPS-BAT-OSS-AT-DWG-933341-F: bedroom wardrobe size increased for improved amenity

/ SMCSWSPS-BAT-OSS-AT-DWG-933541-J: bedroom wardrobe size increased for improved amenity; door adjusted for DDA requirements

/ SMCSWSPS-BAT-OSS-AT-DWG-933641-J: bedroom wardrobe size increased for improved amenity; door adjusted for services requirements; plantroom door enclosed for NCC compliance requirements

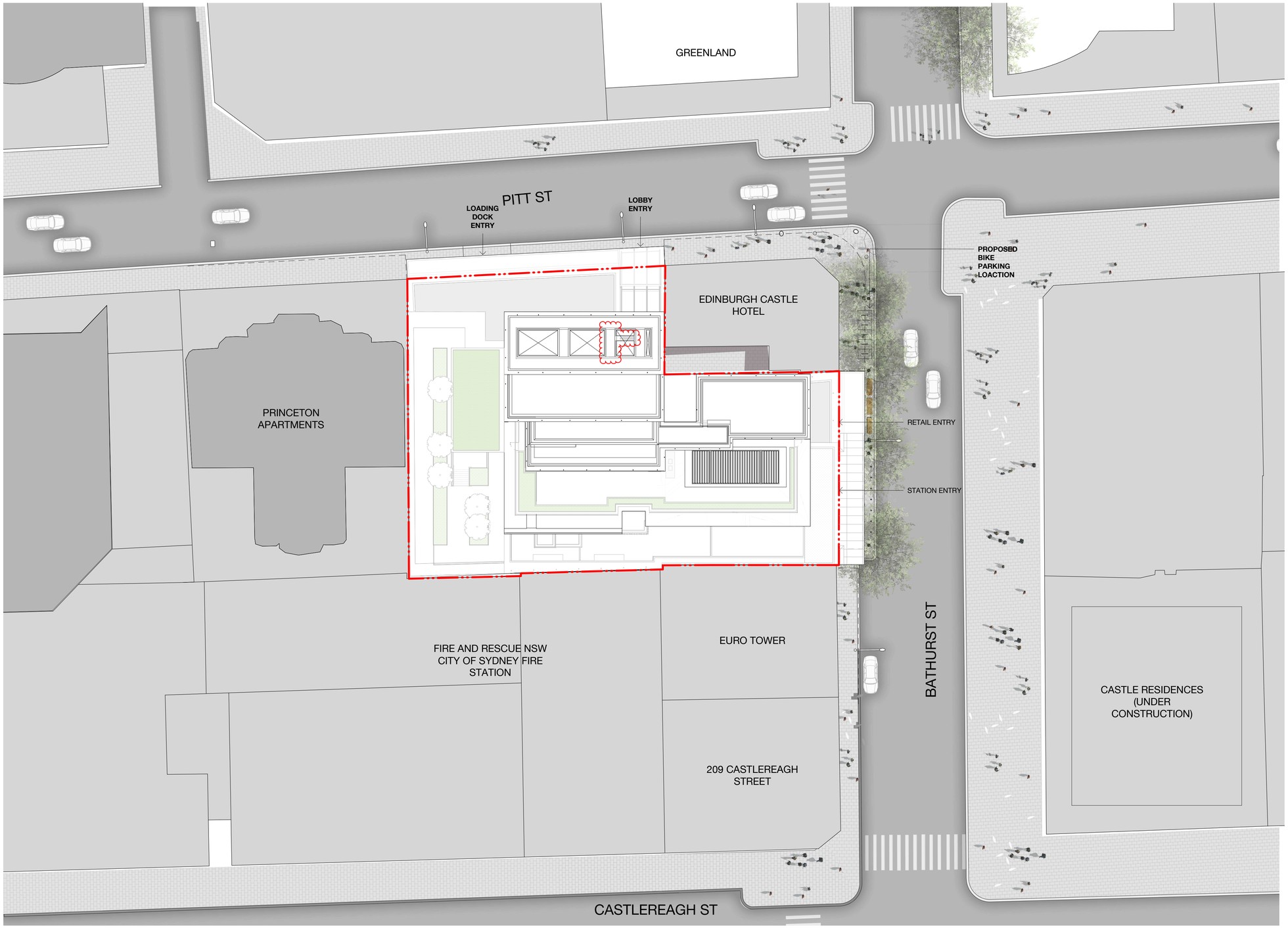
/ SMCSWSPS-BAT-OSS-AT-DWG-933741-H: services enclosures provided, and slab penetrations adjusted for services requirements

/ SMCSWSPS-BAT-OSS-AT-DWG-933841-H: stair enclosure provided for weatherproofing; gate added for façade access requirements

/ SMCSWSPS-BAT-OSS-AT-DWG-933941-H: concrete slab openings adjusted for mechanical services requirements

/ SMCSWSPS-BAT-OSS-AT-DWG-960002-J: Drenchers added to the level 6 façade on the western elevation to ensure appropriate fire protection can be provided

/ SMCSWSPS-BAT-OSS-AT-DWG-960004-L: location of roof access stair adjusted for plantroom services requirements



LEGEND

- PROPERTY BOUNDARY
- CONCEPT SSDA ENVELOPE
- OSD CORE
- OSD SERVICES
- OSD GENERAL
- OSD RESIDENT FACILITIES
- OSD-ONLY EGRESS STAIRS
- OSD RETAIL TENANCY
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT
- SHARED EGRESS STAIRS
- STATION AREAS (SUBJECT TO CSSI APPROVAL)

REV.	BY	DATE	DESCRIPTION	APPD.
J		22.08.22	SSDA Issue	
I		18.06.21	SSDA Issue	
H		08.12.20	SSDA Issue	
G		12.11.20	SSDA Issue	
F		18.09.20	SSDA Issue	
E		12.05.20	Stage 2 SSD DA - Final	
D		07.04.20	Stage 2 SSD DA - For Landowners Consent	
C		31.03.20	SSDA Issue	

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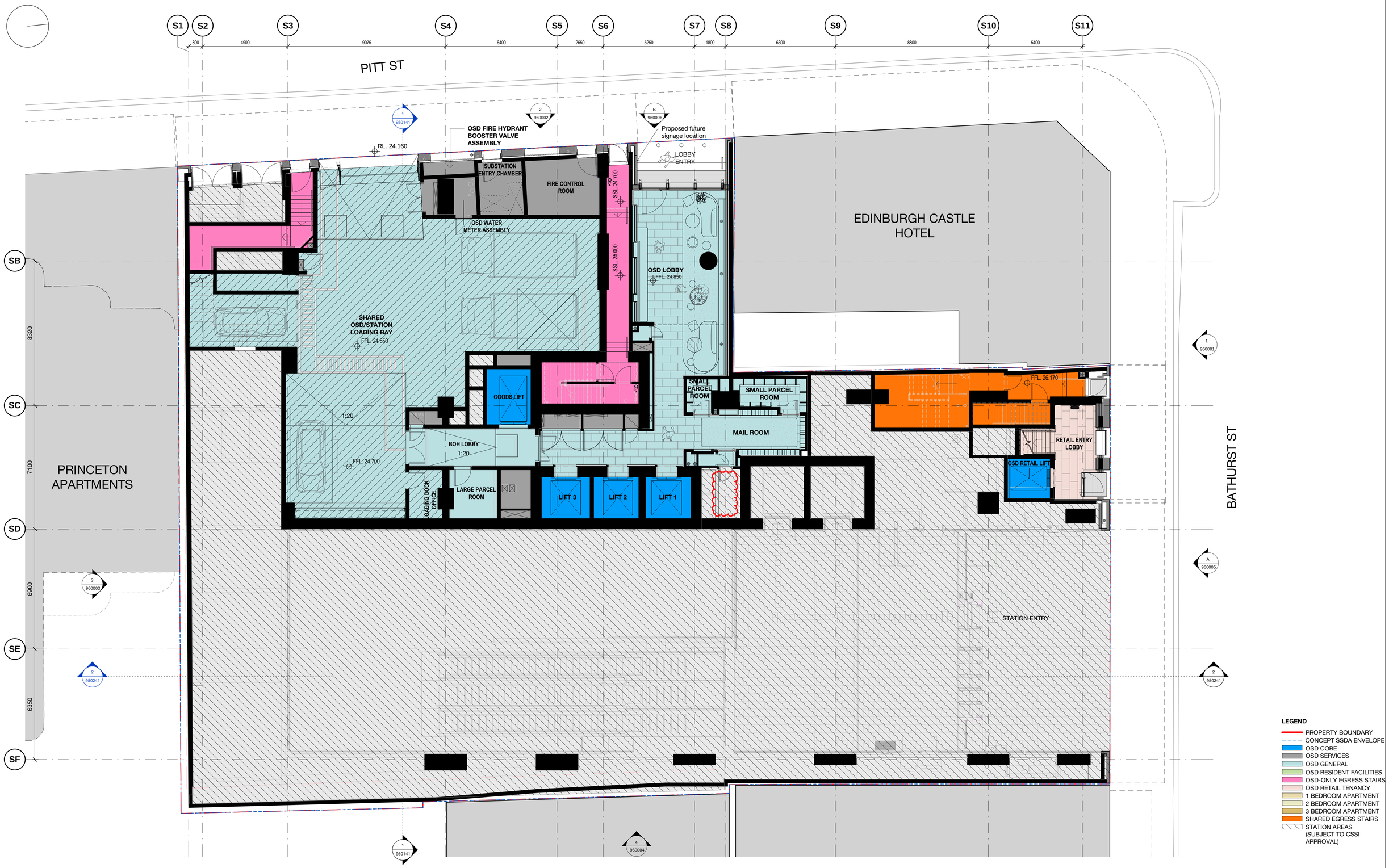
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SSDA Issue
SITE PLAN

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F		12.11.20	SSDA Issue	
E		18.09.20	SSDA Issue	
D		07.04.20	Stage 2 SSD DA - For Landowners Consent	
C		31.03.20	SSDA Issue	
B		10.02.20	SSDA Issue	
3		20.01.20	Preliminary - SSDA Issue	
2		20.12.19	Preliminary - SSDA Issue	

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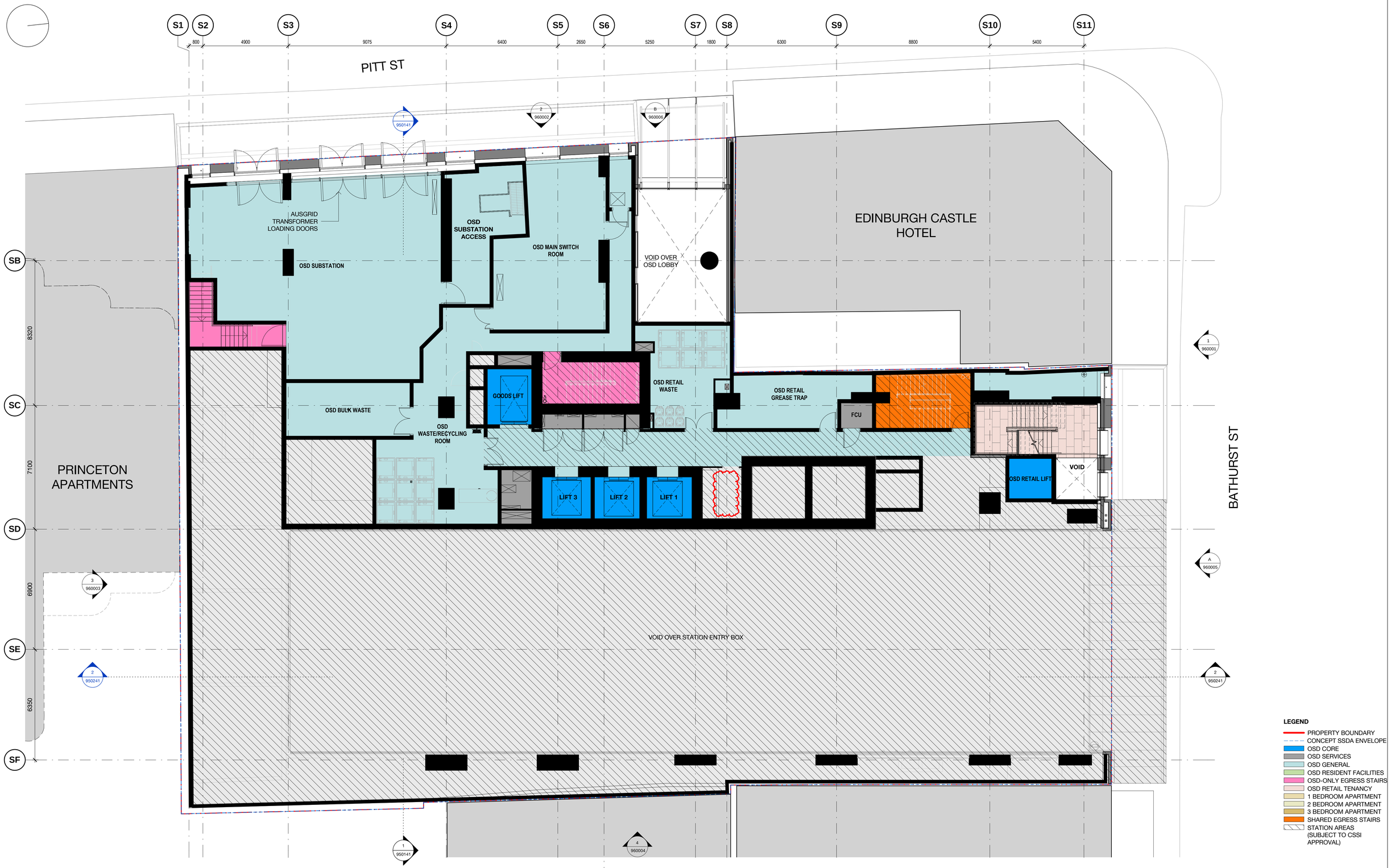
SSDA Issue

L00 GROUND LEVEL - GENERAL ARRANGEMENT PLAN

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LEGEND

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2		20.12.19	Preliminary - SSDA Issue	

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L01 - GENERAL ARRANGEMENT PLAN

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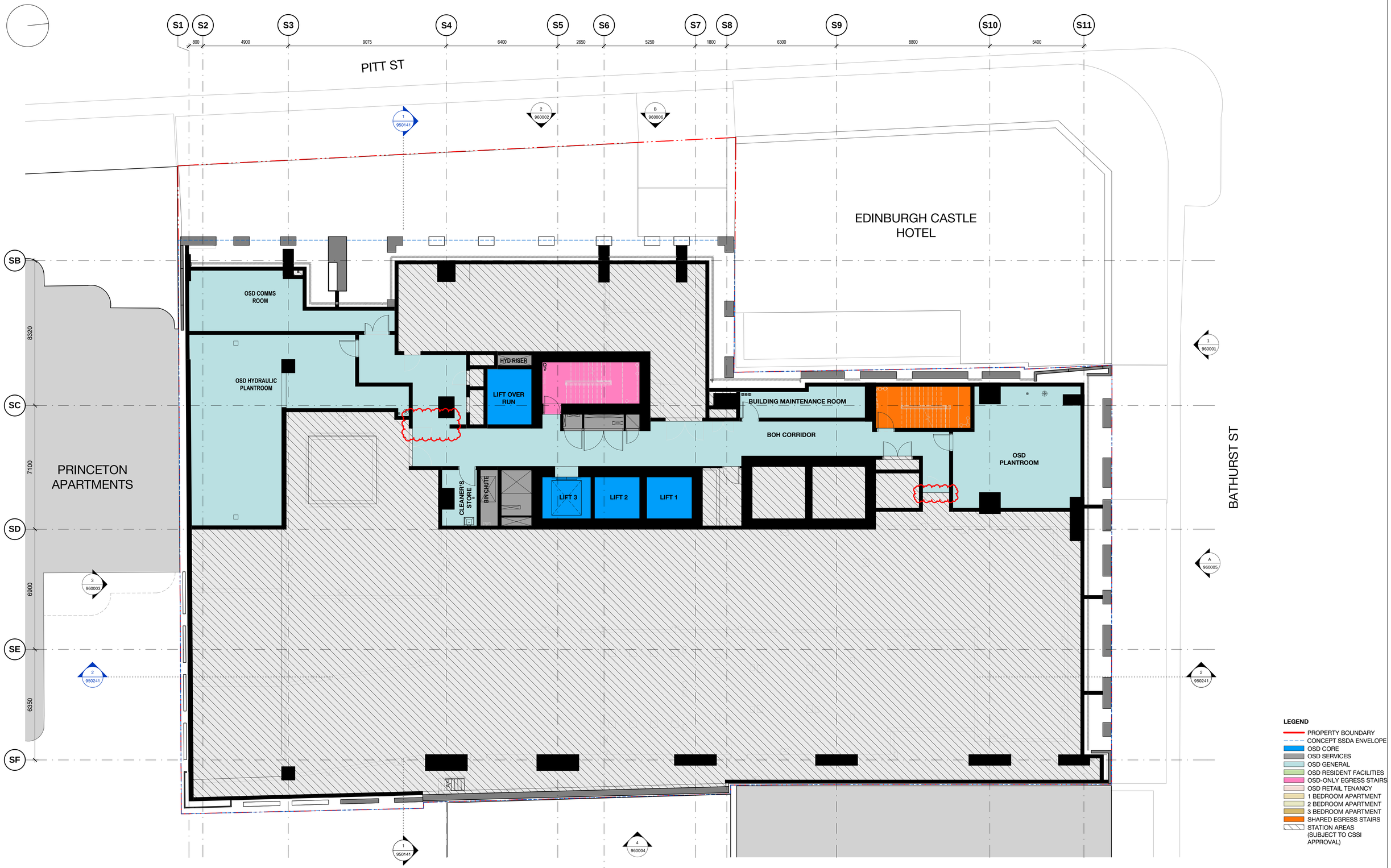
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SSDA Issue

L02 - GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

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LEGEND

- PROPERTY BOUNDARY
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B		10.02.20	SSDA Issue	
3		20.01.20	Preliminary - SSDA Issue	

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

SCALE

1:100 @ A1 0 1 2 3 4 5 m

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DESIGNED_ Designer
DRG CHECK_ Checker
DESIGN CHECK_ Checker
APPROVED_ Approver

DRG No. SMCSWSPS-BAT-OSS-AT-DWG-930441

PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue
L04 - GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. H

100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]



LEGEND

- PROPERTY BOUNDARY
- CONCEPT SSDA ENVELOPE
- OSD CORE
- OSD SERVICES
- OSD GENERAL
- OSD RESIDENT FACILITIES
- OSD-ONLY EGRESS STAIRS
- OSD RETAIL TENANCY
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT
- SHARED EGRESS STAIRS
- STATION AREAS (SUBJECT TO SEPARATE DEVELOPMENT APPROVAL)

100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
K		22.08.22	SSDA Issue	
J		18.06.21	SSDA Issue	
I		08.12.20	SSDA Issue	
H		12.11.20	SSDA Issue	
G		18.09.20	SSDA Issue	
F		12.05.20	Stage 2 SSD DA - Final	
E		07.04.20	Stage 2 SSD DA - For Landowners Consent	
D		31.03.20	SSDA Issue	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

N

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DRAWN Author
DESIGNED Designer
DRG CHECK Checker
DESIGN CHECK Checker
APPROVED Approver

DRG No. SMCSWSPS-BAT-OSS-AT-DWG-930741

PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue

L07 - GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. K



100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
K		22.08.22	SSDA Issue	
J		18.06.21	SSDA Issue	
I		08.12.20	SSDA Issue	
H		12.11.20	SSDA Issue	
G		18.09.20	SSDA Issue	
F		12.05.20	Stage 2 SSD DA - Final	
E		07.04.20	Stage 2 SSD DA - For Landowners Consent	
D		31.03.20	SSDA Issue	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

N

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DRG CHECK Checker
DESIGN CHECK Checker
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DRG No. SMCSWSPS-BAT-OSS-AT-DWG-930841

PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue

L08 - GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. K



LEGEND

- PROPERTY BOUNDARY
- CONCEPT SSDA ENVELOPE
- OSD CORE
- OSD SERVICES
- OSD GENERAL
- OSD RESIDENT FACILITIES
- OSD-ONLY EGRESS STAIRS
- OSD RETAIL TENANCY
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT
- SHARED EGRESS STAIRS
- STATION AREAS (SUBJECT TO SEPARATE DEVELOPMENT APPROVAL)

REV.	BY	DATE	DESCRIPTION	APPD.
G		22.08.22	SSDA Issue	
F		18.06.21	SSDA Issue	
E		08.12.20	SSDA Issue	
D		12.11.20	SSDA Issue	
C		16.09.20	SSDA Issue	
B		12.05.20	Stage 2 SSD DA - Final	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

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DESIGNED Designer
DRG CHECK Checker
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APPROVED Approver

DRG No. SMCSWSPS-BAT-OSS-AT-DWG-931041

PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue

L09-10 - TYPICAL LOWRISE GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. G

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]



100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
G		22.08.22	SSDA Issue	
F		18.06.21	SSDA Issue	
E		08.12.20	SSDA Issue	
D		12.11.20	SSDA Issue	
C		16.09.20	SSDA Issue	
B		12.05.20	Stage 2 SSD DA - Final	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

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DRAWN Author
DESIGNED Designer
DRG CHECK Checker
DESIGN CHECK Checker
APPROVED Approver

DRG No. SMCSWSPS-BAT-OSS-AT-DWG-931141

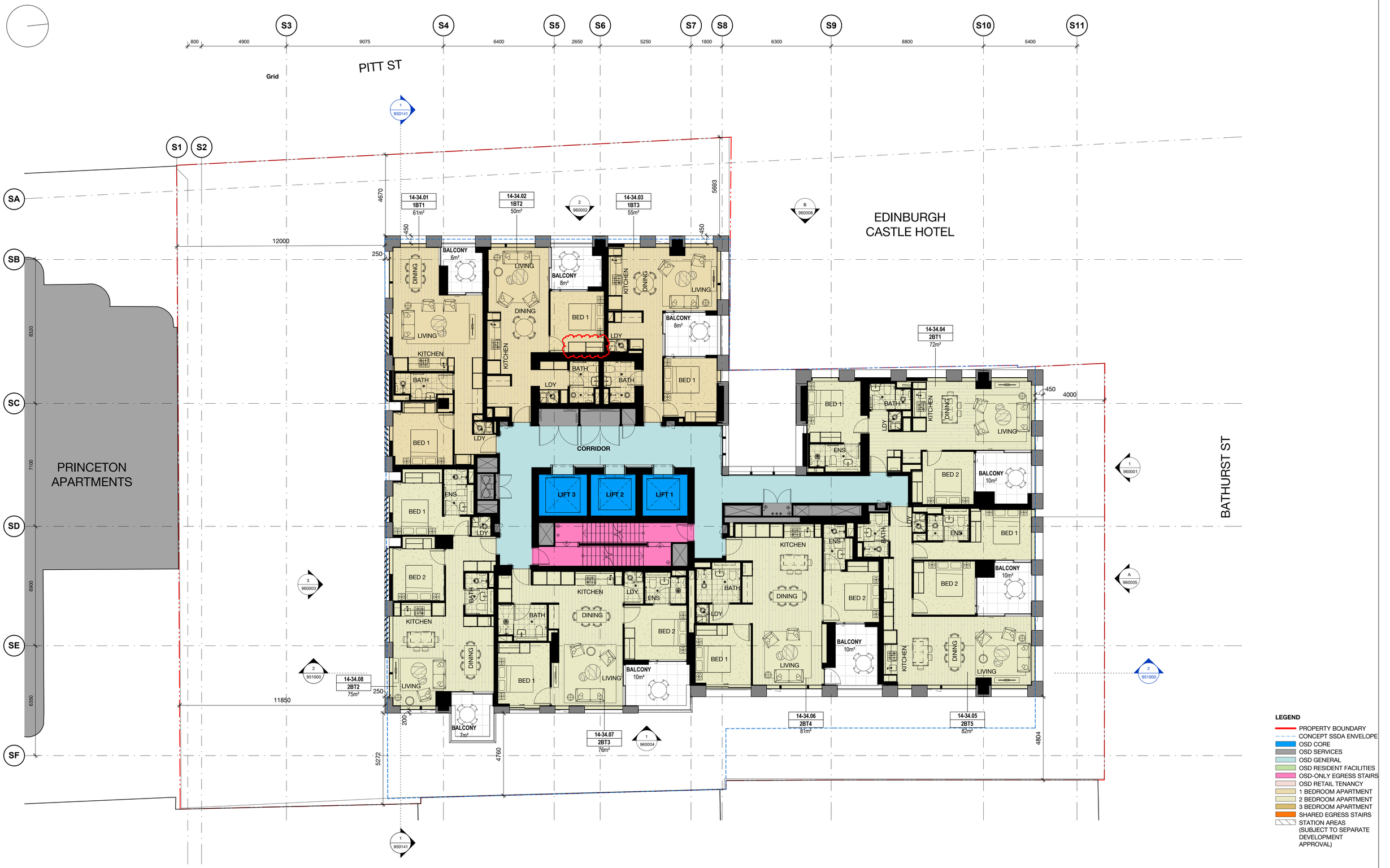
PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue

L11-13 - TYPICAL LOWRISE GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. G



LEGEND

- PROPERTY BOUNDARY
- CONCEPT SSDA ENVELOPE
- OSD CORE
- OSD SERVICES
- OSD GENERAL
- OSD RESIDENT FACILITIES
- OSD-ONLY EGRESS STAIRS
- OSD RETAIL TENANCY
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT
- SHARED EGRESS STAIRS
- STATION AREAS (SUBJECT TO SEPARATE DEVELOPMENT APPROVAL)

100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
J		22.08.22	SSDA Issue	
I		18.06.21	SSDA Issue	
H		08.12.20	SSDA Issue	
G		12.11.20	SSDA Issue	
F		18.09.20	SSDA Issue	
E		12.05.20	Stage 2 SSD DA - Final	
D		07.04.20	Stage 2 SSD DA - For Landowners Consent	
C		31.03.20	SSDA Issue	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

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DRG No. SMCSWSPS-BAT-OSS-AT-DWG-931441

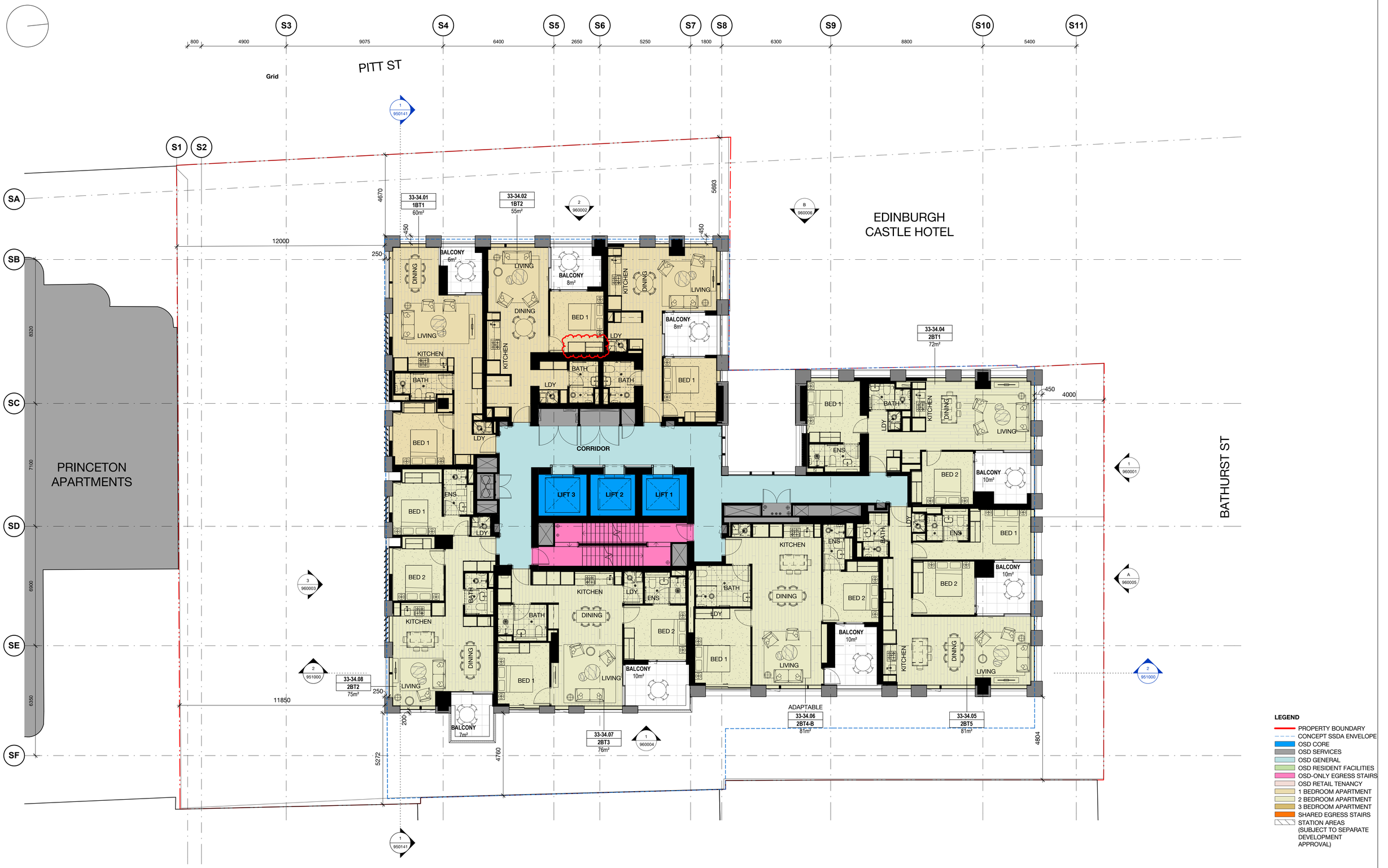
PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue

L14-32 - HIGHRISE GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. J



100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
F		22.08.22	SSDA Issue	
E		18.06.21	SSDA Issue	
D		08.12.20	SSDA Issue	
C		12.11.20	SSDA Issue	
B		18.09.20	SSDA Issue	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

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DESIGN CHECK Checker
APPROVED Approver

DRG No. SMCSWSPS-BAT-OSS-AT-DWG-933341

PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue

L33-34 - HIGHRISE GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. F



100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
J		22.08.22	SSDA Issue	
I		18.06.21	SSDA Issue	
H		08.12.20	SSDA Issue	
G		12.11.20	SSDA Issue	
F		18.09.20	SSDA Issue	
E		12.05.20	Stage 2 SSD DA - Final	
D		07.04.20	Stage 2 SSD DA - For Landowners Consent	
C		31.03.20	SSDA Issue	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

N

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DRG CHECK Checker
DESIGN CHECK Checker
APPROVED Approver

DRG No. SMCSWSPS-BAT-OSS-AT-DWG-933541

PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

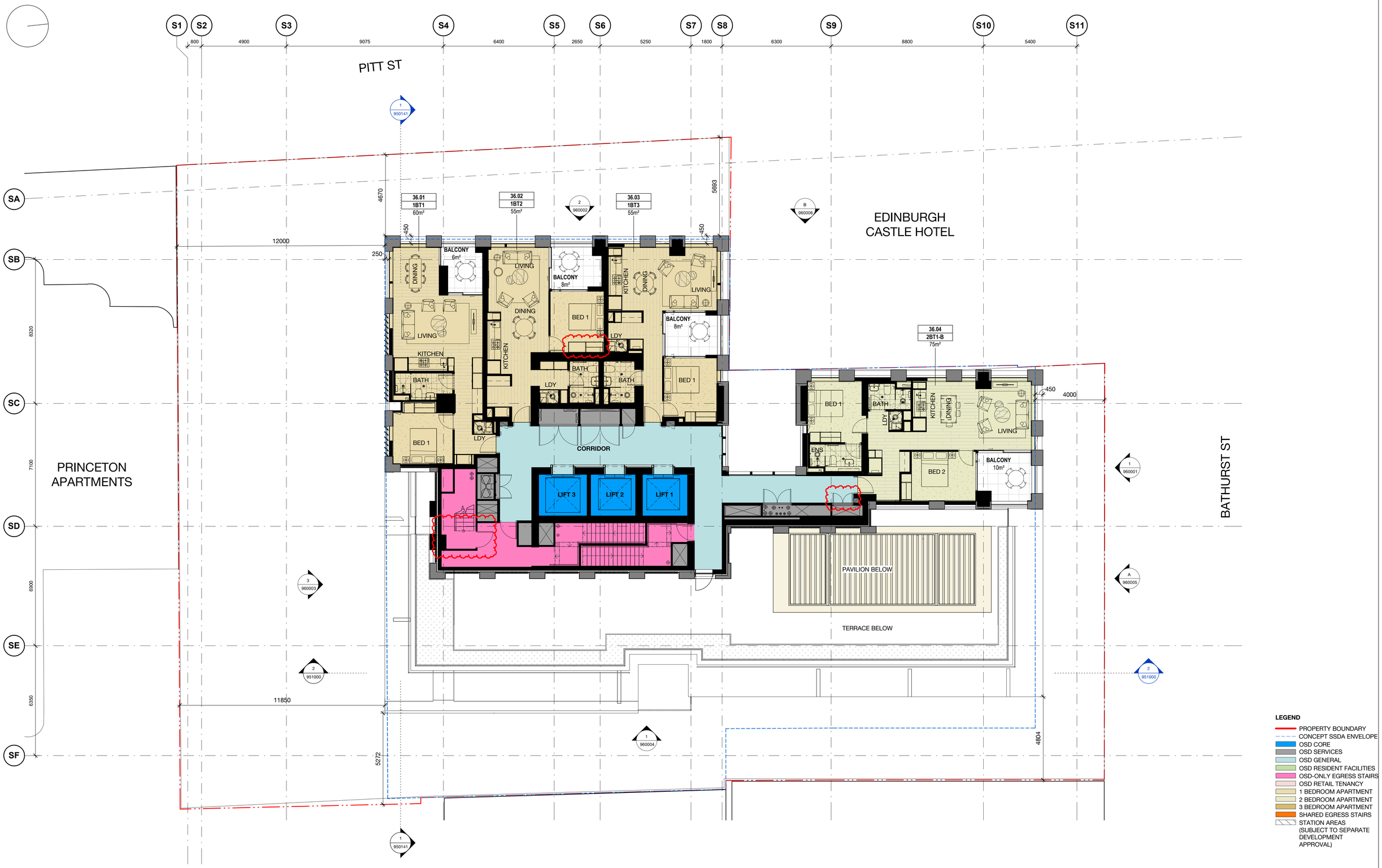
SSDA Issue

L35 - GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV . J

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied



LEGEND

- PROPERTY BOUNDARY
- CONCEPT SSDA ENVELOPE
- OSD CORE
- OSD SERVICES
- OSD GENERAL
- OSD RESIDENT FACILITIES
- OSD-ONLY EGRESS STAIRS
- OSD RETAIL TENANCY
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT
- SHARED EGRESS STAIRS
- STATION AREAS (SUBJECT TO SEPARATE DEVELOPMENT APPROVAL)

100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
J		22.08.22	SSDA Issue	
I		18.06.21	SSDA Issue	
H		08.12.20	SSDA Issue	
G		12.11.20	SSDA Issue	
F		18.09.20	SSDA Issue	
E		12.05.20	Stage 2 SSD DA - Final	
D		07.04.20	Stage 2 SSD DA - For Landowners Consent	
C		31.03.20	SSDA Issue	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

N

NOTE: Do not scale from this drawing.

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SERVICE PROVIDERS

Foster + Partners
COX | CJ ARMS
BATESSMART | LCI
aurecon | TTW

DRAWN Author
DESIGNED Designer
DRG CHECK Checker
DESIGN CHECK Checker
APPROVED Approver

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DRG No. SMCSWSPS-BAT-OSS-AT-DWG-933641

PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue

L36 - GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. J

S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11

800 4900 9075 6400 2650 5250 1800 6300 8800 5400

PITT ST

SA SB SC SD SE SF

8320 7100 6900 6350

12000 11850

4670 5693 5272 4804

450 250 450 450 4000

PRINCETON APARTMENTS

EDINBURGH CASTLE HOTEL

BATHURST ST

PLANT

PV EXTENT

ROOF BELOW

PV EXTENT

ROOF BELOW

PAVILION BELOW

TERRACE BELOW

1 950141

2 960002

B 960006

1 960001

3 960003

A 960005

1 960004

1 950141

LEGEND

- PROPERTY BOUNDARY
- CONCEPT SSDA ENVELOPE
- OSD CORE
- OSD SERVICES
- OSD GENERAL
- OSD RESIDENT FACILITIES
- OSD-ONLY EGRESS STAIRS
- OSD RETAIL TENANCY
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT
- SHARED EGRESS STAIRS
- STATION AREAS (SUBJECT TO SEPARATE DEVELOPMENT APPROVAL)

100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
H		22.08.22	SSDA Issue	
G		18.06.21	SSDA Issue	
F		12.11.20	SSDA Issue	
E		18.09.20	SSDA Issue	
D		07.04.20	Stage 2 SSD DA - For Landowners Consent	
C		31.03.20	SSDA Issue	
B		10.02.20	SSDA Issue	
3		20.01.20	Preliminary - SSDA Issue	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

N

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DRAWN Author

DESIGNED Designer

DRG CHECK Checker

DESIGN CHECK Checker

APPROVED Approver

DRG No. SMCSWSPS-BAT-OSS-AT-DWG-933741

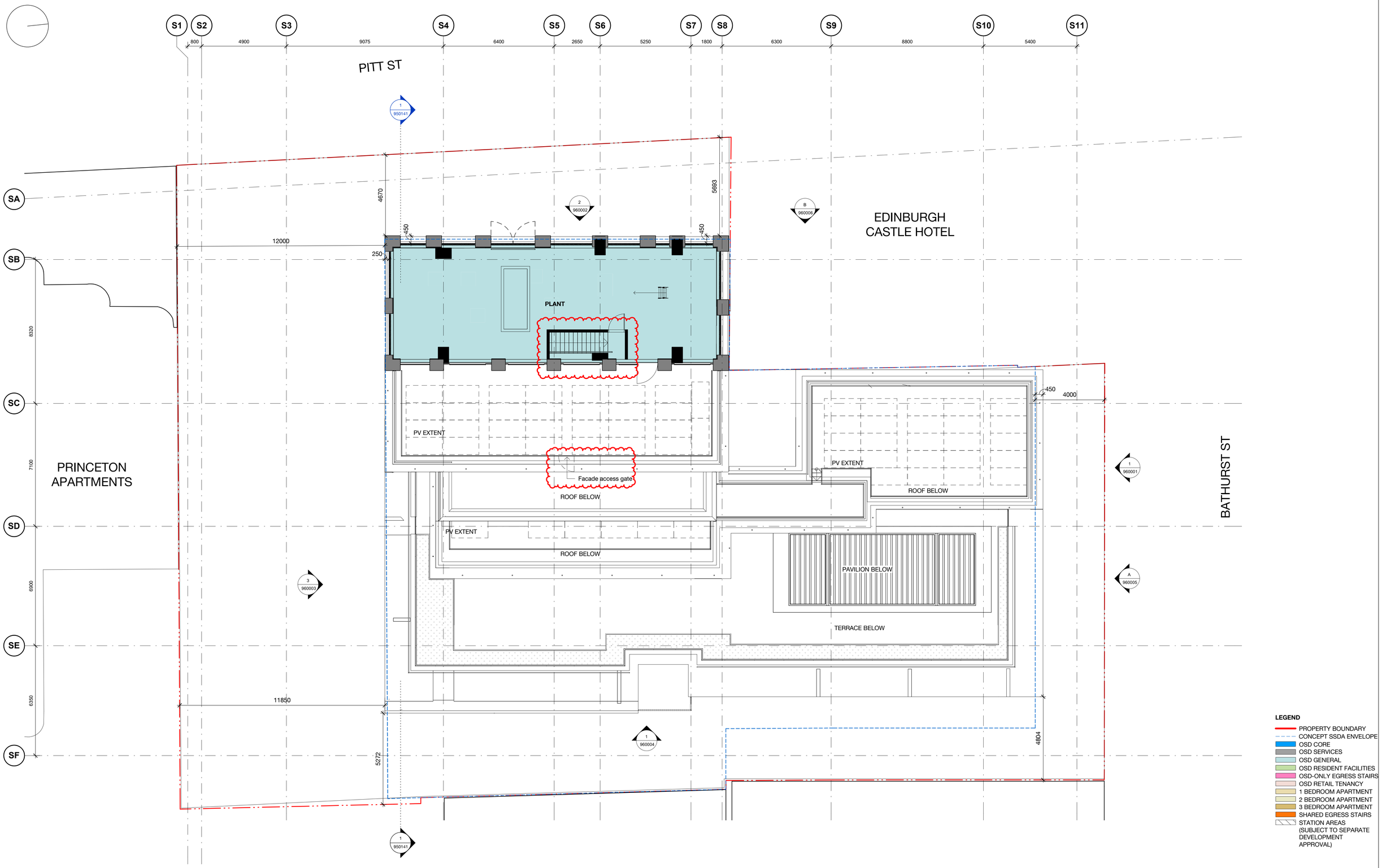
PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue

L37 PLANT - GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV . H



LEGEND

- PROPERTY BOUNDARY
- CONCEPT SSDA ENVELOPE
- OSD CORE
- OSD SERVICES
- OSD GENERAL
- OSD RESIDENT FACILITIES
- OSD-ONLY EGRESS STAIRS
- OSD RETAIL TENANCY
- 1 BEDROOM APARTMENT
- 2 BEDROOM APARTMENT
- 3 BEDROOM APARTMENT
- SHARED EGRESS STAIRS
- STATION AREAS (SUBJECT TO SEPARATE DEVELOPMENT APPROVAL)

REV.	BY	DATE	DESCRIPTION	APPD.
H		22.08.22	SSDA Issue	
G		18.06.21	SSDA Issue	
F		12.11.20	SSDA Issue	
E		18.09.20	SSDA Issue	
D		07.04.20	Stage 2 SSD DA - For Landowners Consent	
C		31.03.20	SSDA Issue	
B		10.02.20	SSDA Issue	
3		20.01.20	Preliminary - SSDA Issue	

SCALE

1:100 @ A1 0 1 2 3 4 5 m

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied

N

NOTE: Do not scale from this drawing.

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DRG CHECK Checker
DESIGN CHECK Checker
APPROVED Approver

DRG No. SMCSWSPS-BAT-OSS-AT-DWG-933841

PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

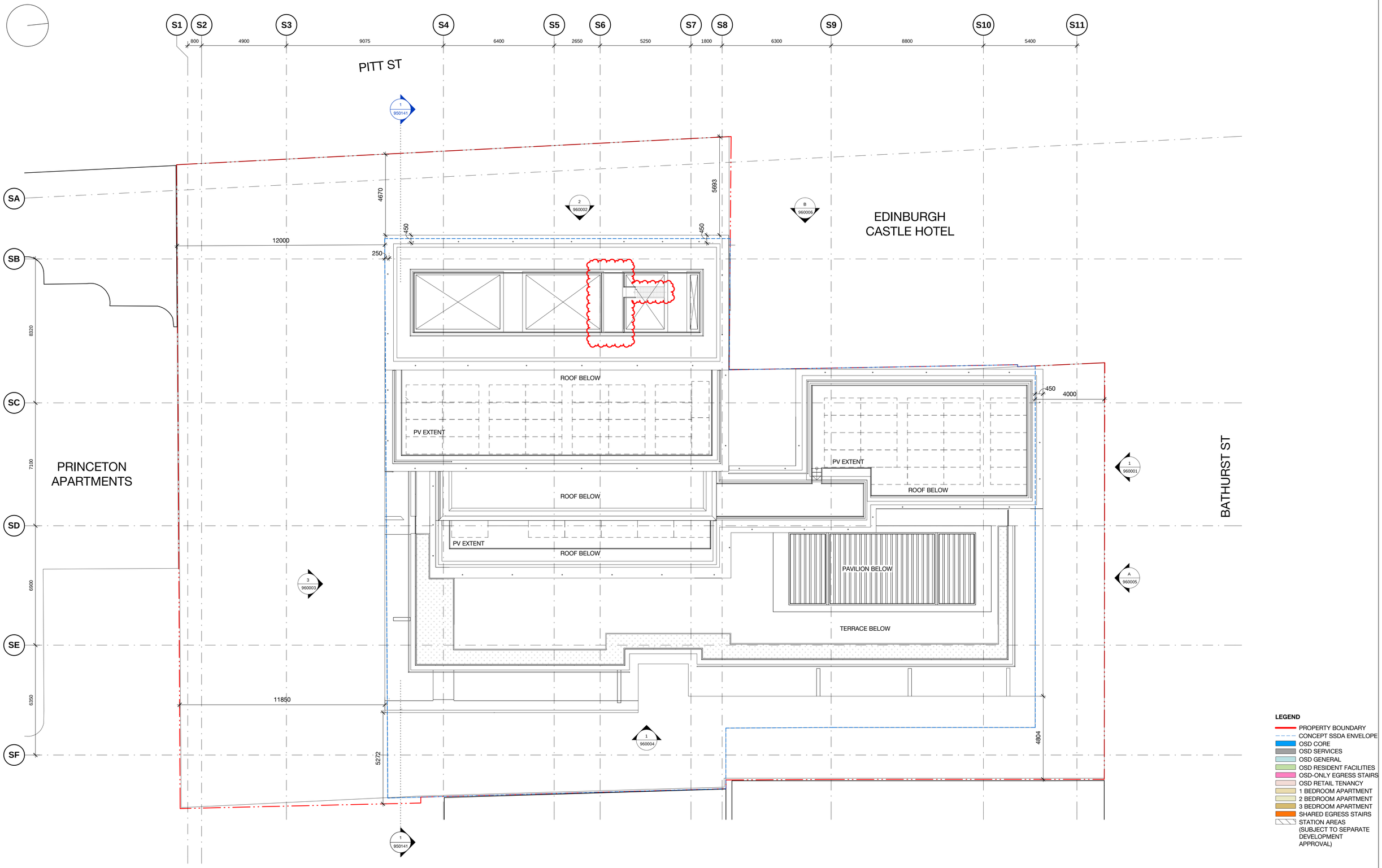
SSDA Issue

L38 PLANT - GENERAL ARRANEGMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. H

100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]



LEGEND

- PROPERTY BOUNDARY
- CONCEPT SSDA ENVELOPE
- OSD CORE
- OSD SERVICES
- OSD GENERAL
- OSD RESIDENT FACILITIES
- OSD-ONLY EGRESS STAIRS
- OSD RETAIL TENANCY
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- 3 BEDROOM APARTMENT
- SHARED EGRESS STAIRS
- STATION AREAS (SUBJECT TO SEPARATE DEVELOPMENT APPROVAL)

100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
H		22.08.22	SSDA Issue	
G		18.06.21	SSDA Issue	
F		12.11.20	SSDA Issue	
E		18.09.20	SSDA Issue	
D		07.04.20	Stage 2 SSD DA - For Landowners Consent	
C		31.03.20	SSDA Issue	
B		10.02.20	SSDA Issue	
3		20.01.20	Preliminary - SSDA Issue	

SCALE

1:100 @ A1

0 1 2 3 4 5 m

N

NOTE: Do not scale from this drawing.

CLIENT

NSW GOVERNMENT | sydney METRO

ISDP

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SERVICE PROVIDERS

Foster + Partners
COX CJ ARMS
BATESSMART. LCI
aurecon TTW Taylor Thomson Whitting

DRAWN Author
DESIGNED Designer
DRG CHECK Checker
DESIGN CHECK Checker
APPROVED Approver

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DRG No. SMCSWSPS-BAT-OSS-AT-DWG-933941

PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

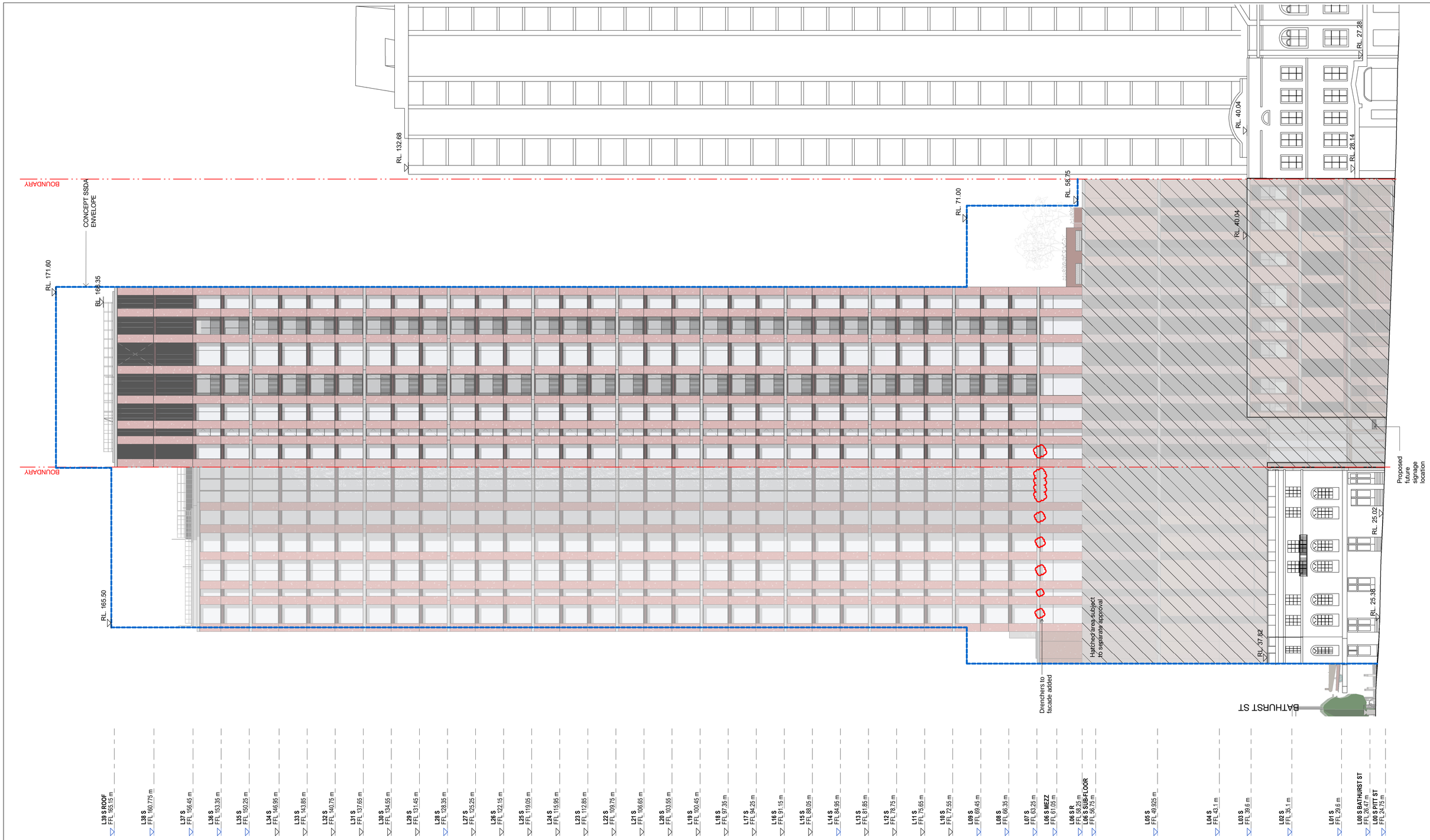
SSDA Issue

L39 ROOF - GENERAL ARRANGEMENT PLAN

STATUS: SSDA Issue | SHEET OF | ©

METRO DRG No. | REV. H

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D. | This sheet may be prepared using colour and may be incomplete if copied



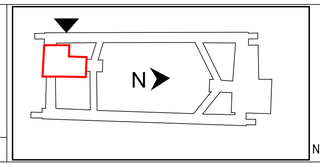
100mm AT FULL SIZE Plot Date & Time [DATE / TIME STAMP]

REV.	BY	DATE	DESCRIPTION	APPD.
J		22.08.22	SSDA Issue	
I		18.06.21	SSDA Issue	
H		26.11.20	SSDA Issue	
G		12.11.20	SSDA Issue	
F		18.09.20	SSDA Issue	
E		07.04.20	Stage 2 SSD DA - For Landowners Consent	
D		31.03.20	SSDA Issue	
C		13.02.20	SSDA Issue	

SCALE

1:200 @ A1 0 2 4 6 8 10 m

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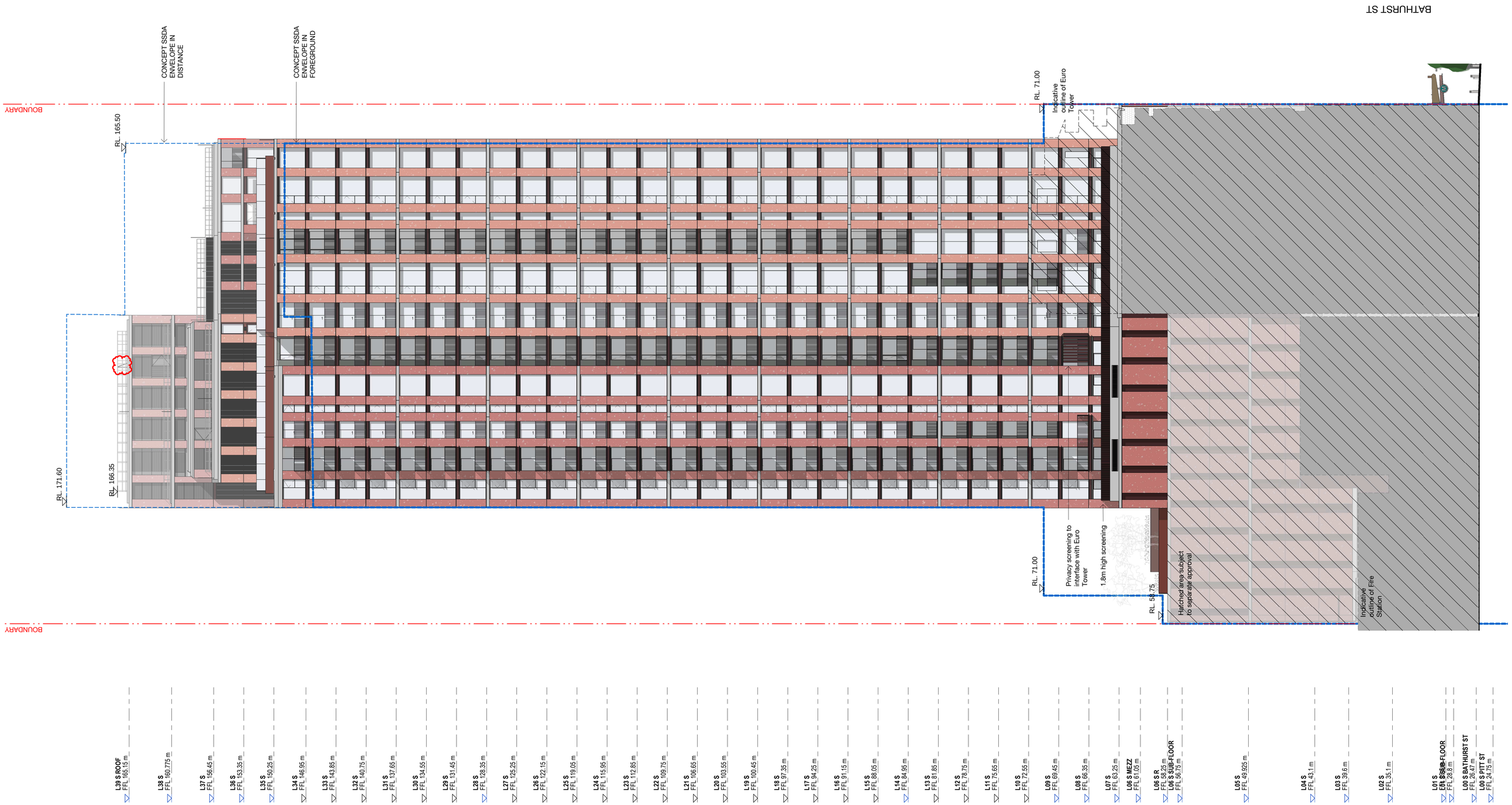
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PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

SSDA Issue
WEST ELEVATION - PITT STREET

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REV.	BY	DATE	DESCRIPTION	APPD.
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K		18.06.21	SSDA Issue	
J		08.12.20	SSDA Issue	
I		26.11.20	SSDA Issue	
H		12.11.20	SSDA Issue	
G		18.09.20	SSDA Issue	
F		12.05.20	Stage 2 SSD DA - Final	
E		07.04.20	Stage 2 SSD DA - For Landowners Consent	

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PITT STREET SOUTH OVER STATION DEVELOPMENT (PSS OSD)

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APPENDIX C UPDATED ACOUSTIC ASSESSMENT OF PROPOSED WORKS OUTSIDE OF STANDARD HOURS

RENZO TONIN & ASSOCIATES
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Acoustics
Vibration
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PITT STREET METRO STATION – OVER STATION DEVELOPMENT SOUTH

Assessment of Proposed Works Outside of Standard Hours

SMCSWSPS-REN-OSS-NA-REP-000002-F

12 September 2022

CPB

TL093-20F02 Extended Construction Hours (r6)

Document details

Detail	Reference
Doc reference:	Renzo Tonin Ref: TL093-20F02 Extended Construction Hours (r6) CPB Ref: SMCSWSPS-REN-OSS-NA-REP-000002-F
Prepared for:	CPB
Address:	Level 18, 177 Pacific Highway, North Sydney NSW 2060
Attention:	Emma Everleigh

Document control

Date	Revision history	Non-issued revision	Issued revision	Prepared	Instructed	Authorised
14.2.2022	Issued		0	T Taylor	T.Taylor	R.Corbett
8.3.2022	Issued		1	T Taylor	T.Taylor	R.Corbett
9.3.2022	Issued		2	T Taylor	T.Taylor	R.Corbett
7.4.2022	Issued		3	T Taylor	T.Taylor	R.Corbett
18.8.2022	Issued		4	T Taylor	T.Taylor	R.Corbett
9.9.2022	Issued	5	6	T Taylor	T.Taylor	R.Corbett

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The work presented in this document was carried out in accordance with the Renzo Tonin & Associates Quality Assurance System, which is based on Australian Standard / NZS ISO 9001.

This document is issued subject to review and authorisation by the Team Leader noted by the initials printed in the last column above. If no initials appear, this document shall be considered as preliminary or draft only and no reliance shall be placed upon it other than for information to be verified later.

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In preparing this report, we have relied upon, and presumed accurate, any information (or confirmation of the absence thereof) provided by the Client and/or from other sources. Except as otherwise stated in the report, we have not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change.

We have derived data in this report from information sourced from the Client (if any) and/or available in the public domain at the time or times outlined in this report. The passage of time, manifestation of latent conditions or impacts of future events may require further examination and re-evaluation of the data, findings, observations and conclusions expressed in this report.

We have prepared this report in accordance with the usual care and thoroughness of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

The information contained herein is for the purpose of acoustics only. No claims are made and no liability is accepted in respect of design and construction issues falling outside of the specialist field of acoustics engineering including and not limited to structural integrity, fire rating, architectural buildability and fit-for-purpose, waterproofing and the like. Supplementary professional advice should be sought in respect of these issues.

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1 Introduction

This report presents an assessment of proposed Outside of Standard Hours Works at the Pitt Street Metro Over Station Development South site.

Renzo Tonin has previously prepared a Construction Noise and Vibration Management Plan for this site in order to address condition of consent B512(b) (*Construction Noise and Vibration Management Plan* Rev 0 dated 26/5/2021 – the "Original CNVMP").

This report only addresses works that were not already addressed (approved) in the Original CNVMP.

While the Original CNVMP report would generally remain applicable, this report will:

- Address specifically the works proposed that are outside of standard hours.
- Identify current conditions of approval that are proposed to be modified in order to permit the change.

The work documented in this report was carried out in accordance with the Renzo Tonin & Associates Quality Assurance System, which is based on Australian Standard / NZS ISO 9001. Appendix A contains a glossary of acoustic terms used in this report.

2 Consent conditions

The Original CNVMP was prepared in order to address the requirements of SSD 10376D/2018/1128 Condition B51(b) as detailed below:

CONSTRUCTION NOISE AND VIBRATION MANAGEMENT SUB-PLAN

B51. Prior to the issue of the relevant Construction Certificate, the Applicant shall:

(a) amend, or prepare an addendum to, the Construction Noise and Vibration Management Sub-Plan (CNVMP) applicable to the CSSI approval (CSSI 7400) to apply to the development. The amended CNVMP must be submitted to the Planning Secretary and Certifying Authority, or

(b) prepare and implement a Construction Noise and Vibration Management Sub-Plan (CNVMP) for the development, independent of the CNVMP approved with the CSSI station works. A copy of the CNVMP must be submitted to the Planning Secretary and Certifying Authority. The Sub-Plan must include:

(i) identification of the specific activities that will be carried out and associated noise sources at the premises;

(ii) identification of all potentially affected sensitive residential receiver locations;

(iii) quantification of the rating background noise level (RBL) for sensitive receivers, as part of the Sub-Plan, or as undertaken in the EIS;

(iv) the construction noise, ground-borne noise and vibration objectives derived from an application of the EPA Interim Construction Noise Guideline (ICNG), as reflected in conditions of approval;

(v) prediction and assessment of potential noise, ground-borne noise (as relevant) and vibration levels from the proposed construction methods expected at sensitive receiver premises against the objectives identified in the ICNG and conditions of approval;

(vi) where objectives are predicted to be exceeded, an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise and vibration impacts;

(vii) description of management methods and procedures, and specific noise mitigation treatments/measures that can be implemented to control noise and vibration during construction;

(viii) where objectives cannot be met, additional measures including, but not necessarily limited to, the following should be considered and implemented where practicable; reduce hours of construction, the provision of respite from noise/vibration intensive activities, acoustic barriers/enclosures, alternative excavation methods or other negotiated outcomes with the affected community;

(ix) where night-time noise management levels cannot be satisfied, a report shall be submitted to the Planning Secretary outlining the mitigation measures applied, the noise levels achieved and justification that the outcome is consistent with best practice;

(x) measures to identify non-conformances with the requirements of the Sub-Plan, and procedures to implement corrective and preventative action;

(xi) suitable contractual arrangements to ensure that all site personnel, including sub-contractors, are required to adhere to the noise management provisions in the Sub-Plan;

(xii) procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity;

(xiii) measures to monitor noise performance and respond to complaints;

(xiv) measures to reduce noise related impacts associated with offsite vehicle movements on nearby access and egress routes from the site;

(xv) procedures to allow for regular professional acoustic input to construction activities and planning; and

(xvi) effective site induction, and ongoing training and awareness measures for personnel (e.g. toolbox talks, meetings etc).

As part of this application for extended work hours, a modification of condition B51(b)(iv) and (v) is suggested. It is suggested that clause (iv) and(v) be amended to include reference to City of Sydney Council *Code of Practice: Construction House and Noise in the City Centre* in addition to EPA Interim Construction Noise Guideline when setting construction noise goals.

The purpose of this is:

- It enables the City of Sydney Code of Practice to be adopted when setting what constitutes standard construction hours. This is reasonable given the site location is in the city centre.

- EPA guidelines remain useful for guidance, particularly with reference to its commentary on reasonable and feasible noise mitigation methods in the even that strict compliance with a numerical noise emission target is not feasible.

3 Site Description / Summary of Works

3.1 Site Description

The Pitt Street Metro Station development consists of two station boxes (a north and south site) with an Over Station Development to be constructed over each of the station boxes:

- The north site (on the corner of Park, Pitt and Castlereagh Streets) and
- The south site (on the corner of Bathurst and Pitt Street).

The proposed Over Station Development (South) works involve the construction of residential tower (Levels 6 to 35), constructed on top of the podium building (being the Station Box South building). The upper levels of the Station Box Building (below the Over Station Development) are predominantly plant rooms.

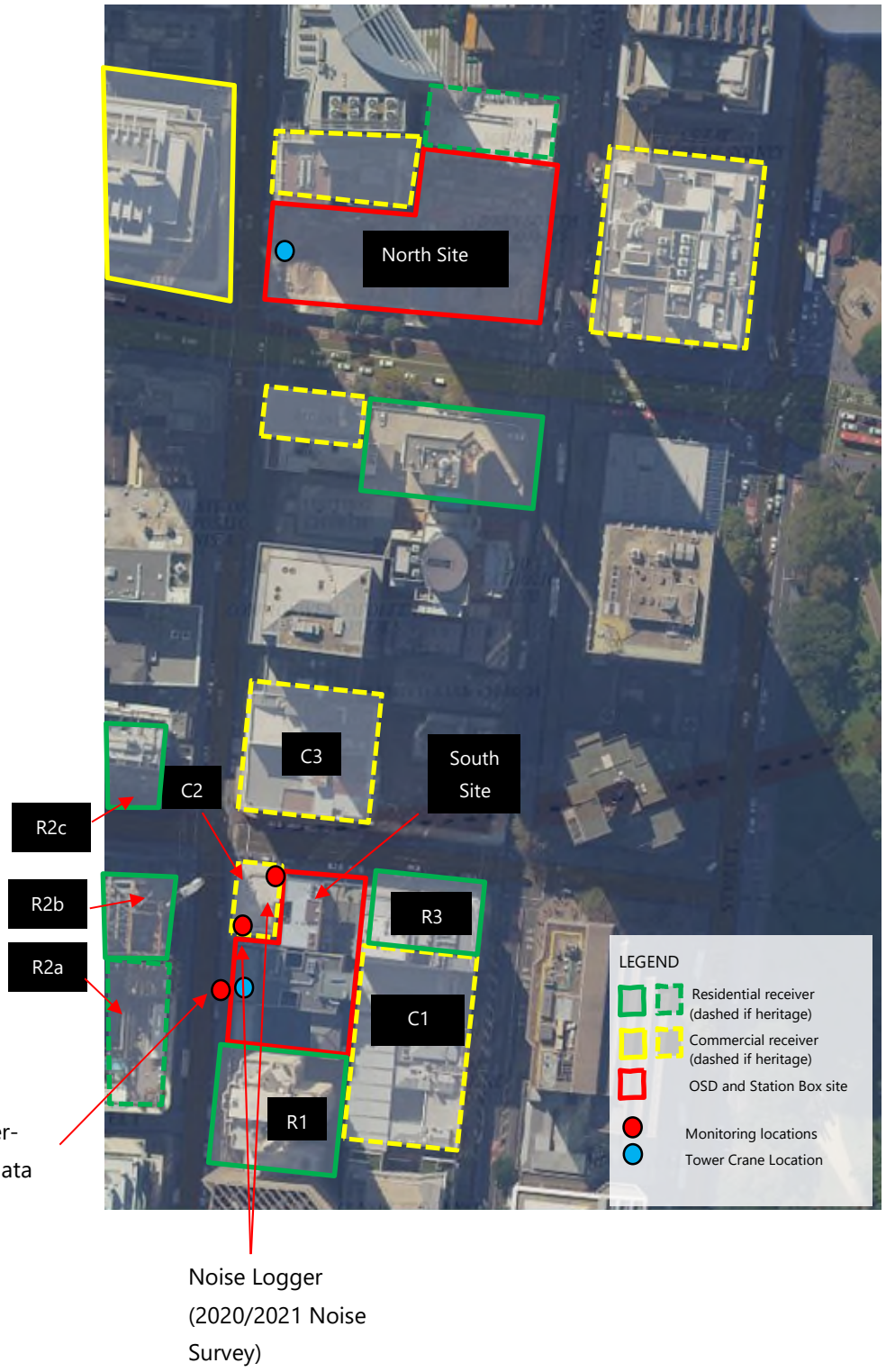
Noise sensitive development in the vicinity of the site is summarised below.

Table 1: Summary of nearest sensitive receivers

Receiver ID	Receiver type	Heritage Item?	Address
South site			
Receiver R1	Residential	No	304-308 Pitt Street (Princeton Apartments)
Receiver R2a Receiver R2b Receiver R2c	Hotel Residential Hotel	No	339 Pitt Street (Primus Hotel) 115 Bathurst Street (Greenland Tower) 329 Pitt Street (Meriton Suites)
Receiver R3	Residential	No	133-139 Bathurst Street
Receiver C1	Commercial	Yes	211 & 217 Castlereagh Street (Fire and Rescue Building)
Receiver C2	Commercial	Yes	294 Pitt Street (Edinburgh Castle Hotel)
Receiver C3	Commercial	Yes	102-104 Bathurst Street
Receiver C4	Commercial/Special Use	No	South Site Station Box.

The site and adjacent noise receivers are indicated in the aerial photo below. Items of heritage significance are indicated with dashed lines.

Figure 1: Site Aerial Photo and Surrounding Noise Receivers



3.2 Existing and Proposed Construction Hours

3.2.1 Standard Hours of Work

Construction hours are regulated by conditions of consent D3-7, as detailed below.

HOURS OF CONSTRUCTION

D3. Construction, including the delivery of materials to and from the site, may only be carried out between the following hours:
   (a) between 7am and 6pm, Mondays to Fridays inclusive; and
   (b) between 8am and 1pm, Saturdays.

D4. No work may be carried out on Sundays or public holidays.

D5. Activities may be undertaken outside of these hours if required:
   (a) by the Police or a public authority for the delivery of vehicles, plant or materials; or
   (b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm.

D6. Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards.

D7. Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours:
   (a) 9am to 12pm, Monday to Friday;
   (b) 2pm to 5pm Monday to Friday; and
   (c) 9am to 12pm, Saturday.

3.2.2 Proposed Extended Work Hours

The additional hours sought are as follows:

- Weekdays - 6pm to 10pm.
- Saturdays - 7am to 8am.
- Saturdays – 1pm-5pm.

Only specific construction works are proposed during the proposed additional work hours. These are set out below.

3.3 Summary of Proposed Works in Extended Hours

The works proposed during the extended hours is as follows:

Table 2: Works Summary (Outside of Standard Hours)

Stage	Description	Equipment Items
Weekday evenings (10pm finish)	Internal Fit Out Works once building façade is complete.	Hand tools (internal areas), Crane.
Saturday Morning (7am-8am)	Site Set up Internal Fit Out Works once building façade is complete.	Hand tools (internal areas), Electric Tower Crane.
Saturday Afternoon (1pm-5pm)	General Construction: Scaffolding, Formwork, Concrete Pouring, Vibrating and Finishing. Façade Works, Landscaping. Internal Works	Hand Tools (internal and external areas), Concrete Truck, Vibrator and Helicopter Float, Electric tower crane, electric mini crawler crane, hand tools.

Workzones (concrete trucks/deliveries) and crane locations are located on Pitt and Bathurst Street (refer to Appendix E).

4 Background Noise Levels

Background noise levels are used in setting construction noise management levels for the site.

As part of the Original Construction Noise and Vibration Management Plan, a detailed review of historical noise logging at the site was undertaken (noise logging from the EIS Stage, and the Tunnelling Station Excavation Stage/TSE Stage. These background noise surveys were supplemented by additional, more recent background noise surveys when determining background noise levels and construction noise emission goals.

These are summarised below:

Table 3: Ambient Noise Survey Results – South Site

Logger Location	Use for	Measured Noise Level		
		Day[1]	Evening[2]	Night[3]
302 - 306 Pitt Street (Historical Data)	*TSE Noise survey (2018 survey)*	*63dB(A)$L_{eq(15min)}$*	*60dB(A)$L_{eq(15min)}$*	*57dB(A)$L_{eq(15min)}$*
		59dB(A)L_{90}	*57dB(A)L_{90}*	*53dB(A)L_{90}*
Pitt Street Metro – South Site (Bathurst Street frontage)	2020 Ambient Noise Survey (10 to 17 December 2020)	71dB(A)$L_{eq(15min)}$	68dB(A)$L_{eq(15min)}$	67dB(A)$L_{eq(15min)}$
		65dB(A)L_{90}	63dB(A)L_{90}	59dB(A)L_{90}
Pitt Street Metro – South Site (Pitt Street frontage)	2020 Ambient Noise Survey (23/11 to 29/11 2020)	72dB(A)$L_{eq(15min)}$	67dB(A)$L_{eq(15min)}$	65dB(A)$L_{eq(15min)}$
		64dB(A)L_{90}	61dB(A)L_{90}	58dB(A)L_{90}

Notes:
1. Day represents the period from 7am to 6pm, Monday to Saturday and 8am to 6pm, Sunday & Public Holidays.
2. Evening represents the period from 6pm to 10pm, Monday to Sunday & Public Holidays
3. Night represents the period from 10pm to 7am, Monday to Saturday and 10pm to 8am, Sundays & Public Holidays

5 Noise and Vibration Criteria

5.1 Hierarchy of Noise Controls

Condition B51(v) identifies the NSW *Interim Construction Noise Guideline* (ICNG, 2009) when setting construction noise goals.

Given the site is located within the City of Sydney CBD, it is proposed to modify condition B51(v) to allow typical City of Sydney construction noise requirements to be adopted for the proposed Saturday afternoon periods.

Being a guideline developed specifically for construction work in the Sydney CBD, the City of Sydney Construction Noise Guideline is more appropriate when setting noise emission goals for this project. This is of particular relevance to Saturday afternoon works, which is considered as being within standard construction hours in the Sydney CBD guideline.

5.2 Outside of Standard Hours Noise Criteria – City of Sydney Construction Noise Code

The City of Sydney also has a Construction Noise Code which sets out noise goals specific to the Central Business District. It is noted that the standard time periods, noise targets and noise descriptors differ from the ICNG. A summary of the noise criteria is set out below (time periods relevant to this assessment in **bold**).

Table 5: Summary of City of Sydney Noise Criteria

Category	Time Period	Permissible Noise Level [dB(A)] $L_{A(Av\ Max)}$
Mondays To Fridays		
4	00:00 to 07:00	Background + 0
1	07:00 to 08:00	Background + 5
1	**08:00 to 19:00**	**Background + 5 + 5 to be determined on a site basis**
2	**19:00 to 23:00**	**Background + 3**
4	23:00 to 24:00	Background + 0
Saturdays		
4	00:00 to 07:00	Background + 0
1	**07:00 to 08:00**	**Background + 5**
1	**08:00 to 17:00**	**Background + 5 + 5 to be determined on a site basis**
2	17:00 to 23:00	Background + 3
4	23:00 to 24:00	Background + 0
Sundays & Public Holidays		
4	00:00 to 07:00	Background + 0
3	07:00 to 17:00	Background + 3
4	17:00 to 24:00	Background + 0

5.3 Outside of Standard Hours Noise Criteria – EPA Guidelines

Condition B51(b) identifies the NSW *Interim Construction Noise Guideline* (ICNG, 2009) when setting construction noise goals.

While in our view the City of Sydney code is proposed when setting noise emission goals for the proposed construction work, the EPA guidelines remain useful for guidance, particularly with reference to its commentary on reasonable and feasible noise mitigation methods in the even that strict compliance with a numerical noise emission target is not feasible.

The table below reproduced from the ICNG, sets out the noise management levels and how they are to be applied for residential receivers.

Table 4: Noise management levels at residential receivers

Time of day	Management level $L_{Aeq\ (15\ min)}$ *	How to apply
Outside recommended standard hours	Noise affected RBL + 5dB	A strong justification would typically be required for works outside the recommended standard hours. The proponent should apply all feasible and reasonable work practices to meet the noise affected level. Where all feasible and reasonable practices have been applied and noise is more than 5dB(A) above the noise affected level, the proponent should negotiate with the community. For guidance on negotiating agreements see section 7.2.2 *[of the ICNG.*

* Noise levels apply at the property boundary that is most exposed to construction noise, and at a height of 1.5 m above ground level. If the property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most noise-affected point within 30 m of the residence. Noise levels may be higher at upper floors of the noise affected residence.

The table below sets out the ICNG noise management levels for other noise relevant receiver locations.

Table 5: Noise management levels at other noise sensitive land uses

Land use	Where objective applies	Management level $L_{Aeq\ (15\ min)}$
Commercial premises	External noise level	70 dB(A)

Notes: Noise management levels apply when receiver areas are in use only.

5.4 Summary of Construction Noise Emission Goals

The table below presents the construction noise management levels established for the nearest noise sensitive receivers based upon the long-term monitoring outlined in Section 4.

The noise goals during the proposed extended hours periods are shown in **bold**.

Table 6: Construction noise management levels at receivers[1, 2]

Receiver type	Time of Day[2]	Noise Management Level	Sleep Disturbance
Residential	Day (Standard – 7am-6pm)	74dB(A)$L_{eq(15min)}$ 75dB(A)$L_{eq(15min)}$ – Highly Noise Affected Threshold	N/A
	Day (Outside of Standard Hours – Saturday Morning/Afternoon)	**69dB(A)$L_{eq(15min)}$ (ICNG)** **74dB(A)$L_{(AvMax)}$ (C of S)**	**N/A**
	Evening (OOH)	**66dB(A)$L_{eq(15min)}$ (ICNG)** **64dB(A)$L_{(AvMax)}$ (C of S)**	**N/A**
	Night (OOH) (after 10pm)	63dB(A)$L_{eq(15min)}$	N/A
Commercial	When in use	70dB(A)$L_{eq(15min)}$	N/A

5.5 Sleep Disturbance – Night Time Works

Given the proposed works will not extend after 10pm or commence before 7am, an assessment of sleep disturbance is not required.

5.6 Construction vibration criteria

5.6.1 Disturbance to Buildings Occupants

Assessment of potential disturbance from vibration on human occupants of buildings is made in accordance with the EPA's '*Assessing Vibration; a technical guideline*' (DECC, 2006). The guideline provides criteria which are based on the British Standard BS 6472-1992 'Evaluation of human exposure to vibration in buildings (1-80Hz)'. Sources of vibration are defined as either 'Continuous', 'Impulsive' or 'Intermittent'. Table 8 provides definitions and examples of each type of vibration.

Table 8: Types of Vibration

Type of Vibration	Definition	Examples
Continuous vibration	Continues uninterrupted for a defined period (usually throughout the day-time and/or night-time)	Machinery, steady road traffic, continuous construction activity (such as tunnel boring machinery).
Impulsive vibration	A rapid build-up to a peak followed by a damped decay that may or may not involve several cycles of vibration (depending on frequency and damping). It can also consist of a sudden application of several cycles at approximately the same amplitude, providing that the duration is short, typically less than 2 seconds	Infrequent: Activities that create up to 3 distinct vibration events in an assessment period, e.g. occasional dropping of heavy equipment, occasional loading and unloading.
Intermittent vibration	Can be defined as interrupted periods of continuous or repeated periods of impulsive vibration that varies significantly in magnitude	Trains, nearby intermittent construction activity, passing heavy vehicles, forging machines, impact pile driving, jack hammers. Where the number of vibration events in an assessment period is three or fewer, this would be assessed against impulsive vibration criteria.

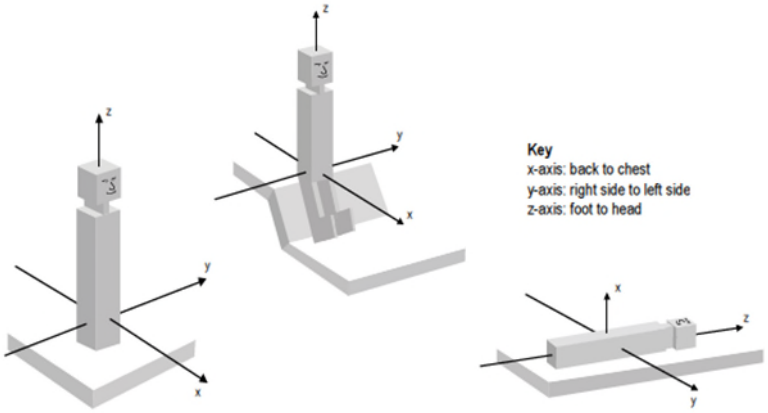
Source: Assessing Vibration; a technical guideline, Department of Environment & Climate Change, 2006

The vibration criteria are defined as a single weighted root mean square (rms) acceleration source level in each orthogonal axis. Section 2.3 of the guideline states:

> *'Evidence from research suggests that there are summation effects for vibrations at different frequencies. Therefore, for evaluation of vibration in relation to annoyance and comfort, overall weighted rms acceleration values of the vibration in each orthogonal axis are preferred (BS 6472).'*

When applying the criteria, it is important to note that the three directional axes are referenced to the human body, i.e. x-axis (back to chest), y-axis (right side to left side) or z-axis (foot to head). Vibration may enter the body along different orthogonal axes and affect it in different ways. Therefore, application of the criteria requires consideration of the position of the people being assessed, as illustrated in Figure 2. For example, vibration measured in the horizontal plane is compared with x- and y-axis criteria if the concern is for people in an upright position, or with the y- and z- axis criteria if the concern is for people in the lateral position.

Figure 2: Orthogonal Axes for Human Exposure to Vibration



The preferred and maximum values for continuous and impulsive vibration are defined in Table 2.2 of the guideline and the locations applicable to receivers surrounding the site are reproduced in Table 5.1.

Table 5.1: Preferred and Maximum Levels for Human Comfort

Location	Assessment period[1]	Preferred values		Maximum values	
		z-axis	x- and y-axis	z-axis	x- and y-axis
Continuous vibration (weighted RMS acceleration, m/s^2, 1-80Hz)					
Critical areas[2]	Day- or night-time	0.005	0.0036	0.010	0.0072
Residences	Daytime	0.010	0.0071	0.020	0.014
	Night-time	0.007	0.005	0.014	0.010
Offices, schools, educational institutions and places of worship (Station Box)	Day- or night-time	0.020	0.014	0.040	0.028
Workshops	Day- or night-time	0.04	0.029	0.080	0.058
Impulsive vibration (weighted RMS acceleration, m/s^2, 1-80Hz)					
Critical areas[2]	Day- or night-time	0.005	0.0036	0.010	0.0072
Residences	Daytime	0.30	0.21	0.60	0.42
	Night-time	0.10	0.071	0.20	0.14
Offices, schools, educational institutions and places of worship '(Station Box)	Day- or night-time	0.64	0.46	1.28	0.92
Workshops	Day- or night-time	0.64	0.46	1.28	0.92

Notes:
1. Daytime is 7:00am to 10:00pm and night-time is 10:00pm to 7:00am
2. Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. There may be cases where sensitive equipment or delicate tasks require more stringent criteria than the human comfort criteria specify above. Stipulation of such criteria is outside the scope of their policy and other guidance documents (e.g. relevant standards) should be referred to. Source: BS 6472-1992

The acceptable vibration dose values (VDV) for intermittent vibration are defined in Table 2.4 of the guideline and the locations applicable to receivers surrounding the site are reproduced in Table 9.

Table 9: Acceptable Vibration Dose Values for Intermittent Vibration (m/s$^{1.75}$)

Location	Daytime[1]		Night-time[1]	
	Preferred value	Maximum value	Preferred value	Maximum value
Critical areas[2]	0.10	0.20	0.10	0.20
Residences	0.20	0.40	0.13	0.26
Offices, schools, educational institutions and places of worship	0.40	0.80	0.40	0.80
Workshops	0.80	1.60	0.80	1.60

Notes:
1. Daytime is 7:00am to 10:00pm and night-time is 10:00pm to 7:00am
2. Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. These criteria are only indicative, and there may be a need to assess intermittent values against the continuous of impulsive criteria for critical areas.

Source: BS 6472-1992

5.6.2 Building Damage

Potential structural damage of buildings as a result of vibration is typically managed by ensuring vibration induced into the structure does not exceed certain limits and standards, such as British Standard 7385 Part 2 and German Standard DIN4150-3. Currently there is no existing Australian Standard for assessment of structural building damage caused by vibration energy.

Within British Standard 7385 Part 1: 1990, different levels of structural damage are defined:

- **Cosmetic** - *The formation of hairline cracks on drywall surfaces, or the growth of existing cracks in plaster or drywall surfaces; in addition, the formation of hairline cracks in mortar joints of brick/concrete block construction.*
- **Minor** - *The formation of large cracks or loosening of plaster or drywall surfaces, or cracks through bricks/concrete blocks.*
- **Major** - *Damage to structural elements of the building, cracks in supporting columns, loosening of joints, splaying of masonry cracks, etc.*

The vibration limits in Table 1 of British Standard 7385 Part 2 (1993) are for the protection against cosmetic damage, however guidance on limits for minor and major damage is provided in Section 7.4.2 of the Standard:

"7.4.2 Guide values for transient vibration relating to cosmetic damage

Limits for transient vibration, above which cosmetic damage could occur are given numerically in Table 1 and graphically in Figure 1. In the lower frequency region where strains associated with a given vibration velocity magnitude are higher, the guide values for the building types corresponding to line 2 are reduced. Below a frequency of 4 Hz, where a high displacement is associated with a relatively low peak component particle velocity value a maximum displacement of 0.6 mm (zero to peak) should be used.

Minor damage is possible at vibration magnitudes which are greater than twice those given in Table 1, and major damage to a building structure may occur at values greater than four times the tabulated values."

Within DIN4150-3, damage is defined as "*any permanent effect of vibration that reduces the serviceability of a structure or one of its components*" (p.2). The Standard also outlines:

"that for structures as in lines 2 and 3 of Table 1, the serviceability is considered to have been reduced if

- *cracks form in plastered surfaces of walls;*
- *existing cracks in the building are enlarged;*
- *partitions become detached from loadbearing walls or floors.*

These effects are deemed 'minor damage." (DIN4150.3, 1990, p.3)

While the DIN Standard defines the above damage as 'minor', based on the definitions provided in BS7385, the DIN standard is considered to deal with cosmetic issues rather than major structural failures.

British Standard

British Standard 7385: Part 2 'Evaluation and measurement of vibration in buildings', can be used as a guide to assess the likelihood of building damage from ground vibration. BS7385 suggests levels at which 'cosmetic', 'minor' and 'major' categories of damage might occur.

The cosmetic damage levels set by BS 7385 are considered 'safe limits' up to which no damage due to vibration effects has been observed for certain particular building types. Damage comprises minor non-structural effects such as hairline cracks on drywall surfaces, hairline cracks in mortar joints and cement render, enlargement of existing cracks and separation of partitions or intermediate walls from load bearing walls. 'Minor' damage is considered possible at vibration magnitudes which are twice those given and 'major' damage to a building structure may occur at levels greater than four times those values.

BS7385 is based on peak particle velocity and specifies damage criteria for frequencies within the range 4Hz to 250Hz, being the range usually encountered in buildings. At frequencies below 4Hz, a maximum displacement value is recommended. The values set in the Standard relate to transient vibrations and to low-rise buildings. Continuous vibration can give rise to dynamic magnifications due to resonances and may need to be reduced by up to 50%. Table 10 sets out the BS7385 criteria for cosmetic, minor and major damage.

Regarding heritage buildings, British Standard 7385 Part 2 (1993) notes that "*a building of historical value should not (unless it is structurally unsound) be assumed to be more sensitive*" (p.5).

To determine whether the site buildings are structurally unsound, we recommend a dilapidation survey be conducted. The results of the survey will determine the adoption of the criteria for major or minor damage, rather than cosmetic damage.

Table 10: BS 7385 Structural Damage Criteria

Group	Type of Structure	Damage Level	Peak Component Particle Velocity[1], mm/s		
			4Hz to 15Hz	15Hz to 40Hz	40Hz and above
1	Reinforced or framed structures Industrial and heavy commercial buildings	Cosmetic		50	
		Minor[2]		100	
		Major[2]		200	
2	Un-reinforced or light framed structures Residential or light commercial type buildings	Cosmetic	15 to 20	20 to 50	50
		Minor[2]	30 to 40	40 to 100	100
		Major[2]	60 to 80	80 to 200	200

Notes:
1. Peak Component Particle Velocity is the maximum peak particle velocity (PPV) in any one direction (x, y, z) as measured by a tri-axial vibration transducer
2. Minor and major damage criteria established based on British Standard 7385 Part 2 (1993) Section 7.4.2

German Standard

German Standard DIN 4150 - Part 3 'Structural vibration in buildings - Effects on Structure' (DIN 4150-3), also provides recommended maximum levels of vibration that reduce the likelihood of building damage caused by vibration and are generally recognised to be conservative.

DIN 4150-3 presents the recommended maximum limits over a range of frequencies (Hz), measured in any direction, and at the foundation or in the plane of the uppermost floor of a building or structure. The vibration limits increase as the frequency content of the vibration increases.

The structural damage vibration criteria adopted for this project is presented in Table 11.

Table 11: DIN 4150-3 Structural Damage Criteria

Group	Type of Structure	Vibration Velocity, mm/s			
		At Foundation at Frequency of			Plane of Floor Uppermost Storey
		1Hz to 10Hz	10Hz to 50Hz	50Hz to 100Hz	All Frequencies
1	Buildings used for commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40
2	Dwellings and buildings of similar design and/or use	5	5 to 15	15 to 20	15
3	Structures that because of their particular sensitivity to vibration, do not correspond to those listed in Group 1 or 2 and have intrinsic value (eg buildings under a preservation order)	3	3 to 8	8 to 10	8

6 Construction Noise Assessment

6.1 Proposed construction noise sources

The schedule of items of plant and equipment likely to be used during the construction of the proposed development is presented in the table below.

Table 12: Equipment Sound Power Levels

Scenario	Plant Items	Sound power levels – dB(A)L_{eq}
1. General Construction (Saturday 1pm-5pm) - Erection of Structure	Formwork:	
	-Tower Crane (electric)	95*
	-Powered hand Tools	100
	-Alimak	100*
	Scaffolding:	
	-Tower Crane (electric)	95*
	-Powered Hand Tools	100
	-Alimak	100*
	Concreting Works:	
	-Tower Crane (electric)	95*
	-Vibrator	105
	-Concrete Pump/truck	104*
	-Slab Finishing (Helicopter float)	105
	Façade Installation:	
	-Tower Crane (electric)	95*
	- Mini Crawler Crane	97**
	-Powered Hand Tools (no rattle gun)	95
	-Alimak	100*
2. General Construction (Saturday 1pm-5pm) - External Works	Crane (Electric)	95*
	Hand Tools (façade)	100
	Alimak	100
4. General Construction (Saturday 1pm-5pm) Site Deliveries	Crane – as marked in App G.	95*
	Forklift	95
	Alimak	100*
5. Weekday Evening: Internal Works	Crane (Electric)	95
	Hand Tools (façade)	100
	Alimak	100*

*Based on on-site measured operational noise proposed equipment items.

**Based on equipment sound data and crane engine being under power approximately 40% of 15 minute period.

The sound power levels for the majority of construction plant and equipment presented in the above table are based on maximum noise levels given in Table A1 of Australian Standard 2436 - 2010 '*Guide to Noise Control on Construction, Demolition and Maintenance Sites*' and are generally consistent with the

noise levels for equipment items set out in the *Sydney Metro Out of Hours Work Application Form* document.

6.2 Predicted noise levels

Noise levels at any receiver location resulting from construction works depends on the location of the receiver with respect to the area of construction, shielding from intervening topography and structures, and the type and duration of construction being undertaken.

The table below presents noise levels likely to be experienced at the nearby affected receivers based on the construction activities and plant and equipment associated with the proposed site.

Noise levels were calculated taking into consideration the distance between the construction works and the receiver locations using noise prediction software for this project.

Where a range in noise levels is predicted, this is because the proposed work activity will occur in multiple locations (across the site/street frontages). The variation in predicted noise level reflects the fact that the work may be conducted close to the noise receiver, or at the opposite end of the site.

6.2.1 Noise Impact Assessment – General Construction Works (Saturday – 7am-8am and 1pm-5pm)

Table 13: Noise Emission Assessment – Saturday (7am-8am and 1pm-5pm)

Noise Criteria	*Time*	*Criteria Noise Levels (dB(A)$L_{eq(15min)}$)*					
		*Residential**			Commercial Receivers*		
		R1	*R2*	*R3*	*C1*	*C2*	*C3*
Noise Management Leve)	*City of Sydney – 7am-8am*	*69*	*69*	*69*	*N/A*	*N/A*	*N/A*
	City of Sydney – 1pm-5pm	*74*	*74*	*74*	*N/A*	*N/A*	*N/A*
	EPA ICNG (For guidance purposes)	*69*	*69*	*69*	*70*	*70*	*70*
Work Item	**Location / Plant Description**	**Predicted Construction Noise Levels - External (dB(A)$L_{eq(15min)}$)**					
		Residential*			**Commercial Receivers***		
		R1	***R2***	***R3***	***C1***	***C2***	***C3***
Erection of Structure - Concrete Pours	Tower Crane – as marked in App F.	62	58	60	60	65	57
	Vibrator/Helicopter float – Across Floor Plate	60-80	60-75	60-80	60-80	60-80	60-70
	Alimak – as marked in App F.	70	60	65	65	72	60
	Concrete truck - as marked in App F.	65	65	70	70	75	72
	Cumulative	*62-80**	*60-75**	*60-80**	*60-80**	*65-81**	*60-74**
Erection of Structure - Formworking, Blockwork, Scaffolding	Tower Crane – as marked in App F.	62	58	60	60	65	57
	Hand tools – Across Floor Plate	55-78	50-66	55-75	55-75	55-75	50-66
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*62-79*	*58-67*	*60-75*	*60-75*	*65-75*	*57-66*
External Works – (Façade, External Plant)	Tower Crane – as marked in App F.	62	58	60	60	65	57
	Hand tools – Across Floor Plate	55-78	50-66	50-75	55-75	55-75	55-66
	Alimak – as marked in App F.	70	60	65	65	72	60
	Mini Crawler Crane	55-75	50-63	50-72	55-72	55-72	55-63
	Cumulative	*62-79*	*58-67*	*60-76*	*60-76*	*65-76*	*57-68*
		*62-66***		*60-66***			
Internal Works –(Fit out – after façade installation)	Tower Crane – as marked in App F.	62	58	60	60	65	57
	Hand tools – Across Floor Plate	<60	<50	<55	<55	<55	<45
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*71*	*63*	68	*68*	*73*	*63*

*Maximum noise levels occur when vibrator used in close proximity to slab edge. Noise level typically 5dB(A) lower when vibrator used away from slab edge.

**The louder cumulative noise level occurs when mini crawler crane located on southern or eastern façade (immediately adjacent R1 and R3 apartments). When working on the northern and western facades, noise level at R1 and R3 are lower (shown as ** levels)

Looking at the table above:

- Noise from activities such as use of hand tools, concrete vibrators and use of a crawler crane will intermittently exceed ICNG Noise Management Levels if the work location is close to residential property boundaries.

- Noise emissions are typically compliant with the City of Sydney noise guidelines for Saturday (1pm-5pm) periods, with exception being during use of a concrete vibrator, mini crawler crane or powered hand tools on the southern and eastern edge of the floor plate directly adjacent to an apartment in R1 and R3. Apartments that are 1-2 storeys above/below the work zone, or when work area is located away from the east/south slab edge will have lower noise levels (compliant with City of Sydney guidelines).

- Use of hand tools, use of concrete vibrators:

    - These works can occur across the floor plate of any given level of the development so there is a significant range in noise emission predictions.

    - Additionally, the predicted noise level from these works will vary based on the level within the building itself. For the noise impact on a given level on the adjacent apartment towers, the highest predicted levels occur only during the construction of the one or two levels immediately adjacent. The noise from works on levels above/below will be lower.

    - While there are exceedances of noise goals when working at close proximity on the slab immediately adjacent a residential window, this worst case scenario only occurs for the works on 1-2 levels immediately adjacent to the apartment window.

- Reasonable and feasible noise mitigation is required. Given the potential intermittent exceedance of the EPA outside of Standard Hours criteria, noise management should be inclusive of consultation with neighbouring properties. See section 7.

- Ground Borne Noise - This is not anticipated to be an issue at the above site:

    - Being over station development, there are no vibration intensive works proposed such as excavation or demolition.

    - There are no buildings other than the Station Box that are physically connected to the OSD component of the site. While the Station Box is located immediately below, the Levels 4 and 5 of Station Box South consist primarily of ventilation plant rooms, and are not noise and vibration sensitive.

Taking the above into account - refer to Section 7 for recommended noise mitigation measures.

6.2.2 Noise Impact Assessment – Weekday Evening (6pm-10pm)

These works consist of:

- Internal works (behind building façade). For the purpose of calculation, for internal works, it is assumed that a 20dB(A) noise reduction occurs as a result of the noise loss through the completed building façade.

Table 14: Noise Emission Assessment – Weekdays (6pm-10pm)

Noise Criteria	*Time*	*Criteria Noise Levels (dB(A)$L_{eq(15min)}$)*					
		Residential			Commercial Receivers		
		R1	*R2*	*R3*	*C1*	*C2*	*C3*
Noise Management Level	*City of Sydney*	*64*	*64*	*64*	*N/A*	*N/A*	*N/A*
	EPA ICNG (for guidance purposes only)	*66*	*66*	*66*	*70*	*70*	*70*
Work Item	**Location / Plant Description**	**Predicted Construction Noise Levels - External (dB(A)$L_{eq(15min)}$)**					
		Residential			**Commercial Receivers**		
		R1	***R2***	***R3***	***C1***	***C2***	***C3***
Internal Works –(Fit out – after façade installation)	Crane – as marked in App F.	63	55	60	60	65	55
	Hand tools – Across Floor Plate	<60	<50	<55	<55	<55	<45
	Alimak – as marked in App F.	70	60	65	65	72	60
	Cumulative	*70*	*61*	66	*66*	*72*	*61*

*Maximum noise levels occur when vibrator used in close proximity to slab edge. Noise level typically 5dB(A) lower when vibrator used away from slab edge.
**The louder cumulative noise level occurs when mini crawler crane located on southern or eastern façade (immediately adjacent R1 and R3 apartments). When working on the northern and western facades, noise level at R1 and R3 are lower (shown as ** levels)

Looking at the table above:

- Internal Works - Internal works and crane use are predicted to comply with both EPA and City of Sydney Evening time construction noise guidelines. Exceedance are only anticipated in the event that hoist use is required in the evening time period – this will be avoided when feasible.

Consideration of both reasonable and feasible noise mitigation is required, as is detailed in section 7.

7 Construction noise mitigation measures and recommendations

The following recommendations provide feasible and reasonable noise control solutions to reduce noise impacts to sensitive receivers.

The advice provided here is in respect of acoustics only. Supplementary professional advice may need to be sought in respect of fire ratings, structural design, buildability, fitness for purpose and the like.

7.1 General noise management measures

The following general noise management measures are recommended for all receiver locations:

- Plant and equipment must be properly maintained.
- Strategically position plant on site to reduce the emission of noise to the surrounding neighbourhood and to site personnel where feasible and reasonable. For the works the subject of this report, this will relate to the positioning of a concrete pump truck, which should be positioned as far from buildings R1 and R3 as possible if used during Saturday afternoon works.
- Avoid any unnecessary noise when carrying out manual operations and when operating plant.
- Any equipment not in use for extended periods during construction work must be switched off. Plant used intermittently to be throttled down or shut down when not in use where practicable.
- Non-tonal reversing beacons for trucks and bobcats will be considered if feasible (depending on OH&S requirements).
- In addition to the noise mitigation measures outlined above, a management procedure will need to be put in place to deal with noise complaints – refer to section 9.
- Line of communication with people living and working in the vicinity of a construction site should be established at the beginning of a project and be maintained throughout the project. Keeping people informed of progress and taking complaints seriously and dealing with them expeditiously is critical. The person selected to liaise with the community must be adequately trained and experienced in such matters.

7.2 Site Specific Noise Management Measures

The following site specific noise management practices are required during after hours works:

- Neighbour notification:
    - Notification (letterbox drop) to be made to developments physically adjoining the site. Key items that should be identified with respect to the proposed Outside of ours Works:
        - Dates of proposed concrete pours (particularly on Saturday afternoon).
        - Advising that works in evening periods will be constrained to internal areas behind façade on an as required basis.
- Internal works:
    - Work in the 6pm-10am weekday period is only to be conducted on levels where the façade is complete (such that the façade provides noise mitigation to the nearby residences).
    - As much as practicable, use of crane and internal lifts (once operational) as opposed to hoist is recommended.
    - No use of hoist or crane after 10pm.
    - Workers to be briefed not to take breaks in external areas during evening time periods.
- Respite periods:
    - There is no rock breaking, rock hammering, sheet piling, pile driving or similar activities proposed. The automatic respite period required of condition of consent D7 is not expected to apply.
    - The 7am-8am period on Saturday morning should be used for site set up and work in internal areas. Concreting work and external work using powered tools should not be conducted prior to 8am on a Saturday unless agreed with the residences at R1 and R3.
- Saturday afternoon works:
    - Use of concrete vibrators and powered hand fools (facade work and form working) in very close proximity to residential properties boundaries to R1 and R3 have a risk in creating noise levels exceeding 69-74dB(A) management levels. There are no viable alternative equipment selections.
    - In the case of a concrete pour, scaffolding and formworking - there will be only a small number of pours that will bring the construction work to close proximity to a given residence. Other pours will typically be further way on the floor plate, or two or more levels above or below the apartment, and the exceedance of the Noise Management Levels is less likely to occur.

- In the case of powered hand tools (form working and façade work) – this work is typically intermittent in nature in any event. The benefits in respite would be relatively small and need to be balanced with the prolonging of the work period that will occur if they are introduced for this activity.
- In the event of sustained complaint (more than two complaints, not vexatious and related to the works) - a respite period (or other form of respite such as meal voucher) can be negotiated with the adjoining residents (Receivers R1, R3 for South Site).

- Façade work (weekday evenings) – recommended that for nights when works on the southern or eastern facades are proposed, the residents at R1 and R3 are notified (letter box drop), with notification schedule of what level in the OSD building the façade works are proposed for.

- In the event that a generator is required to operate outside of standard work hours, manufacturers details of any proposed generator will be provided to determine if any form of acoustic enclosure (or specific equipment location to minimise noise) is required.
- All employees, contractors and subcontractors are to receive site induction and toolbox talks and ongoing training so that the above noise management measures are implemented accordingly. Content within toolboxes will include, location of nearest sensitive receivers; relevant project specific and standard noise and vibration mitigation measures; permissible hours of work, truck route and truck loading restrictions and construction employee parking areas.

7.3 Verification measurements/noise monitoring

- An on-site attended noise measurement will be conducted at Receivers R1 and R3 of:
  - Typical noise level generated during internal works.

  to verify if the noise impact is consistent with what has been predicted in this report. In the event that noise levels are significantly higher than anticipated (3dB(A) or higher), further mitigation is to be investigated. This will involve:
  - Identification if a higher than expected noise level is expected to be consistent or a one off event.
  - If expected to be ongoing, identification of additional mitigation measures such as alternative equipment or respite periods.
  - Results of measurement and recommendations to be included in measurement report.
- On-going unattended noise monitoring is not recommended in the first instance as:
  - The noise impact of the works is expected to be relatively small, and the highest noise impacts (structural work in close proximity to east and south boundaries) will not impact a given resident for extended periods.

  - Attended noise measurements will be more effective in determining suitable mitigation options compared to long term monitoring.

- In the event that either attended or long term noise monitoring is conducted, the procedures outlined in Appendix B are to be adopted.

8 Construction vibration assessment

The vibration generated from construction works will vary depending on the level and type of activity carried out at each site during each activity.

Potential vibration generated at receivers for this project will be dependent on separation distances, the intervening soil and rock strata, dominant frequencies of vibration and the receiver building's construction and structure. Unlike noise, vibration cannot be 'predicted' due to many variables from site to site, for example soil type and conditions; sub surface rock; building types and foundations; and actual plant on site. The data relied upon in this assessment (tabulated above) is taken from a database of vibration levels measured at various sites or obtained from other sources (eg. BS5228-2:2009). They are not specific to this project as final vibration levels are dependent on many factors including the actual plant used, its operation and the intervening geology between the activity and the receiver.

Tactile vibration is not anticipated to be an issue at the above site:

- Being over station development, there are no vibration intensive works proposed such as excavation or demolition.
- The most vibration intensive works would be expected to be used of concrete saws or jackhammers at concrete penetrations or similar.
- There are no buildings other than the Station Box that are physically connected to the OSD component of the site.
- While the Station Box is located immediately below, the Levels 4 and 5 of Station Box South consist primarily of ventilation plant rooms, and are not noise and vibration sensitive.

In the event that machine mounted percussive demolition equipment is required within the development (eg – for slab penetrations), vibration monitoring should be conducted on Level 5 of the Station Box. Refer to Appendix C.

8.1 Vibration Mitigation Measures

The following vibration mitigation measures are recommended to minimise vibration impact from construction activities to the nearest affected receivers:

1. Penetrations or rectification work to slabs to be conducted using rotary equipment (saws) whenever feasible. If this is not feasible - percussive hand held equipment (jackhammer) should be used. Machine mounted percussive equipment should only be used in the event the other options are not viable. If machine mounted percussive equipment is required, refer to Appendix C for vibration monitoring requirements.

2. A management procedure must be implemented to deal with vibration complaints. Each complaint must be investigated and where vibration levels are established as exceeding the set limits, appropriate amelioration measures must be put in place to mitigate future occurrences.

3. Where vibration is found to be excessive, management measures must be implemented to ensure vibration compliance is achieved. Management measures may include modification of construction methods such as using smaller equipment, establishment of safe buffer zones and if necessary, time restrictions for the most excessive vibration activities. Time restrictions are to be negotiated with affected receivers.

4. Where construction activity occurs in close proximity to sensitive receivers or on material that will cause vibration to all identified receivers, vibration testing of actual equipment on site must be carried out prior to their commencement of site operation to determine acceptable buffer distances to the nearest affected receiver locations.

9 Complaints Management and Community Liaison

9.1 Communication with Nearby Land Users

9.1.1 Communication Generally

Communication with nearby land users to be conducted as follows:

- Regular communication with residents and business surrounding the site, including:
  - Weekly email updates to subscribed stakeholder email distribution list outlining construction activities and planned work, during standard construction hours, proposed extended hours, and any other approved OOH work separate to this proposal
  - offering project briefings to interested project stakeholders
  - the provision of project contact details to make enquiries or complaints about the work
  - the provision of project website details to find out more information about the work.
  - Monthly letterbox drop community notifications, updates and out of hours work information delivered to properties within 200m radius from site.

9.1.2 Activity Specific Communication

Notification to nearby residents and businesses of works anticipated to extend outside of standard hours is required.

This should be done by letter box drop, email (or other method agreed pursuant to section 7) to R1, R2, R3, C1 and C2.

Construction work to take place during proposed extended hours (the subject of this plan), to be notified for by:

- Monthly community letterbox notification\.
- Weekly email update outlining planned work to take place during standard construction hours, extended hours (subject of this proposal) and other works outside of standard construction hours that may be approved to take place subject to separate approvals by the ER and AA.

9.2 Complaints Management

A complaint is defined as any communication received from a stakeholder expressing dissatisfaction. This is a purposely broad definition and is used to ensure that matters of concern to stakeholders are addressed promptly.

Stakeholders will be able to register enquiries and complaints through several channels including:

- Sydney Metro City & Southwest 24-hour, 1800 community information line (1800 171 386 which is run by Sydney Metro for the Project as a whole)

- Email to CPB project team or through Sydney Metro
- Dedicated website www.sydneymetro.info
- Post

The CPB complaints management process is outlined in Section 10 of the CPB Community Communications Strategy which has been approved by Sydney Metro.

Specific details on the above communication channels are made available within the project CPB *Community Communications Strategy*. Complaints may be received directly or referred by Sydney Metro or other contractors.

All calls to the 1800-number will be answered and responded to 24 hours a day, seven days a week. A call centre reception service managed by Sydney Metro records contact details and basic information about the nature and location of the complaint. The complainant is made aware that an on-call officer will contact them shortly to address the issue. With this approach, the caller is not placed on hold or referred to a recorded message. If the rostered officer cannot receive a call (e.g. they are on the phone responding to another caller), calls can be directed to an alternate rostered on-call officer.

Translators will be arranged if a stakeholder or community member is unable to communicate their concerns in English. Email and other contact options will assist those with disabilities.

Specific protocols and procedures have been arranged to ensure a consistent approach to managing enquires and complaints, including systems for recording and monitoring stakeholder contact. All staff and work crews will be informed that all contact from the community must be referred to the community relations team for action. To facilitate this everyone will be provided with community contact cards to direct enquiries to the community information line or email address.

Each stakeholder contact is an opportunity to build understanding about the Project and allay concerns. Complaints provide important feedback to improve project processes and mitigation measures to avoid or minimise further complaints. All reasonable measures will be taken to prevent the reoccurrence of stakeholder and community complaints.

The strategic approach to managing complaints consists of:

- Courtesy
- Accessibility
- Responsiveness
- Delegation of authority to resolve the issue
- Access to accurate information.

All employees and subcontractors are required to respond to stakeholders with courtesy and professionalism. This will be reinforced during Project inductions. Specific toolbox talks will further consolidate the approach.

The Contractor will immediately report all environmental complaints to the Project Environment Manager and relevant Environment Co-ordinator to confirm any required action, including but not limited to:

- Noise, and/or vibration monitoring.
- Subject to monitoring results consideration of options to reduce impacts including:
- Scheduling activities to minimise impacts
- Targeted inspection to determine if it is reasonable and to install additional controls (i.e. noise barriers/blankets if feasible)
- Respite offers (for example, coffee vouchers, movie tickets, meal vouchers or alternative accommodation)
- Site visit with complainant to assist in understanding our operations and mitigation strategies.

The complaint is escalated to the Contractor Project Director and Sydney Metro representative if the complainant remains unsatisfied. Further escalation will be in line with the Sydney Metro Overarching Community Communications Strategy (Sydney Metro Document Reference: A5732897) and the Sydney Metro Construction Complaints Management System and may include the:

- Environmental Representative required under Project Planning Approval Condition A22,
- Acoustic Advisor required under Project Planning Approval Condition A25,
- Community Complaints Mediator required under Project Planning Approval Conditions B11 to B14 or
- Independent Property Impact Assessment Panel (IPIAP) required under Project Planning Approval Condition E62 as appropriate.

10 Conclusion

This report has been prepared to address proposed Out of Standard Construction Hours works for the proposed Pitt Street Metro Station Over Station development (South) project.

The expected construction noise levels have been predicted and presented in Section 6.

Noise mitigation and management measures have been presented in Section 7 to aid in providing additional noise reduction benefits where exceedance of the objective occurs.

Vibration impacts and management measures have been presented in Section 8 to aid in minimising any potential vibration impacts.

APPENDIX A Glossary of terminology

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

Adverse weather	Weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter).
Ambient noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
Assessment period	The period in a day over which assessments are made.
Assessment point	A point at which noise measurements are taken or estimated. A point at which noise measurements are taken or estimated.
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation, when extraneous noise is removed. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the L90 noise level (see below).
Decibel [dB]	The units that sound is measured in. The following are examples of the decibel readings of every day sounds: 0dB The faintest sound we can hear 30dB A quiet library or in a quiet location in the country 45dB Typical office space. Ambience in the city at night 60dB CBD mall at lunch time 70dB The sound of a car passing on the street 80dB Loud music played at home 90dB The sound of a truck passing on the street 100dB The sound of a rock band 115dB Limit of sound permitted in industry 120dB Deafening
dB(A)	A-weighted decibels. The A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter switched on is denoted as dB(A). Practically all noise is measured using the A filter.
dB(C)	C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies.
Frequency	Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.
Impulsive noise	Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise.
Intermittent noise	The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more.
L_{Max}	The maximum sound pressure level measured over a given period.
L_{Min}	The minimum sound pressure level measured over a given period.

L_1	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L_{10}	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L_{90}	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L90 noise level expressed in units of dB(A).
L_{eq}	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time.
Reflection	Sound wave changed in direction of propagation due to a solid object obscuring its path.
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy through its conversion into thermal energy.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound pressure level	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone.
Sound power level	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power.
Tonal noise	Containing a prominent frequency and characterised by a definite pitch.

APPENDIX B Specification for Construction Noise Monitoring

B.1 Scope

This document specifies methods for undertaking noise monitoring during the construction phase of the project.

B.2 Referenced Standards and Guidelines

- Australian Standard AS IEC 61672.1 2004 '*Electroacoustics - Sound Level Meters - Specifications*'
- Australian Standard AS 1259.2-1990 '*Acoustics - Sound Level Meters*'
- Australian Standard AS 1055-1997 '*Acoustics - Description and Measurement of Environmental Noise*'
- NSW '*Interim Construction Noise Guideline*' (Department of Environment and Climate Change 2009)
- NSW '*Industrial Noise Policy*' (Environment Protection Authority 2000)

B.3 Testing Procedures

The following procedures are to be followed by personnel suitably qualified and experienced in undertaking acoustic measurements.

All noise monitoring equipment used must be at least Type 2 instruments as described in AS 1259.2-1990 and calibrated to standards that are traceable to Australian Physical Standards held by the National Measurement Laboratory (CSIRO Division of Applied Physics). The calibration of the monitoring equipment shall also be checked in the field before and after the noise measurement period, and in the case of long-term noise monitoring, calibration levels shall be checked at minimum weekly intervals.

Long-term noise monitoring equipment or Noise Loggers, consist of sound level meters housed in weather resistant enclosures. The operator may retrieve the data at the conclusion of each monitoring period in person or remotely if the logger is fitted with mobile communications.

All environmental noise measurements shall be taken with the following meter settings:

- Time constant: FAST (ie 125 milliseconds)
- Frequency weightings: A-weighting
- Sample period: 15 minutes

All outdoor noise measurements shall be undertaken with a windscreen over the microphone. Windscreens reduce wind noise at the microphones.

Measurements of noise should be disregarded when it is raining and/or the wind speed is greater than 5m/s (18km/h).

B.4 Long-Term (Unattended) Noise Monitoring

Noise monitoring shall be undertaken in accordance with the environmental noise measurement requirements stipulated in the reference standards and documents listed above.

Noise monitoring equipment shall be placed at positions which have unobstructed views of general site activities, while acoustically shielded as much as possible from non-construction site noise (eg. road traffic, rail noise and other surrounding noise).

Noise levels are to be recorded at a minimum rate of 10 samples per second. Every 15 minutes, the data is to be processed statistically and stored in memory. The minimum range of noise metrics to be stored in memory for later retrieval is the following A-weighted noise levels: L_{min}, L_{90}, L_{eq}, L_{10}, L_1 and L_{max}.

Where the noise monitors are placed within 3.5 metres of building facades, walls or cliffs, then a reflection correction of up to -2.5dB(A) shall be applied to remove the effect of increased noise due to sound reflections from such structures. Presence of impulsive and tonal noise, and subsequent penalty, is to be determined in accordance with the provisions of Table 4.1 Modifying Factor Corrections of INP. Attended measurements may be required to determine modifying factor corrections in the first instance.

Meteorological conditions including wind velocity, wind direction and rainfall shall be monitored over the entire noise monitoring period, either on site or recorded from the nearest weather station to the project site.

Reporting of results to be provided monthly. Report to be provided to CPB within 1 week of the end of the monthly monitoring period.

Reporting to present:

- Monitoring Location
- Relevant equipment details such as make, model, serial number, photo, date of last NATA accredited laboratory calibration, photo of equipment in use.
- Details of baseline data (L_{90} and $L_{eq(15min)}$).
- Details of ambient (L_{90} and $L_{eq(15min)}$) and construction noise ($L_{eq(15min)}$) as measured during the construction monitoring period. Commentary with respect to other (non-construction) noise source if relevant (to the extent that they impact any construction noise measurement).
- Assess noise levels with respect to the criteria identified in section 6.1.
- In the event of exceedances of criteria, and if the exceedances are expected to be ongoing, identify further noise mitigation measures to be implemented.

B.5 Short-Term (Attended) Monitoring

Where noise complaints or requests from relevant authorities are received, attended short-term noise monitoring shall also be conducted at the requested location and at any other relevant noise receiver location with closest proximity to the construction activities.

Short-term noise monitoring shall be used to supplement long-term noise monitoring undertaken at nearby locations, and to establish whether noise levels measured by the long-term noise monitors are determined by construction activities carried out on site.

All attended short-term noise monitoring shall be recorded over 15 minute sample intervals. Noise levels are to be recorded at a minimum rate of 10 samples per second. Every 15 minutes, the data is to be processed statistically and stored in memory. The minimum range of noise metrics to be stored in memory and reported is the following A-weighted noise levels: L_{min}, L_{90}, L_{eq}, L_{10}, L_1 and L_{max}.

In addition to measuring and reporting overall A-weighted noise levels, statistical L_{90}, L_{eq}, L_{10} noise levels shall be measured in third-octave band frequencies from 31.5Hz to 8kHz.

Where the noise monitors are placed within 3.5 metres of building facades, walls or cliffs, then a reflection correction of up to -2.5dB(A) shall be applied to remove the effect of increased noise due to sound reflections from such structures. Presence of impulsive and tonal noise, and subsequent penalty, is to be determined in accordance with the provisions of Table 4.1 Modifying Factor Corrections of INP.

Outdoor noise monitoring is to be undertaken with the microphone at a height of 1.2 – 1.5m from the ground, unless noise measurements are taken from a balcony or veranda, in which case the same microphone height shall apply off the floor.

Noise measurements inside buildings should be at least 1m from the walls or other major reflecting surfaces, 1.2 m to 1.5m above the floor, and 1.5m from windows.

APPENDIX C Specification for Construction Vibration Monitoring

C.1 Scope

This document specifies methods for undertaking vibration monitoring during the construction phase of the project, where it may be deemed to be required. The vibration monitoring shall be conducted in accordance with DIN 4150.3 Structural Vibration in Buildings – Effects on Structures.

C.2 Referenced Standards and Guidelines

- AS 2775 Mechanical Mounting of Accelerometers
- AS 2670.2 Part 2: Evaluation of human exposure to whole body vibration
- DECC NSW Assessing Vibration: A Technical Guideline
- DIN 4150.3 Structural Vibration in Buildings – Effects on Structures
- BS 7385:1 Evaluation and Measurement for Vibration in Buildings – Part 1: Guide for measurement of vibrations and evaluation of their effects on buildings
- BS 7385:2 Evaluation and Measurement for Vibration in Buildings – Part 2: Guide to Damage Levels from Groundborne Vibration
- ISO 4866 Mechanical Vibration & Shock – Vibration of Buildings – Guidelines for the Management of the Vibrations and Evaluation of their Effects on Buildings

C.3 Testing Procedures

The following procedures are to be followed by personnel suitably qualified and experienced in undertaking vibration measurements.

All vibration monitoring equipment used must be calibrated at least once every two years to standards that are traceable to Australian Physical Standards held by the National Measurement Laboratory (CSIRO Division of Applied Physics). The monitoring system should also have a measurement frequency range down to 1Hz.

C.3.1 Short-Term (Attended) Monitoring

Vibration monitoring shall be undertaken:

- at the commencement of operation for each plant or activity on site, which has the potential to generate significant vibration levels, so to refine the indicative minimum working distances and provide a site-specific table of minimum working distances

- vibration sensitive locations determined to fall within the 'buffer distances' established for each item of plant. Areas likely to require vibration monitoring are identified in this report; and
- where vibration complaints or requests from relevant authorities, at the requested location and at any other relevant vibration receiver location with closest proximity to the construction activities.

Vibration monitoring shall be undertaken over the following period(s):

- for plant operating within the 'buffer distances', during the commencement of use of each plant on site until site-specific minimum working distances are established; and
- for complaints or requests from relevant authorities, during the of use of requested plant until site-specific minimum working distances are established.

All attended short-term vibration monitoring shall be recorded over 15 minute sample intervals. The magnitude of vibration is to be recorded at a minimum rate of 10 samples per second. The minimum range of vibration metrics to be stored in memory and reported are the following:

- Vibration Dose Values (VDVs)
- root-mean-square (rms) – maximums and statistical levels
- peak-particle velocity (ppv) – maximums and statistical levels.

In addition to measuring and reporting overall vibration, statistical vibration shall also be measured and reported in third-octave band frequencies from 1Hz to 250Hz.

Vibration monitoring shall be undertaken in accordance with the vibration measurement requirements stipulated in the reference Standards and documents listed above. The following notes of importance are included here:

- vibration monitoring equipment shall be placed outside at the footings or foundations of the building of interest, closest to the vibrating plant;
- the surface should be solid and rigid in order to best represent the vibration entering the structure of the building under investigation;
- the vibration sensor or transducer shall not be mounted on loose tiles, loose gravel or other resilient surfaces;
- the vibration sensor or transducer shall be directly mounted to the vibrating surface using either bees wax or a magnetic mounting plate onto a steel washer, plate or bracket which shall be either fastened or glued to the surface of interest; and
- where a suitable mounting surface is unavailable, then a metal stake of at least 300mm in length shall be driven into solid ground adjacent to the building of interest, and the vibration sensor or transducer shall be mounted on that.

The following information shall be recorded:

- Date and time of measurements;
- Type and model number of instrumentation;
- Description of the time aspects of each measurement (i.e. sample times, measurement time intervals and time of day);
- Sketch map of area;
- Measurement location details and number of measurements at each location;
- Operation and load conditions of the vibrating plant under investigation; and
- Possible vibration influences from other sources (eg domestic vibrations, other mechanical plant, traffic, etc).

C.3.2 Long-Term (Unattended) Monitoring

Vibration monitoring shall be undertaken at vibration sensitive locations determined to fall within the 'minimum working distances' established for each item of plant during the commencement of use of each plant on site.

Vibration monitoring shall be undertaken over the following period(s):

- continuously whilst the vibrating plant is operational within the pre-determined 'minimum working distance' from the potentially affected building.

Vibration monitoring equipment shall be placed outside at the footings or foundations of the building of interest, closest to the vibrating plant.

Vibration is to be recorded at a minimum rate of 10 samples per second. The data is to be processed statistically and stored in memory. The minimum range of vibration metrics to be stored in memory for later retrieval is the following:

- Vibration Dose Values (VDVs)
- vector-sum root-mean-square (rms) – maximums and statistical metrics; and
- vector-sum peak-particle velocity (ppv) – maximums and statistical metrics.

Vibration monitoring shall be undertaken in accordance with the vibration measurement requirements stipulated in the reference Standards and documents listed above. The following notes of importance are included here:

- vibration monitoring equipment shall be placed outside at the footings or foundations of the building of interest, closest to the vibrating plant;

- the surface should be solid and rigid in order to best represent the vibration entering the structure of the building under investigation;
- the vibration sensor or transducer shall not be mounted on loose tiles, loose gravel or other resilient surfaces;
- the vibration sensor or transducer shall be directly mounted to the vibrating surface using bees wax or a magnetic mounting plate onto a steel plate or bracket either fastened or glued to the surface of interest;
- where a suitable mounting surface is unavailable, then a metal stake of at least 300mm in length shall be driven into solid ground adjacent to the building of interest, and the vibration sensor or transducer shall be mounted on that; and
- a flashing light alarm should be attached in a visible position from the construction work area. When vibration exceeds the set threshold, the light will flash notifying the operator that works in that area should cease immediately.

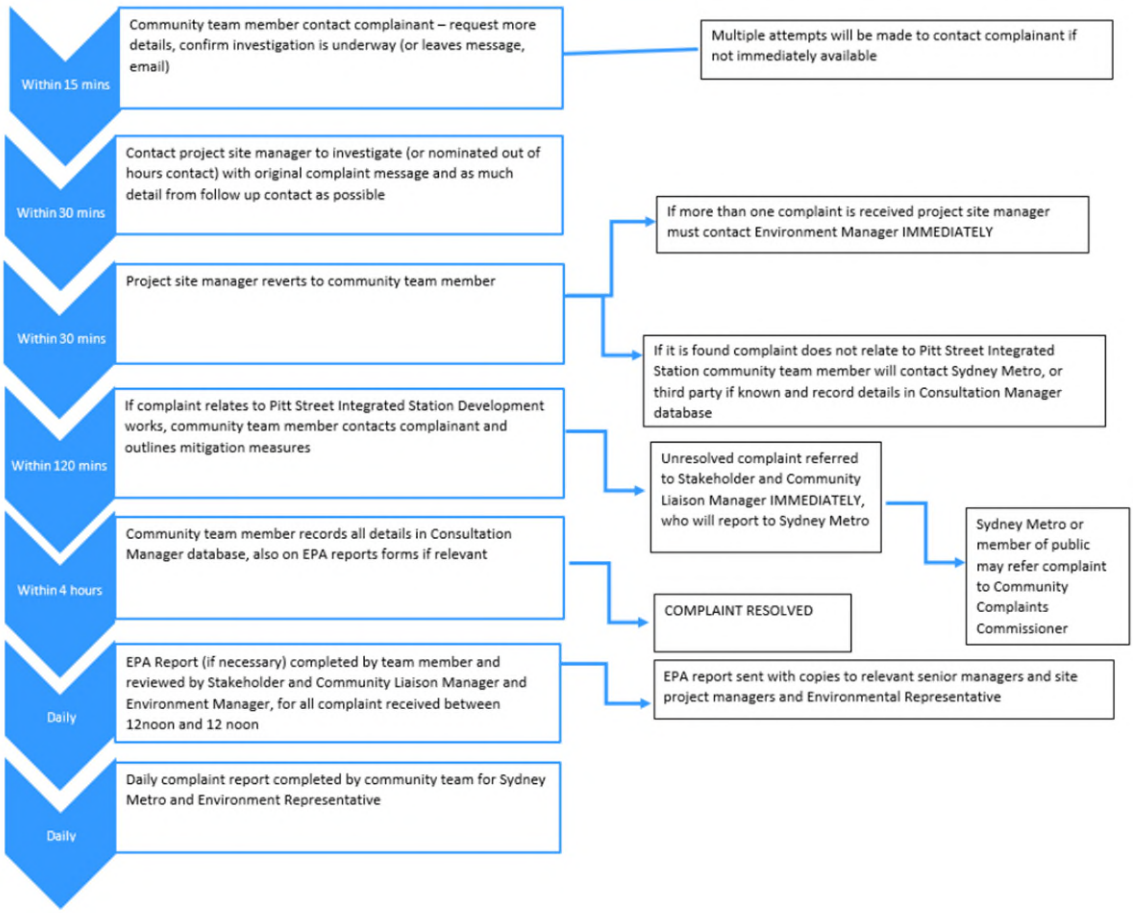
Vibration Monitor Set up and Reporting

- This is recommended only in the event that there is significant use excavator mounted hydraulic hammer or a vibratory roller and would be conducted on Level 5 of the Station Box Building.
- In the event that the construction works produce vibration levels well below the triggers outlined above, and there is no more vibration intensive equipment proposed, monitoring can cease (to be determined by Acoustic Consultant.
- Vibration monitoring results are to be made available in real time to CPB.
- Monitors will have real time SMS warning capability. SMS warning notification will be sent to the Contractor and their Acoustic Consultant in the event that the following thresholds are reached:
  - 3mm/s Peak Particle Velocity for monitors at a Heritage Building.
  - 8mm/s Peak Particle Velocity for monitors on other buildings, including Station Box.
- Reporting of results to be provided monthly. Report to be provided to CPB within 1 week of the end of the monthly monitoring period.
- Reporting to present:
  - Monitoring Location.
  - Relevant equipment details such as make, model, serial number, photo, date of last NATA accredited laboratory calibration, photo of equipment in use.
  - Graphs of Peak Particle Velocity as measured during the construction monitoring period.
  - Assess noise levels with respect to the criteria identified in section 6.2.
  - In the event of exceedances of criteria, and if the exceedances are expected to be ongoing, identify further noise mitigation measures to be implemented.

APPENDIX D Noise/Vibration Complaint Management Procedure

Complaints management procedures as set out in the CPB *Community Communications Strategy* (17/7/620) document are to be adopted. Relevant sections are extracted below:

Enquiries / Complaints Management Flowchart:



Complaint Escalation:

Complaints should be escalated when:

- The complaint cannot be resolved using the procedure outlined in figure 4 or within a timeframe agreed to by the complainant.
- The nature of the complaint falls into one of the following categories:
  - an activity generates three complaints within a 24-hour period (separate complainants)
  - any construction site receives three different complaints within a 24-hour period
  - a single complainant reports three or more complaints within the 3 days period
  - a complainant threatens to escalate their issue to the media or government representative
  - the complaint was avoidable
  - the complaint relates to a compliance matter.

Complaints would first be escalated to the Sydney Metro Director, Communications (for Sydney Metro City & Southwest) as the designated complaints handling management representative for the relevant project.

Complaint Mediation:

In some circumstances where the complaints handling management representative for the project is unable to resolve the complaint, the complaint may be escalated to the project Community Complaints Mediator.

The role of the Community Complaints Mediator (CCM) is to facilitate communication between parties in conflict with the view to guiding/assisting these parties to reach a voluntary mutually agreeable outcome to the dispute. It is acknowledged that the role of the community complaints mediator is to mediate and not arbitrate. The mediator can actively encourage and facilitate discussion to move toward an outcome, however cannot order or decide an outcome for the parties.

The Community Complaints Mediator will provide information as to the mediation process during initial consultation, these actions will be dependent upon the complaint escalated, however may include;

- Through facilitation or other process(es) provide guidance, skills transfer and other services that aim to assist with any internal escalation mechanism

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- Meet with aggrieved parties to understand concerns and suggest/implement methods as appropriate with the view to provide an opportunity to resolve and/or work through issues
- Seek involvement of various internal and external subject matter experts such as, but not limited to the Environmental Representative and/or the acoustic advisor (in relation to SSI_7400 projects only).
- Provide a proposal, developed by the parties which is facilitated by the mediator that clearly reflects a narrative that all parties agree upon in regard to the complaint mediation with due consideration to confidentiality requirements.

In instances where a complainant remains unsatisfied, the Secretary will be advised.
The CCM will not act before;

- Sydney Metro has provided an initial response to an escalated complaint.

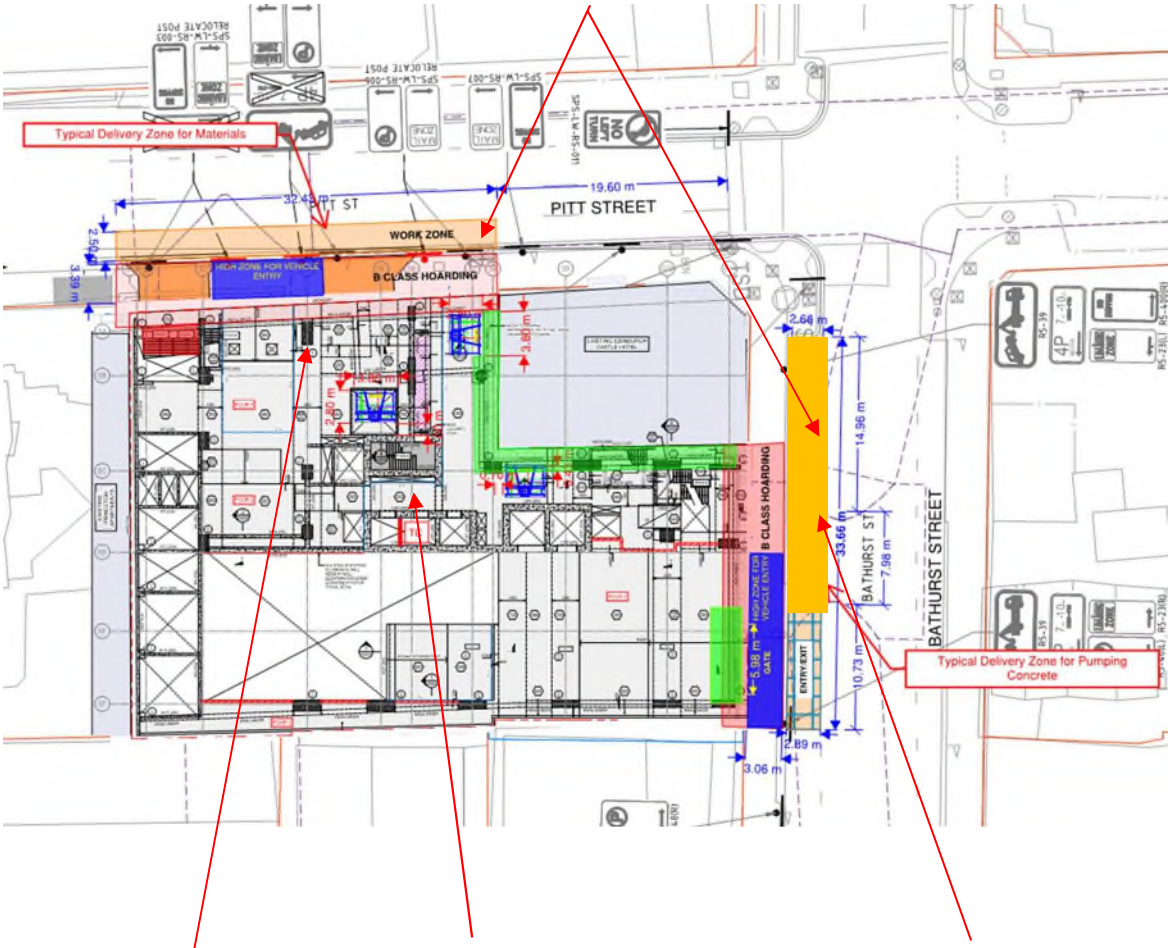
The CCM will not consider issues such as:

- Property acquisition where other dispute processes are provided for
- Where clear Government policy and associated resolution processes are available
- Where matter are not within the scope of the CSSI Project.

If the complainant states that the Department of Planning, Industry and Environment, NSW Environment Protection Authority, other TfNSW agencies and/or a local council have contributed to, or have a role in a particular complaint, the CCM may refer back to Sydney Metro for guidance and utilise their established interface pathways to liaise with either party.

APPENDIX E Construction Plan

Work Zones



Tower Crane Location (Future – Over Station Development)

Tower Crane Location (Current Location)

Concrete Pump and Truck

NORTH

APPENDIX D COMMUNITY CONSULTATION PLAN – EXTENDED WORK HOURS

Community Consultation Plan - extended work hours

17 August 2022

Pitt Street South over station development (OSD) SDD-10376 MOD 2 - community consultation for extension of construction work hours

Proposal

CPB Contractors (CPB) have been engaged by Sydney Metro for the construction of the new Pitt Street Station in the Sydney CBD. Pitt Street Station will have two station entrances with over station buildings above, train platforms and underground tunnels.

Oxford Properties and Investa, with CPB Contractors as design and construction contractor have commenced construction of the 234 apartment build-to-rent residential building over the Sydney Metro Pitt Street Station's south entrance. Plans are in place to commence construction of the 39-storey commercial office building over the north station entrance.

In order to progress work on the over station development (OSD), CPB are requesting an extension to the construction work hours approved under condition D3, as well as a minor amendment to condition B51 to include reference to the City of Sydney Construction Noise Code.

Current approved standard construction hours for South OSD construction are 7am to 6pm, Monday to Friday and 8am to 1pm on Saturday. CPB propose to extend standard construction work hours to include:

- 6pm to 10pm, Monday to Friday
- 7am to 8am, Saturday
- 1pm to 5pm, Saturday.

The work activities proposed to be undertaken at the Pitt Street South OSD site during extended work hours include:

- formwork installation and dismantling
- scaffolding installation and dismantling
- concrete pour and finishing work, including the use of machinery such as a concrete helicopter and a concrete vibrator
- installation of external building façade panels
- landscaping
- internal fit-out works within building facade
- material deliveries from on-street work zones
- use of electric tower crane, mini crawler crane and hoist operations
- general construction work
- site set-up.

No high noise work activities, such as jackhammering, saw cutting, rock breaking, or similar high impact activities are proposed to be undertaken during the extended work hours.

The extended construction work hours will provide an evening work shift each weekday, Monday to Friday, 6pm to 10pm, and will allow for a full day shift on Saturdays, 7am to 5pm. No work is proposed on Sundays or public holidays.

Extended work hours will benefit the project and community by accelerating the overall duration of project works and reduce the overall timeline and community impact from construction work.

Current site environment and work hours for Pitt Street Station (CSSI) construction

The proposed extended work hours for South OSD construction (August 2022 to December 2023) are currently being utilised at this site for Pitt Street metro station construction for low impact work activities.

Extended weekend work hours, Saturdays and Sundays, 7am to 6pm, implemented as part of the NSW Government Covid-19 Construction Work Days Order 2020, expired in March 2022. Following the expiry of the Covid-19 Order, Sydney Metro submitted a planning modification with the Department of Planning and Environment (DPE) to extend Saturday construction hours until 6pm at all its sites from Chatswood to Sydenham. The planning modification was approved by DPE in July 2022. In addition to the extension of the standard Saturday construction hours, Sydney Metro and its contractors have continued working additional hours on some evenings and Sundays to reduce the overall remaining construction program. This work is done through the standard out-of-hours works approval (OOHWA) process, following assessment by an independent Acoustic Advisor and Environmental Representative.

Pitt Street South OSD community consultation and feedback

A community consultation request for feedback will be issued to site-adjacent residential and commercial properties to assess the community sentiment for the proposed extended work hours for Pitt Street South OSD construction.

Identified adjacent residential and commercial properties (see figure 1) will be consulted by:

- letter box distribution of the community feedback request (Appendix 1)
- email and in person/online briefing offer to key stakeholders, to include building managers of identified adjacent properties to ensure their feedback is obtained
- emailed and in person/online briefing offer to key stakeholders, to include Sydney Coordination Office/NSW Customer Journey Planning and City of Sydney Council.

A meeting invitation will be extended to key stakeholders to discuss details further and address any questions/inquiries. Follow up phone calls will be carried out to ensure feedback is received from key stakeholders on the proposed extended work hours.

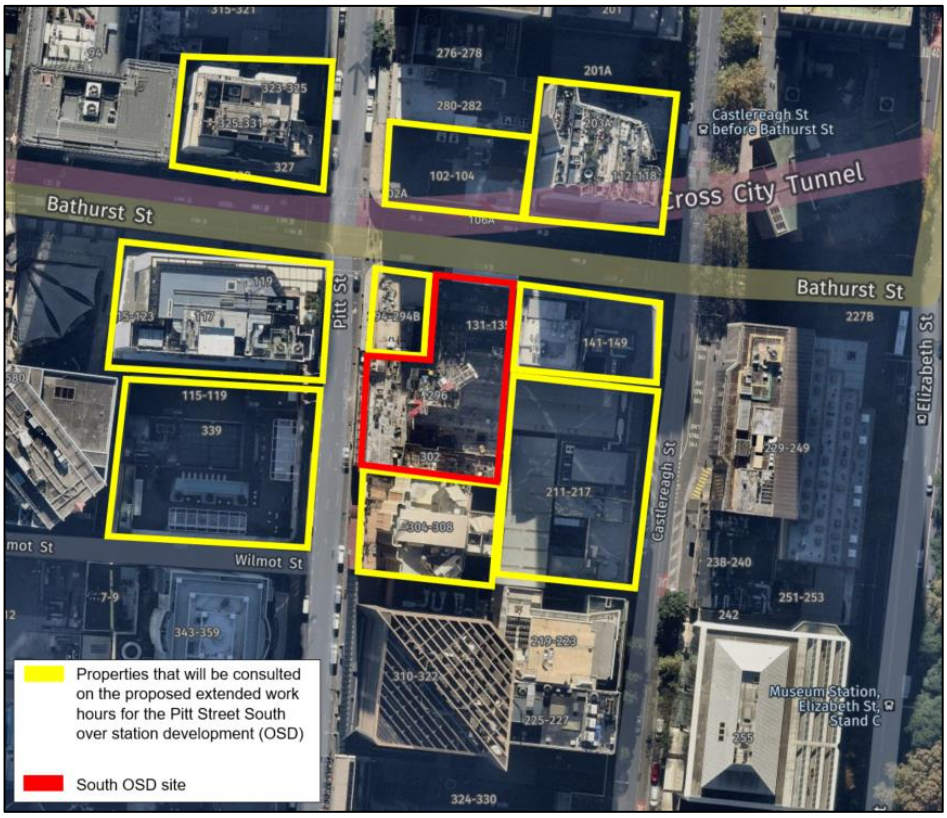


Figure 1: Properties that will be consulted on the proposed extended work hours for Pitt Street South OSD

Key stakeholders to be consulted

CPB will consult the below listed stakeholders to obtain feedback on the proposed extended work hours at the Pitt Street South OSD site:

	Stakeholder
1	City of Sydney Council
2	Transport for NSW – Customer Journey Planning
3	Fire and Rescue NSW, 211-217 Castlereagh Street
4	Princeton Apartments, 304-308 Pitt Street
5	EuroTower Apartments, 137-139 Bathurst Street including street level retailers
6	Edinburgh Castle Hotel, 294 Pitt Street
7	102-104 Bathurst Street including street level retailers
8	Greenland Tower, 115 Bathurst Street
9	Kimpton Margot Hotel Sydney, 339 Pitt Street
10	Meriton Suites, 329 Pitt Street
11	Hutchinsons Builders (Castle Residence), 112-118 Bathurst Street
12	Subscribed email addresses on Pitt Street South site email distribution list (2112 subscribed email addresses)

1. Consultation period

Timeline:

1. Consultation material distributed (letterbox drop, door knock and email to key stakeholders): Friday 15 July 2022
2. Offer project briefing to local authorities (City of Sydney Council and Customer Journey Planning): Friday 15 July
3. Consultation period: Friday 15 July to Friday 29 July (COB, 5pm)
4. Second reminder for community feedback (letterbox drop, door knock and email): Friday 22 July
5. Third reminder for community feedback (letterbox drop, door knock and email): Wednesday 27 July
6. Consultation feedback report produced following initial feedback: Friday 29 July
7. Directly contact stakeholders with ‘do no support’ responses to conduct face-to-face sessions: Friday 5 August
8. Final consultation feedback report produced: Wednesday 17 July
9. Notification to community of implementation of extended work hours (if approved). Community notification to take place 7-days prior to commencement of extended work hours
10. Implementation of extended work hours – 7 days post community notification date.

Any approved change to standard construction hours will be communicated to stakeholders via email and a letterbox dropped community notification.

Appendices

Appendix 1 – Letterbox distributed community feedback request and email blast to subscribed stakeholders on project email distribution list

Text

Subject: Have your say – Pitt Street South over station development proposal to extend weekday and Saturday construction work hours

Dear [#r:NameFirst#]

CPB Contractors (CPB) is delivering the Pitt Street South over station development (OSD). This 39-storey build-to-rent residential building is being constructed over the new Pitt Street metro station southern entry on Bathurst Street in the Sydney CBD.

The approved standard construction work hours at the Pitt Street South OSD site are:

- Mondays to Fridays, 7am to 6pm
- Saturdays, 8am to 1pm
- no work on Sundays and public holidays.

CPB can undertake specific activities outside of these hours subject to relevant approvals.

CPB is seeking to extend the standard weekday and Saturday work hours for low impact work activities to include:

- Mondays to Fridays, 6pm to 10pm
- Saturdays, 7am to 8am and 1pm to 5pm

The proposed Pitt Street South OSD extended work hours are currently being utilised at this site for Pitt Street metro station construction. No high noise work activities, such as jackhammering, saw cutting, rock breaking, or similar high impact activities are proposed to be undertaken during the extended work hours.

The proposed extended work hours will provide:

- flexibility to schedule more deliveries to occur outside of peak traffic and pedestrian periods. This will result in a reduction in peak hour deliveries
- continuation of productive works such as formwork, concrete works, crane and hoist operations and activities
- the ability for CPB to undertake more productive works on the site over the project life, and as a result, reduce the overall construction timeframe to complete construction work at the site.

A detailed list of the activities that are proposed during the extended work hours are shown in the table below:

Timeframe outside standard work hours	Construction activities
6pm to 10pm, Monday to Friday	• installation of external building façade panels • internal fit-out works • concrete finishing works including the use of machinery such as a concrete helicopter • material deliveries from work zones • use of the electric tower crane, mini crawler crane and hoist operations.

7am to 8am, Saturdays	• site set-up for concrete works • internal fit-out works • material deliveries from work zones • tower crane and hoist operations.
1pm to 5pm, Saturdays	• general construction work • formwork installation and dismantling • scaffolding installation and dismantling • concrete pour and finishing work including the use of machinery such as a concrete helicopter and a concrete vibrator • installation of external building façade panels • landscaping • internal fit-out works • material deliveries from work zones • tower crane, mini crawler crane and hoist operations.

In order to implement changes to the approved standard construction work hours, CPB is required to consult with the surrounding community on its proposal and seek feedback from community members.

We are committed to providing regular updates to the community on construction activity and minimising disruption where possible. Please let us know if you would like to meet with the team to discuss this proposal or would like more information about work at the site.

In order to extend our work hours, we would like to hear from you. Please provide your feedback on this proposal by emailing the Pitt Street South OSD team at pittstreet@cpbcon.com.au or by calling **1800 171 386** and ask to speak to Melinda or Sarah from the Pitt Street integrated station development.

The closing date for your feedback is 5pm, Friday 29 July 2022.

Kind regards,
Melinda Ozkan

Community Relations Place Manager

Pitt Street Integrated Station Development
Level 4, 201 Elizabeth Street, Sydney, NSW 2000, Australia
P 1800 171 386
E pittstreet@cpbcon.com.au
cpbcon.com.au

Appendix 2

Community feedback results

Consultation closed 5pm, Friday 29 July 2022.

Stakeholder	Response	Comments
Princeton Apartments 304-308 Pitt Street	Princeton residents committee: • do not support weeknight extended hours from 6pm to 10pm • do not support Saturday extended hours from 7am to 8am • do not object Saturday extended hours from 1pm to 5pm.	Princeton residents are not in favour of the extended Saturday 1pm-5pm hours, however, they do not object to these extended hours.
Kimpton Margot Hotel Sydney 339 Pitt Street	Representatives: • support weeknight extended work hours from 6pm to 10pm • support Saturday extended hours from 1pm to 5pm • do not support Saturday extended hours from 7am to 8am	Following initial feedback received from Kimpton Margot Sydney, CPB met with representatives to provide details on revised work activities during the extended hours. The Kimpton Margot Sydney representatives advised that they do not support early morning Saturday hours, as their leisure guests sleep in on the weekend. However, they understand the reason for extending the standard construction hours, and can support extended hours during weeknights and on Saturday afternoons. The Kimpton Margot Sydney representatives raised concerns about deliveries and trucks making noise during the night. CPB will implement the following measures during the night, to ensure noise is minimised from site deliveries: • CPB will not use a tower crane during the weeknight extended hours • a forklift will move materials/deliveries from the vehicle in our work/loading zone to the internal loading dock (within the construction site on ground floor)

		• where possible, acoustic barriers will be installed on the side of vehicles within the work/loading zone.

Greenland Centre
115 Bathurst Street
	Seven responses received:
	1. Greenland Centre committee member
	  ○ does not support weeknight extended hours from 6pm to 10pm
	  ○ supports Saturday extended hours
	2. Resident does not support proposed extended hours
	3. Resident does not support proposed extended hours
	4. Residents do not support proposed extended hours
	5. Resident does not support proposed extended hours
	6. Resident supports proposed extended hours
	7. Resident
	  ○ does not support weeknight extended hours from 8pm to 10pm
	  ○ supports weeknight extended hours from 6pm to 8pm
	  ○ support Saturday extended hours
		Following initial feedback received from a resident at Greenland Centre, the CPB Community Place Manager called the resident to discuss revised work activities.
		
		The resident has concerns around noise during the night and can only support extended weeknight hours until 8pm. He is fine with extended hours on Saturday.

Meriton Suites 329 Pitt Street	Support the proposed extended work hours	No concerns with extended hours as long as work is low impact.

Eurotower Apartments
137-139 Bathurst Street including street level retailers
	Three responses received:
	1. Resident does not support proposed extended work hours
	2. Eurotower committee
	  ○ do not support weeknight extended hours from 6pm to 10pm
	  ○ support weeknight extended hours from 6pm to 7pm
	  ○ do not support Saturday extended hours from 1pm to 5pm
		Eurotower residents committee provided revised extended work hours for weeknights and also Saturdays. Their preference is for extended hours to be from:
		• 6pm to 7pm, Monday to Friday
		• 7am to 3pm, Saturday.

	○ support Saturday extended hours from 7am to 3pm 3. Café De Casablanca support proposed extended hours	
149 Bathurst Street	Maru Styles support proposed extended work hours	
209 Castlereagh Street	Doodles Noodles (Shop 1) support proposed extended hours	
Fire Rescue NSW 211-217 Castlereagh Street	Support proposed extended work hours	Main concerns around driveway access via Bathurst Street.
Edinburgh Castle Hotel 294 Pitt Street	No response	
102A Bathurst Street	Sydney Bro's Barber Shop support the proposed extended work hours	No concerns as they close at 6pm.
International House 104 Bathurst Street including street level retailers	Property Manager does not support weeknight extended work hours from 6pm to 10pm	
106 Bathurst Street	Warhammer support proposed extended work hours	Following initial feedback received from Warhammer, the CPB Community Place Manager door knocked the business to discuss revised work activities with a representative. Warhammer do not have any concerns about weeknight extended hours. Their main concern is around noise on a Saturday, in particular, from the concrete truck. If noise from the concrete truck can be minimised, they have no concerns with extended hours on a Saturday. CPB will not be completing concrete pours every Saturday – only as required. Warhammer supported the Saturday extended hours as concrete works will not be taking place every Saturday.
108 Bathurst Street	Subway (Shop 1) support the proposed extended work hours	
Hutchinsons Builders 112-118 Bathurst Street	No response	

Transport for NSW Customer Journey Planning	Support proposed extended work hours	N/A
City of Sydney Council	Support proposed extended work hours	Following initial feedback received from City of Sydney Council, CPB met with Council representatives to discuss revised work activities. City of Sydney provided the following feedback: "… the City raises no objections to the site extending their current hours to align with the City's standard construction hours, being 7am-7pm Mon-Fri and 7am-5pm Sat. The works that occur during those times are not restricted and all works related to the project can be completed. We also have no objections to the quite internal works being undertaken after hours once the façade is in place, we do not the support any external works or deliveries being done after 7pm (5pm Sat)."
Other feedback received	Resident (property not disclosed) does not support the proposed extended hours	

Following feedback received from the community, work activities during extended hours were revised to minimise construction impact on surrounding properties (in table below):

Timeframe outside standard work hours	Construction activities
6pm to 10pm, Monday to Friday	• internal fit-out works • material deliveries from work zones up until 7pm • hoist operations.
7am to 8am, Saturdays	• site set-up for concrete works • internal fit-out works • material deliveries from work zones • tower crane and hoist operations.
1pm to 5pm, Saturdays	• general construction work • formwork installation and dismantling • scaffolding installation and dismantling • concrete pour and finishing work including the use of machinery such as a concrete helicopter and a concrete vibrator • installation of external building façade panels • landscaping • internal fit-out works • material deliveries from work zones • tower crane, mini crawler crane and hoist operations.

Summary:

Total number feedback responses received: 23

- Number of responses supporting weeknight and Saturday proposed extended hours: 11
- Number of responses not in support of the weeknight and Saturday proposed extended hours: 6

The remaining 6 responses have provided feedback to revise the proposed extended hours:

1. Not in support of weeknight proposed extended hours and Saturday extended hours from 7am to 8am. However, do not object to Saturday extended hours from 1pm to 5pm.
2. Not in support of weeknight proposed extended hours, however support Saturday extended hours.
3. Not in support of Saturday extended hours from 7am to 8am, however supports weeknight extended hours and Saturday extended hours from 1pm to 5pm.
4. Not in support of weeknight extended hours from 8pm to 10pm. Supports extended night work hours from 6pm to 8pm and Saturday extended hours.
5. Not in support of weeknight proposed extended hours.
6. Not in support of weeknight extended hours from 7pm to 10pm and Saturday extended hours from 3pm to 5pm. However, support weeknight extended hours from 6pm to 7pm and Saturday extended hours from 7am to 3pm.

General community feedback for consideration:

Majority of the feedback responses received from the community were in support of both the proposed weeknight and Saturday extended work hours.

Those who did not support the proposed extended hours or provided revised extended hours, advised that their decision was based off construction activities from the existing Pitt Street metro station site and other construction work taking place in surrounding roads (which are not all related to Sydney Metro work).

Following initial feedback provided by the community, the CPB Pitt Street South OSD team revised work activities that would take place during the proposed extended hours. The team have proposed the following:

- façade installation will no longer take place during weeknights, Monday to Friday from 6pm to 10pm
- there will be no use of the electric tower crane and mini crawler crane during weeknights, Monday to Friday from 6pm to 10pm
- concrete finishing works will not take place during weeknights, Monday to Friday from 6pm to 10pm. However, if a concrete pour runs past the standard work hours, City of Sydney Council and surrounding properties will be notified immediately.

CPB reached out to stakeholders who provided a ‘do not support’ response to conduct face-to-face sessions. The purpose of these face-to-face sessions was to discuss the revised work activities and address/resolve any concerns. CPB reached out to ten stakeholders requesting to discuss the revised work activities during the proposed extended hours. Eight stakeholders either requested further information (via email) or were willing to discuss the revised work activities. CPB discussed the revised work details with five stakeholders. Four of these stakeholders changed their initial feedback response, and now support majority of the proposed extended work hours.

Proposed construction activities at the Pitt Street South OSD site during these extended hours will be low impact. CPB are not proposing high noise work activities, such as jackhammering, saw cutting, rock breaking, or similar high impact activities, be undertaken during the extended work hours.

Outcomes:

A total of 23 feedback responses were received during the two week consultation period (Friday 15 July to Friday 29 July) on the Pitt Street South over station development (OSD) proposal to extend construction work hours. Following the initial consultation period and additional face-to-face sessions with stakeholders who provided a ‘do not support’ response, a total of 11 stakeholders (48%) supported the weeknight and Saturday proposed extended hours, with 6 stakeholders (26%) not supporting the proposed extended weeknight and Saturday hours. The remaining 6 stakeholders responses (26%) provided revised extended work hours, or were either solely in support of the weeknight or Saturday extended hours.

APPENDIX E ARCHITECTURAL DESIGN STATEMENT PREPARED BY BATES SMART

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6 Sep 2022

Architecture
Interior Design
Urban Design
Strategy

BATESSMART.™

Architectural Design Statement

Pitt Street Integrated Station Development
Over Station Development South – SSD-10376 – Modification 02

We confirm that the proposed modifications described in the attached documents are consistent with the design intent developed by Bates Smart for the State Significant Development Application. (SSD-10376).



……..
[Mathieu Le Sueur]
Studio Director

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