

The background of the entire page is a high-angle, nighttime architectural rendering of the Sydney Metro Victoria Cross Over Station Development. The central focus is a tall, modern skyscraper with a glass and metal facade, illuminated from within. It is surrounded by other urban buildings, some with lit windows. In the distance, the Sydney Harbour Bridge and the city skyline are visible under a dark blue sky with some clouds. The foreground shows a street intersection with traffic lights and pedestrian crossings, with some trees and lower-level buildings. The overall scene is a vibrant depiction of a modern urban environment at night.

SYDNEY METRO VICTORIA CROSS OVER STATION DEVELOPMENT

ENVIRONMENTAL IMPACT STATEMENT

STATE SIGNIFICANT DEVELOPMENT, DEVELOPMENT APPLICATION

OCTOBER 2019

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Project Code	P7580
Report Number	Final

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DECLARATION

SUBMISSION OF ENVIRONMENTAL IMPACT STATEMENT

This Environmental Impact Statement has been prepared in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulations 2000*.

Environmental Assessment prepared by:

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Address	Urbis Pty Ltd Angel Place, Level 8, 123 Pitt Street Sydney NSW 2000

Applicant and Land Details:

Applicant	Lendlease (Victoria Cross) Pty Limited
Address	C/O Lendlease Level 14, Tower Three, International Towers Sydney, Exchange Place, 300 Barangaroo Avenue, Barangaroo NSW 2000
Land Details	<ul style="list-style-type: none">155-167 Miller Street (SP 35644) (which incorporates lots 40 and 41 of Strata Plan 81092 and lots 37, 38 and 39 of Strata Plan 79612)181 Miller Street (Lot 15/DP 69345, Lot 1 & 2/DP 123056, Lot 10/DP 70667)187 Miller (Lot A/DP 160018)189 Miller (lot 1/DP 1230458)Formerly part 65 Berry Street (Lot 1/DP 1230458)
Project	Detailed State Significant Development Application for a commercial mixed-use Over Station Development above the new Sydney Metro Victoria Cross Station.

Declaration:

I/We certify that the contents of the Environmental Impact Statement, to the best of our knowledge, has been prepared as follows:

- In accordance with the requirements of the Environmental Planning and Assessment Act 1979, Environmental Planning and Assessment Regulation 2000, and State Environmental Planning Policy (State and Regional Development) 2011;
- Containing all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates; and
- The information contained in this report is true in all material particulars and is not misleading.

Name	Stephen White, Director	Ashleigh Ryan, Associate Director	Jack Kerstens, Consultant
Signature			
Date	10 September 2019	10 September 2019	10 September 2019

GLOSSARY AND ABBREVIATIONS

Abbreviation	Meaning
AHD	Australian Height Datum
BCA	Building Code of Australia
CIV	Capital Investment Value
CMP	Construction Management Plan
Consent	Development Consent
Council	North Sydney Council
CPTED	Crime Prevention Through Environmental Design
CSMP	Construction and Site Management Plan
CSSI	Critical State Significant Infrastructure
CTMP	Construction Traffic Management Plan
DA	Development Application
DPE	NSW Department of Planning and Environment (Title of NSW Department of Planning, Industry and Environment prior to 1 July 2019)
DPIE	NSW Department of Planning, Industry and Environment
DRP	Design Review Panel
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA	NSW Environment Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
ESD	Ecologically Sustainable Design
GANSW	NSW Government Architect's Office
GFA	Gross Floor Area
HIA	Heritage Impact Assessment
IAP	Interchange Access Plan
LGA	Local Government Area
NCC	National Construction Code
NSDCP	<i>North Sydney Development Control Plan 2013</i>
NSLEP	<i>North Sydney Local Environmental Plan 2013</i>

Abbreviation	Meaning
OSD	Over Station Development
PIR	Preferred Infrastructure Report
RMS	Roads and Maritime Services
SEARs	Secretary's Environmental Assessment Requirements
SDPP	Station Design and Precinct Plan
SEPP	State Environmental Planning Policy
SEPP 55	<i>State Environmental Planning Policy No.55 – Remediation of Land</i>
SEPP 64	<i>State Environmental Planning Policy No. 64 – Advertising and Signage</i>
SRD SEPP	<i>State Environmental Planning Policy (State and Regional Development) 2011</i>
SSD	State Significant Development
TfNSW	Transport for NSW
Urbis	Urbis Pty Ltd
WSUD	Water Sensitive Urban Design

EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) has been prepared to accompany a detailed State Significant Development (SSD) development application (DA) for a commercial office and retail Over Station Development (OSD) above the new Sydney Metro Victoria Cross Station.

This EIS should be read in conjunction with the Secretary's Environmental Assessment Requirements (SEARs) included at **Appendix A**, and the supporting technical documents provided at **Appendix B – Appendix EE**.

This EIS has been prepared in accordance with and meets the minimum requirements of clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the **Regulation**) and contains an assessment of the proposal against the relevant considerations under Section 4.15 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

SYDNEY METRO

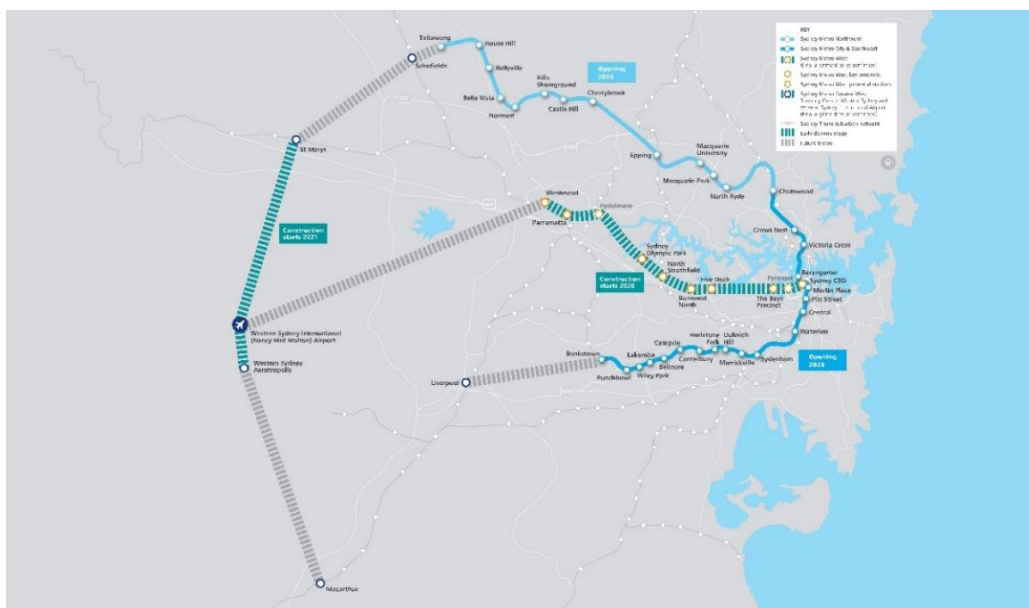
Sydney Metro is Australia's biggest public transport project. Services started in May 2019 in the city's North West with a train every four minutes in the peak. Metro rail will be extended into the CBD and beyond to Bankstown in 2024. There will be new metro railway stations underground at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new metro platforms under Central.

In 2024, Sydney will have 31 metro railway stations and a 66 km standalone metro railway system – the biggest urban rail project in Australian history. There will be ultimate capacity for a metro train every two minutes in each direction under the Sydney city centre. The Sydney Metro project is illustrated in **Figure 1**.

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest - Chatswood to Sydenham project as a Critical State Significant Infrastructure project (reference SSI 15_7400) (CSSI Approval). The terms of the CSSI Approval includes all works required to construct the Sydney Metro Victoria Cross Station, including the demolition of existing buildings and structures on both sites. The CSSI Approval also includes construction of below and above ground improvements with the metro station structure for appropriate integration with the OSD.

With regards to CSSI related works, any changes to the “metro box envelope” and public domain will be pursued in satisfaction of the CSSI conditions of approval and do not form part of the scope of the Concept SSD DA for the OSD.

Figure 1 – Sydney Metro Alignment Map



Source: Sydney Metro

THE PROPOSAL

The proposal includes construction of a commercial office building and retail premises above the Sydney Metro Victoria Cross Station – otherwise known as the Victoria Cross Station OSD. In summary, the proposed Detailed SSD DA seeks approval for the following:

- The design, construction, and operation of a new commercial office tower with a maximum building height of RL 230 or 168 metres (42 storeys);
- The commercial tower including 61,500sqm of GFA, excluding floor space approved in the CSSI;
- Integration with the approved CSSI proposal including though not limited to:
 - Structures, mechanical and electronic systems, and services; and
 - Vertical transfers;
- Use of spaces within the CSSI 'Sydney Metro box' building envelope for the purposes of:
 - Retail tenancies;
 - Commercial office lobbies and space;
 - 161 car parking spaces within the basement for the purposes of the commercial office and retail use with a maximum of 150 of those car parking spaces relating to the OSD;
 - End of trip facilities; and
 - Loading and services access;
- Utilities and services provision;
- Signage zone locations; and
- Stratum subdivision (staged).

It is important to identify the delineation between the works included within the CSSI Approval and the components sought for approval under the Detailed SSD DA for the OSD. The CSSI Approval separately grants consent for the 'metro box', including the commercial podium and the 'retail building', and including all public domain works. These components are included throughout the SSD documentation for information only. No Consent is sought for those components which will be constructed pursuant to the CSSI Approval for such works.

Figure 2 –Artist's Impression of proposed development (Miller Street ground plane)



Source: Bates Smart

Figure 3 –Artist's Impression of proposed development (commercial tower)



Source: Bates Smart

PROJECT NEEDS AND BENEFITS

Victoria Cross Station is a key new station on the Sydney Metro network. This station will provide a new focal point for the North Sydney CBD, extending the rail catchment north within the North Sydney CBD and reducing overcrowding at North Sydney Station. The station will also improve access to North Sydney's highly skilled job market and education facilities and improve pedestrian access in the area.

This proposal capitalises on the introduction of Sydney Metro by providing for a commercial tower integrated with the future Victoria Cross Station. Additional commercial uses in this location will strengthen North Sydney's role as a primary office market in an internationally competitive Sydney and will align with a key action in the *North District Plan* (2018) by maximising the land use opportunities provided by the new Victoria Cross Station.

The primary objective of the proposal is to provide an A-grade office tower to support significant new employment within North Sydney CBD that will leverage from the significant NSW Government investment into Sydney Metro and specifically the new Victoria Cross Station. In achieving this objective, the proposal also seeks to achieve the following project objectives:

- Support strategic objectives for the North Sydney CBD by providing additional employment floor space to strengthen the role and presence of North Sydney as a major commercial centre;
- Being a catalyst for positive change, through the creation of large-scale civic spaces which reinforce the ambitions of North Sydney Council's masterplan;
- Optimise the use of the site to create a world-class commercial office tower with flexible floorplates that can meet the needs of diverse tenants;
- Maximise integration of the new Victoria Cross Metro Station with the OSD and associated public realm areas, improving connectivity for the surrounding community living, working or visiting the site;
- Ensuring an easy customer experience, through the provision of ample space for orientation outside of travel paths, the usage of natural light as a way-finding mechanism, the deployment of architecturally integrated signage and colour coded vertical transportation;
- Being part of a fully integrated transport system;
- Design a podium which offers commercial and retail opportunities via a thriving civic place connecting space between the public and private realms;
- Improve activation and amenity of North Sydney CBD outside of typical business hours, notably providing an active and safe public domain on weekends and in evenings;
- Provide a high-quality built form which sits harmoniously within the context of significant built heritage items and surrounding built form;
- Provide a built form that minimises overshadowing impacts to surrounding key public spaces and habitable areas both inside and outside the North Sydney CBD; and
- Delivering an enduring and sustainable legacy for Sydney.

THE SITE

The site is generally described as 155-167 Miller Street, 181 Miller Street, 187-189 Miller Street, and part of 65 Berry Street, North Sydney (**the site**). The site occupies various addresses/allotments and is legally described as follows:

- 155-167 Miller Street (SP 35644) (which incorporates lots 40 and 41 of Strata Plan 81092 and lots 37, 38 and 39 of Strata Plan 79612)
- 181 Miller Street (Lot 15/DP 69345, Lot 1 & 2/DP 123056, Lot 10/DP 70667)
- 187 Miller Street (Lot A/DP 160018)
- 189 Miller Street (Lot 1/DP 633088)
- Formerly part 65 Berry Street (Lot 1/DP 1230458)

References within the EIS to the Sydney Metro Victoria Cross Station site relate to the Sydney Metro Victoria Cross Station **southern** site only. No works are proposed to the Sydney Metro Victoria Cross Station northern site located on the north eastern corner of the MacLaren Street and Miller Street intersection.

CONSULTATION

To inform the detailed design of the development, consultation has been undertaken with the local community, including the surrounding land owners / occupiers prior to the lodgement of the Detailed SSD DA.

Various strategies were implemented to ensure collaborative community involvement in the project, including emails to subscribers and stakeholders, stakeholder briefings, website information, newspaper advertisements, planning booklet, community newsletters and community information sessions.

Feedback received through the consultation has informed the detailed design of the proposed OSD and has been taken into consideration by the developer as it relates to matters within the scope of the CSSI Approval

(including for instance the site layout, building positioning, Sydney Metro information, and public domain design).

PLANNING FRAMEWORK

As the proposal is for the purposes of a 'commercial premises' associated with railway infrastructure and has a Capital Investment Value of more than \$30 million, it is classified as SSD pursuant to clause 19(2), Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011*. The Minister for Planning, or their delegate, is the consent authority for the SSD DA and the application is lodged with the NSW Department of Planning, Industry and Environment (NSW DPIE) for assessment.

The proposal will generate a total of 430-450 full time equivalent (**FTE**) construction jobs. The proposal will make a significant contribution to employment within North Sydney CBD, providing for 4,900 FTE ongoing jobs.

This EIS has been prepared to accompany the detailed SSD DA which seeks consent for the proposal, in accordance with section 4.4 of the EP&A Act and the Concept Approval (SSD 17_8874) granted for a maximum building envelope on the site, as proposed to be modified by a concurrent section 4.55(2) modification application.

KEY PLANNING ASSESSMENT

This EIS has addressed the SEARs requirements issued for the development and includes an assessment against the relevant environmental planning instruments, policies, and guidelines and demonstrates that the proposed development does not result in any significant departures from applicable controls, or unreasonable environmental effects.

The general and key impacts resulting from the proposed development are outlined in detail in the EIS. Key impacts resulting from the proposed development include:

- Ensuring the achievement of design excellence through compliance with the approved Design Excellence Strategy and incorporating feedback from the independent Design Review Panel chaired by the NSW Government Architect.
- Minimising overshadowing to protected areas of public open space and surrounding residential premises, by complying with the building envelope to be determined in the Concept SSD DA.
- Protection of privacy to surrounding development by incorporating solid facades along large portions of the eastern façade and reducing sightlines through inclusion of blades on the façade.
- Managing additional traffic generation associated with the proposed development, including the reducing the provision of car parking spaces on site (operational) compared to car parking that existed on the site prior to CSSI demolition works, use of a Loading Dock Management Plan to manage delivery and service vehicle movements, and construction traffic management.
- Pedestrian management during construction and ensuring during operation that potential conflicts between pedestrians, cyclists and vehicles are minimised.
- Delivering appropriate pedestrian amenity suitable for the intended use of the public domain and surrounding locations.
- Ensuring the proposed building façade does not cause unreasonable or adverse solar reflectivity to pedestrians and motorists through use of fins and articulation of the façade.
- Delivering a safe and secure development that adheres to Crime Prevention through Environmental Design Principles, to be further refined during the detailed design of the proposal and concurrent CSSI Approval works.
- Addressing potential acoustic and vibration impacts to and from the development during the construction and operation of the development over a new Sydney Metro service.
- The achievement of Ecologically Sustainable Development through targeting ratings require by the Concept SSD DA.

- Mitigating impacts to surrounding non-indigenous heritage items and complying with the relevant CSSI Approval standards that relate to Aboriginal Heritage.
- Understanding the future minor augmentation required to connect into existing infrastructure services.
- Managing stormwater run-off and flood water across the site through the detailed design and concurrent CSSI Approval works.
- Complying with the relevant conditions relating to land contamination as per the terms of the CSSI Approval.
- Managing air quality so that it is not unreasonably diminished as a result of construction impacts.
- Ensuring any potential biodiversity qualities of the site and/or surrounds are not adversely impacted by the proposed development.
- Delivering appropriate management (and reduction) of waste during the construction and operational phases of the development.
- Ensuring the development complies with the required building standards including those relating to the National Construction Code, accessibility standards and fire safety standards.
- Ensuring the proposed maximum height of the development does not unreasonably or adversely impact protected airspace.
- Consideration of any cumulative impacts associated with nearby development and existing uses.
- Delivering a socially and economically sound development that is considered in the public interest.

In considering each of the above key planning issues and potential impacts associated with the development, the EIS outlines the proposed mitigation measures to address each of these matters. Following the application of each of the mitigation measures, only two residual risks are identified that have a risk profile of 'medium' or greater including:

- Potential flooding of aspects of the CSSI 'metro box' including the public domain; and
- Adverse external noise conditions to surrounding development during construction.
- These risks can be appropriately managed through the minimisation and mitigation measures which are proposed as part of this application.

CONCLUSION AND JUSTIFICATION

Overall the proposed development sought within the Detailed SSD DA is considered appropriate for the site and warrants approval for the following reasons:

- The proposal contributes to the achievement of the objectives for development within the North Sydney CBD as outlined within the relevant strategic plans and policies.
- The proposal results in an orderly and economic use of the land that leverages significant NSW Government investment in public transport to the site, specifically Sydney Metro.
- The proposed supports a GFA of 61,500sqm which is capable of contributing to an estimated 4,900 workers to contribute to the job targets of the North District Plan.
- The proposal satisfies the applicable state planning policies, and relevant environmental planning instruments that apply to the site:
 - The proposed uses are permitted with consent and meets the objectives of the B3 Commercial Core zone in NSLEP 2013.
 - The proposal does not create a net additional impact to protected public places including 'Special Areas' and land zoned RE1 Public Recreation in NSLEP 2013.
 - The proposal complies with the maximum height control that applies to the site and the development is supported by a clause 4.6 variation to exceed the building height control that applies to the minor, central portion of the site. The clause 4.6 variation provides a comprehensive justification that

compliance with this part of the height control is unreasonable and unnecessary in the circumstances of the case as:

- The objectives of the development standard, including maintaining solar access and privacy to existing dwellings, public reserves and streets and encouraging an appropriate scale and density of development which promotes and is compatible with the character of the area, are achieved by the proposed development; and
 - There are sufficient environmental planning grounds to support the proposed development, in that the proposal does not result in any non-complying overshadowing to public space, and does not have any unacceptable heritage impacts or unacceptable impacts to the views and privacy of the Alexander Apartments.
- The proposed setback to Miller Street at RL 127 is within the approved envelope under the Concept Approval and a clause 4.6 objection to compliance with this standard has already been approved as part of the Concept Approval. Determination of this Detailed SSD DA cannot be inconsistent with the Concept Approval and therefore the Miller Street Setback provision in clause 6.4 of the NSLEP 2013 no longer constrains approval of this Detailed SSD DA. Notwithstanding this, the proposal is supported by a further clause 4.6 variation to protrude into the Miller Street setback area as prescribed by clause 6.4 of the NSLEP 2013. The clause 4.6 variation provides a comprehensive justification that compliance with this part of the height control is unreasonable and unnecessary in the circumstances of the case as:
- The objective of the development standard will be achieved as a landscaped setback and character is delivered along Miller Street, notwithstanding the protrusion to the Miller Street setback area above RL 127 (approximately 15 storeys above ground); and
 - There are sufficient environmental planning grounds to support the proposed development, in that the amended proposal reduces the extent of the approved non-compliance with the setback area, and the proposed setback does not adversely impact the ability to deliver a significant setback and landscape setting on the eastern side of Miller Street.
- The proposal will not have any unacceptable environmental impacts, as follows:
 - The proposal has no unacceptable traffic impacts.
 - The proposal is sympathetic to the heritage items in the vicinity of the site, including the MLC Building and the Rag & Famish Hotel.
 - The proposal minimises impacts on neighbouring residential development, in particular through minimising overshadowing to 3% of apartments that will fall below the ADG design criteria (in line with the ADG guidelines), providing blank walls and transition areas on the eastern façade of the building to mitigate privacy impacts, and having regard to view sharing principles.
 - The bulk and scale of the podium has been reduced significantly from the previously approved envelope to improve the bulk and scale of the development from Denison Street and the through-site link.
 - The proposed reduction in the bulk and scale at the podium has removed the need for a full width awning across the through-site link and has improved sunlight access to this link.
 - The proposal provides ground level activation through the positioning of retail tenancies along Miller Street and the through site link, at both ground level and in the podium levels to increase activation, activity outside typical business hours, and passive surveillance of the public domain.
 - The variation to the height of building standard allows for the delivery of large high-rise commercial office floor plates to meet anticipated tenant demand that encourages additional employment opportunities on the site
 - The proposed detailed design of the OSD has considered, and is integrated with, the detailed design of the Sydney Metro Victoria Cross Station and its related works including the construction of the development up to the transfer slab and the public domain.
 - The proposal satisfies the SEARs as demonstrated in this EIS and accompanying specialist reports.

In view of the above, we submit that the proposal is in the public interest and that the SSD DA should be approved subject to appropriate conditions.

1. INTRODUCTION

This Environmental Impact Statement (**EIS**) has been prepared to accompany a 'Detailed' State Significant Development (**SSD**) development application (**DA**) which seeks consent for a commercial office and retail Over Station Development (**OSD**) above the new Sydney Metro Victoria Cross Station.

This report has been prepared by Urbis Pty Ltd on behalf of Lendlease (Victoria Cross) Pty Ltd (**Lendlease**), the applicant of the Detailed SSD DA (SSD-10294). Following the completion of a competitive bid process, Sydney Metro appointed Lendlease as the preferred development partner to deliver the Victoria Cross Station OSD.

The lodgement of the Detailed SSD DA (SSD-10294) follows the approval of a Concept SSD DA (SSD 17_8874) granted by the Minister for Planning on 18 December 2018. A section 4.55(2) modification application which seeks amendments to the approved building envelope is lodged concurrently with the Detailed SSD DA.

This EIS is submitted to the NSW Department of Planning, Industry and Environment (**DPIE**) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**). The Minister for Planning, or their delegate, is the consent authority for the Detailed SSD DA.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (**SEARs**) dated 6 May 2019 included within **Appendix A**, and should be read in conjunction with the supporting documents provided at **Appendix B – Appendix HH**.

1.1. PROJECT OVERVIEW

The Detailed SSD DA seeks approval for the detailed design, construction and operation of a new 42 storey commercial office building to be constructed above the new Sydney Metro Victoria Cross Station. The proposed development also includes the use of secondary commercial office floorspace and retail uses within four storeys of the podium and lower levels of the development which are to be constructed in accordance with the terms of the Sydney Metro project approval (**CSSI Approval**).

The proposed commercial floor space and retail uses support the operation and user experience of Sydney Metro, in addition to providing destination food and drink premises to enliven the site and surrounds during and outside typical business hours. The proposal will generate significant employment growth within the North Sydney CBD and optimise the NSW Government's major investment in public transport infrastructure. The proposal also includes 'The Hub' at Level 2 of the commercial tower for a multi-purpose area envisioned to be a publicly accessible space utilised for community uses, meetings, events, and as a workspace or exhibition space.

The detailed design of the commercial OSD tower has been the subject of design development and testing and ongoing review from various government and independent parties to ensure that it achieves the highest standard in architectural design, while ensuring a functional interface is delivered with the Sydney Metro.

In summary the Detailed SSD DA (SSD-10294) seeks development consent for:

- The design, construction and operation of a new commercial office tower with a maximum building height of RL 230 or 168 metres (42 storeys). The commercial tower includes 61,500sqm of GFA, excluding floor space approved in the CSSI.
- Physical integration with the approved Sydney Metro works including:
 - Structures, mechanical and electronic systems, and services; and
 - Vertical transfers.
- Use of spaces within approved Sydney Metro envelope for the purposes of:
 - Retail tenancies;
 - Commercial office lobbies and space;
 - 161 car parking spaces within the basement for the purposes of the commercial office and retail use with a maximum of 150 of those car parking spaces relating to the OSD;

- End of trip facilities; and
- Loading and services access.
- Provision and augmentation of utilities and services.
- Provision of rooftop business identification signage zones.
- Stratum subdivision (staged).

Images of the proposed development at Miller Street and Denison Street are included at **Figure 4**.

Figure 4 – Artist's impressions of proposed development at ground plane



Picture 1 – Sydney Metro Victoria Cross Station Entrance, Miller Street



Picture 2 – Sydney Metro Victoria Cross Station Entrance, Denison Street
Source: Bates Smart

1.2. PROJECT OBJECTIVES

The primary objective of the proposal is to provide an A-grade office tower to support significant new employment within North Sydney CBD that will leverage from the significant NSW Government investment into the Sydney Metro and specifically the new Victoria Cross Station. In achieving this objective, the proposal also seeks to achieve the following project objectives:

- Support strategic objectives for the North Sydney CBD by providing additional employment floor space to strengthen the role and presence of North Sydney as a major commercial centre;
- Being a catalyst for positive change, through the creation of large-scale civic spaces which reinforce the ambitions of North Sydney Council's masterplan;
- Optimise the use of the site to create a world-class commercial office tower with flexible floorplates that can meet the needs of diverse tenants;
- Maximise integration of the new Victoria Cross Metro Station with the OSD and associated public realm areas, improving connectivity for the surrounding community living, working or visiting the site;
- Ensure an easy customer experience, through the provision of ample space for orientation outside of travel paths, the usage of natural light as a way-finding mechanism, the deployment of architecturally integrated signage and colour coded vertical transportation;
- Being part of a fully integrated transport system;
- Design a podium which offers commercial and retail opportunities via a thriving civic place connecting space between the public and private realms;
- Improve activation and amenity of North Sydney CBD outside of typical business hours, notably providing an active and safe public domain on weekends and in evenings;
- Provide a high-quality built form which sits harmoniously within the context of significant built heritage items and surrounding built form;
- Provide a built form that minimises overshadowing impacts to surrounding key public spaces and habitable areas both inside and outside the North Sydney CBD; and
- Delivery of an enduring and sustainable legacy for Sydney.

The proposed development positively contributes to the site and its surrounds, delivering on its vision to transform North Sydney CBD by creating a landmark development that acts as a 'new public heart' and exhibits design excellence centred around the Sydney Metro Victoria Cross Station.

1.3. STRATEGIC NEED

As identified in the *Greater Sydney Region Plan* (2018), Sydney's population is forecast to grow to eight million by 2056. Sydney Metro responds to the transport demand that will accompany this growth with its plan to deliver a new standalone railway with 31 stations and more than 66 kilometres of new rail. Once completed, Sydney Metro, along with other signalling and infrastructure upgrades across the existing networks, will increase the capacity of Sydney's train services from approximately 120 per hour today up to 200 services beyond 2024 – a 60 per cent increase resulting in an extra 100,000 train customers per hour in the peak. The project has been endorsed by the NSW Government as a key component of *Sydney's Rail Future: Modernising Sydney's Trains*.

The NSW Government's *Future Transport Strategy 2056* guides transport over the longer term delivered through a series of services and infrastructure plans. Victoria Cross Station is a key new station on the Sydney Metro network which feeds into the framework for the transport system and customer mobility in NSW. This station will provide a new focal point for the North Sydney CBD, extending the rail catchment north within the North Sydney CBD and reducing overcrowding at North Sydney Station. The station will also improve access to North Sydney's highly skilled job market and education facilities and improve pedestrian access in the area.

This proposal capitalises on the introduction of Sydney Metro by providing for a commercial tower integrated with the future Victoria Cross Station. Additional commercial uses in this location will strengthen North Sydney's role as a primary office market in an internationally competitive Sydney and will align with a key

action in the *North District Plan* (2018) by maximising the land use opportunities provided by the new Victoria Cross Station.

The Detailed SSD DA proposal also responds to the need for revitalisation of the commercial stock in North Sydney CBD. As detailed in Urbis' *North Sydney Commercial Centre Study* (2015) prepared for North Sydney Council, the ageing office accommodation and an increase in the standard thresholds for office accommodation grades have combined to diminish the level of prime quality stock in the North Sydney Centre.

Without the renewal of the commercial office stock, there is a risk that the overall quality of the North Sydney office market will deteriorate over time and diminish North Sydney's role as one of Sydney's prime office markets. The detailed proposal and associated modification application respond positively to this issue by providing the framework for a world-class office building in an ideal location directly above future high-frequency public transport. The consistency of the proposal with key strategic plans, strategies and policies is discussed in detail in **Section 6** of this EIS.

1.4. ANALYSIS OF FEASIBLE ALTERNATIVES

This section discusses the consideration of feasible alternatives to the carrying out of the development as per clause 7(1)(c), Part 3, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000 (the Regulation)*. Four options for the proposal could be considered to address the project objectives and site constraints and opportunities, which include:

- Scenario 1 – 'do nothing';
- Scenario 2 – public plaza alternative;
- Scenario 3 – non-employment generating OSD land use (residential);
- Scenario 4 – development of the project at an alternative location; and
- Scenario 5 – integrated OSD commercial tower (the proposal).

1.4.1. Do Nothing

The 'do nothing' scenario, involving no OSD above the approved Victoria Cross Sydney Metro Station, is not a feasible development option for the site. OSD forms a key component of the overall Sydney Metro project which Transport for New South Wales (**TfNSW**) is committed to delivering.

It is also noted that demolition of the existing structures was approved under the CSSI proposal and has largely been completed on the site. Construction works are currently underway on site for the delivery of the Victoria Cross Station elements approved under the CSSI.

No development on the site provides minimal place making benefits and would result a net loss of employment floorspace on the site. Ultimately a 'do nothing' scenario constitutes gross under-development of a valuable site within North Sydney CBD.

In addition, a 'do nothing' scenario could generate further issues in the future should the site be developed separately as a future development that would likely result in a less integrated development that does not maximise the opportunities of new transport infrastructure.

1.4.2. Public Plaza

The second option for the site consists of developing a public plaza above the Victoria Cross Station. Similar to the 'do nothing' scenario, this alternative is not considered to be a feasible development option for the site considering the potential development uplift. There is also a number of existing established public plaza's and public recreation areas with the North Sydney commercial core.

Whilst it is recognised that a public plaza would provide some benefit to the surrounding locality, it does not align with State and local strategic planning objectives which are seeking to transform the commercial core of the North Sydney Centre through an uplift of premium commercial floor space in proximity to transport opportunities.

Developing the site as a public plaza would not be maximising the opportunities to provide key employment floorspace for the growing workforce in a location that is more than capable of supporting the desired uplift and that could be accessed by a wider population through sustainable transport modes.

1.4.3. Non-Employment Generating OSD Land Use

The third option for the site involves proposing alternative land uses for development above Victoria Cross Station. From a development feasibility perspective, a viable alternative land use would be to develop the site for the purposes of residential accommodation. Residential use of the site would facilitate a high level of usage of the Sydney Metro infrastructure for residents and guests, however the benefits this use would deliver do not outweigh the wider benefits of employment generating uses. As such, this scenario is not supported as it conflicts with objectives for a consolidated commercial core within North Sydney CBD.

Such an alternative land use would also conflict with the approved Concept SSD DA and the long-term strategic vision for the North Sydney CBD to grow employment opportunities within the established commercial core. The site and associated strategic policies encourage commercial land uses for the OSD which provides high-value commercial floorspace whilst maximising on future public transport opportunities.

In terms of integration with the Victoria Cross Station, residential land uses pose additional challenges and constraints on site-users. For example, specific car parking requirements and amenity concerns would need to be carefully considered in the design for future residents.

The alternative land use also contradicts North Sydney Council's vision for the site which encourages 'appropriate employment opportunities in accessible locations and prohibits further residential development in the core of the North Sydney Centre'. Non-commercial uses would also contradict the recommendations in various strategic documents, including the *North District Plan* (2018), *North Sydney Centre Capacity and Land Use Strategy* (NSCCLUS) (2017) and *Sydney Metro Planning Study* (2016), as discussed in **Section 6** of this EIS. As such, pursuing an alternative land use within the Victoria Cross Station OSD is considered a less preferred alternative form of development for the site.

1.4.4. Development of the Proposal at Alternative Location

A fourth option for the proposal involves proposing the development at an alternative location. This would result in the development of a commercial office tower that would otherwise not be classified as SSD due to not being associated with a rail corridor.

This option would also be inconsistent with NSW transport policy and State and local strategic objectives for the site and North Sydney CBD. In particular, the proposal would not maximise opportunities to leverage off the significant investment in Sydney Metro for employment generating uses.

In addition, the alternative location scenario would not include A-grade commercial floor space being developed above the Sydney Metro Victoria Cross Station and would further erode the commercial core of North Sydney CBD. The opportunity cost to the local community and broader metropolitan region would be significant and key economic, transport and social benefits presented by the proposal would not be realised.

1.4.5. Integrated OSD Commercial Tower

The proposed development is to provide an integrated station and OSD outcome which aligns with the approved Concept SSD DA (SSD 8874). This solution is considered the most suitable option for the site as it delivers:

- **A Revitalised Public Realm** – The proposal integrates and interacts with the future Sydney Metro Victoria Cross Station through activated ground floor and podium levels with various commercial and retail spaces, and direct pedestrian access to the Metro station concourse.
- **Alignment with Strategic Intentions** – The proposal addresses objectives for the B3 Commercial Core Zone contained within the *North Sydney Local Environmental Plan 2013 (NSLEP)* (discussed in detail in **Section 7.9.1**). The proposal provides a wide range of commercial uses and encourages employment opportunities in a highly accessible location to optimise public transport patronage. It also adheres to the strategic vision for the site and surrounds, aligning with various strategic documents such as *North Sydney Centre Capacity and Land Use Strategy (NSCCLUS)* (2017) and *Sydney Metro Planning Study* (2016).
- **Connected Transit Orientated Development (TOD)** – The proposal includes appropriate provision for a through-site link to be delivered on the site with high levels of integration to other elements of the Sydney Metro Victoria Cross Station. The proposal contributes towards wider connection to other services of the Sydney Metro and improved legibility through the North Sydney CBD whilst encouraging active transport modes.

- **Delivers High-Value Commercial Floor Space** – The fully integrated OSD and Sydney Metro Victoria Cross Station delivers a development for the North Sydney CBD that provides an enhanced economic and civic landmark and a commercial development that will attract premium tenants that will reinforce the precinct as an economic and employment driver for NSW.

1.5. REPORT STRUCTURE

This EIS provides the following:

- A description of the site and surrounding context, including identification of the site, existing development on the site and surrounding development;
- A detailed description of the consultation undertaken with respect to the proposal;
- A detailed description of the proposed development;
- An assessment of the proposed development against the relevant strategic and statutory planning controls;
- An assessment of the key planning considerations and impacts generated by the proposed development; and
- An assessment of environmental risk and mitigation measures.

1.6. SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

A request was made to the Minister for the issuance of SEARs, pursuant to clause 3(1), Part 2, Schedule 2 of the Regulation. SEARs were subsequently issued on 6 May 2019 (**Appendix A**) and have informed the preparation of this EIS and supporting technical documents. **Table 1** provides a summary of the SEARs and identifies the section of this EIS where the relevant requirement is addressed.

Table 1 – Secretary's Environmental Assessment Requirements

Description / Requirement	Reference
GENERAL REQUIREMENTS	
The Environmental Impact Statement (EIS) must be prepared in accordance with and meet the minimum requirements of clauses 6 and 7 of Schedule 2 the Regulation.	Refer to Statement of Validity (pg. i) and throughout.
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	Section 9 – Environmental Risk Assessment
Where relevant, the assessment of key issues below, and any other significant issues identified in the risk assessment, must include: <ul style="list-style-type: none"> • adequate baseline data; • consideration of the potential cumulative impacts due to other developments in the vicinity (completed, underway or proposed); • measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment; and • justification of impacts. 	Section 9 – Environmental Risk Assessment
The EIS must be accompanied by a report from a qualified quantity surveyor providing: <ul style="list-style-type: none"> • a detailed calculation of the Capital Investment Value (CIV) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; 	A Summary Report is provided at Appendix B which includes the estimated cost of

Description / Requirement	Reference
<ul style="list-style-type: none"> • Provide details of consistency with any modification(s) to the Concept Application if sought concurrently; and • Include a detailed analysis of the proposal's compliance with the Victoria Cross Design Guidelines and Design Excellence Strategy. 	<p>Section 2.4 – Modification to Concept SSD DA</p> <p>Section 2.5 Design Development and Design Excellence & Section 8.1.1.</p>
3. Land Use and Gross Floor Area	
<ul style="list-style-type: none"> • Include a table identifying the proposed land uses including a floor-by-floor breakdown of gross floor area (GFA) and total GFA; • Include details of the proposed uses and/or operational details for the development, including but not limited to: <ul style="list-style-type: none"> – Fit-out and operational details; and – Preliminary operational management plan. 	<p>Appendix E – Design Report</p> <p>Section 4.5 – Operation and Fit-out Details</p>
4. Built Form and Urban Design	
<ul style="list-style-type: none"> • Describe the design process leading to the proposal; • Include an urban design analysis demonstrating how the orientation, height, setbacks, street walls and articulation of the proposal will fit within the context of the site and the existing and future desired future character of North Sydney CBD. 	<p>Section 4.6 – Built Form & Urban Design</p> <p>Appendix E – Design Report</p>
5. Design Excellence	
<ul style="list-style-type: none"> • Document how advice and feedback from the Sydney Metro Design Review Panel (DRP) and Design Excellence Evaluation Panel (DEEP) has been incorporated into the proposal. This must include the project team's response to feedback from these Panels including justification where advice has not been adopted; • Include details of the review and endorsement of the Sydney Metro DRP against the Design Excellence Strategy principles, benchmarks and Design Guidelines; and • Confirm the design process is in accordance with the endorsed Victoria Cross Design Excellence Strategy. 	<p>Section 5.3 – Sydney Metro Design Review Panel</p> <p>Appendix HH – Design Review Panel Endorsement Minutes Schedule</p> <p>Section 8.1.1.</p>
6. Integration with Sydney Metro Infrastructure	
<ul style="list-style-type: none"> • Distinguish the extent of the proposal that is SSD from the CSSI works (CSSI 7400), while noting any interrelationships and dependencies; • Demonstrate how the SSD will integrate with the CSSI infrastructure such as structural design, detailed architectural approach, access, wayfinding and public domain. This must include consideration of pedestrian capacities around the site and pedestrian comfort and safety, for example, consider weather protection where needed and potential conflict points with vehicles; 	<p>Included within the Architectural Plans at Appendix D and Section 4.3 – Relationship between OSD & Station Components</p>

Description / Requirement	Reference
<ul style="list-style-type: none"> • Address how the development supports the design objectives, principles and standards of the Station Design Precinct Plan and Interchange Access Plan under the CSSI; • Describe the coordination of, timing and implementation of access, landscape and public domain works associated with the CSSI and OSD development; • Detail any design approaches or solutions within the SSD proposal that will benefit the amenity of the station below, such as in relation to pedestrian access or solar access; and • Identify any modifications or design development to the CSSI which has influenced the SSD design. 	Section 4.7.1 and Section 8.1.2
7. Ecologically Sustainable Development (ESD)	
<ul style="list-style-type: none"> • Demonstrate how ESD principles (as defined in clause 7(4) Schedule 2 of the Regulation) will be incorporated in the design, construction and ongoing operation of the development; • Include a framework for how the proposed development will reflect best practice sustainable building principles to improve environmental performance, including energy and water efficient design and technology and use of renewable energy. This shall include commitments to relevant ESD benchmarks; and • Outline any specific sustainability initiatives that will minimise/reduce the demand for drinking water, including any alternative water supply and its use, water sensitive urban design and any water conservation measures proposed. 	Appendix K Section 8.1.6
8. Transport and Accessibility	
<ul style="list-style-type: none"> • Describe consultation undertaken with the owners of the MLC Building regarding basement vehicle access via shared connection or future breakthrough panel <p>Include a Transport and Traffic Impact Assessment that provides, but is not limited to, the following:</p> <ul style="list-style-type: none"> • Accurate details of the current daily and peak hour vehicle, public transport, point to point transport services, pedestrian and bicycle movements from existing buildings/uses on the site using the adjacent and surrounding road network; • Forecast total daily and peak hour trips likely to be generated by the proposed development including vehicle, public transport, point to point transport services, pedestrian and bicycle trips, including an indication of whether related to the station or OSD, together with cumulative impacts of existing, proposed and approved developments in the area and any transport/traffic upgrade; • An assessment of impacts of the development on the operation of existing and future transport networks, in particular bus corridors, including the public transport capacity and its ability to accommodate the forecast number of trips to and from the development; • Detailed assessment of the existing and future performance of key intersections providing access to the site, supported by appropriate modelling and analysis to the satisfaction of RMS and TfNSW; • Measures to mitigate impacts of the proposed development on the operation of existing and future traffic, public transport, pedestrian and bicycle networks; • Measures to be implemented, including a Green Travel Plan, to encourage users of the development to make sustainable travel choices, including walking, cycling, public 	Appendix T and Appendix CC Appendix T

Description / Requirement	Reference
<p>transport and car sharing, such as the integration with rail and bus infrastructure and provision of adequate bicycle parking and end of trip facilities;</p> <ul style="list-style-type: none">Proposed car and bicycle parking provision for workers and visitors, including consideration of the availability of public transport and the requirements of the relevant parking codes and Australian Standards;Modelling and analysis of pedestrian and cyclist access to the development in consultation with TfNSW, together with an assessment of pedestrian and cyclist safety and consideration of the relationship with design and operation of the station;Proposed vehicle access arrangements, including for service and loading activities, including an assessment of any potential impacts such as potential pedestrian, cyclist and transport conflicts, and measures to mitigate impacts;Adequacy of the loading dock servicing and management arrangements. <p>Provide a draft Construction Pedestrian and Traffic Management Plan to demonstrate the proposed management of impacts during construction. The Plan shall include:</p> <ul style="list-style-type: none">Vehicle routes, peak hour and daily truck movements, hours of operation, access arrangements (including swept path analysis) and traffic control measures for all demolition/construction activities including management of light commercial vehicles attending the site;An assessment of road safety at key intersections and locations subject to pedestrian / vehicle / bicycle conflicts;Details of temporary cycling and pedestrian access and end of trip facilities during construction; andAn assessment of the impacts associated with any required road / lane closures and diversions, on bus and 'point to point' transport, pedestrian and cycle movement, and taking into account other construction activities within the precinct, and other stations along the Sydney Metro City and Southwest.	<p>Appendix T</p>
9. Heritage	
<ul style="list-style-type: none">Include a detailed Heritage Impact Statement that identifies and addresses the extent of heritage impact of the proposal on the surrounding heritage items including the listed MLC Building and the Rag and Famish Hotel.	<p>Appendix L</p>
10. Amenity	
<ul style="list-style-type: none">Include detailed solar access analysis for relevant LEP protected public domain areas and private land. The analysis must include, at a minimum, shadow diagrams at hourly intervals in mid-winter and sun's eye views of impacts on relevant publicly accessible spaces. The analysis must include a comparison of the existing situation, the proposed modified building envelope and the proposal;outline the proposal's response to view sharing from the adjoining Alexander Apartments to the east including a comparison of existing views, views arising from the proposed modified building envelope and views arising from the proposal. This must include consideration of the Land and Environment Court's view sharing principles;	<p>Appendix E and Section 8.1.5</p> <p>Appendix E, Appendix U, and Section 8.1.4</p>

Description / Requirement	Reference
<ul style="list-style-type: none"> provide a view analysis to and from the site from key vantage points and streetscape locations including photomontages or perspectives of the proposal; provide wind analysis, including wind tunnel testing, outlining the impacts to existing and proposed public domain areas and any terraces or useable outdoor space within the proposal; and provide a reflectivity analysis identifying possible adverse glare conditions affecting users of the public domain and occupants of neighbouring buildings. 	<p>Appendix U and Section 8.1.4</p> <p>Appendix M and Section 8.1.10</p> <p>Appendix DD and Section 8.1.11</p>
11. Noise and Vibration	
<ul style="list-style-type: none"> Identify any sensitive receivers to noise in the vicinity of the site, particularly child care centres and schools' identify the main noise and vibration generating sources and activities at all stages of construction, and any noise and vibration sources during operation; consider cumulative noise and vibration impacts with the approved CSSI works; and outline measures to minimise and mitigate the potential noise and vibration impacts on surrounding occupiers of land. 	<p>Appendix S, Appendix V, and Section 8.1.12</p>
12. Utilities	
<p>The EIS shall identify the existing capacity of the site to service the proposal and any augmentation required for utilities.</p>	<p>Appendix W and Section 8.1.13</p>
13. Public Benefit and Contributions	
<ul style="list-style-type: none"> Outline the application of the North Sydney Section 94 Development Contributions Plan 2013; any additional public benefit, land dedication, services or infrastructure; and describe any proposed Voluntary Planning Agreement or other binding agreement with public authorities for any 'works in kind' or other public benefit. 	<p>Section 6.13 – North Sydney Section 7.11 Development Contributions Plan</p>
14. Prescribed Airspace for Sydney Airport	
<p>The EIS shall identify any impacts of the proposal on the prescribed airspace for Sydney Airport.</p>	<p>Appendix X and Section 8.1.20</p>
15. Biodiversity	
<p>The EIS shall provide an assessment of the proposal's biodiversity impacts in accordance with the <i>Biodiversity Conservation Act 2016</i>, including the preparation of a Biodiversity Development Assessment Report where required under the Act.</p>	<p>Appendix H and Section 7.2 – Biodiversity Conservation Act 2016</p>
PLANS AND DOCUMENTS	
<p>The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include the following:</p>	

1.7. OTHER APPROVALS

In addition to the approvals noted elsewhere in this document, other approvals will be required in the future to permit the construction of the OSD. These approvals may include, but are not limited to, the following:

- Approvals under the *Roads Act 1993* (including Section 138 approvals) may be required. A consent under section 138 of the *Roads Act 1993* cannot be refused if it is necessary for carrying out SSD that is authorised by a development consent and any Roads Act consent must be substantially consistent with the SSD consent.
- An environment protection licence under the *Protection of the Environment Operations Act 1997*. An environment protection licence under Chapter 3 of the *Protection of the Environment Operations Act 1997* cannot be refused if it is necessary for carrying out SSD that is authorised by a development consent and any licence must be substantially consistent with the consent.
- A compliance certificate issued under Section 73 of the *Sydney Water Act 1994*.
- The Outer Horizontal Surface of the Obstacle Limitation Surface (**OLS**) across the site is 156m AHD, and therefore, the proposed building envelope (230m AHD) will require approval under the *Airports (Protection of Airspace) Regulations*. The Detailed SSD DA is accompanied by an Aeronautical Impact Assessment (**Appendix X**) to address the OLS penetration.

2. BACKGROUND

2.1. SYDNEY METRO

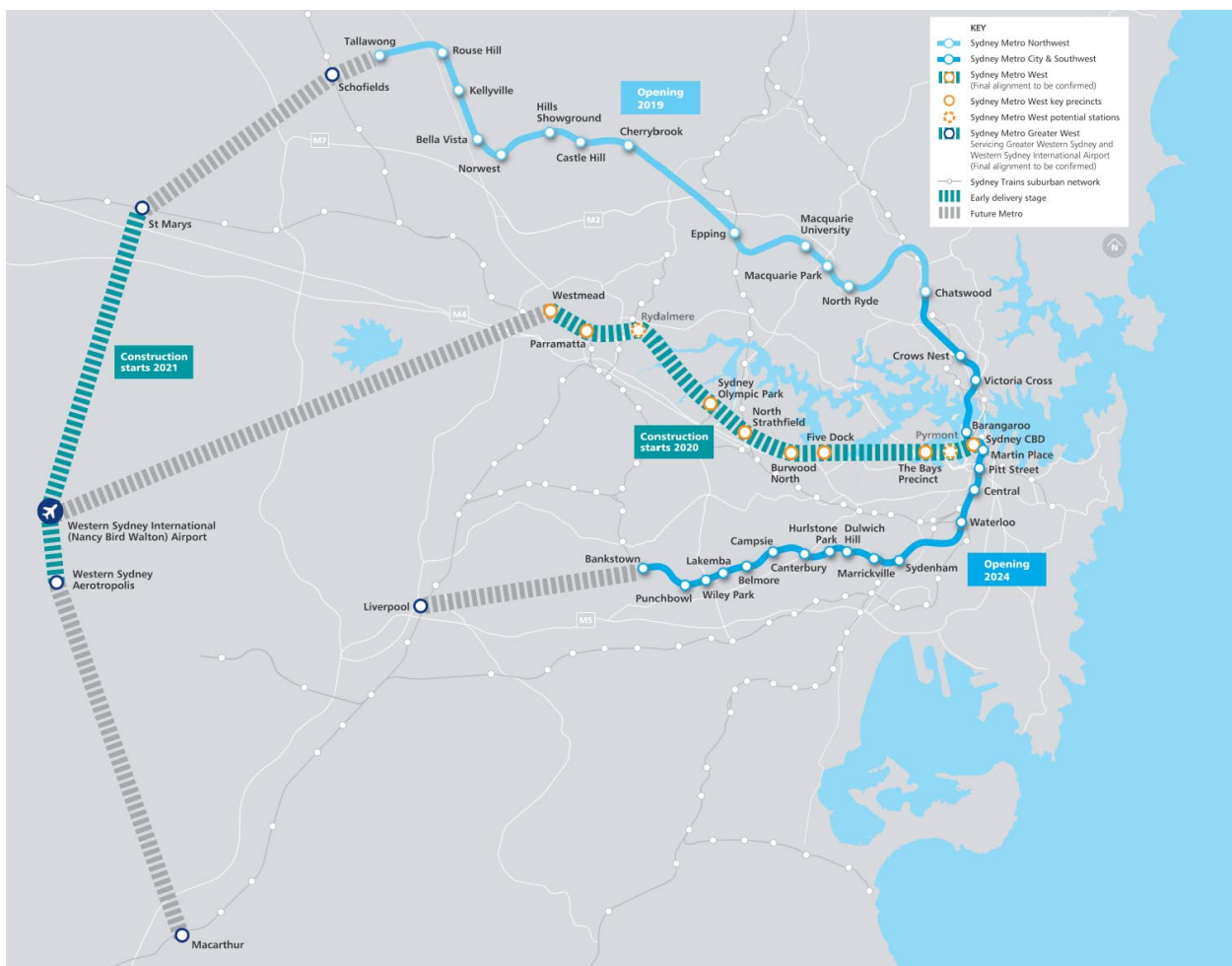
Sydney Metro is Australia's biggest public transport project. Services started in May 2019 in the city's North West with a train every four minutes in the peak. Metro rail will be extended into the CBD and beyond to Bankstown in 2024. There will be new metro railway stations underground at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new metro platforms under Central.

In 2024, Sydney will have 31 metro railway stations and a 66 km standalone metro railway system – the biggest urban rail project in Australian history. There will be ultimate capacity for a metro train every two minutes in each direction under the Sydney city centre. The Sydney Metro project is illustrated in **Figure 5**

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest - Chatswood to Sydenham project as a Critical State Significant Infrastructure project (reference SSI 15_7400) (CSSI Approval). The terms of the CSSI Approval includes all works required to construct the Sydney Metro Victoria Cross Station, including the demolition of existing buildings and structures on both sites. The CSSI Approval also includes construction of below and above ground improvements with the metro station structure for appropriate integration with the OSD.

With regards to CSSI related works, any changes to the “metro box envelope” and public domain will be pursued in satisfaction of the CSSI conditions of approval and do not form part of the scope of the Concept SSD DA for the OSD.

Figure 5 – Sydney Metro Alignment Map



Source: Sydney Metro

2.2. CSSI APPROVAL SYDNEY METRO CITY & SOUTHWEST (SSI 15_7400)

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest – Chatswood to Sydenham project as a Critical State Significant Infrastructure project (reference SSI 15_7400) (**CSSI Approval**). The CSSI Approval granted consent for:

Construction and operation of a metro rail line, approximately 16.5 kilometres long (of which approximately 15.5 kilometres is located in underground rail tunnels) between Chatswood and Sydenham, including the construction of a tunnel under Sydney Harbour, links with the existing rail network, seven metro stations, and associated ancillary infrastructure.

The terms of the CSSI Approval include all works required to construct each of the Sydney Metro stations, including the Victoria Cross Station. Except to the extent described in the EIS or Preferred Infrastructure Report (**PIR**) submitted with the CSSI application, any OSD buildings and uses, do not form part of the CSSI Approval and will be subject to the relevant assessment pathway prescribed by the EP&A Act. Details of the CSSI Approval are provided in the following sections.

2.2.1. Primary Station Works and OSD Structural / Service Provisions

The CSSI Approval includes the construction of all below and above ground works required to deliver the Sydney Metro Victoria Cross Station. The Sydney Metro CSSI EIS and PIR outlines the integration between the future OSD and the Victoria Cross Station. The EIS submitted with the CSSI application states that:

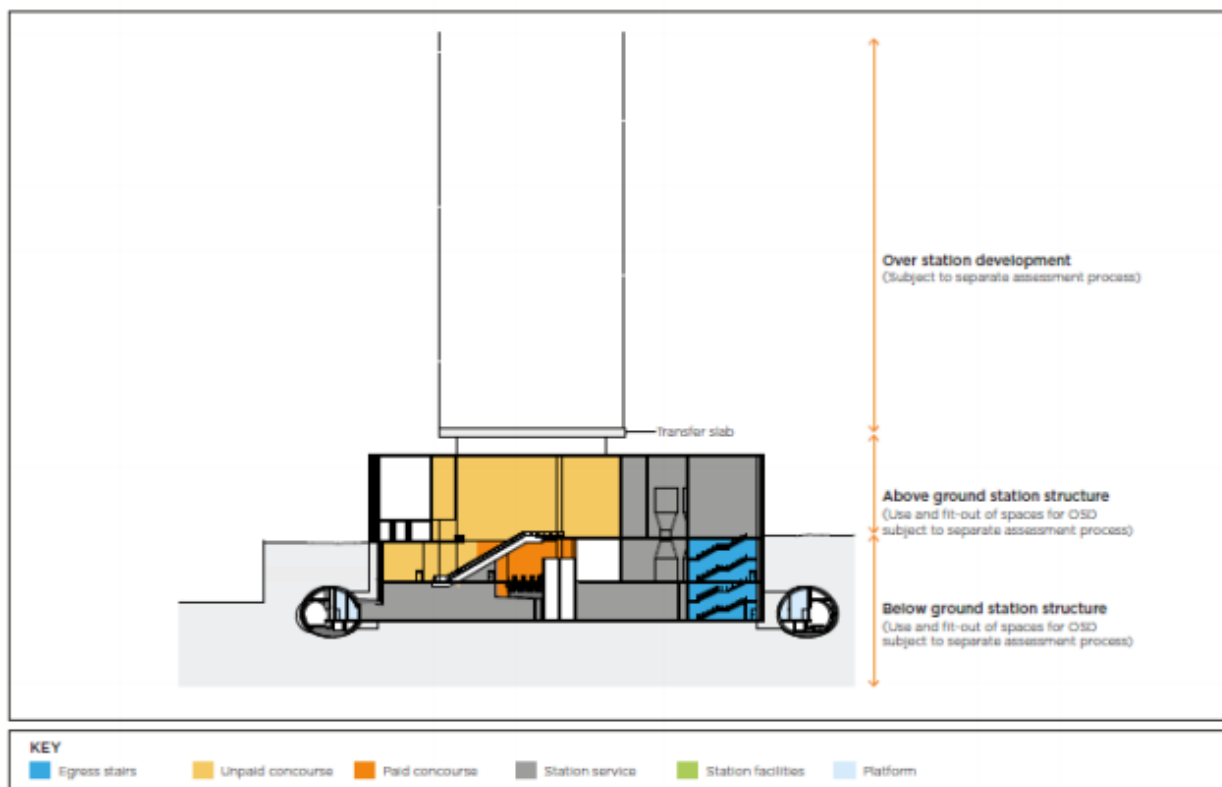
“the Metro stations would be designed and constructed to take into account, and make physical provision for, any design or other requirements associated with possible future over station development.”

The EIS and PIR clarifies this further by identifying that, subject to detailed design, the Sydney Metro stations will include:

- structural elements (steel and / or concrete), building grids, column loadings and building infrastructure to enable the construction of future over station development; and
- space for future lift cores, access, parking and building services for the future over station development.

The CSSI Approval also allows provision for structural and service areas associated with the construction of the OSD, including utility connections. The extent of the approved station works includes up to the ‘transfer slab’ level above the ground plane, as described on page 139 of the CSSI EIS and page 15 of the PIR, and is illustrated at **Figure 6**. This makes it clear that the transfer slab is effectively the defining line between the above ground station structure or ‘metro box’ (the subject of the CSSI Approval) and the over station development the subject of this Detailed SSD DA.

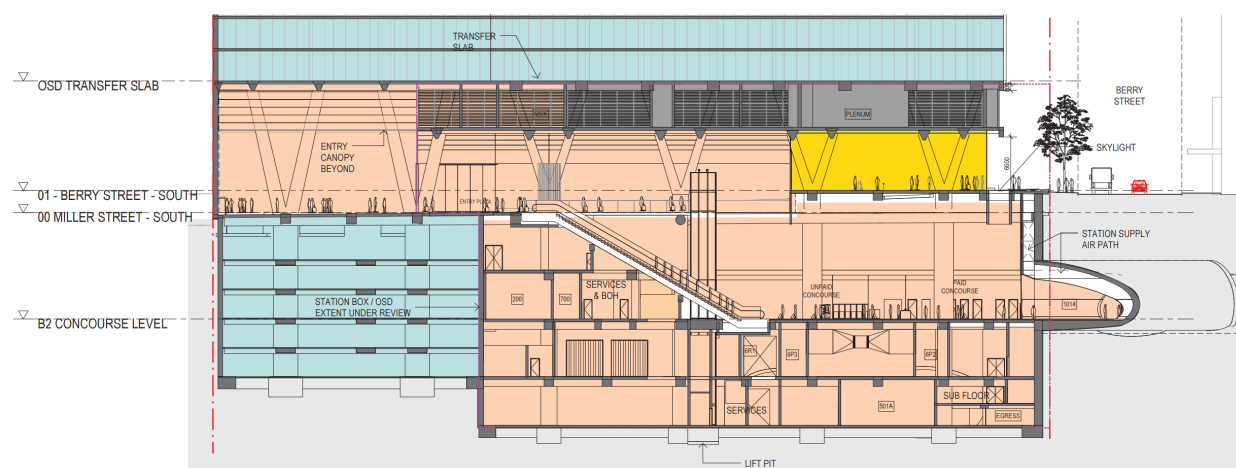
Figure 6 – Typical over station development interface



Source: Environmental Assessment Report under Section 115ZA of the EP&A Act, Dec 2016

As such the only components of the Sydney Metro Victoria Cross Station OSD that has been approved within the CSSI Approval includes structural elements to support the OSD, suitable spatial allocation within the 'Sydney Metro box' envelope for OSD components, and public domain works and embellishment. The construction of each of these elements will be authorised by the CSSI Approval conditions and do not form part of the scope of the Detailed SSD DA for the OSD. These items are generally highlighted in orange in the section below.

Figure 7 – Indicative Victoria Cross Station OSD Interface



Source: Sydney Metro CSSI PIR,

2.2.2. Demolition

The demolition of all existing buildings across the site was approved under the CSSI Approval, as demolition works were required for the construction of the Sydney Metro Victoria Cross Station. Therefore, the Detailed SSD DA does not seek consent for any demolition works on the site. At the time of writing this report, all buildings previously on site had been demolished and replaced with a temporary shed structure containing the site to aid the carrying out of works associated with constructing the station.

2.2.3. Bulk Earthworks

Bulk earthworks and excavation across the site will be delivered as per the CSSI Approval. The extent of the earthworks and excavation methodology to be used is discussed within the EIS and the PIR submitted with the CSSI application. As such, the Detailed SSD DA does not seek consent for bulk earthworks or excavation.

2.2.4. Public Domain Works

In accordance with condition E101 of the CSSI Approval, a Station Design and Precinct Plan (**SDPP**) must be prepared that presents an integrated urban and place making outcome for each station. Further, condition E92 requires the proponent to develop an Interchange Access Plan (**IAP**) for each station to inform the final design of transport and access facilities and services, including footpaths, cycleways, passenger facilities, parking, traffic and road changes, and integration of public domain and transport initiatives around and at each station.

The design and delivery of all public domain works within and surrounding the site will therefore be subject to the satisfaction of conditions of the CSSI Approval, in particular through approval of the SDPP and the IAP by the Secretary of the NSW DPIE or their delegate prior to the commencement of any above ground works. Accordingly, the Detailed SSD DA does not seek consent for any public domain works.

While the public domain works form part of a separate planning process, the proposal includes references to the proposed public domain and addresses the interface of the proposed OSD with the ground plane, notably through the architectural design of the podium, use of four levels of the podium for retail premises including food and drink premises and future outdoor dining, and provision of a through-site link at the southern portion of the site between Miller Street and Denison Street.

Further, the through-site link will be designed to satisfy the CSSI Approval and therefore not be included within the detailed SSD DA. However the Detailed SSD DA includes the fit-out and use of the retail spaces located adjacent to the thoroughfare, including the commercial and 'The Hub' spaces.

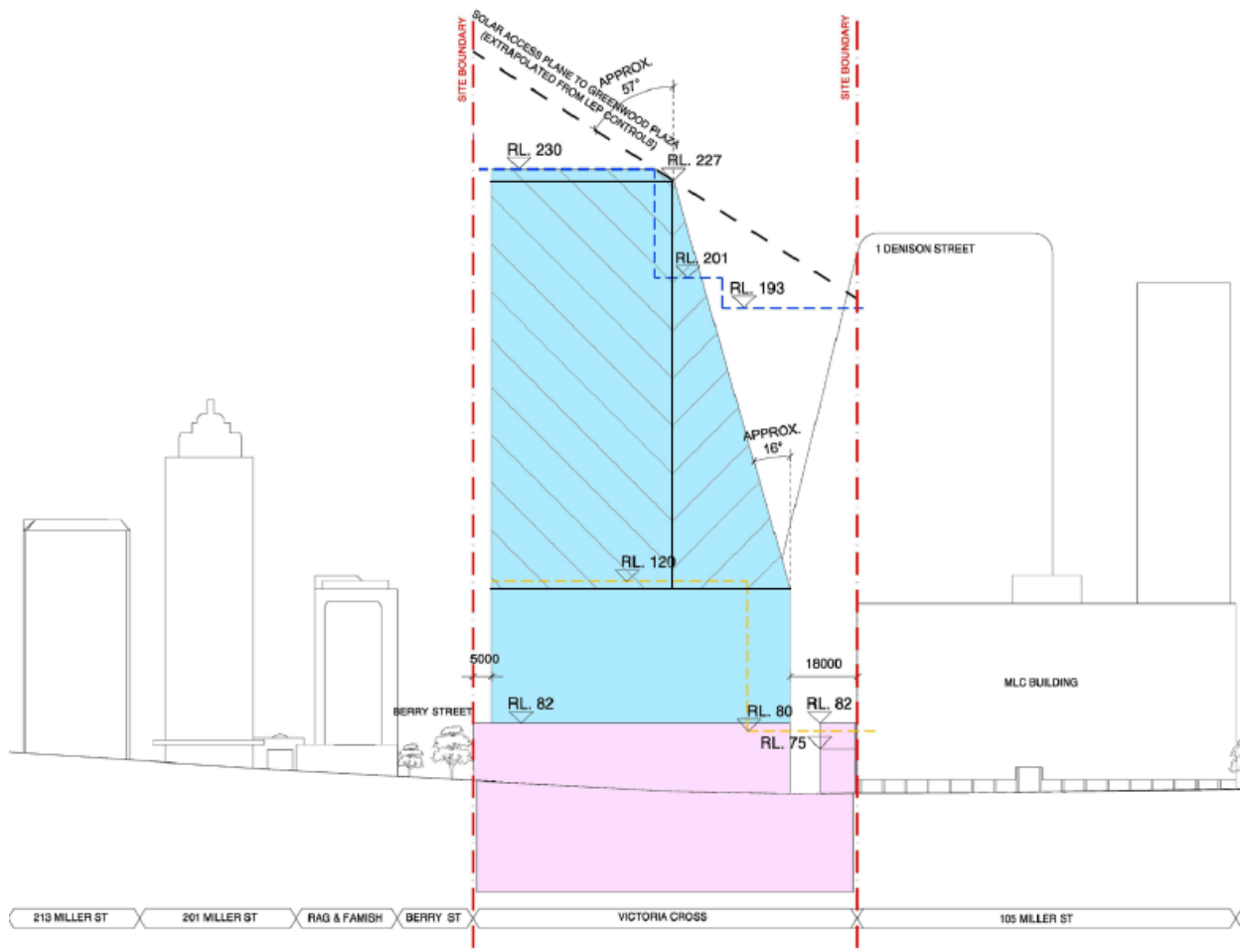
2.3. CONCEPT PROPOSAL (SSD 17_8874)

The Minister for Planning granted development consent to SSD 17_8874 for Concept Approval of a commercial mixed-use OSD above the new Sydney Metro Victoria Cross Station on 18 December 2018. This concept development consent includes conceptual approval for:

- A maximum building envelope, including street-wall and setbacks for the over station development
- A maximum building height of RL 230 or 168 metres, providing:
 - Approximately 40 commercial storeys and 2 additional storeys for rooftop plant for the high-rise portion of the building envelope
 - Approximately 13 storeys for the lower eastern portion of the building envelope at RL 118 or 55 metres
- A maximum gross floor area (GFA) of 60,000sqm, excluding station floor space
- Basement car parking for a maximum 150 parking spaces

The Concept SSD DA instrument of approval does not consent to any physical works commencing on site. This EIS supports the Detailed SSD DA to physically commence works on site, in general accordance with the terms and conditions of SSD 17_8874 (discussed below).

Figure 8 – Approved Concept SSD DA Building Envelope



Source: SSD 17_8874 Approved Plans (Miller Street Elevation)

The Development Consent for application SSD 8874 issued on 18 December 2018 included two components. 'Part A' related to the terms of the consent, whilst 'Part B' included the conditions to be satisfied in future detailed development application(s). **Table 2** below outlines the conditions to be satisfied as identified under Part B of the Concept Development Consent and how they relate to and/or are addressed within this EIS as part of the Detailed SSD DA.

Table 2 – Concept DA SSD 8874 Conditions of Consent to be Satisfied

Condition / Requirement	Document Reference
BUILT FORM AND URBAN DESIGN	
B1. The detailed DA(s) shall address compliance with:	
a) the Design Guidelines as endorsed by the Planning Secretary pursuant to conditions A26 and A27	Section 8.1.1
b) the Design Excellence Strategy as endorsed by the Planning Secretary pursuant to condition A28, including the advice of the Sydney Metro Design Review Panel and the Victoria Cross Design Excellence Evaluation Panel as contained within the Design Excellence Report.	Section 8.1.1 and as discussed at Section 5.4

Condition / Requirement	Document Reference
<p>B2. The following elements of the concept development application are not inconsistent with the concept proposal but are subject to further assessment with the relevant detailed DA(s):</p> <ul style="list-style-type: none"> a) architectural roof features such as projecting fins or poles b) design and use of rooftop terrace areas c) indicative signage zones, following preparation of a Signage Strategy d) subdivision 	<p>No architectural roof features are proposed</p> <p>Section 4.6.5</p> <p>Section 4.10 and Section 7.6</p> <p>Section 4.1.4</p>
<p>B3. The detailed DA shall address the following built form considerations:</p> <ul style="list-style-type: none"> a) building massing or facade detailing to provide visual reference to the height of surrounding buildings including the MLC Building b) modulation and expression of built forms within the articulation zone are to break up the bulk and scale of the building and minimise visual impacts above publicly accessible space c) minimisation of privacy impacts to the adjoining Alexander Apartments through suitable placement of building services and lift cores and appropriate architectural treatments or devices d) wind mitigation measures arising from compliance with Condition B6 below e) integration with the approved Metro station 	<p>Section 8.1.3</p> <p>Section 8.1.2</p> <p>Section 8.1.4</p> <p>Section 8.1.10</p> <p>Section 4.7</p>
HERITAGE IMPACT ASSESSMENT	
<p>B4. Future detailed DA(s) shall include a detailed Heritage Impact Assessment and a Heritage Interpretation Strategy for the proposed works, prepared in consultation with the Heritage Council of NSW. The Heritage Impact Assessment must address the recommendations of the concept stage Heritage Impact Assessment dated 15 May 2018 prepared by OCP Architects.</p>	<p>Section 8.1.3 and Appendix L</p>
ENVIRONMENTAL PERFORMANCE / ESD	
<p>B5. Future detailed DA(s) must demonstrate how the principles of ESD have been incorporated into the design, construction and ongoing operation of the proposal. The ESD credentials of the detailed DA shall be in accordance with the framework, core objectives and visions of the ESD Report lodged with the EIS prepared by <i>AECOM Australia</i>.</p>	<p>Section 8.1.6 and Appendix K</p>
WIND IMPACTS	
<p>B6. The detailed DA shall be accompanied by a Wind Impact Assessment including computer modelling of the detailed building form. Compliance shall be demonstrated with the <i>Lawson wind comfort criteria</i> through the incorporation of mitigation measures within the detailed design.</p>	<p>Section 8.1.10 and Appendix M</p>
SECURITY AND CRIME ASSESSMENT	

Condition / Requirement	Document Reference
B7. Future detailed DA(s) shall be accompanied by a Security and Crime Risk Assessment prepared in consultation with NSW Police having regard to NSW Police publication <i>"Safe Places" Vehicle Management: A comprehensive guide for owners, operators and designers</i> and CPTED principles.	Section 8.2 and Appendix AA
FIRE AND RESCUE ASSESSMENT	
<p>B8. Future detailed DA(s) shall be accompanied by a draft Fire and Rescue Assessment/ Engineering Brief for the OSD prepared in consultation with Fire and Rescue NSW providing relevant details of:</p> <ul style="list-style-type: none"> a) The various sectors within the Victoria Cross Metro site served by independent fire systems (such as the OSD, the underground and aboveground metro sector, etc) b) Fire engineering analysis of the pedestrian connection interfaces between the sectors and the sectors themselves, having regard to emergency occupant egress, fire and smoke compartmentation, smoke hazard management and firefighting intervention c) Adequacy of fire and life safety systems within the Victoria Cross Metro site in relation to the fire hazards of the Sydney Metro d) Design of fire hydrant systems for OSD elements that exceed 135 m e) Future consultation to be undertaken with Fire and Rescue NSW in respect of the final design and construction of the OSD and operational compatibility of the Victoria Cross Metro site's proposed fire and life safety systems. 	Section 8.1.16 and Appendix P
CONSTRUCTION IMPACT ASSESSMENT	
<p>B9. Future detailed DA(s) shall provide analysis and assessment of the impacts of construction and include:</p> <ul style="list-style-type: none"> a) Construction Traffic Management Plan as per condition B11(e) b) Cumulative Construction Impact Assessment (i.e. arising from concurrent construction activity) c) Noise and Vibration Impact Assessment d) Community Consultation and Engagement Plans e) Construction Waste Management Plan f) Air Quality Management Plan <p>The plans referred to above may be prepared as part of a Construction Environmental Management Plan prepared and implemented under the conditions of any consent granted by future development applications, having regard to the Construction Environmental Management Framework and Construction Noise and Vibration Strategy prepared for the City Metro City and Southwest (CSSI 7400).</p>	<p>Appendix W</p> <p>Appendix S</p> <p>Appendix BB</p> <p>Appendix R</p> <p>Appendix W</p>
TRAFFIC, ACCESS AND CAR PARKING	
B10. Future detailed DA(s) shall be accompanied by a Traffic and Transport Impact Assessment.	Appendix T
B11. Future detailed DA(s) shall incorporate the following:	

Condition / Requirement	Document Reference
<ul style="list-style-type: none"> a) include a strategy, including possible technological solutions, that will manage conflict between loading dock, parking area access and bike parking access b) demonstration of manoeuvring of larger/longer vehicles via Denison Street including swept path analysis, if larger or longer vehicles are required to service the OSD compared to the station infrastructure c) demonstration of wayfinding infrastructure and public exposure to bicycle parking within the basement d) consideration of responsibilities, timing and commitments to the development of pedestrian facilities and bicycle infrastructure proposed to be undertaken by other parties e) a Construction Traffic Management Plan (CTMP) prepared in consultation with the Sydney Coordination Office and North Sydney Council, and to the satisfaction of the relevant roads authorities. The CTMP shall include, but not be limited to: <ul style="list-style-type: none"> o construction car parking strategy o haulage movement numbers/ routes including contingency routing o detailed travel management strategy for construction vehicles including staff movements; o maintaining property accesses o maintaining bus operations including routes and bus stops o maintaining pedestrian and cyclist links/ routes o independent road safety audits on construction-related traffic measures o measures to account for any cumulative activities/ work zones operating simultaneously. 	
<p>B12. Independent road safety audits are to be undertaken for all stages of detailed design development involving road operations and traffic issues relevant to the OSD. Any issues identified by the audits shall be closed out in consultation with the Sydney Coordination Office and North Sydney Council to the satisfaction of the relevant road authorities.</p>	Section 5.3
UTILITIES	
<p>B13. Future detailed DA(s) shall address the existing capacity and any augmentation requirements of the development for the provision of utilities, including staging of infrastructure through the preparation of an infrastructure / utility management plan in consultation with relevant agencies and service providers.</p>	Appendix W and Section 8.1.13
NOISE AND VIBRATION	
<p>B14. Future detailed DA(s) shall be accompanied by a Noise and Vibration Impact Assessment that identifies and provides a quantitative assessment of the main noise generating sources and activities during operation including consideration of noise and vibration impacts associated with commercial development above a train station. Details are to be included outlining any mitigation measures necessary to ensure the amenity of</p>	Appendix S and Section 8.1.12

Condition / Requirement	Document Reference
future sensitive land uses on the neighbouring sites is protected during the operation of the development.	
FLOODING AND STORMWATER	
B15. Future detailed DA(s) shall be accompanied by a Flood Impact Assessment.	Appendix Q

2.4. MODIFICATION TO CONCEPT SSD DA (SSD 17_8874)

Following Sydney Metro's appointment of Lendlease (Victoria Cross) Pty Limited as the preferred development partner to deliver the Victoria Cross Station OSD, and ongoing design development, minor modifications to the approved building envelope are now required to accommodate the detailed design.

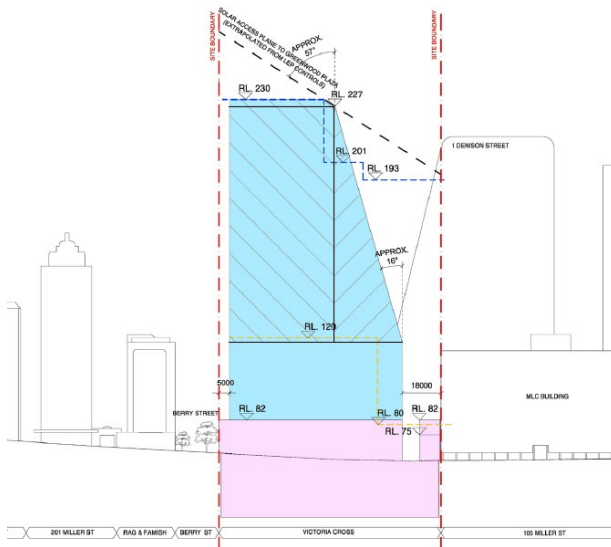
A modification application to the Concept proposal has therefore been lodged concurrently with the Detailed SSD DA. The section 4.55(2) modification application seeks consent for the following amendments to the approved building envelope:

- Reduction in the massing and overall dimensions of the building cantilever above the Miller Street special area setback;
- Relocation of building massing from the low-rise levels of the tower, north of the through-site link, to the high-rise levels of the tower increasing the setback of the tower from the MLC Building by 10 metres;
- Reduction of the Berry Street setback from 5 metres to 4.5 metres, extending the building envelope marginally to the north;
- Increase in the total GFA across the site to 61,500sqm; and
- Lowering the base of the tower by 400mm from RL 82 to RL 81.6.

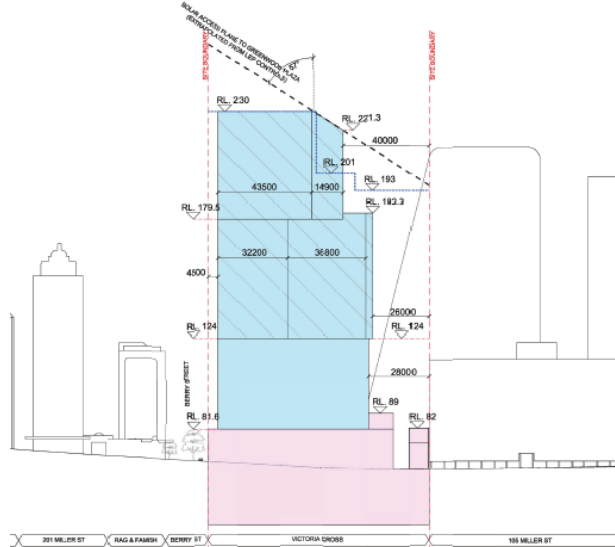
A visual representation of amendments proposed to the approved Stage 1 Concept SSD DA building envelope are illustrated in **Figure 9** below. The modified building envelope denotes the Victoria Cross Station CSSI approval or "metro box" in pink, whereas the OSD envelope is shown in blue.

As illustrated in the figure below, some changes have occurred within the pink CSSI "metro box" component. It is noted that these changes have been approved through the 'consistency assessment' process under the CSSI Approval and are not within the scope of the proposed building envelope modification.

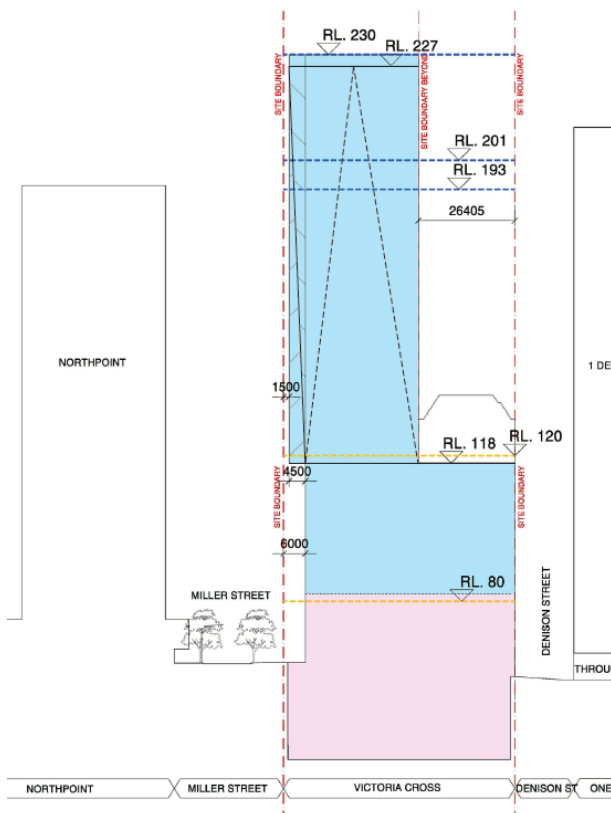
Figure 9 – Concept Building Envelope Amendment



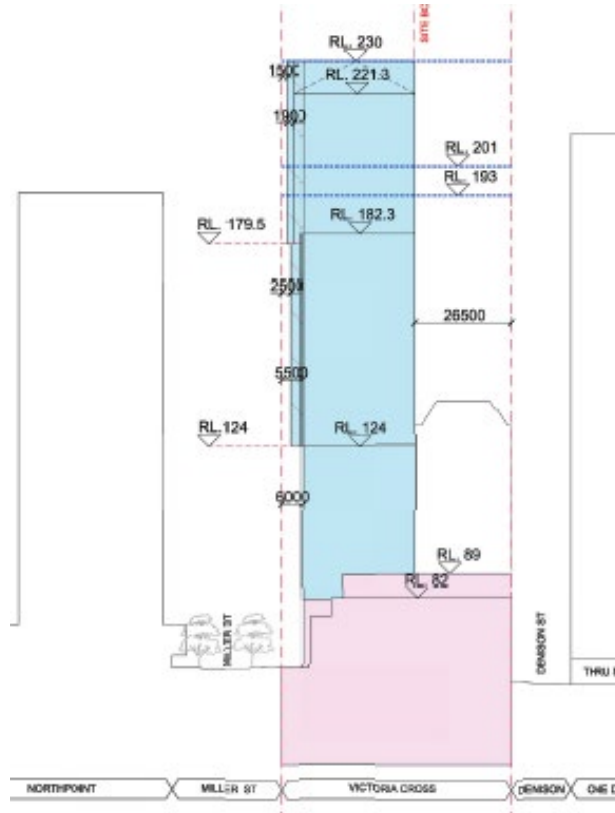
Picture 3 – Approved Building Envelope West Elevation



Picture 4 – Modified Building Envelope West Elevation



Picture 5 – Approved Building Envelope South Elevation



Picture 6 – Modified Building Envelope South Elevation

Source: SSD 17_8874 approved plans

As illustrated at **Picture 3** and **Picture 4** above, the modified building envelope includes an additional 10m setback to the MLC building to the south, and while minor increases of built form are proposed at the upper levels, the approved cantilever over the Miller Street setback area has been reduced. Further, there is a significant reduction to the bulk and massing proposed north of the through site link and to Denison Street as illustrated at **Picture 5** and **Picture 6**. A minor (500mm) reduction in the tower setback is proposed to Berry Street.

While the modification includes changes to the approved building heights in the southern portion of the tower, there is no overall change to top of building height and the sun access plane to Greenwood Plaza

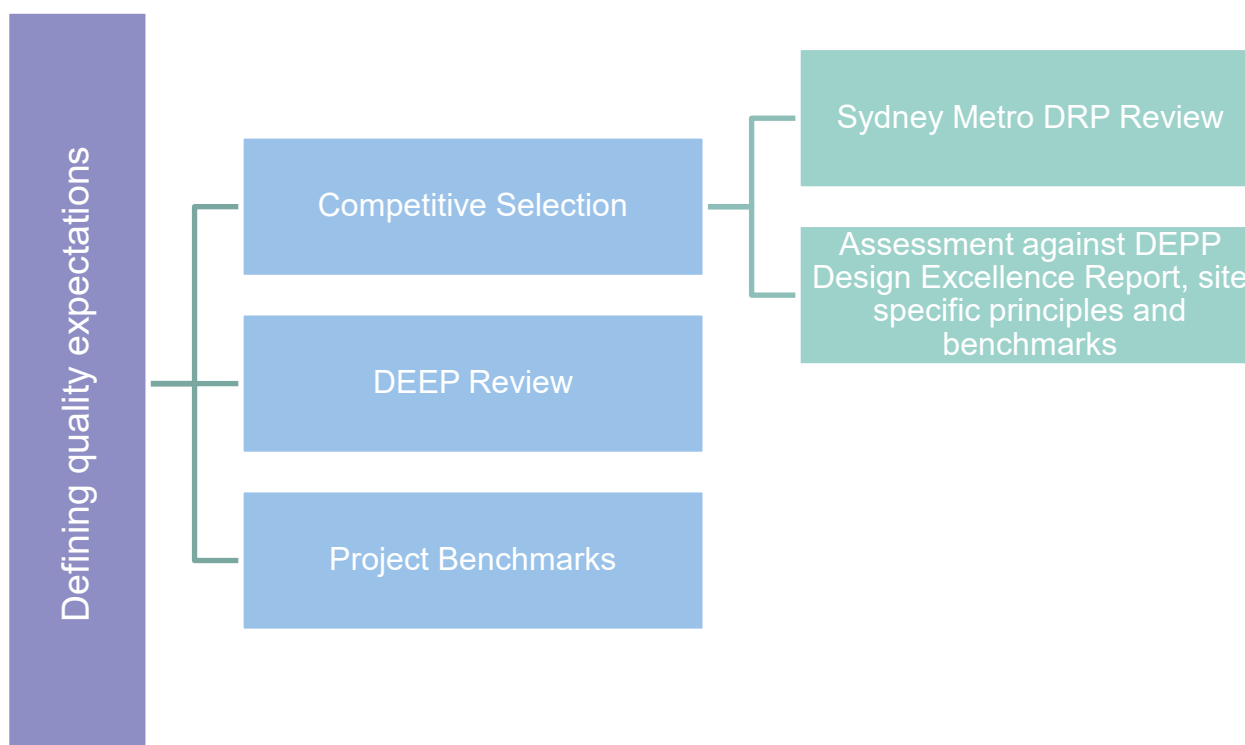
remains unencumbered. The proposed development of this Detailed SSD DA is consistent with the Concept Approval building envelope as proposed to be modified.

2.5. DESIGN DEVELOPMENT AND DESIGN EXCELLENCE PROCESS

The Concept SSD DA includes a Design Excellence Strategy for all integrated station developments part of the Sydney Metro City & Southwest project, and a set of specific Design Guidelines for the Victoria Cross Station OSD. These documents were established to guide the detailed design of the future OSD and ensure a high quality of design was achieved for the site and other over station developments.

The endorsed Design Excellence Strategy is included at **Appendix CC**. The Design Excellence Strategy comprises a multi-phase process including a competitive selection which involved an *Expression of Interest (EOI)* and *Request for Tender* process, benchmarking studies and continued design review by a Design Excellence Evaluation Panel (**DEEP**) and subsequently the Sydney Metro Design Review Panel (**DRP**). A summary of the design excellence process undertaken is illustrated in **Figure 10** below.

Figure 10 – Summary of Design Excellence Process

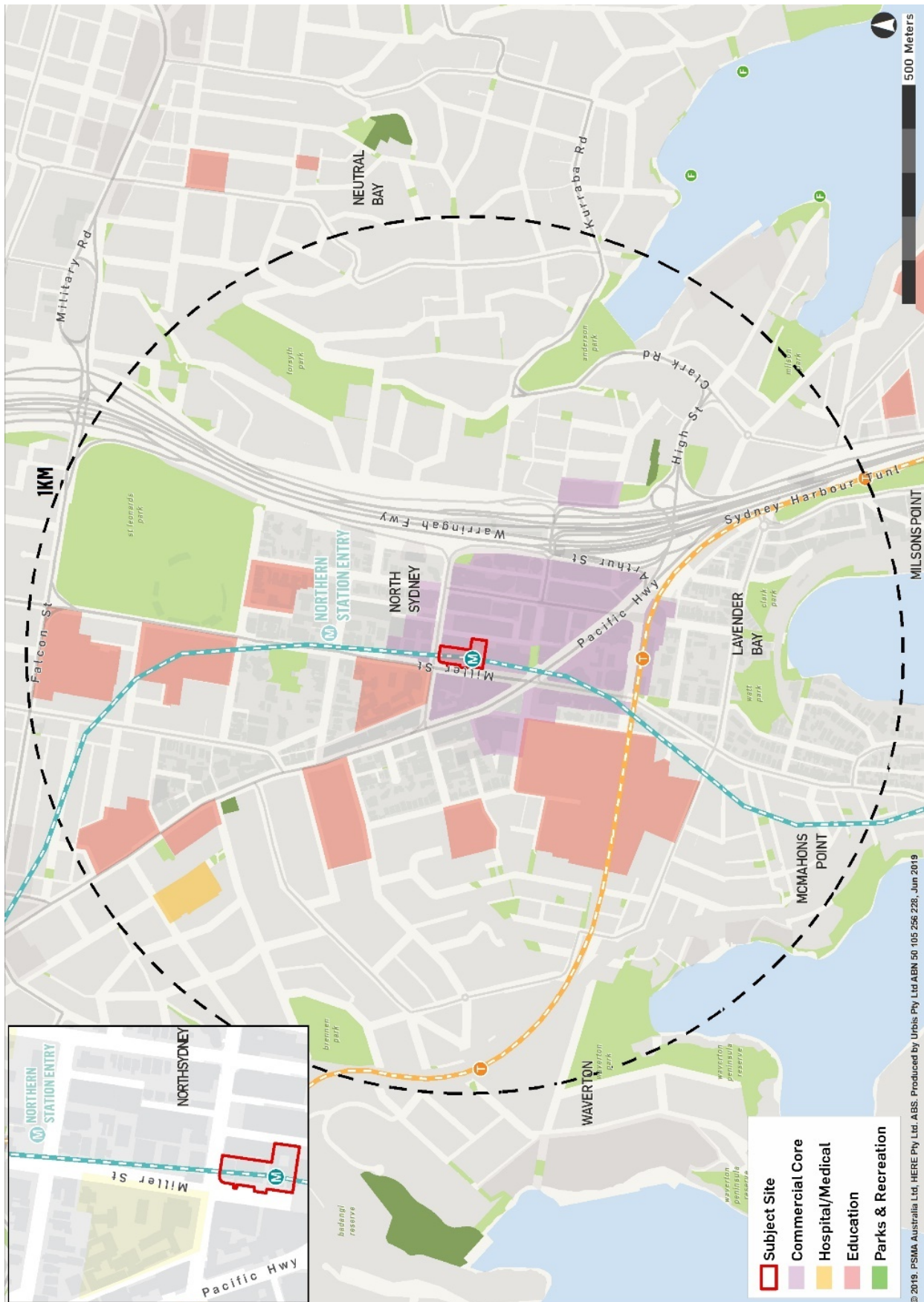


A critical objective of the competitive tendering process was to review alternative approaches to the Victoria Cross Station southern site and strive for design excellence for the OSD project. Following the approval of the Concept SSD Proposal and completion of the EOI and Request for Tender process, Lendlease and its architect Bates Smart (the Architect) were chosen as the successful development partner for the Sydney Metro Victoria Cross Station OSD.

Since the selection of Lendlease as the development partner for the Victoria Cross Station OSD, the applicant has presented to the Sydney Metro DRP ninetetimes. Throughout this process the DRP has provided ongoing design review of the proposed Victoria Cross Station OSD proposal to ensure design excellence and integrity have been achieved.

The specific details of the consultation undertaken to achieve design excellence in accordance with the Design Excellence and Design Guidelines is outlined at **Section 5**, with a detailed discussion of the proposal's design excellence included at **Section 8.1.1**.

Figure 12 – Location Map of Subject Site



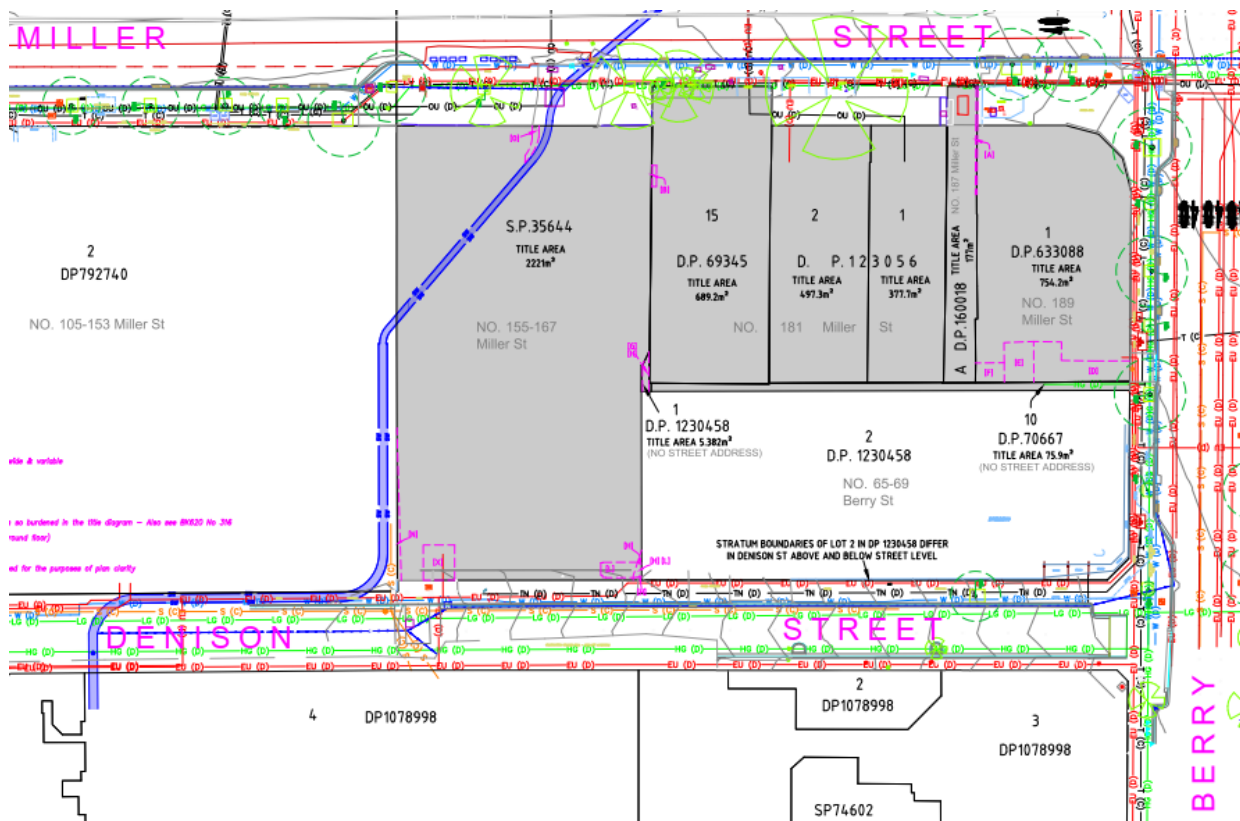
3.2. LEGAL DESCRIPTION

The site is generally described as 155-167 Miller Street, 181 Miller Street, 187-189 Miller Street and part of 65 Berry Street, North Sydney (**the site**). The site occupies various addresses/allotments and is legally described as follows:

- 155-167 Miller Street (SP 35644) (which incorporates lots 40 and 41 of Strata Plan 81092 and lots 37, 38 and 39 of Strata Plan 79612)
- 181 Miller Street (Lot 15/DP 69345, Lot 1 & 2/DP 123056, Lot 10/DP 70667)
- 187 Miller Street (Lot A/DP 160018)
- 189 Miller Street (Lot 1/DP 633088)
- Formerly part 65 Berry Street (Lot 1/DP 1230458)

The allotments include a series of easements affecting parts of the land for stormwater drainage and sewer as outline within the Site Survey included within the Concept SSD DA EIS. The existing easements however do not impede the construction of the approved development as proposed to be modified. The various allotments that comprise the site area are illustrated in **Figure 13**.

Figure 13 – Site Survey Extract



Source: RPS

3.3. EXISTING DEVELOPMENT

Prior to the demolition of all buildings across the site under the terms of CSSI Approval, the site was occupied by a mix of low-rise retail and mid-rise office developments. These are briefly discussed below:

- **155-167 Miller Street (formerly Tower Square)** – two-storey shopping centre between Miller and Denison Street, including restaurants, cafes, retail shops, basement parking and an outdoor eating area;
- **181 Miller Street** – 14-storey commercial tower with a frontage to Miller Street. Retail premises occupied the lower levels with office spaces above. There was a consistent setback with no pronounced podium.

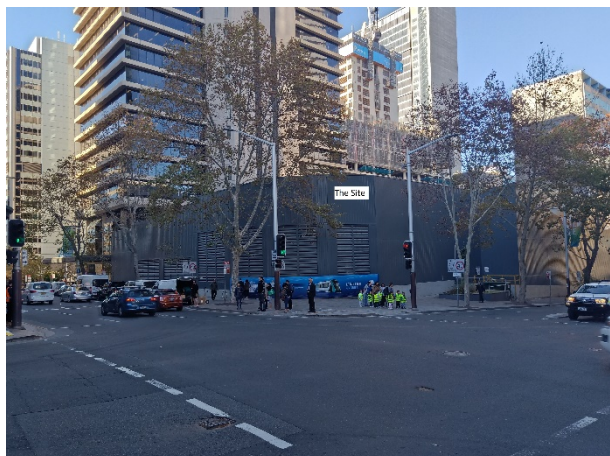
- **187 Miller Street** – two-storey shop (Jewellers) with frontage to Miller Street. The Jewellery shop was listed as a heritage item in NSLEP 2013.
- **189 Miller Street** – seven-storey commercial building with frontage to Miller Street Retail premises occupied the lower levels with office spaces above. There was a consistent setback with no pronounced podium; and
- **Part 65 Berry Street** – access way to 65 Berry Street which does not comprise any buildings / structures. The site was bounded by external walls of Tower Square and 65 Berry Street.

The previous site conditions displayed a pattern of development with very little consistency in scale, form or alignment. Mid-rise commercial buildings were abutting low-rise retail/food and drink premises, intertwined with an outdoor eating area.

Denison street is frequently used by pedestrians as a thoroughfare during peak times and is anticipated to support increased pedestrian traffic once Victoria Cross Station is constructed. The current pathway conditions are narrow and illegible due in part to the presence of construction hoardings, and overall is considered to be a poor interface for pedestrians and vehicles using the road.

As discussed, all the buildings / structures previously on the site have now been demolished under the CSSI Approval for the Victoria Cross Station. Construction of the Station is currently underway with the site currently occupied by a large temporary shed structure (see **Figure 14**).

Figure 14 – Site Photos



Picture 7 – View from the north-west at the Miller and Berry Street intersection



Picture 8 – View from the north-west at Berry Street



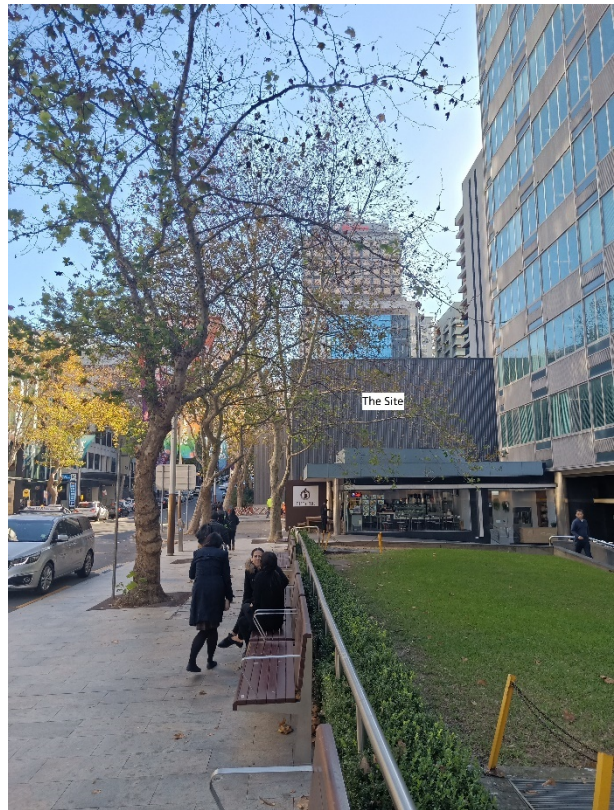
Picture 9 – View from the West (Miller Street)



Picture 10 – Internal view from the east (Denison Street)



Picture 11 – View from the south-west



Picture 12 – View from the south (MLC Building)



Picture 13 – View of the southern portion from the north-east (Denison Street)

Source: Urbis



Picture 14 – View of the southern portion from the south-east (Denison Street)

Source: Urbis

3.4. SURROUNDING DEVELOPMENT

The surrounding context is characterised by a mix of mid to high density commercial developments, interspersed with lower scale heritage items, educational institutions (e.g. Australian Catholic University), retail developments and civic uses such as the North Sydney Council Chambers (Miller Street). One isolated residential building form exists in the centre which is considered an uncharacteristic land use in the wider context. The immediate site is generally bound as follows:

- **North** – Berry Street directly to the north along with the heritage listed Rag & Famish Hotel. Further north beyond the hotel are high density residential and commercial developments.
- **South** – The site abuts the heritage listed MLC commercial office building to the south with higher density commercial developments towards North Sydney Station and Greenwood Plaza.
- **East** – Group House (65 Berry Street) and Denison Street are situated immediately east of the site. Immediately east of Denison Street are the Alexander Apartments, a 36-storey residential building and Denison Street, a similar high-density commercial development currently under construction. Further east are similar high-density commercial developments towards the Warringah Freeway and Cahill Expressway.
- **West** – Miller Street abuts the site to the west along with various high-density commercial buildings. The Pacific Highway is located further to the west.

Existing surrounding buildings are shown in **Figure 15** below.

Figure 15 – Key Surrounding Developments



Picture 15 – MLC Building (immediately south)



Picture 16 – Genworth Building (to the south)



Picture 17 – Rag and Famish Hotel (to the north)

Source: Urbis



Picture 18 – Brett Whiteley Place (to the south)

Source: Urbis

The recent emergence of a high-density commercial built form typology of within the North Sydney centre is strengthening a future high-rise commercial core character to which this proposal will positively contribute towards. Recently completed or currently under construction large scale office buildings are illustrated in **Figure 16**, with notable high-rise developments listed below:

- 1 Denison Street (RL. 213) – A-grade commercial tower DA approved and currently under construction (Bates Smart);
- 100 Mount Street (RL. 200) – A-grade commercial tower DA approved and recently completed (SOM and Architectus);
- 177 Pacific Highway (RL. 195) – A-grade commercial tower completed 2016 (Bates Smart);
- 77 Berry Street (RL 180) – Alexander Apartments, an existing residential tower.

Figure 16 – Surrounding High Rise Built Form

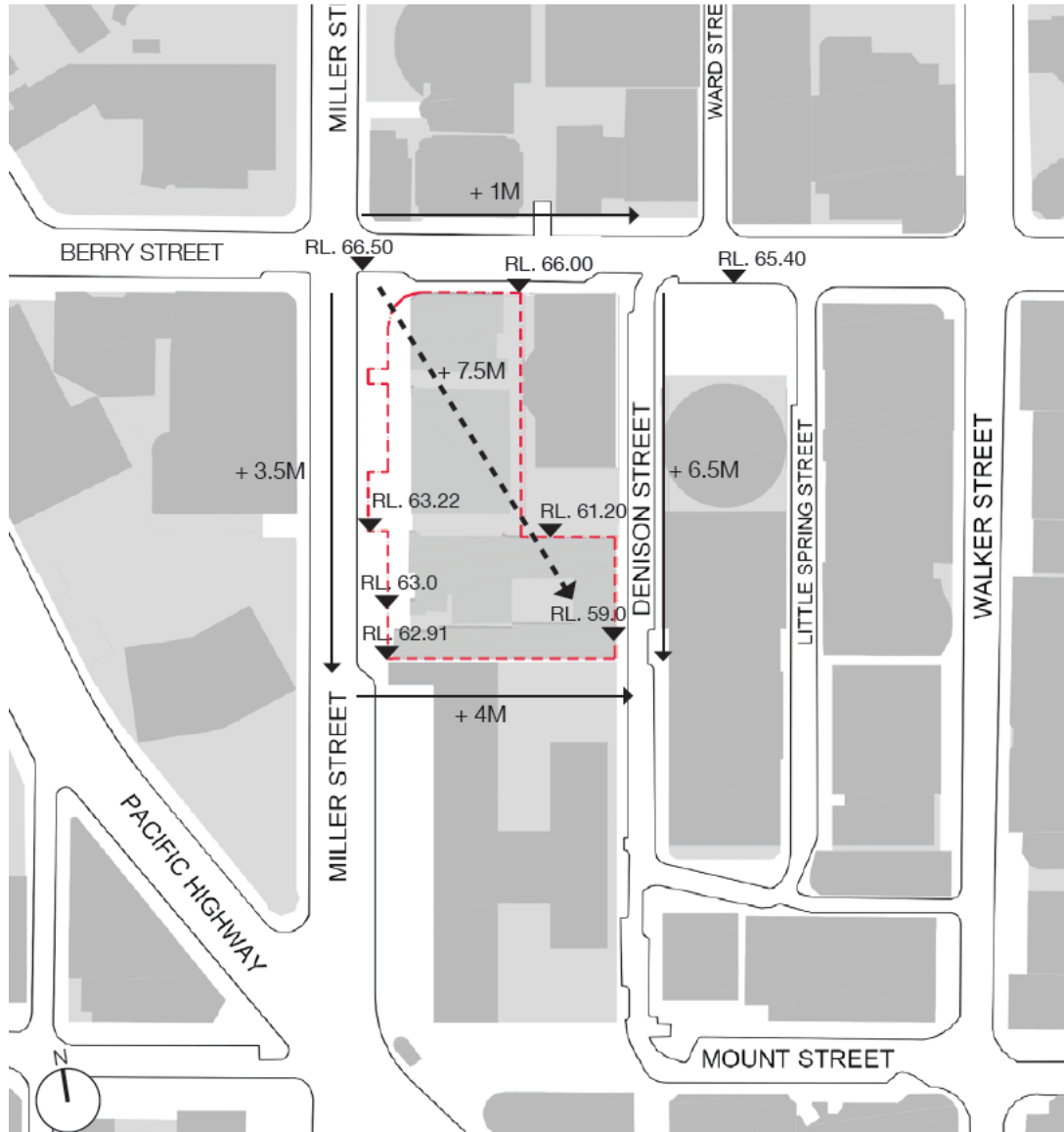


Picture 19 – 1 Denison Street (left), 100 Mount Street (centre) and 177 Pacific Highway (right)

3.5. TOPOGRAPHY

The site has an area of approximately 4,815 sqm and a fall of approximately 7.5 metres towards the south-east corner (see **Figure 17**). This slope occurs from a high point on the corner of Miller Street and Berry Street of RL 66.5m (AHD), to a low point on the Denison Street frontage of RL 59m (AHD). The southern end of the Miller Street frontage can be considered a mid-point of the slope at RL 63m (AHD).

Figure 17 – Topography of the Site



Source: Bates Smart

including the North Sydney Train Station to the south of the site and the Sydney Bus services. Surrounding public transport opportunities are shown in **Figure 19**.

Bus

There are numerous bus services within the surrounds of the subject site with Miller Street currently operating major bus stops for suburban bus routes which connect to the North Shore and T1 North Shore Line, Northern Beaches and Northwest suburbs. The site is also proximate to the Pacific Highway and Harbour Bridge which connects to the Sydney CBD and southbound services.

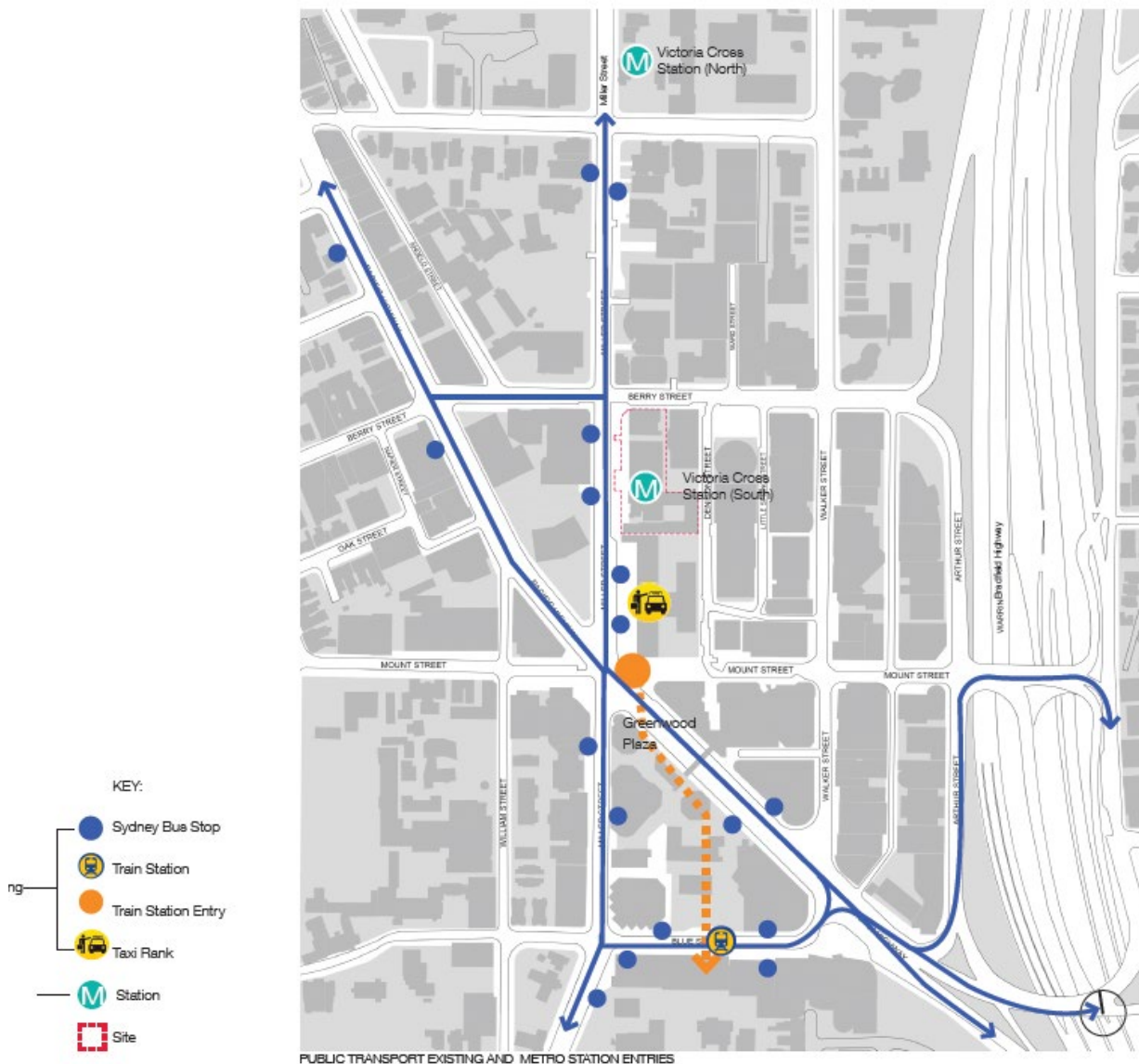
Rail

The North Sydney train station is situated in walking distance approximately 400 metres to the south of the site. The North Sydney Station is on the North Shore Line which links Hornsby to the Sydney CBD (south) and connects to Parramatta / Penrith to the west. An entry providing access to the train station currently exists on the corner of Mount Street and Miller Street via Greenwood Plaza.

Ferry

The McMahon's Point ferry stop is situated approximately 1.2 kilometres to the south of the site and provides access to Circular Quay and Parramatta.

Figure 19 – Surrounding Public Transport Opportunities



Source: Bates Smart

3.7.2. Road Network

The surrounding road network has provisions for vehicular access, loading and parking. In particular, a discussion is provided of the three (3) following roads which border the site.

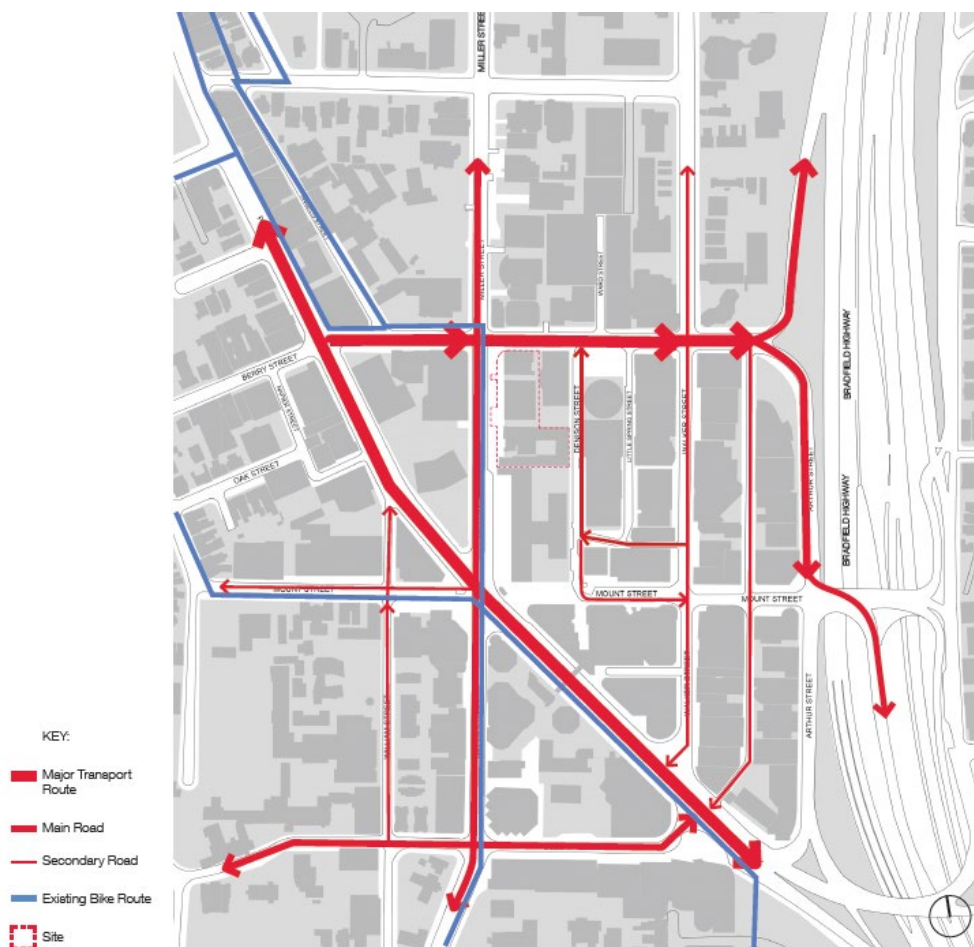
- **Berry Street:** The site is bound by Berry Street to the north and has an east-west alignment. It is Classified as a State Road to the east where it intersects with both the M1 Motorway/Sydney Harbour Bridge and the Pacific Highway off Arthur Street. The street is one way flowing to the east with four lanes, some of which are subject to time restricted parking.
- **Denison Street:** The site is bound by Denison Street to the east which runs between Mount and Berry Street. It is a one-way vehicular street which provides access to a private carpark and the MLC building.
- **Miller Street:** The site is bound by Miller Street to the west which is the primary north-south vehicular street through North Sydney. The road connects Blues Point Road in the South and Crows nest in the north. It comprises a traffic lane, bus/loading zone lane and on-street parking.

3.7.3. Bicycle Network

The site is proximate to a network of on-road marked and off-road (shared paths) bicycle routes within the surrounds as illustrated in **Figure 20** below. Miller Street has a key cycling route running through North Sydney which links to routes on Berry and Mount Streets. Cycle routes run south from the Miller and Mount Streets in two directions towards North Sydney Station, McMahon's Point Ferry stop and the Sydney Harbour Bridge.

North Sydney Council is currently working on various major cycling projects that will improve the existing network connections to the Sydney Harbour Bridge and Sydney CBD (North Sydney Integrated Cycling Strategy 2014). Once completed, this will provide a greater connection between the two CBDs. **Figure 20** illustrates the surrounding vehicle and bicycle network surrounding the site.

Figure 20 – Vehicle and Bicycle Movement Network



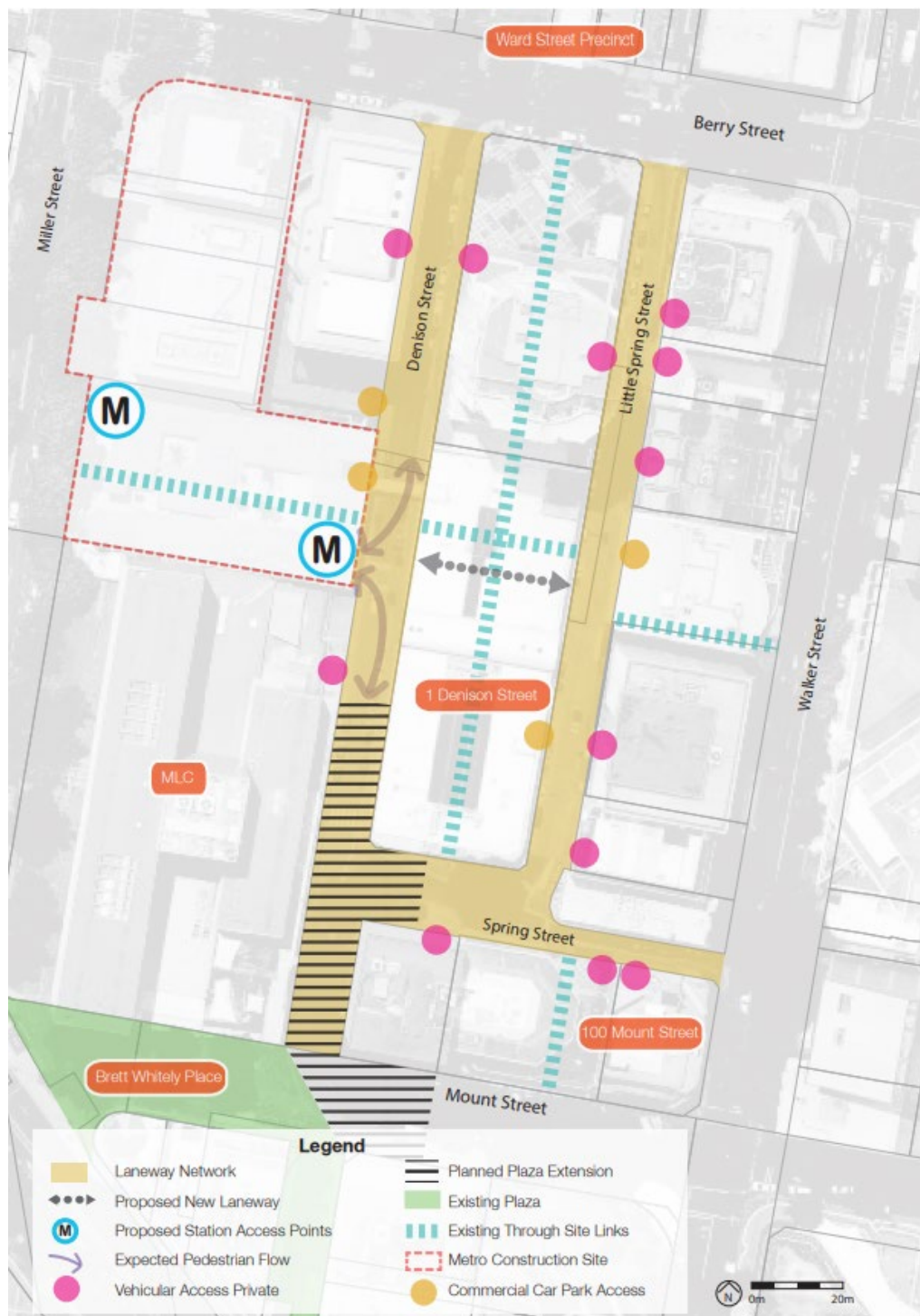
Source: Bates Smart

3.7.4. Pedestrian Access

The surrounding road network provides pedestrian access to the site and surrounding areas. The three surrounding streets, notably, Miller Street, Denison Street and Berry Street all feature dedicated footpaths. Predominantly, Miller Street acts as a major thoroughfare for pedestrian movement, providing access to and from North Sydney Train Station and bus stops within the vicinity.

Denison Street also features considerable north-south pedestrian movement, which is proposed to be dedicated pedestrian access from Mount Street to the future lower station entry under Council's *Central Laneways Masterplan* (2016) (**Figure 21**). This further reinforces the significance of the proposed through-site link in the southern portion of the Victoria Cross OSD site, running from Miller Street to Denison Street.

Figure 21 – Victoria Cross – Public Domain and Open Space Laneways



Source: North Sydney Council, Sydney Metro Planning Study, adopted 16 May 2016

3.8. OPEN SPACE AND SPECIAL AREAS

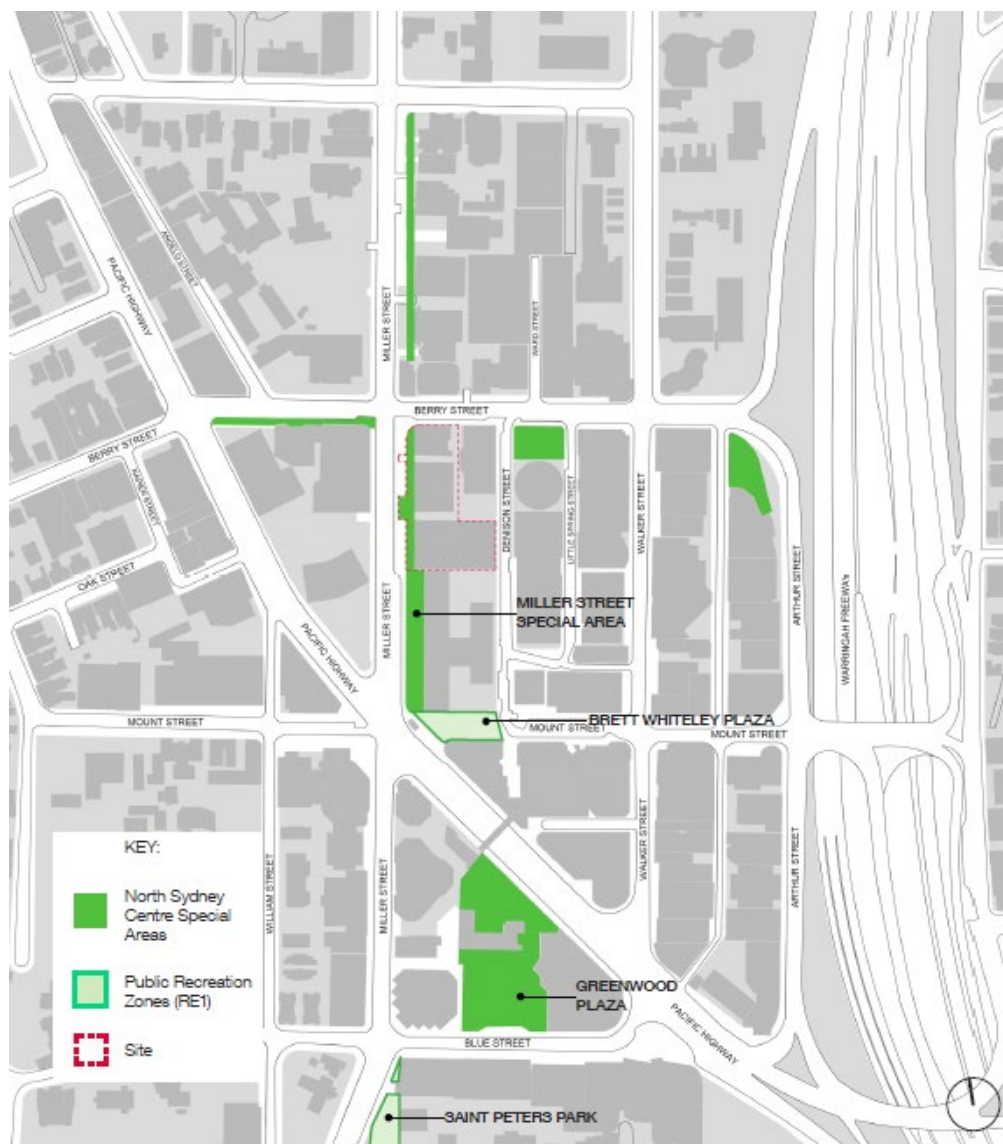
A number of key public recreation areas and special character areas protected under the local planning controls within the North Sydney Centre are located within proximity to the site (**Figure 22**). These include areas to the south of the site such as Brett Whitely Plaza and Greenwood Plaza which are commonly used as an open space and lunchtime destination for workers, residents and site visitors. An urban open space area is also located to the east of the site on the corner of Berry and Denison Street at the norther end of the Alexander Apartments.

In addition to these public recreation zones and special areas, the site is proximate to various public open space opportunities including:

- St Leonards Park – A major open space area located approximately 450 metres to the north which includes North Sydney Oval, Bon Andrews Oval, The Greens North Sydney (bowls club) and a public playground; and
- The open space area within the Council library precinct located to the north-west of the site on Miller Street.

Furthermore, a new open space area, 'The Central Square' will be established to north of the site as part of the Ward Street Master Plan initiated by Council.

Figure 22 – Public Recreation Zones and Special Areas



Source: Bates Smart

An objective of the North Sydney Local Environmental Plan 2013 (**NSLEP**) is to prevent a net increase in overshadowing to Special Areas and Public Recreation Zones as a result of increased building heights and massing. The NSLEP also has controls pertaining to the maintenance of the established setback and landscaped setting on the eastern side of Miller Street between McLaren Street and Mount Street, referred to as the “Miller Street Setback”. These controls for North Sydney Centre contained within the NSLEP are discussed in detail in **Section 7.9**.

3.9. UTILITIES AND INFRASTRUCTURE (SERVICES)

A Services and Infrastructure Report has been prepared by Arcadis & Mott Macdonald and is included at **Appendix X**, indicating existing utilities in the vicinity of the site based on Dial Before You Dig (DBYD) information. Where relevant, some of these utilities are illustrated in the Site Survey plans (**Appendix C**).

Electrical

Ausgrid has infrastructure running along Miller and Berry Streets as well as a substation in the North Sydney Zone. Specifically, two 125mm Ausgrid cables and conduits on Denison Street.

Communications

There a number of service providers which have telecommunications services operating within the area and along Miller, Berry and Denison Streets, including AAPT/ PowerTel, AARNet, NBN Co., Nextgen, Optus and / or Ucomm, PIPE Networks, Telstra, Verizon Business and Vocus Communications.

Gas

Based on Jemena’s Sydney Metro Station Servicing Assessment and recent consultation with Jemena, there is a 150mm existing SS Jemena secondary network main in Denison Street which can be utilised to satisfy the proposal’s gas requirements. A 75mm NY Jemena gas main also existing on Miller Street.

Potable Water

The proposed development has existing Sydney Water connections for potable water and fire services in the vicinity of the site, including:

- Existing 150mm CACL water main on Miller Street;
- 100mm CACL water main on Denison Street;

Sewer

The proposal has existing sewer infrastructure in the vicinity of the site, including:

- 225mm VC Sydney Water sewer main on Denison Street

Stormwater

The proposal has the following drains in the vicinity of the site:

- 300mm North Sydney Council Stormwater pipe on Denison Street

The site is located within an established urban area and currently contains all necessary services including electricity, gas, water, communications, drainage and sewerage. Furthermore, future development on the site has the availability to be connected to these services when required. To accommodate for the proposed development, some augmentation works to existing services are required (refer to **Section 4.11**).

Refer to the Services and Infrastructure Report at **Appendix X** for further details of required utility and service infrastructure provisions.

4. PROPOSED DEVELOPMENT

This section of the report provides a comprehensive description of the Detailed SSD DA proposal, including all elements associated with the OSD and the integrated relationship with the CSSI approved Metro Station components. The discussion is informed by the Architectural Drawings (**Appendix D**) and Urban Design Report (**Appendix E**) prepared by Bates Smart, as well as other supporting information accompanying the application.

The proposed development is contained wholly within the Concept SSD DA building envelope, as proposed to be amended, with the exception of façade louvres at Berry Street. The proposed development includes a total GFA of 61,500sqm, excluding floor space approved within the CSSI Approval.

4.1. DESCRIPTION OF THE PROPOSAL (SSD-10294)

The Detailed SSD DA seeks approval for the detailed design, construction and operation of a new 42 storey commercial office building to be constructed above the new Sydney Metro Victoria Cross Station. The proposed development also includes the use of secondary commercial office floorspace and retail uses within four storeys of the podium and lower levels of the development which are to be constructed in accordance with the terms of the Sydney Metro project approval (CSSI Approval).

The Detailed SSD DA specifically seeks development consent for:

- The design, construction and operation of a new commercial office tower with a maximum building height of RL 230 or 168 metres (42 storeys).
- Physical integration with the approved Sydney Metro works including:
 - Structures, mechanical and electronic systems, and services; and
 - Vertical transfers.
- Use of spaces within approved Sydney Metro envelope for the purposes of:
 - Retail tenancies;
 - Commercial office lobbies and space;
 - 161 car parking spaces within the basement for the purposes of the commercial office and retail use with a maximum of 150 of those car parking spaces relating to the OSD;
 - End of trip facilities; and
 - Loading and services access.
- Provision and augmentation of utilities and services.
- Provision of rooftop business identification signage zones.
- Stratum subdivision (staged).

The proposed development provides A-grade commercial floorspace in a singular tower form to deliver an integrated development where the OSD, future Victoria Cross Metro station and the public domain function together. The proposal responds to the key site constraints, such as surrounding heritage built form and visual and view impacts (solar access and overshadowing), to deliver an integrated OSD which exhibits design excellence, as illustrated in the indicative render at **Figure 23**.

The Detailed SSD DA for Victoria Cross OSD is lodged concurrently with a Section 4.55(2) modification application to the approved building envelope (Concept SSD DA) for changes proposed to the commercial tower. The proposal is also accompanied by two clause 4.6 variation requests which allow the detailed design and vision for the site to be realised.

Figure 23 – Illustrative Render of Victoria Cross OSD



Source: Bates Smart

4.2. NUMERIC OVERVIEW

The key numerical aspects of the proposed detailed OSD design are summarised below in **Table 3**.

Table 3 – Detailed SSD DA Numerical Overview

Component	Proposal
Site Area	4,815 square metres
OSD Gross Floor Area (GFA)	<ul style="list-style-type: none"> Commercial office OSD: 60,875sqm End of trip facilities for OSD: 625sqm Total GFA of Detailed SSD DA: 61,500sqm
Building Height	<ul style="list-style-type: none"> RL 230 (166.4 metres) maximum height of building 40 storeys (plus 2 storeys of rooftop plant/mezzanine)
Setbacks	<ul style="list-style-type: none"> 4.5 metre setback from Berry Street (northern boundary) 28 metre setback from adjoining MLC Building up to RL 124 (southern boundary) 26 metre setback from southern boundary (between RL 124 to RL 182.3) 26.5 metre setback from Denison Street (eastern boundary) Miller Street setbacks range from: <ul style="list-style-type: none"> 6 metres at lower levels (up to RL 127); 2.5 metres at mid-rise levels (between RL 127 and RL 179.5); and 1.5 metres at high-rise levels (between RL 179.5 and RL 230). <p>These setbacks only apply to the OSD component of the development</p>
Loading and Parking	<ul style="list-style-type: none"> One loading dock providing access to 2 x Medium Rigid Vehicles; 2 x Small Rigid Vehicles; 2 x Courier spaces, 2 x Sydney Metro Staff Space Commercial office OSD car parking: 150 spaces Retail car parking: 11 spaces Bicycle parking: 457 spaces

4.3. LAND USE & GROSS FLOOR AREA

The Detailed SSD DA seeks approval for the use of the proposed OSD for commercial premises, including office premises and retail premises.

As discussed throughout this EIS, commercial uses for the OSD directly align with strategic objectives and Council's vision for the site which reinforces the appropriateness of the development's location within North Sydney's commercial core. Furthermore, this detailed design application also seeks approval for use of the various OSD spaces within the Victoria Cross Station 'metro box' (CSSI Approval).

The detailed design of the OSD building envelope yields a total GFA of 61,500sqm that specifically relates to the commercial tower. This incorporates the primary use and design of the OSD commercial low to high-rise floor plates, use / fit-out of the OSD lobby space, OSD parking and loading, end-of-trip facilities, services facilities and retail tenancies, and additional commercial floor space in laneway buildings.

The Urban Design Report (**Appendix E**) includes a table which identifies the proposed land uses and a floor by floor breakdown of GFA and total GFA as required by the SEARs 3. *Land Use and Gross Floor Area*.

4.4. RELATIONSHIP BETWEEN OSD (SSD) AND STATION (CSSI) COMPONENTS

The Concept SSD DA (as proposed to be amended) establishes the proposed building envelope and the indicative integration between the proposed OSD envelope with the approved CSSI Victoria Cross Metro Station. For the purposes of this EIS, it is important to identify the relationship and clearly delineate between the works included within the CSSI Approval (refer to **Section 2.2**) and the components sought for approval under the Detailed SSD DA for the OSD.

In summary, all built form up to the transfer level, including the public domain, is to be designed and delivered under the CSSI Approval. The design resolution of this built form up to the transfer level will be mandated by the IAP and the SDPP, to be approved by the Secretary of the NSW DPIE (or nominee) in accordance with the CSSI Approval. Notwithstanding, the indicative design of the built form up to the transfer level on the site, including indicative design of the public domain, is included within the Detailed SSD DA documentation to provide a logical context for the assessment of the proposed use of this built form that is sought within the Detailed SSD DA for the OSD.

The sections below outline in more detail the relationship between the Detailed SSD DA for the OSD and the CSSI Approval. The key components of the integrated project are highlighted, identifying those that fall within the scope of the CSSI Approval and those sought under this Detailed SSD DA.

4.4.1. Development Approval Sought Under Detailed SSD DA

Condition A4 of the CSSI approval states that, *"except to the extent described within the CSSI EIS and PIR, any over station development, including associated future uses, does not form part of this CSSI and will be subject to the relevant assessment pathway prescribed by the EP&A Act"*. 'Over Station Development' (OSD) is defined in the CSSI approval as follows:

Includes non-rail related development that may occupy land or airspace above, within or in the immediate vicinity of the CSSI but excluding spaces and interface works such as structural elements may be constructed as part of the CSSI to make provision for future developments.

Accordingly, the Detailed SSD DA seeks consent for the detailed design of the OSD and its dependencies on the CSSI interface.

The internal fit-out and use of the CSSI interface areas and the OSD areas are not covered under the CSSI approval. Page 16 of the CSSI PIR states the following:

The Environmental Impact Statement further indicates that over station development above the transfer slab would be subject to a separate assessment process. For clarity, the specific use and fit-out of the spaces below the transfer slab (above ground level, at ground level and below ground level – refer Figure 2-3) does not form part of the project and would be subject to a separate assessment process.

As such, the Detailed SSD DA for the OSD seeks approval for integration with the approved CSSI (structures, services, lift cores etc.) and the use of the OSD spaces within the CSSI 'metro box'. These include use and internal fit-out of retail tenancies, OSD commercial office lobbies and spaces, basement parking, end-of-trip facilities and loading facilities, and access to services provisions. The built form of the

'metro box' (shown in **Figure 9**) is provided for under the CSSI Approval and does not form part of the proposed modification of the Concept SSD DA.

As indicated in the Concept SSD DA modification application, the OSD envelope is proposed to be larger by 400mm at the base of the tower, now proposed at RL 81.6 instead of RL 82 in the approved concept plans.

4.4.2. Summary of Interface

The Architectural Drawings (**Appendix D**) and Urban Design Report (**Appendix E**) prepared by Bates Smart further delineate the integrated elements of the Detailed SSD DA and CSSI with extensive illustrative references. Effectively, this Detailed SSD DA seeks consent for the detailed design, construction and use of the OSD tower, as well as the use of OSD areas within the CSSI 'metro box'.

A summary of the planning pathway relationship between the Detailed SSD DA and the CSSI approval for the Victoria Cross Station is provided below.

Detailed SSD DA (subject of this EIS):

- Design, construction and operation of the OSD (i.e. above the 'transfer slab' level) for 'commercial premises' and ancillary uses;
- Use (and fit out) of areas within the CSSI 'metro box' that support the OSD:
 - OSD commercial office lobby and the 'Hub' area;
 - Podium commercial and retail tenancies;
 - OSD parking and loading facilities;
 - End-of-trip facilities; and
 - Service facilities.

CSSI Approval:

- Demolition of all existing structures and vegetation removal;
- Bulk earthworks and excavation;
- Remediation activities;
- Primary station works, including both structural elements and service provisions below the 'transfer slab' (e.g. lift cores, access, parking etc.);
- Public domain works;
- Station retail tenancies; and
- Ancillary facilities relating to the operation of the Sydney Metro.

The components of the metro box that while are approved under the terms of the CSSI Approval require further consideration and assessment as part of the detailed SSD DA are considered in the following sections.

4.4.3. Interface Areas

The Detailed SSD DA seeks approval for the location, uses and fit-out (where applicable) of the areas conceptually approved within the CSSI Approval however which are associated with the OSD.

Specifically, the elements within the CSSI 'metro box' include the OSD office entry and lobby, end of trip facilities, parking and loading areas, service / plant facilities and the use and fit-out of commercial and retail tenancies not associated with the Metro Station.

Table 4 – Summary of Proposed OSD uses within CSSI approval (Interface Areas)

Level	Proposed OSD Use
Level 4 (Tower)	OSD commercial office / podium plant

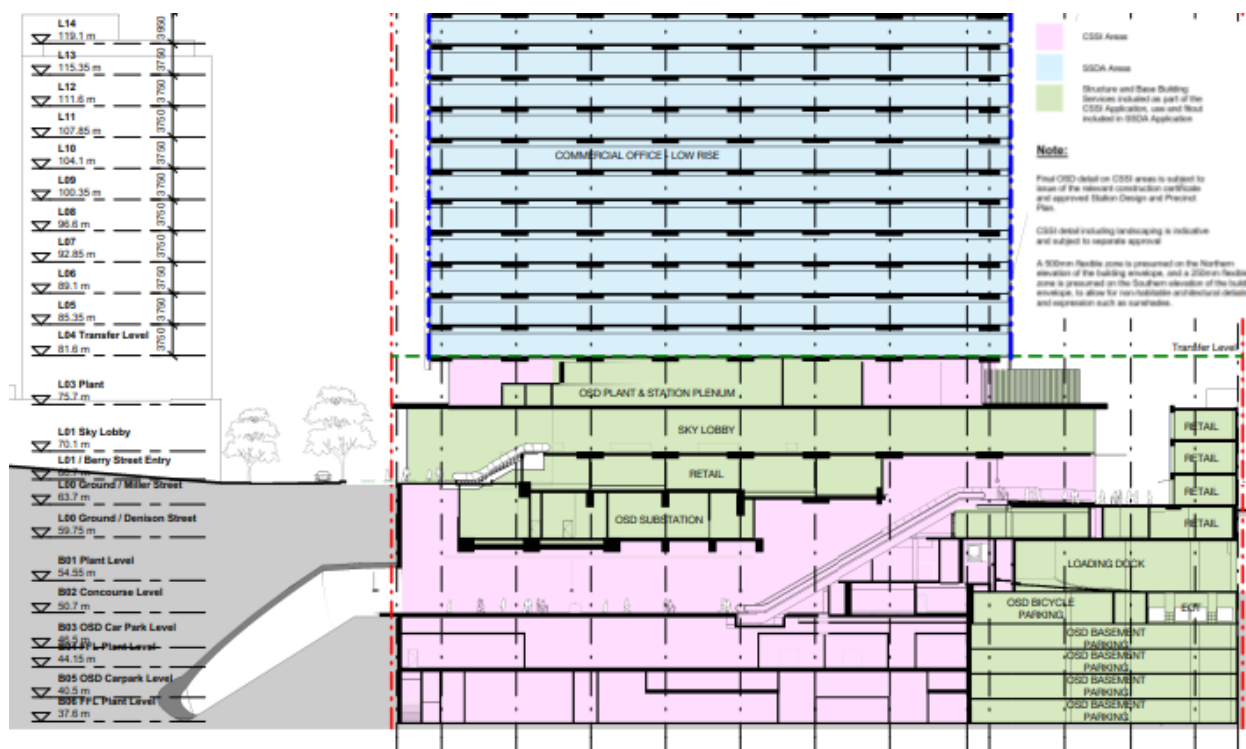
Level	Proposed OSD Use
Level 3 Mezzanine (Tower) and Level 4 (Podium)	Tower plant & secondary / podium commercial office
Level 3 (Tower & Podium)	Tower plant & secondary / podium commercial office
Level 2 (Tower & Podium)	Retail, OSD commercial office entry, secondary / podium commercial office and the 'Hub' area
Level 1 (Podium)	Retail, secondary / podium commercial office
Miller Street GF	OSD commercial office entry and retail
Denison Street GF	Retail
Basement Levels	Car parking, end of trip facilities, waste management, retail and commercial storage and services

The Architectural plans prepared by Bates Smart (**Appendix D**) clearly delineate between the Sydney Metro approved areas, and the OSD areas contained within the 'metro box' to be considered within the Detailed SSD DA. The north-south section included at **Figure 38** provides an example of how each building component is to be considered in the Detailed SSD DA. In summary the areas are:

- Blue shaded area: OSD tower which is entirely the subject of the Detailed SSD DA.
- Green shaded area: Areas within the approved 'metro box' are approved for construction under the CSSI Approval, however the use and internal fit-out of these spaces are the subject of the Detailed SSD DA as they are related to the OSD (rather than the Sydney Metro'). The final design of these areas will need to conform to the terms of the CSSI Approval and specifically the SDPP and the IAP.
- Pink shaded area: Sydney Metro approved development, the design, construction, and use of which is subject to the terms of the CSSI Approval.

We note that within the Architectural Plans at **Appendix D**, some changes have occurred within the pink CSSI "metro box" component. It is noted that these changes have been approved through the 'consistency assessment' process under the CSSI Approval and are not within the scope of this SSD DA for the OSD.

Figure 24 – North-South Section View Illustrating Interface Areas



Source: Bates Smart

4.4.4. Station Design Precinct Plan and Interchange Access Plan

In accordance with condition E101 of the CSSI Approval, the Victoria Cross Station Design Precinct Plan (**SDPP**) has been developed to inform the design and delivery of all public domain works within and surrounding the site. Further, the Victoria Cross SDPP has mandated the detailed built form of the podium up to the transfer level which forms part of the Detailed SSD DA proposal.

The concept plan aims for the public domain to be a catalyst for change in North Sydney and deliver an activated streetscape. This will be achieved through a green spine along Miller Street that provides seating options and secondary pedestrian access paths which connect with the through-site link where outdoor dining opportunities are located.

Overall, the detailed design of the proposed development supports the design objectives, principles and standards of the Victoria Cross SDPP. In summary, the proposal has been designed to ensure the following:

- The amenity of public spaces and permeability around station entrances located adjacent and within the through-site link has been maximised through uses which filter out from the station and activated podium levels;
- The local environmental, heritage and place making values within the surrounds of the North Sydney commercial core interact with the site and activated podium levels;
- The existing and desired future urban context in the locality has been referenced in the podium and public domain design;
- Community safety, amenity and privacy has been maximised through the incorporation of CPTED principles; and
- Best practice sustainable design solutions have been adopted throughout the detailed OSD and building podium design to minimise environmental impacts.

TfNSW is currently working with the Greater Sydney Commission, NSW Government Architect and North Sydney Council to develop the preferred place making vision for the environs surrounding Sydney Metro at Victoria Cross and the associated Interchange Access Plan (**IAP**). The detailed OSD design has been carefully considered in accordance with the Victoria Cross SDPP to ensure a seamless interaction with the

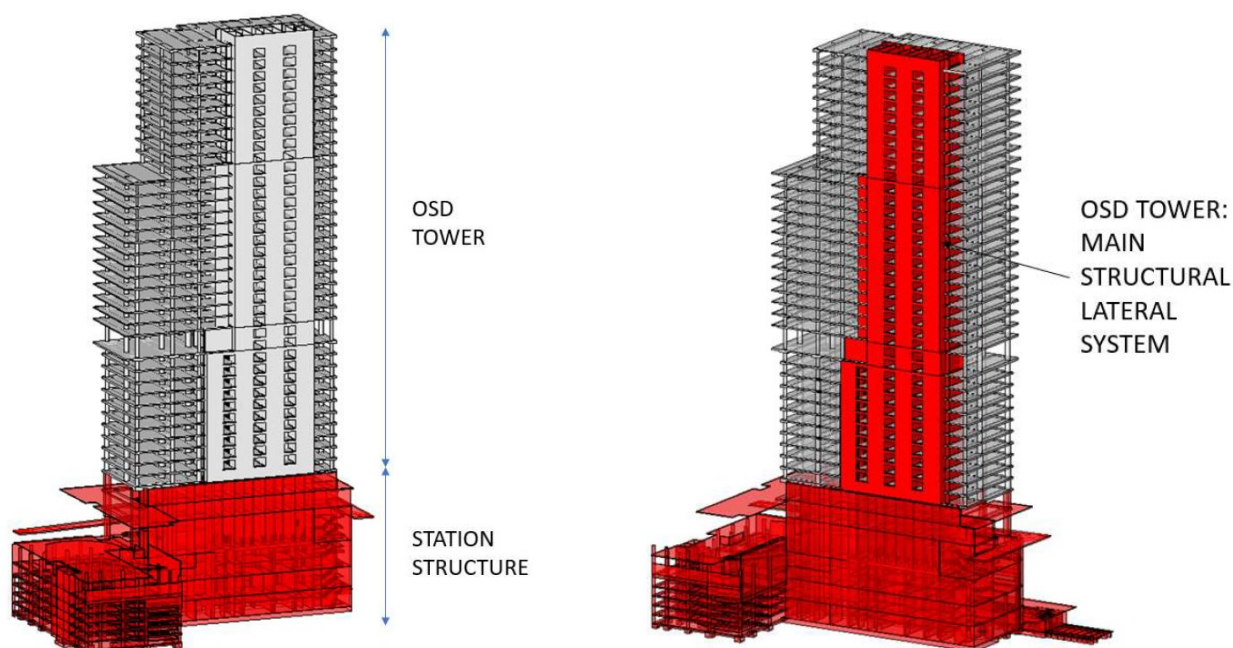
public domain areas delivered as part of the CSSI Approval. Currently being finalised through design review process with the secretary

As required by the SEARs in Item 6, **Section 4.6.6** of this EIS, the Urban Design Report at **Appendix E** and Landscape Report at **Appendix F** describes the coordination of timing and implementation of access, landscape and public domain works associated with the CSSI and OSD development.

4.4.5. Structural Integration

The structural philosophy of the project is developed around the Station shaft forming the base of the OSD tower itself, where the two structures are both designed and constructed as one integrated structure from foundation to rooftop. A side core-wall system or spine situated to the eastern side of the building envelope together with perimeter base walls form the main lateral stability of the integrated OSD. The OSD also has perimeter and internal columns throughout the floor plates to transfer loads from the tower structure to the foundation. Refer to the Structural Statement at **Appendix Z** for a detailed discussion of structural elements.

Figure 25 – OSD and Station Structural Stability System



4.5. OPERATION & FIT-OUT DETAILS

The operation and internal fit-out of individual retail and podium office tenancies within the CSSI Approval areas will be subject to Complying Development Certificates (CDC) or local minor development applications where appropriate for specific fit-out and outdoor seating associated with retail premises.

The internal fit-out of the commercial office tower will be determined through a CDC.

4.6. BUILT FORM & DESIGN

The proposed OSD is detailed in the Architectural Plans (**Appendix D**) and Design Report (**Appendix E**) prepared by Bates Smart. The following sections of the EIS establish the design principles which underpin the detailed design of the OSD and provide a description of the key design elements.

4.6.1. Built Form Guidelines

In order to realise the vision for an integrated station development for the Victoria Cross site, a set of design principles relating to built form, integration, movement and open space have been developed to guide the planning and design of the building envelopes (Concept and modified envelope), and the detailed design of the OSD.

As part of satisfying conditions of the CSSI Approval and Concept SSD DA, Sydney Metro have revised the Victoria Cross Station OSD Design Guidelines (May 2019) which have informed the detailed design of the proposed commercial office tower and OSD project. The principles for the Victoria Cross Station OSD are to:

- Deliver a **high-quality built form** that:
 - *exhibits design excellence;*
 - *is identifiable as a landmark building;*
 - *is architecturally integrated with the overall Metro Station design, yet distinctly identifies the Metro Station and the OSD entries at the ground plane;*
 - *responds sympathetically to the existing character of neighbouring buildings, including surrounding heritage items;*
 - *provides a podium that responds to and integrates with the public domain and the Metro Station;*
 - *minimises privacy and solar access impacts on the surrounding residential uses;*
- Protect and **enhance the surrounding public domain** by:
 - *Minimising any additional overshadowing from the building or any associated plant, lift overruns, or architectural roof feature;*
 - *Ensuring pedestrian comfort in and around the building through managing the potential for wind impacts; and*
 - *Providing appropriate setbacks along street frontages in recognition of the established and emerging urban context.*
- Provide for an **A grade with premium services office use**, supported by a range of complementary uses, to revitalise and activate the public domain.

The detailed design of the OSD is consistent with the above built form design principles. Specifically, the design supports the achievement of these design principles by:

- Accommodating a detailed design that achieves design excellence;
- Relocating building massing to the high-rise floor plates, responding sympathetically to the existing character of surrounding buildings, ensuring pedestrian comfort in and around the building through managing the potential for wind impacts, and contributing to the perception of the building massing as an identifiable landmark building within the North Sydney skyline;
- Responding sensitively to adjacent heritage items, specifically by increasing the setback to the MLC Building to the south;
- Providing an activated podium that does not dominate the public domain, specifically by reducing the street wall height adjacent to the through-site link and Denison Street and by increasing the height (up to RL 127) of the 6m Miller Street setback area (compared to RL 118 previously approved);
- Improving pedestrian comfort around the building by reducing potential wind drafts along the through-site link and by providing additional retail and active frontages along Miller Street; and

- Delivering commercial floor plates that are suitable for A grade/ premium grade commercial office tenants with podium retail.

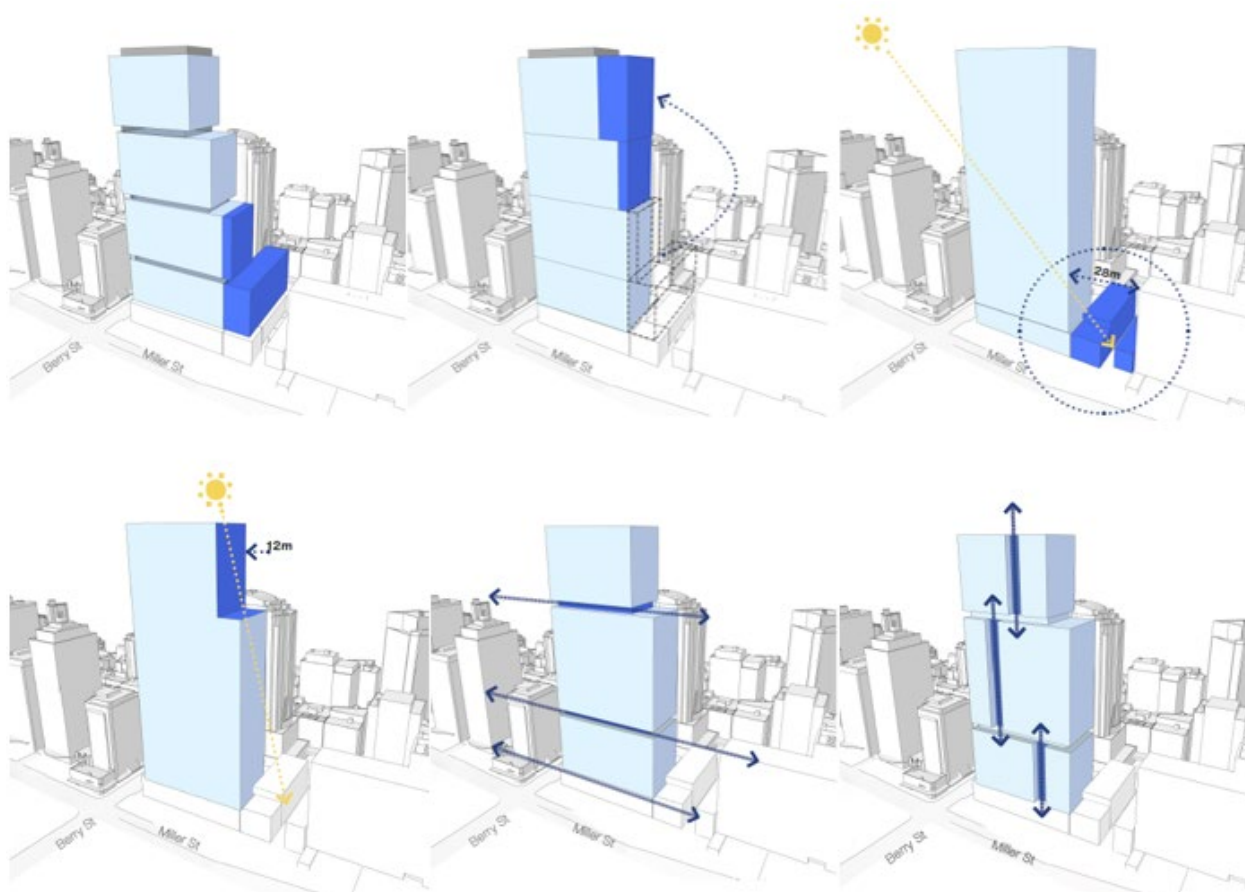
4.6.2. Urban Design Drivers

As illustrated within the Urban Design Report included at **Appendix E**, the design strategy of the detailed OSD design associated with the modified building envelope has been driven by the following rationale:

- Clearly articulate the Metro Station entry and retain laneway, previously concealed beneath nine storeys of a commercial office building;
- Revise massing to mitigate the need for a glass roof above the retail laneway;
- Relocate commercial floor space to the high-rise tower to provide higher amenity for visitors to and occupants of both the retail floor space and commercial floor space;
- Increase separation between the OSD and MLC Building;
- Ensure no additional overshadowing to the Greenwood Plaza Special Area and the Miller Street Special Area; and
- Provide horizontal and vertical articulation that takes design cues from adjacent heritage items.

The proposed modified building envelope design drivers are illustrated at **Figure 26** below. The detailed design of the commercial office tower is articulated further below at **Section 4.6.3**.

Figure 26 – Proposed Design Strategy Principles Driving



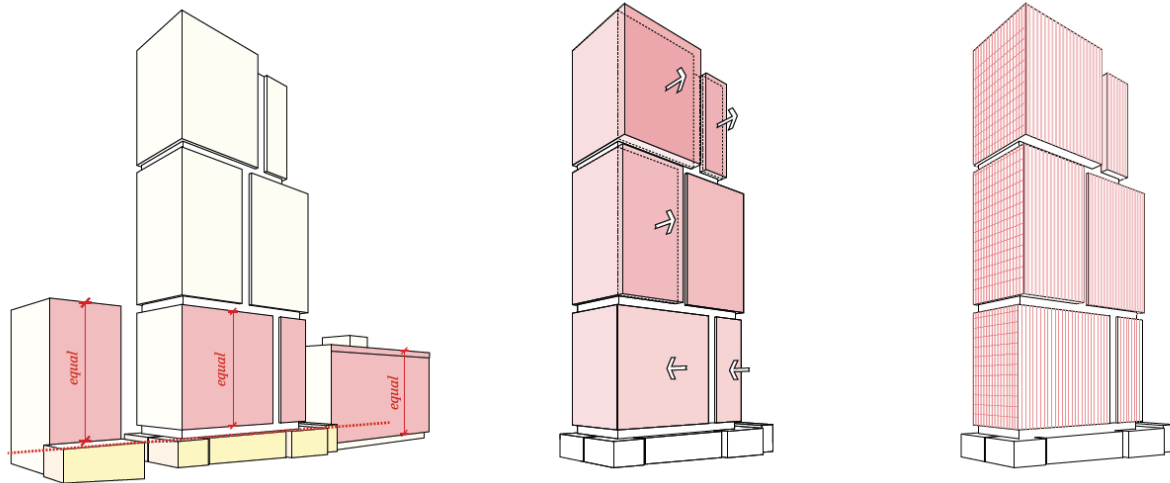
Source: Bates Smart

4.6.3. Commercial Tower Design

The OSD has been specifically designed to provide an expressive singular tower form which delivers an A-grade commercial office building with large contiguous commercial floor plates. The design reflects the various contextual influences, architectural objectives and commercial needs in a landmark development for North Sydney's commercial centre.

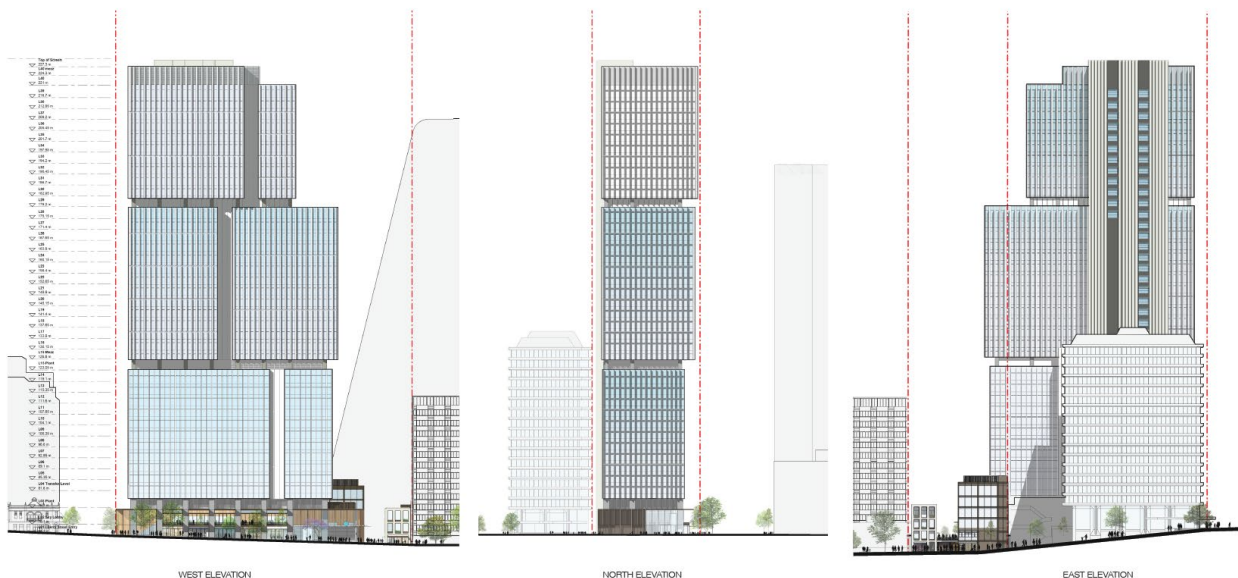
The tower massing incorporates a series of blocks each with a composition which creates various vertical and horizontal articulations. These articulations of the tower form are supported by the varying depths of the cantilever volumes within the “articulation zone” (Miller Street frontage). Expression of these individual blocks with varying volumes maintains the legibility of a singular tower form within the context of the skyline. At a closer context however, the design uses shadow and depth to detail the delineations between individual volumes which also has the effect of reducing the perception of scale compared to a sheer façade. The design approach for the modulation of the façade including references to the scale of adjacent buildings is illustrated at **Figure 27** below.

Figure 27 – Façade Design Approach



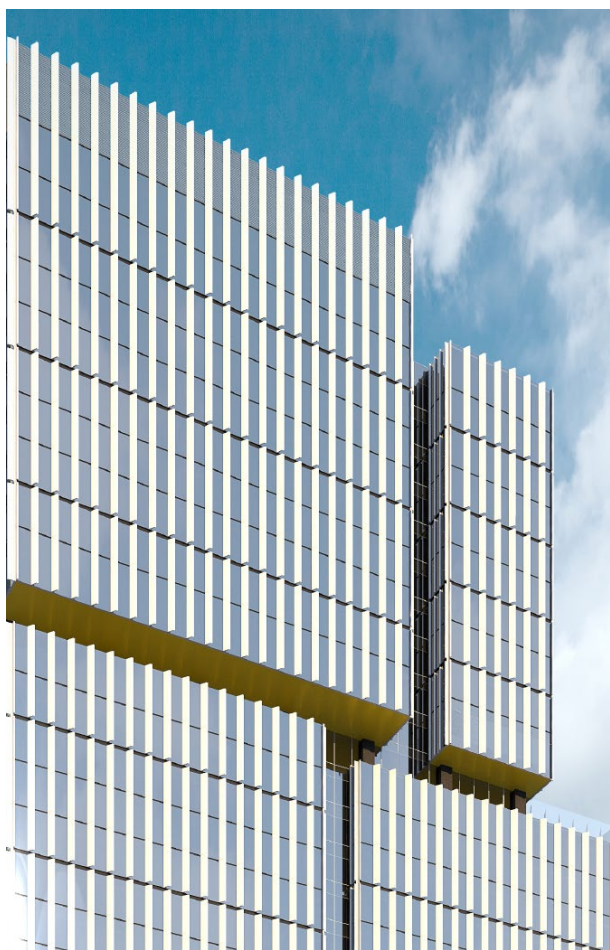
A fine grain overlay of vertically expressed external shading is integrated into the tower façade design. Four unique shading types have been adopted across the different frontages of the tower in response to different climate requirements associated with the different building orientations as illustrated below.

Figure 28 – Elevations of Detailed OSD Design



The tower core (lift shafts and stair risers) on the eastern elevation is expressed externally while remaining in keeping with the stepped building form and massing. This provides the building with a structural and vertical circulation spine which includes windows inserted between lift shafts to enable daylight and views into the lobby areas (of individual levels) (refer to **Picture 21** in **Figure 29**).

Figure 29 – Building Design Articulation



Picture 20 – Articulation Zone on Western Façade



Picture 21 – Tower Core on Eastern Façade

Overall the design of the tower façade enhances the landmark development with articulation which effectively breaks up the built form massing and integrates with the context of surrounding structures in North Sydney CBD. The scale of the stacked volumes of the OSD tower are further reduced with the articulation of the façade which presents as a grid of vertically proportioned frames that create depth, texture and a sense of human scale.

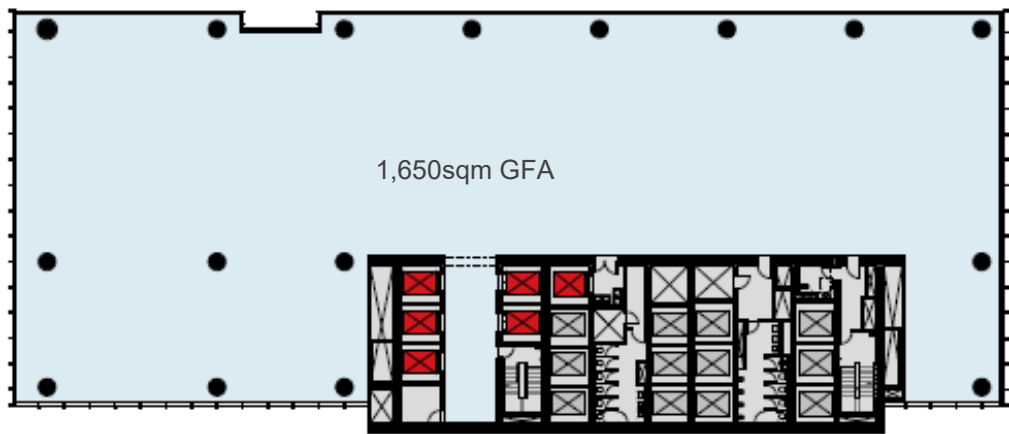
4.6.4. OSD Commercial Office Floor Plates

The commercial office floor plates have been designed with consideration of the tower core situated to the east side of the tower form which allows for a single contiguous work space to the west. The tower structure is arranged around a primary 16.5 x 9 metre grid with perimeter columns located on the north, west and east façades, minimising the need for a number of internal columns throughout each floorplate which creates this unencumbered office area.

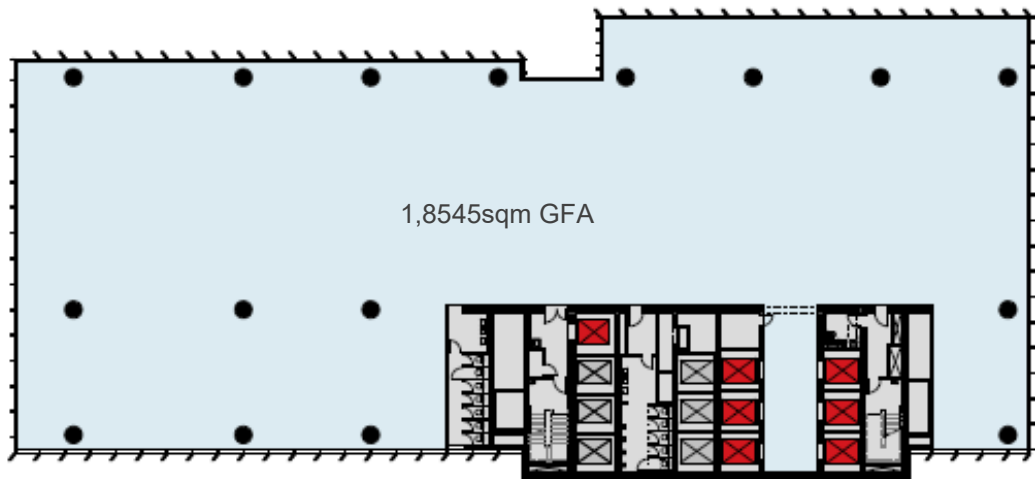
Office floor plates have been specifically designed to create a workplace which maximises natural light, physical connectivity and flexibility, whilst remaining efficient in terms of the circulation spaces and being easily subdivided as illustrated within the Design Report at **Appendix E**.

Typical floor plates range between 1,500sqm to 1,700sqm of net leasable area, which is a desirable size for future tenants throughout the tower. Typical office floor plates for the varying tower “stacks” are illustrated in **Figure 30**.

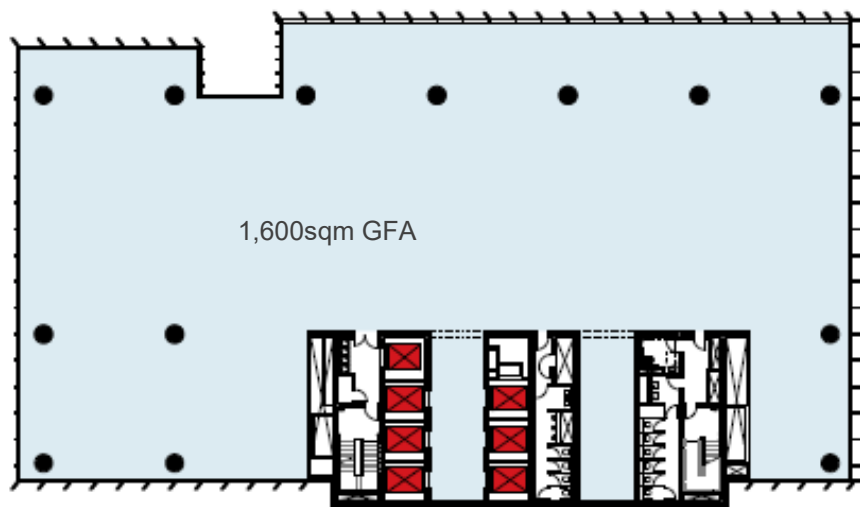
Figure 30 – Typical Office Floor Plates



TYPICAL LOW-RISE FLOOR PLAN (NTS)



TYPICAL LOWER MID-RISE FLOOR PLAN (NTS)



TYPICAL HIGH-RISE FLOOR PLAN (NTS)

4.6.5. Podium

The development proposes a podium with a diversity of uses that interact with the public domain in distinct ways and at varying scales, including:

- An urban plaza fronting Miller Street; and
- A pedestrian laneway which connects to Denison Street (through-site link).

Miller Street Plaza and OSD Lobby

The proposed podium levels are setback approximately 15 metres from the Miller Street edge and appropriately address the new public domain by providing a generous landscape setback with ground level retail tenancies and a wide circulation area at the primary entrance to the Victoria Cross Station.

At ground level, the Miller Street podium features a glass façade with a frontage which maximizes retail food and beverage uses with outdoor seating to provide an activated frontage. The second floor also features an activated frontage that spills out from the lobby, lounge and reception areas within the OSD lobby on Level 2.

A high-level awning (9 metre height) creates a two-storey scale articulated with intermittent precast concrete columns which form the foundation for the OSD. The intersection of the columns with the awning create a series of 2-storey sections in which the public domain flows into the building and the activated retail flows out.

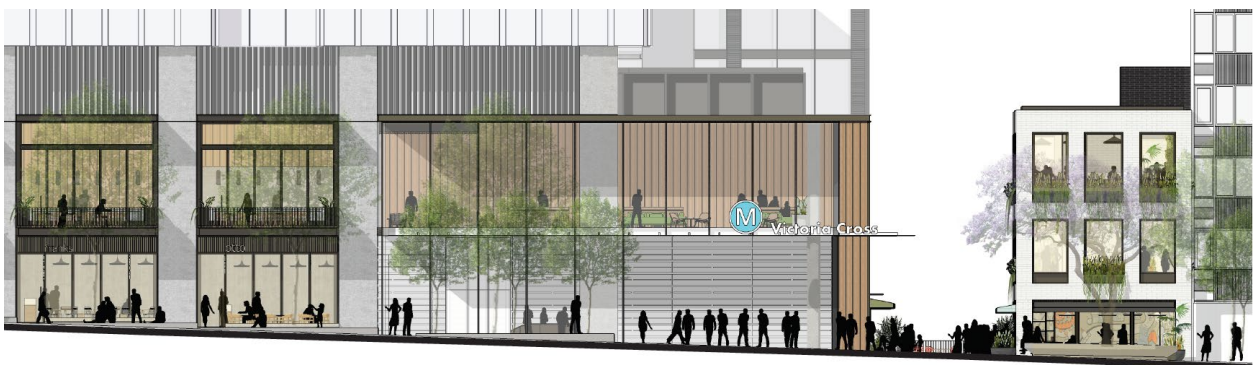
The OSD entry is situated at the northern end of the plaza on the corner of Miller and Berry Street, and consists of a 2-storey high glazed wall and awning which expresses the new office lobby (**Figure 31**).

Figure 31 – Urban Plaza North End (Miller Street)



At the southern end of the plaza is the start of the through-site link which is characterised by the prominent metro station entry (to the north) and a retail and entertainment building to the south (**Figure 32**).

Figure 32 – Urban Plaza South End and Metro Entry (Miller Street)



Along the Miller Street frontage five new retail food and beverage outlets are proposed which spill out into the new public domain. Level 02 of the urban plaza consists of the commercial office 'sky lobby' / reception area and an approximately 200sqm 'The Hub' space.

The OSD commercial office 'sky lobby' is an open planned space that looks out over the Miller Street public domain area. The lobby is accessed from both the main entry at the corner of Miller and Berry Streets, and the secondary entrance on the through-site link. The space comprises the office reception area, café and large lounge seating / informal meeting area, and the lift lobbies servicing the commercial tower above.

The Hub is located above Miller Street Metro Entry within the OSD sky lobby and is accessible from the through-site link. A minimum of 200sqm of the space is positioned adjacent to the OSD sky lobby, retail and podium office as a multi-purpose area, to be a publicly accessible space utilised for community uses, meetings, events, and as a workspace or exhibition space. The area has intentionally been incorporated into the layout of the main lobby. The Hub will be open during business hours and opportunities to extend this will be further explored.

The internal layout of the urban plaza area at both the Miller Street and OSD lobby (Level 02) levels is shown in **Figure 33** below.

Figure 33 – Miller Street Plaza and Miller Street Metro Entrance

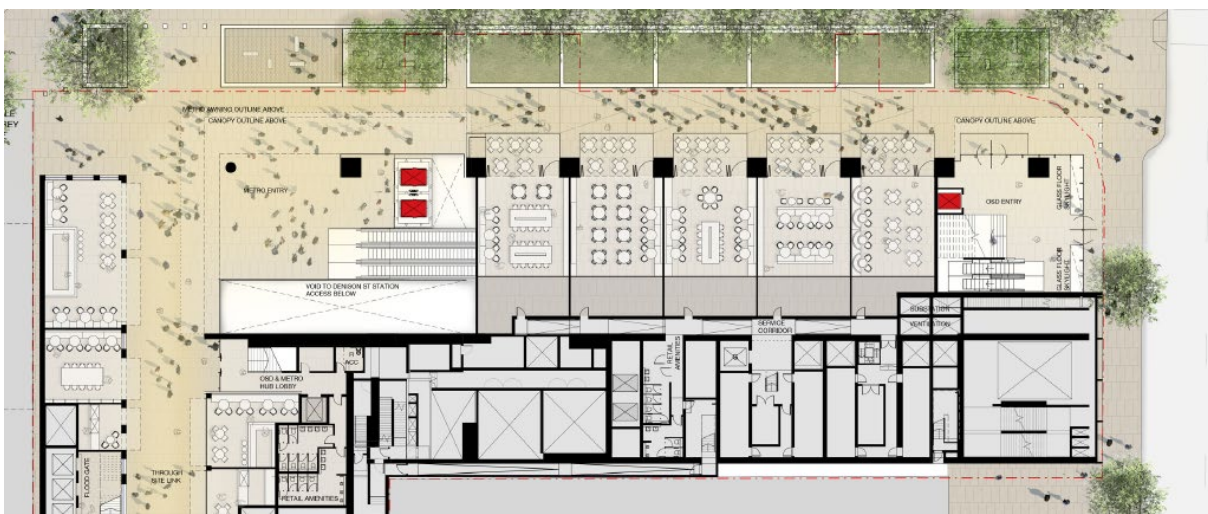


Figure 34 – Level 02 OSD Commercial Office Lobby



Pedestrian Laneway (Through-Site Link)

The vibrant two-tiered pedestrian through-site link is lined with active retail frontages to both sides at ground level which feature cafes, bars and restaurants to provide a respite within the commercial office precinct for site users / visitors and future workers.

The through-site link is elevated from Denison Street but gradually rises towards the west to be generally at grade with Miller Street. The laneway provides the primary access to the main Metro Entrance via two separate escalators at both the Miller and Denison Street levels. It also enables a pedestrian link between Miller and Denison Street, aligning with Council's vision to ensure Denison Street becomes an increasingly pedestrian-oriented zone.

The internal layout of the pedestrian laneway is shown previously in **Figure 33** and below in **Figure 35**.

Figure 35 – Pedestrian Layout Internal Layout at Denison Street Level

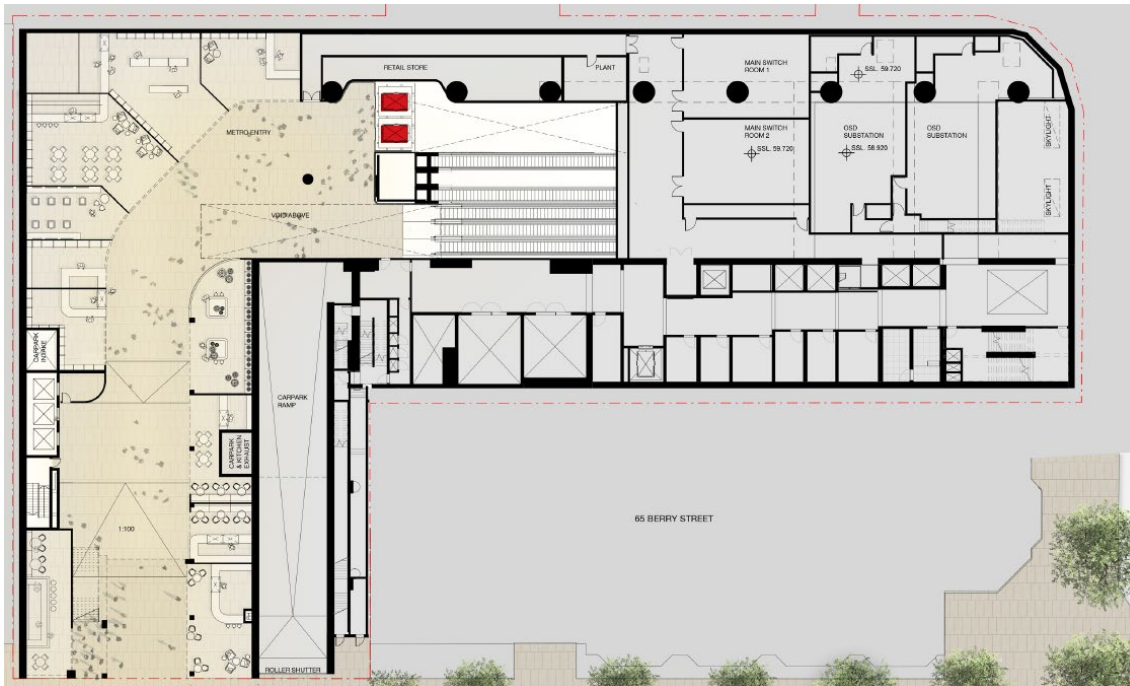


Figure 36 – Conceptual Perspective View of the Through-Site Link



The through-site link is positioned between two 'podium building'. The podium buildings are located below the 'transfer slab' and have been approved within the CSSI Approval. However, the proposed use of the buildings for the purposes of commercial office and retail premises are the subject of the Detailed SSD DA.

The northern podium building adjacent the Metro entry comprises four storeys of commercial office floor space and two storeys of retail premises (one retail level at the Denison Street lower ground level, and one retail level adjacent to the through-site link at Miller Street ground level). The northern podium is articulated as a pop-out podium building from the primary tower form.

The southern podium building is four storeys (three storeys at Miller Street ground level). The southern podium building is intended to be used for retail premises and includes two levels of retail space envisioned to be a 'destinational' food and beverage offering above the through-site link to activate the site outside of typical office hours.

Figure 37 – Section of Northern Podium Building (secondary commercial office and retail)



Figure 38 – Section of Southern Podium Building (retail)



4.6.6. Landscape and Public Domain

OSD Landscaping

Level 29 of the OSD commercial tower contains a private terrace area, proposed to be used by future tenants as an outdoor space.

Public Domain

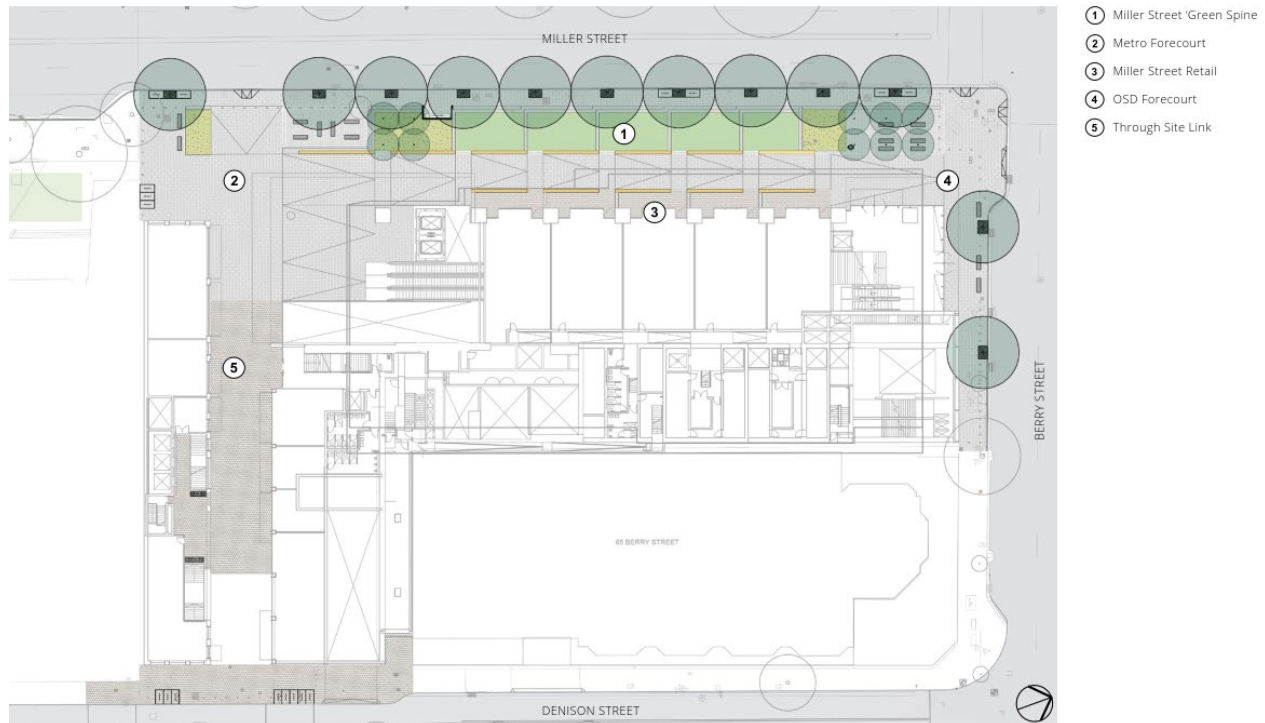
As previously outlined, the public domain design and construction works for the Victoria Cross Station precinct are to be delivered as part of the CSSI Approval. Notwithstanding, to ensure a fully integrated outcome where the public and private realms interact, the design of the public domain has been considered as part of the whole development. The design details for Victoria Cross Station have been developed in conjunction with the SDPP and IAP.

The public domain is to include an activated streetscape that fosters social interaction and encourages the use of desirable spaces as a meeting place. This is centred around a 'green spine' which features canopy tree planting and seating options along Miller Street and secondary pedestrian access paths. The through-site link is the primary pedestrian pathway and is lined with outdoor dining opportunities which activate the

laneway. Specific landscaping details for the precinct are provided in the Landscape Architecture plans and report contained within **Appendix F**.

In accordance with the SEARs in Item 6, the Landscape Architecture Plans and Report (including public domain aspects) provided at **Appendix F** demonstrate how the SSD integrates with the CSSI infrastructure in terms of the detailed architectural approach, access, wayfinding and public domain.

Figure 39 – Proposed Public Domain Concept Plan

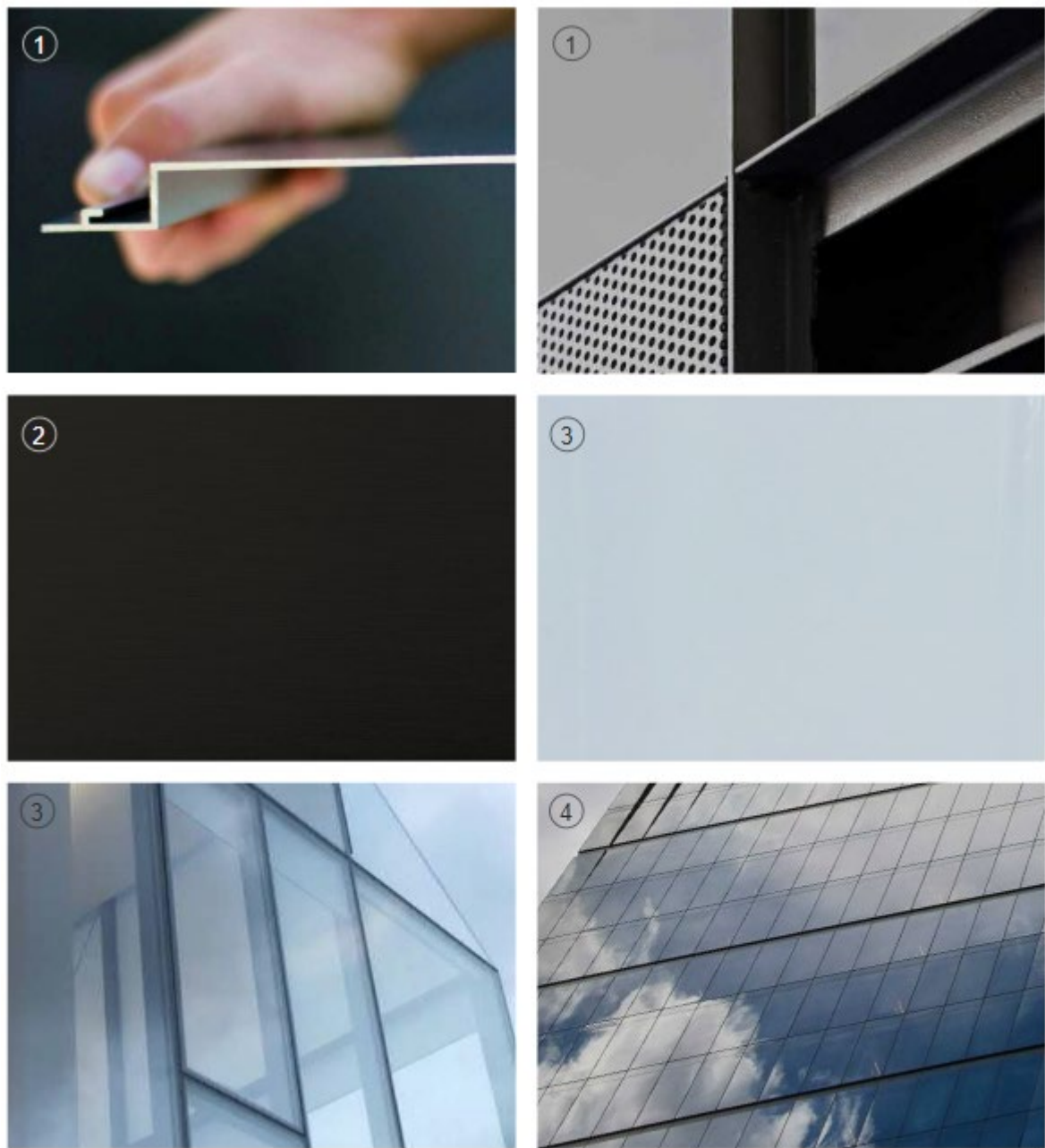


Source: Aspect

4.6.7. Materials and Finishes

The proposed materiality of the commercial tower includes light-silvery-champagne coloured shading fins made of aluminium. The metal and glass tower has been designed to include low-saturation and non-distracting materials. The articulated profile of the proposed fins and louvres on the façade has been designed to improve passive shading, reflectivity, and architectural expression of the tower (refer to **Figure 40** below).

Figure 40 – Proposed Tower Façade Materials



Source: Bates Smart

4.7. ACCESS, PARKING & TRANSPORT

As discussed, the access and parking arrangement for the site forms part of the CSSI Approval, with this Detailed SSD DA seeking approval for the use of areas within the basement levels.

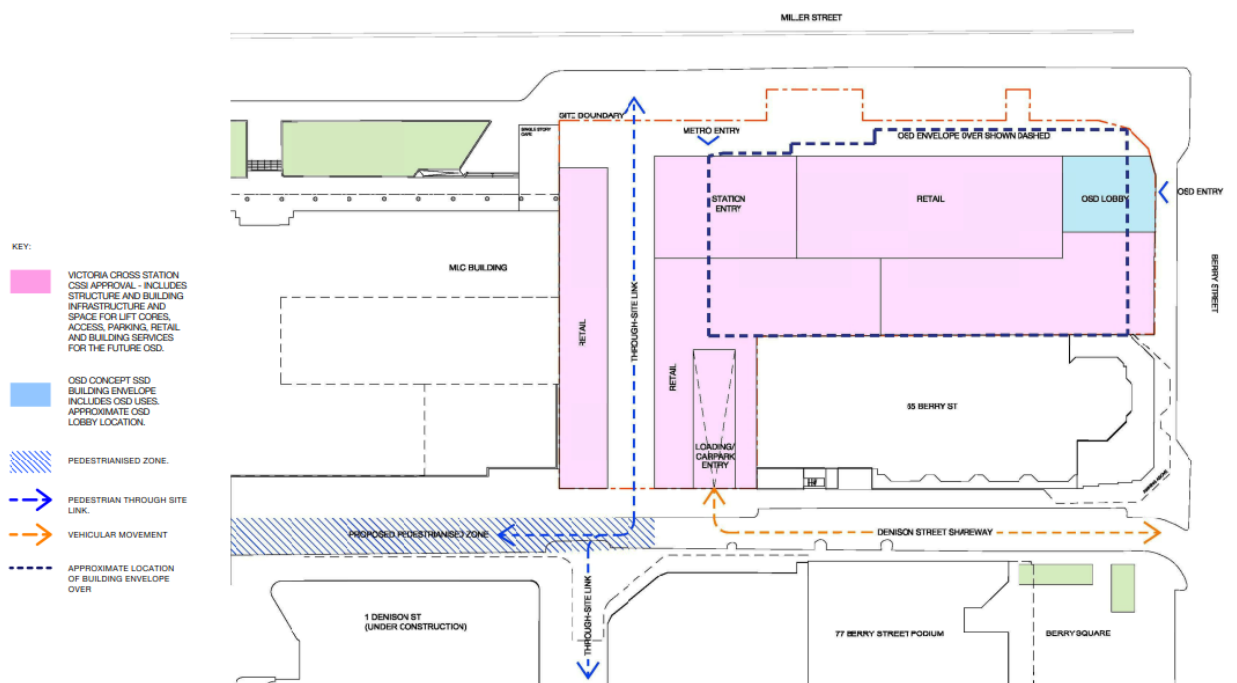
The following sections discuss the access, parking and transport arrangements associated with the proposal. The Traffic and Transport Impact Assessment attached at **Appendix T** provides further clarification of access, parking and transport matters.

4.7.1. Vehicular Access and Parking

Vehicular access is proposed from Denison Street via a two-way driveway entry to the site (**Figure 41**). The driveway and ramp provide access to the loading areas, car parking, bicycle parking and end of trip facilities over six basement levels (Levels B1 to B6).

The proposed driveway off Denison Street provides access to a car park area containing a total of 161 car parking spaces, of which, 150 spaces are to be dedicated to the commercial OSD tenants and visitors and 11 spaces are dedicated to the Sydney Metro retail users. In addition, two car parking spaces are proposed to be made available for Sydney Metro staff on the site, in accordance with the terms of the CSSI Approval.

Figure 41 – Indicative Building Access Plan



4.7.2. Pedestrian Access

Figure 41 above and the Architectural Plans at **Appendix D** indicate the primary pedestrian access arrangements to the site and the Victoria Cross Station. The principal access point to the OSD entry / lobby is located on Berry Street, near the intersection with Miller Street (north-west corner of the site).

The main access to the future Metro Station is located on Miller Street towards the southern end of the site adjacent the pedestrian through-site link which connects Miller Street and Denison Street. The secondary Metro Station entrance is provided directly from Denison Street via the lower ground retail arcade. The ground level through-site laneway provides pedestrian connectivity to other developments on Denison Street and public domain areas throughout the North Sydney CBD.

4.7.3. Bicycle Parking and End of Trip Facilities

The primary access to the bicycle parking and end of trip facilities for the proposed OSD will be via the Miller Street frontage, using the three lifts located within the laneway at the Miller Street Ground Level. Access to the basement lifts is also available from the lower ground level retail arcade that is directly accessible from Denison Street, while the detailed design of the bicycle parking and end of trip facilities remains the subject

of further coordination as per the terms of the CSSI Approval, the Detailed SSD DA seeks approval for the use of basement areas containing the bicycle parking and end of trip facilities.

The main bicycle parking and end of trip facilities will be located on Basement level 2 (B2) and provides 439 bicycle parking spaces. End of trip facilities are provided in the way of approximately 527 lockers and 60 showers. These facilities are provided for employees and visitors of the development in accordance with the Green Building Council of Australia (GBCA) 6 Star Green Star Requirements.

4.7.4. Loading, Unloading and Servicing

All loading dock facilities are located on Basement Level 01 and are accessed via the driveway of Denison Street. The loading dock will provide spaces for two Medium Rigid Vehicles, two Small Rigid Vehicles, two courier spaces, and two Sydney Metro staff spaces.

The loading dock will be available 24 hours per day (subject to booking with a facilities manager), with a typical operational window of 14 hours per day 6:00am – 8:00pm, seven days a week.

The loading and servicing dock will be managed in accordance with the Loading Dock Management Plan (**Appendix T**) prepared by Arcadis / Mott Macdonald.

The proposed development does not compromise the emergency vehicle access possible via both Miller Street and Denison Street.

4.8. ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

The Victoria Cross OSD proposal includes a key objective to provide a development which achieves the projects Ecologically Sustainable Development (**ESD**) targets. In conjunction with the GBCA, the project's commitment to sustainability is demonstrated by targeting the following ratings:

- 6 Star Green Star Design and As- Built v1.2; and
- 5.5 Star NABERS Energy Rating.

An Ecological Sustainable Design Report has been prepared by Lendlease Applied Insight and is included at **Appendix K**. This report provides further detail around how the overall planning and design of the building has incorporated ESD principles as defined in clause 7(4) Schedule 2 of the Regulation.

In summary, the proposal aims to maximise indoor environmental quality outcomes, such as waste reduction and low environmental impact materials, whilst maintaining energy efficiency and providing easy access to transport and bike / end of trip facilities.

4.9. SIGNAGE ZONES

Four building identification signage zones are proposed at the top of the commercial office tower. As stated at the Architectural Plans, the Detailed SSD DA seeks consent for the use of three of these four zones.

It is intended that the installation of the top of building signage will be subject to a separate development application in the future, however that the future development application will be consistent with the general location and number of signs proposed within this Detailed SSD DA.

4.10. WASTE MANAGEMENT

The storage, management and disposal of waste generated by the operation of the mixed-use commercial building and the construction of the Victoria Cross OSD has been appropriately considered in the Waste Management Plan prepared by Waste Audit (**Appendix R**).

The primary waste streams expected to be generated by the ongoing operation of the total development are summarised below.

Table 5 – Summary of operational waste generation and management requirement

Type of waste	Commercial office (OSD) L/wk	Commercial office (CSSI) L/wk	Retail (CSSI) L/wk	Total Bins Required
Waste	41,427	17,888	1,471	12 collected five times weekly
Commingled recycling	27,618	7,155	981	7 collected five times weekly
Paper/cardboard recycling	41,427	10,733	1,471	10 collected five times weekly
Organics	5,524	2,385	196	14 collected five times weekly

The spatial allocation for the bins (and circulation space) required to service the development (including the retail and commercial office approved within the CSSI Approval) is a minimum area of 40.2sqm. This area is accommodated readily within two separate waste rooms within Basement Level 01.

4.11. SERVICES & UTILITIES

The Detailed SSD DA design further develops the Concept design in order to establish the capacity and augmentation requirements of the developments utilities provisions. Generally, in order to support the development, the approach has included measures to avoid, protect, augment or relocate/remove utilities within the surrounding area. Connections into the OSD and Station include electrical, communications, fire, gas, potable water and sewer services, utilising existing connections where possible.

The services and infrastructure report at **Appendix X** undertook an assessment of the existing infrastructure capabilities, identifying new connections required to be provided as part of the development as summarised below.

Table 6 – Utilities services augmentation required

Utilities	Augmentation required
Electrical	Existing Ausgrid infrastructure has been confirmed to be sufficient to accommodate supply the new substations for the OSD. A new feed is required to be provided from the North Sydney Zone substation to the OSD and the southern Sydney Metro entry, however the new incoming consumer main will be supplied utilizing existing Ausgrid infrastructure/conduits where possible.
Communications	No new external connections, or upgrades to existing feeds, are required.
Gas	Connection to 150mm existing secondary network service in Denison Street is proposed to be utilised to satisfy development gas requirements
Sewer	New connections to provide sewer service are required. The existing 225mm Sydney Water sewer in Denison Street will be used for the Sydney Metro southern entry and the OSD which will have sufficient capacity to service the Victoria Cross Integrated Station development. The proposed connections above are subject to Section 73 application to Sydney Water.
Potable water	New connections for potable water and fire services are required.

The existing 150mm Sydney Water network in Miller Street will be used for the Sydney Metro southern entry and the OSD, which will have sufficient capacity to service the Victoria Cross Integrated Station development. The proposed connections above are subject to Section 73 application to Sydney Water.

The report also includes plans which indicate the proposed locations of services connections to the building (substations) from the authority trunk mains in the street. It is noted that these locations have been coordinated with building services design but may be subject to relocation in order to better coordinate with building structure, room locations and services routes throughout the building.

4.12. CONSTRUCTION MANAGEMENT & STAGING

A Construction Site and Management Plan (CSMP) has been prepared by Lendlease Building (**Appendix W**) which outlines the construction processes and procedures associated with the proposed development from handover and site establishment, right through to operational station commissioning and testing.

Project works include those associated with the Metro Station and the OSD. The CSMP defines the scope of works carried out by Lendlease building and those by other contractors, including the interface and handover of the Tunnel and Station Excavation Works (TSE).

Further, the CSMP provides detail regarding traffic and pedestrian management, staging methodology, milestones, materials handling and crange, waste management, temporary works and program management. At the time of writing this EIS, the existing buildings on site have been demolished as part of the CSSI approval, and the site excavation by the TSE Contractor has commenced.

The precinct has three construction components/zones:

- North Station and Cavern Construction (CSSI);
- South Station Construction (CSSI & SSD); and
- Over Station Development (SSD).

4.12.1. Site Establishment

Demolition and excavation works associated with the CSSI Approval have commenced on site and as such the TSE contractors have established the site with the erection of a temporary construction shed around the site boundaries and work zones (refer **Figure 14**). Notwithstanding, following handover from the TSE contractors, Lendlease will erect hoardings in accordance with the Sydney Metro standards on the Miller Street, Berry Street and Maclaren Street (North Site) frontages. The site will also be established with a security perimeter and gates, site accommodation / amenities and a project office.

4.12.2. Construction Hours

Construction hours for the site have been established in accordance with the CSSI Approval consent conditions, which include:

- Monday to Friday: 7:00am – 6:00pm
- Saturday: 8:00am – 1:00pm; and
- Sunday: No work

It is noted that Lendlease Building proposes to make an application to extend these hours to be consistent with other Sydney Metro works and other North Sydney CBD construction projects, however that application will be subject to a separate approval process. In addition to the above site working hours, there will be times when out of hours works are required. In this regard the CSMP states:

An Out Of Hours (OOH) Protocol for the assessment, management and approval of work outside of standard construction hours will be prepared and submitted for approval for works not subject to an EPL. Out of hours works subject to an EPL will be approved in accordance with the conditions of the EPL.

4.12.3. Traffic and Pedestrian Management

Managing the flow of materials and equipment into and out of the construction site, as well as the flow of pedestrians and traffic to surrounding buildings and roads, is key to ensure the continuity of business within the North Sydney CBD and overall successful delivery of the project.

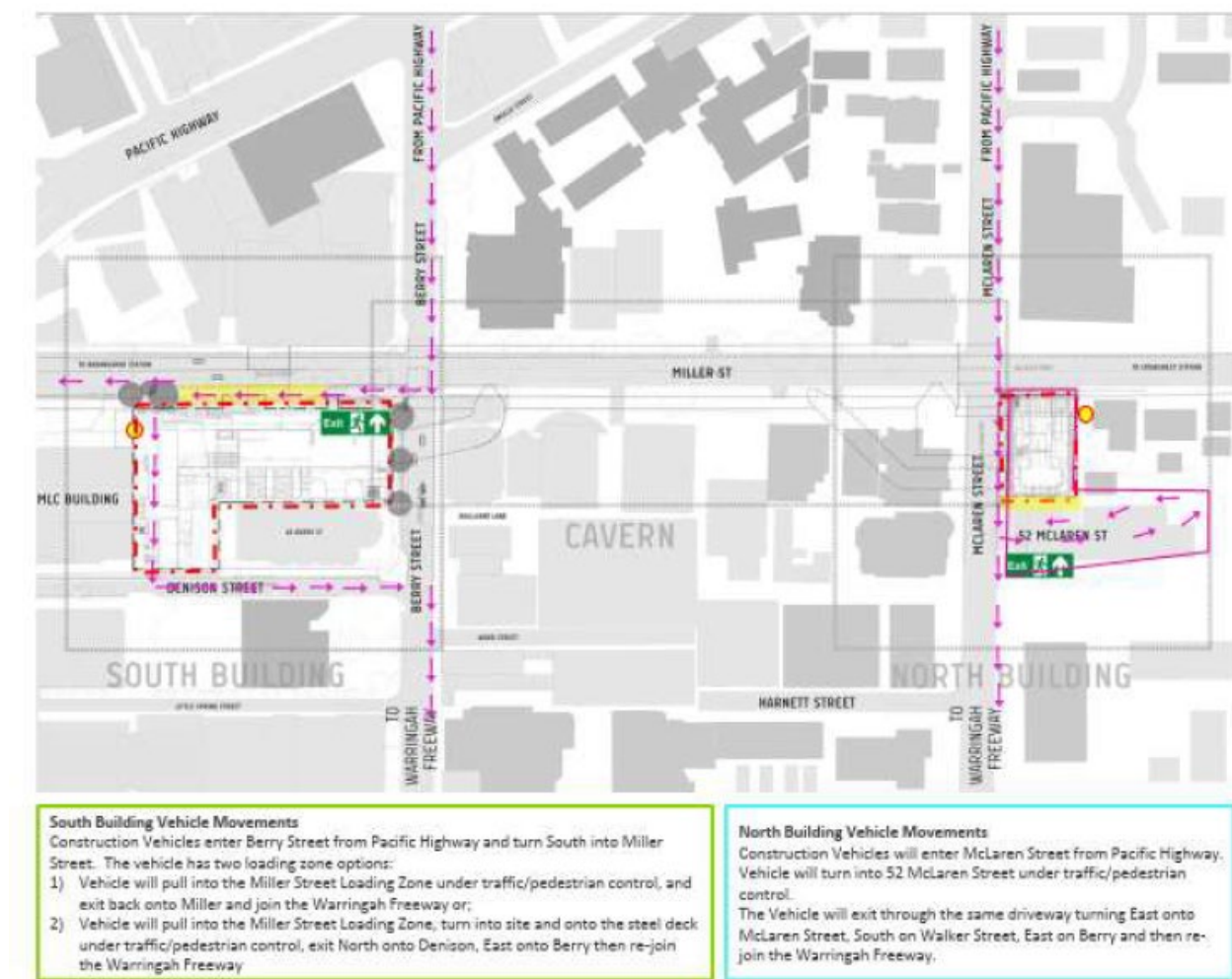
The CSMP prepared by Lendlease (**Appendix W**) outlines the traffic and pedestrian management overview for the project in conjunction with the following key strategies to be adopted:

- A framework Construction Pedestrian and Traffic Management Plan (**CPTMP**) prepared by Arcadis & Mott Macdonald (attached to the Traffic and Transport Impact Assessment at **Appendix T**) which is consistent with the Construction Traffic Management Framework prepared as part of the CSSI; and
- A Green Travel Plan (**GTP**).

As shown in **Figure 42**, construction vehicle movements to the subject site (south site) will enter Berry Street from the Pacific Highway and turn south into Miller Street. From here vehicles have two loading zone options:

- (a) Vehicles will pull into the Miller Street Loading Zone under traffic/pedestrian control, and exit back onto Miller Street where they join the Warringah Freeway, or;
- (b) Vehicles will pull into the Miller Street Loading zone, turn into the site onto the steel deck under traffic/pedestrian control, exit north on Denison street, then east onto Berry street where they re-join the Warringah Freeway.

Figure 42 – South Site Construction Vehicle Routes

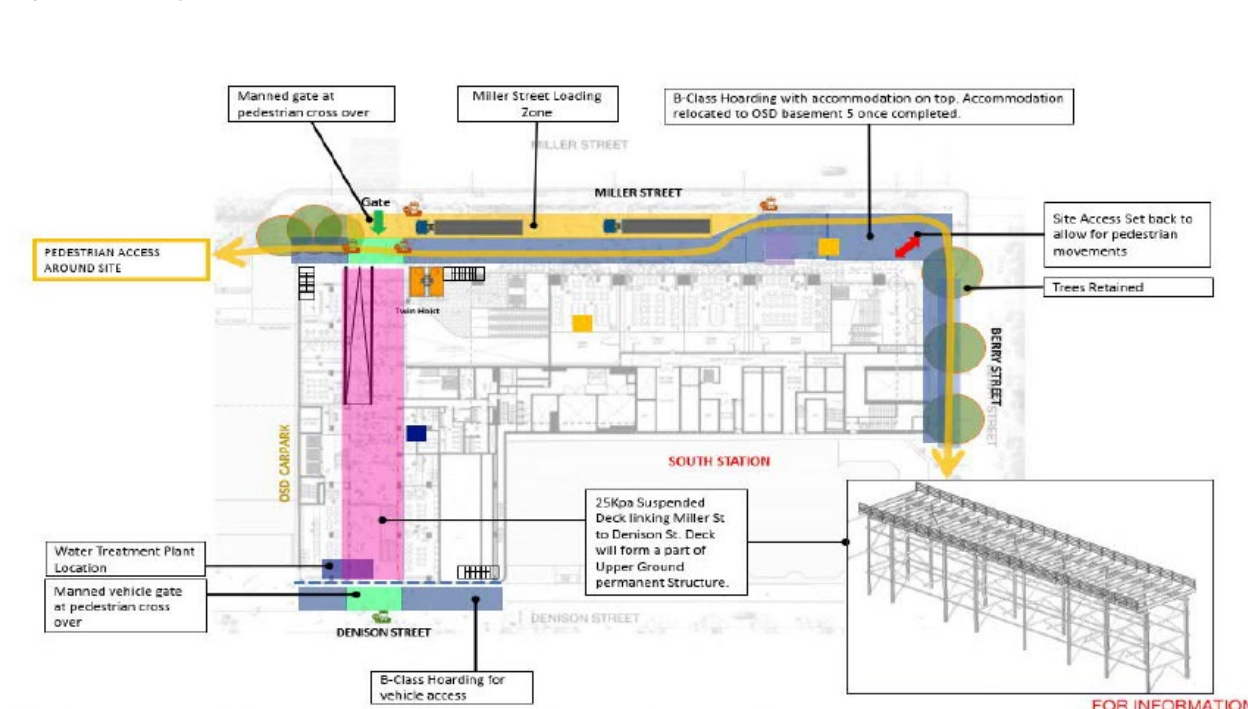


Traffic management and control will be established for all major roads and interfaces areas across the project site. Control measures include traffic controllers, warning lights and pedestrian boom gates at all site access/egress and construction zones to ensure:

- Segregation of the public from truck movements;
- Segregation of construction worker access from construction vehicle access;
- Materials and deliveries don't impede public roadways or footpaths; and
- Coordination of truck movements to and from the site.

During construction Lendlease will be responsible for ensuring surrounding stakeholders, commuters and visitors to North Sydney CBD are well informed of required footpath closures and the alternate travel paths to major destinations provided. Generally, a pedestrian access route will be provided around the southern site along Berry Street and Miller Street where pedestrian/vehicle crossover areas are manned by gates and qualified traffic controllers (refer to **Figure 43**). As there is no parking available on site, subcontractor and construction workers access to the site will be encouraged through the use of existing public transport networks as part of the GTP.

Figure 43 – Subject Site Construction Zone and Pedestrian Movement



The Framework CPTMP attached to the Traffic and Transport Impact Assessment (**Appendix T**) provides further detail around the management of traffic and pedestrians. It is noted the framework is currently under iterative development in conjunction with the relevant authorities to identify, document and implement the strategy for managing pedestrian vehicular traffic construction movements for the precinct. This document will be updated accordingly as required per the conditions of any approval granted for the Detailed SSD DA.

4.12.4. Construction Staging

The CSMP steps out the construction staging sequence and methodology for the three construction components / zones for the integrated Victoria Cross project. As discussed, demolition and excavation works associated with the CSSI Approval have commenced on the subject site to ensure delivery of the station in time for the opening of the Sydney Metro in 2024. This sub-section will provide an overview of the construction staging for the south station site and OSD only.

The south site station and basement levels are integral to the future operation of the Sydney Metro. As such, completion of these works is critical to handover of the line-wide contractors and will occur in a staged manner in conjunction with the agreed upon milestone sequence.

At the time of the Victoria Cross Station completion, the OSD loading zone and B-Class hoarding along Miller Street will be reduced to the footprint required only for the OSD. The concrete pumping station from the Miller Street through-site link will be relocated to basement Level 1 of the OSD car park. By the time the Station is open, it is anticipated that only external works relating to the north-east public domain and the finishing touches to the northern façade will remain. The OSD east, south and western facades are scheduled to be completed.

4.13. SUBDIVISION

Preliminary subdivision plans are included at **Appendix G**. The CSSI Approval provided consent for the subdivision of the Station lot (Lot 101). The subdivision of all other allotments beyond the Station lot is required to be created by the Detailed SSD DA and this includes:

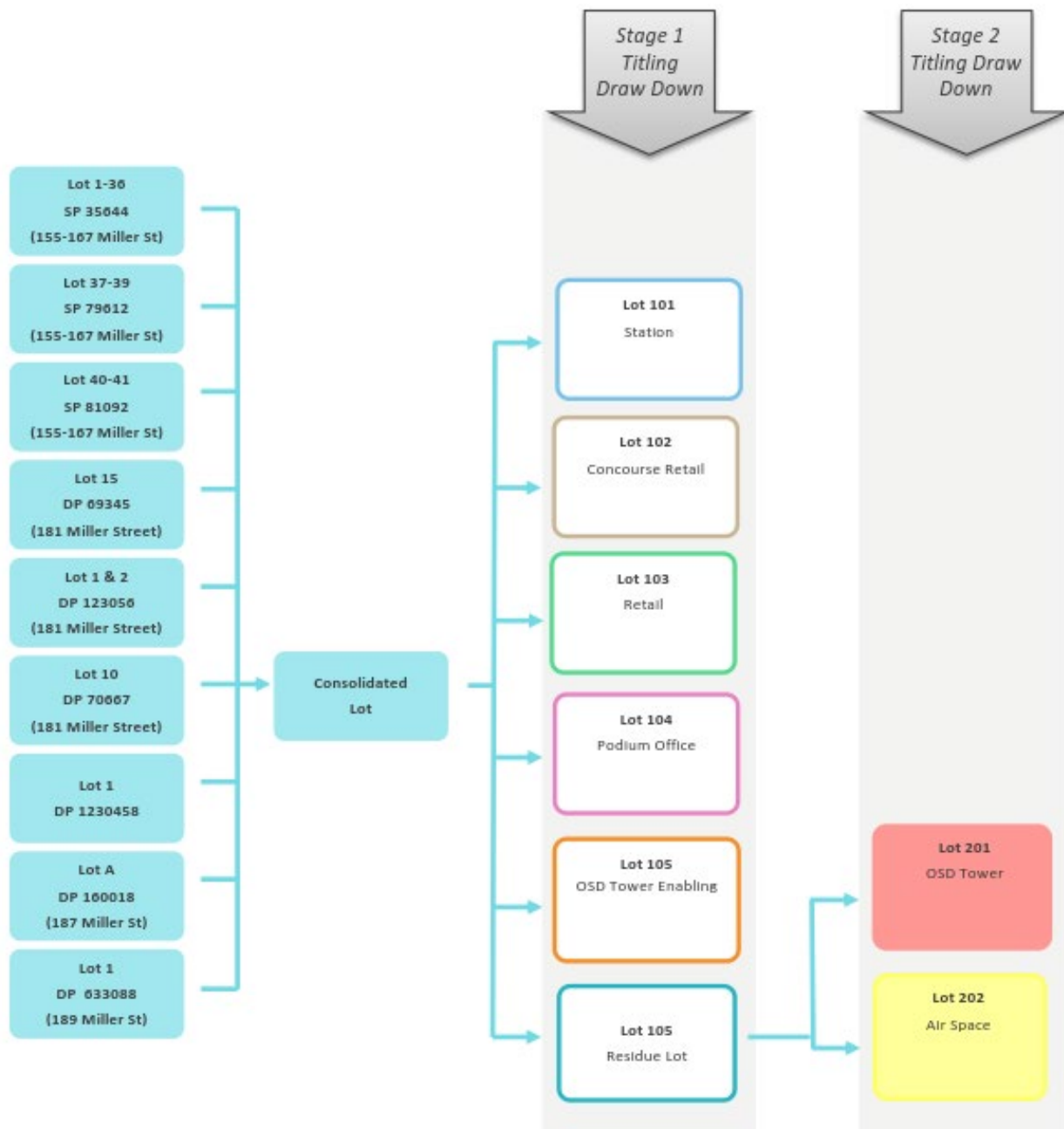
- Lot 102 – Concourse Retail
- Lot 103 – Retail
- Lot 104 – Podium Office
- Lot 105 – OSD Tower Enabling
- Lot 201 – OSD Tower
- Lot 202 – Air Space

It is proposed that the stratum lots be created in a staged manner. The staged subdivision consent is to allow for the sequential creation / registration of allotments to occur as is required to coincide with the construction and occupation program for the Integrated Station Development without the need for separate ongoing subdivision applications. The final sequencing of the creation / registration of allotments will need to be flexible and in turn final allocated lot numbers will vary subject to staging. The anticipated staging is demonstrated by **Figure 44** below.

The anticipated Stage 1 titling relates to everything below the transfer level. This includes, allotments for the station concourse retail, podium retail, secondary / podium commercial office floor space, part of the OSD Tower ancillary/ structure (areas within the podium) and residue areas.

Given the design for areas below the transfer level are continually evolving, flexibility is required for effected lot boundaries within the CSSI 'metro box'. The subdivision plans include provisions to accommodate for potential changes to lot boundaries. The anticipated Stage 2 titling relates to everything above the transfer level, including the OSD Tower (areas above the podium) and the Air Space around the tower.

Figure 44 – Anticipated subdivision staging



Source: Lendlease

5. CONSULTATION & STAKEHOLDER ENGAGEMENT

To inform the request for SEARs and the preparation of this EIS, the applicant and its consultant team have undertaken pre-lodgement consultation with key stakeholders, including:

- Relevant local community groups;
- Surrounding owners/occupiers;
- NSW Government Architect's Office (**GANSW**);
- NSW Department of Planning, Industry and Environment (**DPIE**);
- North Sydney Council (**Council**);
- Sydney Airport Corporation Limited / Civil Aviation Safety Authority;
- Sydney Water;
- Transport for NSW (**TfNSW**);
- Roads and Maritime Services (**RMS**); and
- Sydney Metro Design Review Panel (**DRP**).

Community and stakeholder engagement sessions have been documented within Pre-Consultation Report included at **Appendix CC** and further detailed in the following sections.

5.1. COMMUNITY CONSULTATION

Community consultation has been undertaken with the local community, including surrounding land owners and occupiers. This has occurred throughout all stages of the development approval process from CSSI to Concept SSD DA, and all the way through to the Detailed SSD DA.

Various strategies were implemented to ensure collaborative community involvement in the project. Including emails to subscribers and stakeholders, stakeholder briefings, website information, newspaper advertisements, community newsletters and community information sessions. Specific community consultation actions undertaken are summarised in **Table 7** below.

Table 7 – Summary of community consultation activities

Activity	Content	Date
Email to subscribers including stakeholders	Offered briefing with project team to discuss integrated station development project update including proposed modifications to the Concept SSD Approval as well as the detailed design of the OSD.	16 May 2019
One on one stakeholder briefings	Carried out stakeholder briefings with surrounding land owners, interest groups, members of parliament, and local schools to present a project overview including proposed modifications to the Concept SSD Approval as well as the detailed design of the OSD and discuss project status and relevant items coordination as well as to receive feedback on integrated station development.	Various meetings from 26 February 2019 – 1 July 2019
Website information	Provided project update and seek community and stakeholder feedback on integrated station development. Promotion of Community Information Sessions at Fred Huntley Hall, North Sydney.	May 2019

Activity	Content	Date
Newspaper advertisements	Provided project update and seek community and stakeholder feedback on integrated station development.	North Shore Times: 16 May 2019 23 May 2019 Mosman Daily: 16 May 2019 23 May 2019
Community newsletter (issued to residents and businesses within 500m radius of the site)	Provided an overview of planning approvals pathways, planning timelines, how to provide feedback and invitation to Community Information Sessions at Fred Huntley Hall in North Sydney.	13 May 2019
Integrated station development booklet	Provided information about integrated station development detailed design, planning approvals pathways, planning timelines and project phases and how to provide feedback.	May 2019
Community information sessions	Displayed project information including artist's impressions, planning approvals pathways overview and timeline, station entrances, OSD, public realm and how to provide feedback and a formal feedback submission to the DPIE. Made available expert members of the project team to provide in person project overview and answer questions from the community members.	Thursday 23 May 2019 Saturday 25 May 2019

There were nine (9) feedback forms received following the two community information sessions. The comments raised from the community consultation undertaken that are relevant to the Detailed SSD DA include:

- Tower height;
- Overshadowing;
- Architectural Design;
- Facilities / uses;
- Consultation and submissions;
- Construction; and
- Safety.

The community consultation strategy and all content (responses) received during and throughout the process are included at **Appendix CC**. A summary of the matters raised from the community during consultation that relate specifically to the Detailed SSD DA and the proposal's response is included in **Table 8** below.

Table 8 – Summary of responses to community consultation matters

Matters Raised	Proposals Response / Document Reference
Suggestion for reduction in building height to match with elevation which 'step' up Miller Street (heading north towards McLaren Street) like buildings along Pacific Highway, North Sydney.	<p>Maximum building height was approved under the Concept Approval SSD 17_8874 and is generally consistent with the stepped building height control stipulated within the NSLEP.</p> <p>The proposal is situated in the context of several large-scale commercial buildings in the North Sydney CBD, including the following high-rise buildings recently completed and under construction: 1 Denison Street, 100 Mount Street and 177 Pacific Highway. The building height supports the employment function of North Sydney Centre by enabling the provision of significant commercial floor space, some 61,500 square metres of premium commercial floor space above a new metro station.</p>
I like the design of the building and the height is not out of place.	Noted.
Concern for overshadowing impacts to Miller Street and green spaces.	Overshadowing has been carefully considered as part of the design development for the building. The Detailed SSD DA will achieve no net additional overshadowing when compared to the previous shadowing conditions within Miller Street Special Areas, as demonstrated in the shadow diagrams included in Appendix E and as described at Section 8.1.6 of this EIS.
Suggestion for the site to be reconfigured to maximise the amount of public space that received the most sunlight.	The maximum building height and general site layout plan was approved under Concept Approval SSD 17_8874. The approved building envelope as proposed to be modified removes bulk and massing from the tower levels of the building to create a pedestrian scale to the through-site link and improve solar access to this laneway.
Suggestion to change the proposed building's architectural design to reduce the 'brutal' style with more articulation.	The building design incorporates significant articulation, both vertically and horizontally. Projections on the west elevation extend up to 4.3 metres with a variety of modulation. The north and south elevation provide modulation in their profile and are embellished with their sun shading element to provide an elegant and refined design. In response to feedback, the façade has been further developed to enhance the architectural design.
I like the design of the building and the height is not out of place. There appears to be good pedestrian access and [well] placed in the setback and alignment of the building.	<p>Noted.</p> <p>Setbacks and alignments have been carefully considered to ensure pedestrian access requirements are met and that the overall design is well resolved in its context.</p>
Suggestion for community and cultural facilities to be located within the building between ground floor and level 4 (not only retail uses).	Currently the proposal is tailored to meet Sydney Metro and NSW Government detailed requirements and concept approval for an integrated station development at Victoria Cross. Lendlease will consider opportunities to interface with and/or complement community and cultural facilities prior to opening.

Matters Raised	Proposals Response / Document Reference
Suggestion for building uses to be reconsidered to allow for more community facilities and amenity to be provided for the local community.	The proposed nature of uses is consistent with the Concept Approval SSD 17_8874. Importance for community facilities and amenity to support a local community is understood. The project team will continue to consult with government and community groups and consider opportunities to include more community facilities and amenity.
Suggestion to incorporate a cinema to improve nightlife in North Sydney.	Currently the proposal is tailored to meet Sydney Metro and NSW Government detailed requirements and concept approval for an integrated station development at Victoria Cross. Lendlease will consider this suggestion in future including the call for expressions of interest for retail/services partners.
Stakeholder outlined that NSW Department of Planning, Industry and Environment's website currently lists 9 projects 'on exhibition' of which none are within North Sydney LGA (being the Victoria Cross integrated station development).	<p>Information on the planning pathways and anticipated public exhibition timing was on display at the May 2019 community and stakeholder consultations. This information was further included in the newsletter and booklet available at the consultations.</p> <p>The Detailed SSDA will be placed on public exhibition by the NSW DPIE post lodgement.</p>
Suggestion for Miller Street to remain open during construction	Lendlease will work closely with Sydney Metro, TfNSW (including Roads and Maritime Services) and North Sydney Council regarding requirements for road closures should they be required for safety or other reasons during the construction of Victoria Cross integrated station development. Safety is paramount in these considerations.
Suggestion for more imagery of the building's connection to Berry Street and Denison Street. Berry Street is the sunniest street and most horizontal to best cater for outdoor café seating.	Additional information is contained within the supporting documentation including additional imagery. Further, this EIS provides a detailed description of the proposal's components accompanied by imagery aspects (refer Section 4.6), including the through-site link, and will be placed on exhibition once lodged.
Suggestion for more activation within the station precinct and development to create a safe environment (passive surveillance).	<p>This will be addressed pursuant to CSSI 15_7400 approval. The project team are working closely with Sydney Metro and a CPTED consultant to develop the landscape and public realm design in consideration of this feedback. The importance of design excellence in place making to create great spaces is understood.</p> <p>A vibrant, activated retail precinct is proposed within the lower levels of the development which will contribute to a well-used place during the day and well into the evening.</p>
Cater for disabled of course - use of yellow to assist.	Noted. Lendlease is designing in accordance with the Australian Standards and Building Code of Australia having regard to disability access and mobility.

5.2. GOVERNMENT AGENCIES & OTHER STAKEHOLDERS

The applicant and their consultants have engaged in one-on-one briefings with the relevant Government agencies throughout the Detailed SSD DA process as outlined in **Table 9** below.

Table 9 – Summary of feedback from government agencies and stakeholders

Agency / Meeting Details	Matters Raised	Response / Reference
NSW Government Architects Office (GANSW)	Government Architect's Office was invited to a one on one briefing session with the DPIE on the 18 March 2019, however sent an apology and was not in attendance at the meeting. The Government Architect is a member of the Design Review Panel and the Acting Government Architect has reviewed the project through this forum.	Design excellence has been reviewed through the Sydney Metro DRP as described in detail at Section 5.4 .
NSW Department of Planning, Industry and Environment (DPIE) – 18 March 2019	DPIE provided technical commentary on the future planning processes and considerations including the need for a SEARs request for the Detailed SSD DA.	The application clearly follows the statutory planning pathway as agreed with DPIE staff and makes clear the proposed scope of the detailed design. SEARs were received and have been responded to accordingly (refer Section 1.6).
North Sydney Council <ul style="list-style-type: none"> 28 February 2019 8 March 2019 19 March 2019 1 May 2019 17 May 2019 14 June 2019 	<ul style="list-style-type: none"> Generally North Sydney Council officers were positive about the Integrated Station Development however would like to be involved in the evolution of the design detail particularly the public domain aspects. Raised concerned on various design details and requested further information and explanation be provided. Council was consulted on progress of technical project matters including stormwater detention co-ordination and construction management. Council officers generally supported the design, noting the envelope was an improvement to the Concept SSD Approval reference scheme and they support the fine grain architectural response of the laneway, the Hub 	<p>The applicant understands the Council's aspirations for public space in the area and is committed to consulting with the Council on relevant elements as the design progresses.</p> <p>Lendlease further provided specific information requested by North Sydney Council and provided a response to address to their raised concerns.</p> <p>The applicant understands the desire for community facilities and retail that respond to the need in the local area to be incorporated and is committed to exploring this further.</p> <p>The applicant is committed to continue consulting with Council as the detailed design progresses.</p> <p>The applicant will continue to consult with Council on levels along Denison Street and future</p>

Agency / Meeting Details	Matters Raised	Response / Reference
	<p>initiative and the tower façades response to the MLC building façade.</p> <ul style="list-style-type: none"> The applicant presented the proposed public domain design along Miller Street, Berry Street, Denison Street and McLaren Street. 	<p>works associated with Denison Street.</p>
<p>North Sydney Councillors</p> <ul style="list-style-type: none"> 2 September 2019 	<ul style="list-style-type: none"> The applicant presented an overview of the ISD project including an update on design development, such as the proposed modifications to the Concept SSD Approval as well as the detailed design of the OSD. An overview of the project's activation and public domain strategy was also presented. The applicant and the Councillors discussed the wider North Sydney Council's vision for North Sydney and the strategy for Victoria Cross' surrounding precinct. The North Sydney Councillors noted the proposal and provided support for the ISD as the integrated transport solution provides opportunities to benefit the Council's vision for North Sydney and the precinct strategy. 	<p>The applicant confirmed its commitment to continue to consult with North Sydney Council officers on relevant elements as the design progresses. The applicant also confirmed that discussions would continue throughout the project to ensure North Sydney Councillors remain well informed.</p>
<p>Sydney Water</p> <ul style="list-style-type: none"> 26 February 2019 2 April 2019 30 April 2019 4 May 2019 	<ul style="list-style-type: none"> Initiation of the Sydney Water Section 73 approval process to deliver and protect Sydney Water infrastructure works in order to service the Station and OSD works above street level. Presented an update on services design proposal. The applicant to further refine design proposal and submit formal notice of requirement for s.73 for the metro and the OSD / retail components of the project. 	<p>The applicant lodged a s.73 application for Metro and OSD/retail components on 14 June 2019.</p>

Agency / Meeting Details	Matters Raised	Response / Reference
	<ul style="list-style-type: none"> The applicant to provide an overview of the Integrated Station Development to the Water Service Coordinator. Discussion about project co-ordination and timing moving forward was carried out. The applicant will continue design development and follow the process discussed. The applicant is committed to continue consulting with Sydney Water throughout the project. The applicant discussed stormwater drainage design on Miller Street including stormwater detention tank and ownership structure as well as relevant standards applicable to the project. 	
Sydney Coordination Office (including Roads and Maritime Services) – 6 March 2019	The applicant to develop construction management plan further and come back in the future to discuss.	The applicant has further developed the Construction Management Plan (Appendix W) and will consult with the Sydney Coordination Office including RMS.
Sydney Airport (Civil Aviation Safety Authority) Teleconference – 20 March 2019	The applicant to provide technical input into the future construction methodology including crane activity.	The application is accompanied by technical input regarding these matters in the Construction and Site Management Plan (Appendix W). These components are discussed in further detail in Sections 4.12 and Section 8.1.20 .
Telstra – 29 May 2019 & 7 June 2019	<p>The applicant and Telstra agreed for a field inspection and assessment to be carried out with the applicant to review approach following this.</p> <p>Field inspection was completed with Telstra 7 June 2019.</p>	<p>No specific implications at this stage of the Detailed SSD DA.</p> <p>Inspection results will be used to agree the location of project works in relation to available assets from Telstra within Miller and Denison Streets.</p>
Ausgrid – 4 March 2019	The applicant to further review approach and present updated design when finalised.	No specific implications at this stage of the Detailed SSD DA.
Jemena	<ul style="list-style-type: none"> Jemena was positive about the proposal and received the 	No specific implications at this stage of the Detailed SSD DA. The

Agency / Meeting Details	Matters Raised	Response / Reference
<ul style="list-style-type: none"> 4 March 2019 16 April 2019 2 May 2019 	<p>construction management strategy well.</p> <ul style="list-style-type: none"> The applicant requested temporary isolation of services for construction. Jemena was open to request and will take time to review and provide feedback. The applicant will continue consulting with Jemena throughout the project. 	<p>applicant remains committed to consulting Jemena throughout.</p>

For further discussion of one-on-one stakeholder briefings, please refer to the Pre-Consultation Report at **Appendix BB**.

5.3. SYDNEY METRO DESIGN REVIEW PANEL

To inform the preparation of the Detailed SSD DA for the detailed design of the proposed OSD project, the scheme has been presented to the Design Excellence Evaluation Panel (DEEP) and Design Review Panel (DRP) nineteen times, nine times since the appointment of Lendlease as the development partner, to seek feedback and to confirm design integrity.

Matters raised relating to the detailed architecture of the building are addressed throughout this EIS including key items relating to the OSD design described at **Table 10**.

Appendix HH provides a schedule of the DEEP and DRP endorsement minutes which demonstrate support of the proposal and the closing out of relevant design matters.

Table 10 – Response to Sydney Metro DEEP & DRP Comments

Matter	DRP Comment	Response
Architectural Design	The Panel disliked the use of 'V' shaped columns	Further detailed design work has removed these columns and include rather more refined, singular columns on Miller Street that do not undermine the visibility of the retail facades at Miller Street.
	The Panel had concerns with the blank eastern facade.	The eastern facade has been revised to include windows and a variety of facade materials to provide a specific design character of this facade. Refer to Section 4.6.3 for comment.
Metro Entrance	The Panel requested the OSD team review the Miller Street frontage to increase the visual and physical presence of the Metro entry. Further, the Panel noted the station entrance should address the junction at MLC, the expression of the laneway, scale of	The design of the Metro Entry at Miller Street has been revised to ensure that it is easily identifiable. The reduction in the built form immediately above the Miller Street Metro entry within the Concept SSD DA modification application further enhances the visibility and civic character of the primary metro entry.

Matter	DRP Comment	Response
	the entry and other tower elements.	
Design Development	The Panel would like to work with the OSD team on the proposed environmental performance, noting a concern with over-reliance on performance glass.	The proposed tower facades have been revised to include additional shading devices to enhance passive ESD methods.
	The Panel noted a strong preference for the Miller Street Stage 1 setback to be retained.	The ground level Miller Street setback included within the Concept SSD DA has been retained. The setback to Miller Street for the OSD has been increased.
Tower Massing and Façade	The Panel noted that the strategy for breaking up the mass of the tower should be integral to the design rather than an applique.	The façade breakdown has evolved throughout the detailed design however the Miller Street façade maintains deep façade indentation and articulation as described at Section 4.6.3 .
	The Panel recommended further resolution of the eastern elevation adjacent to the office building, and the detailed resolution of the building corners.	The eastern elevation of the tower and building corners has been revised as included within Appendix D .
Design Guidelines	The ultimate design is to be in accordance with the Victoria Cross OSD Design Guidelines	The detailed design has been informed by the Victoria Cross OSD Design Guidelines as detailed at Appendix E and as summarised at Section 8.1.1 .

Consultation with the Sydney Metro DRP also related to matters relevant to the CSSI works including awnings, public domain and podium facades which will be resolved through the Station Design and Precinct Plan (**SDPP**) (condition E101 of the CSSI Approval).

In accordance with Item 5 of the SEARs, the Schedule of the matters raised by the DEEP and DRP having regard to the Design Excellence review process has been included at **Appendix HH**. This documents how the advice and feedback of the Sydney Metro DRP and DEEP has been considered and incorporated into the proposal.

The Endorsed Design Excellence Strategy for Victoria Cross is provided at **Appendix CC**.

6. STRATEGIC PLANNING CONTEXT

In accordance with the SEARs, the following strategic planning policies have been considered in the assessment of the proposal:

- NSW State Priorities
- Greater Sydney Region Plan – ‘A Metropolis of Three Cities’
- North District Plan
- Future Transport Strategy 2056 and supporting plans
- Better Placed – an integrated design policy for the built environment of NSW 2017
- Development Near Rail Corridors and Busy Roads Interim Guideline
- Noise Policy for Industry
- Guide to Traffic Generating Development (RMS)
- NSW Planning Guidelines for Walking and Cycling
- North Sydney Section 94 Development Contributions Plan
- Sydney Metro Planning Study 2016 (North Sydney Council)
- North Sydney Centre Capacity and Land Use Strategy 2016
- Draft North of Centre / Ward Street Precinct Masterplan

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

6.1. NSW STATE PRIORITIES

The *NSW State Priorities* is the State Government’s and Premier’s plan to guide policy and decision making across the State. The proposed Victoria Cross OSD is consistent with the relevant key objectives contained within the plan. These include:

- **Creating Jobs:** Create 150,000 new jobs by 2019.
 - The proposal will generate between 430-450 temporary job opportunities during the project’s construction phase. Once complete, the development facilitates commercial and retail opportunities for future tenants which will provide approximately 4,900 jobs.
 - This proposed tower strengthens the North Sydney commercial district and through supporting a conglomeration of commercial offices will assist in the attractiveness and competitiveness of the North Sydney CBD for businesses operating in NSW.
- **Delivering Infrastructure:** Key metropolitan, regional and local infrastructure projects to be delivered on time and on budget.
 - The NSW Government has committed to delivering 10 significant infrastructure projects on time and on budget under the NSW State Priorities, including the Sydney Metro to be opened in 2024.
 - The proposal provides a significant development opportunity for the State in conjunction with the new Sydney Metro Project. The Detailed SSD DA supports the delivery of Sydney Metro by facilitating employment growth which is coordinated with the new Victoria Cross Station. The proposed built form includes active ground floor uses and provides building relief with clear wayfinding to the main Sydney Metro Victoria Cross Station entrance from Miller Street.
 - *Improving Road Travel Reliability:* The OSD at Victoria Cross will assist in reducing journey time targets for road users by providing a development which encourages commuter use of public

transport. This is largely through the physical integration of the OSD and Sydney Metro Victoria Cross Station.

- **Better Services:** Ensure on-time running for public transport.
 - The Sydney Metro Victoria Cross Station will provide additional infrastructure within North Sydney to reduce commuter congestion at North Sydney Station and transport overcrowding for north and south bound services. Once constructed, the OSD will contribute towards reducing travel and waiting times through the provision of a landmark development above the Victoria Cross Station which attracts the community and transport patrons, while providing additional workers in proximity to public transport.

Overall, it is considered that the proposal is consistent with the goals and objectives set out within the *NSW State Priorities*.

6.2. GREATER SYDNEY REGION 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 easier reach of more residents, no matter where they live. Western Parkland City, Central River City and Eastern Harbour City (building on its recognised economic strength and addressing liveability and sustainability) sets a 40-year vision (to 2056) and establishes a 20-year plan to manage growth and change for Greater Sydney in the context of social, economic and environmental matters.

The plan informs district and local plans, assists infrastructure agencies to align infrastructure delivery and informs the private sector and wider community of the growth management and infrastructure investment intentions moving into the future.

The vision for the plan is built on three 30-minute cities within Greater Sydney, 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-served and highly accessible by its radial rail network, with half a million jobs and the largest office market in the region.

The proposed Victoria Cross 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 & Southwest project. In accordance with Objective 18, the proposal specifically aligns with the regional plan by:

- Providing a significant amount of premium office floor space (61,500 sqm) which strengthens the Harbour CBD’s economy globally and nationally;
- Comprises a commercial tower and activated podium which supports a diversity of uses for competitive services and entertainment opportunities; and
- Maximises opportunities presented by the Sydney Metro Victoria Cross Station to improve business to business connections and support the 30-minute city.

6.3. NORTH DISTRICT PLAN

The North District covers the local government areas of Hornsby, Hunter’s Hill, Ku-ring-gai, Lane Cove, Mossman, North Sydney, Northern Beaches, Ryde and Willoughby. It forms a large part of the Eastern Harbour City with its economy leaning to the Harbour CBD, which acts as the metropolitan centre for the North District.

The District Plan aligns with major transport, health and education investments either committed or planned across the District, such as the Northern Beaches Hospital, Sydney Metro Northwest, Sydney Metro City & Southwest and North Connex, which aligns with *Future Transport 2056*.

Planning priorities that directly relate to the proposed Sydney Metro Victoria Cross Station OSD include those discussed below.

- **N1 – Planning for a city supported by infrastructure:**

The proposal directly benefits from the development of the Sydney Metro Victoria Cross Station by locating additional employment floor space (61,500 sqm). The modified building envelope and OSD accommodate a vibrant public domain area that enhances local opportunities for entertainment, social interaction, pedestrian

access and wayfinding which can be utilised by the surrounding and wider community. The detailed design reduces building massing above the Victoria Cross Station entrance at Miller Street to provide a legible entrance to the Sydney Metro with improved solar and wind conditions around the site. Further, the proposed relocation of the OSD commercial lobby entrance allows for additional retail and active frontages to Miller Street.

The development facilitated by the modified Concept SSD DA aligns with the place-based infrastructure service, encouraging active transit methods such as walking and cycling, and evidently the Sydney Metro Victoria Cross Station.

- ***N7 – Growing a stronger and more competitive Harbour CBD:***

The priority establishes North Sydney CBD as a key part of the Harbour CBD. The OSD provides premium commercial and retail floor space, thus, ensuring the commercial core of North Sydney remains an attractive office market which complements the Sydney CBD. The proposal integrates with the Victoria Cross Station, improving the site's connectivity to Sydney CBD and other centres in the Eastern Economic Corridor. Furthermore, the proposed OSD encourages a more diverse night-time economy and continues to improve walking and cycling links within the North Sydney CBD.

- ***N10 – Growing investment, business opportunities and jobs in strategic centres:***

The proposal delivers premium grade commercial floor space within a metropolitan centre, aligning with employment growth objectives, which is identified as the principal underlying economic goal for metropolitan and strategic centres.

- ***N12 – Delivering integrated land use and transport planning and a 30-minute city:***

By locating additional commercial floor space above the Sydney Metro Victoria Cross station, the proposal contributes to the vision for a 30-minute city. Further, the proposal is considered sustainable as it increases the proportion of trips by public transport, walking and cycling trips to reduce emissions and health.

6.4. FUTURE TRANSPORT STRATEGY 2056

The NSW Governments *Future Transport Strategy 2056*, issued in March 2018, is an update of NSW's Long-Term Transport Master Plan. The Strategy sets the 40-year vision, directions and outcomes framework for the transport system and customer mobility in NSW, which are divulged for Regional NSW and Greater Sydney. It will guide transport investment over the longer term delivered through a series of services and infrastructure plans and other supporting plans.

The Services and Infrastructure Plans define the network required to achieve the service outcomes, whilst the Supporting Plans provide detailed issues or place-based planning documents that assist implementation of the Strategy across NSW.

The Greater Sydney Services and Infrastructure Plan aligns with the GSC's vision for Greater Sydney as a Metropolis of Three Cities', where people have access to jobs and services within 30 minutes by public transport.

The site benefits from being located directly above the future Victoria Cross Metro Station which forms an important cog in the Sydney Metro City & Southwest project. The strategic location of premium grade commercial floorspace delivers economic benefits for Sydney by enhancing connectivity between businesses and people. The proposal provides an opportunity to boost the city's productivity by allowing future businesses to access a wider range of works and allowing employees to access jobs faster and more reliably.

Victoria Cross OSD boasts proximity to future public transport opportunities for site users/visitors, which encourages use of existing active transport networks to reduce automobile reliance, decreasing congestion and reducing environmental impacts.

6.5. BETTER PLACED DESIGN POLICY

Better Placed (2017) is an integrated design policy for the built environment, prepared by the Government Architect NSW, to create a clear approach to ensure good design outcomes are achieved to deliver desired architecture, public places and environments throughout NSW (September 2017). The policy guides best

practice design processes which align with a clear set of established objectives in order to steer projects towards achieving the best possible outcomes. Seven applicable objectives include:

- Better fit – contextual, local and of its place
- Better performance – sustainable, adaptable and durable
- Better for community – inclusive, connected and diverse
- Better for people – safe, comfortable and liveable
- Better working – functional, efficient and fit for purpose
- Better value – creating and adding value
- Better look and feel – engaging, inviting and attractive.

The Detailed SSD DA has been subject to an extensive review process that involved a collaborative, cyclical and iterative process which has resulted in a better resolved envelope design solution. This iterative process has featured ongoing design review and feedback loops from the Sydney Metro Design Review Panel (DRP) to establish a set of design guidelines / principles derived from a design excellence strategy.

The detailed design of the proposal accommodates a built form that is sustainable, functional, sensitive to its context and visually distinctive as encouraged by objectives of Better Placed.

6.6. DEVELOPMENT NEAR RAIL CORRIDORS & BUSY ROADS – INTERIM GUIDELINE

The *Development Near Rail Corridors and Busy Roads* guideline assists in the planning, design and assessment of development which is in or adjacent to rail corridors and busy roads. The application of the guideline shares a close relationship with the *State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)*, supporting specific rail and road provisions contained within.

The Guideline relates to development impacted by rail corridors and busy roads, in terms of noise and vibration and air quality, as well as the potential impact of adjacent development on roads and railways, with regards to safety and design issues and excavation, earthworks and other construction related issues.

The Victoria Cross OSD proposal capitalises on this by concentrating commercial activities within easy walking distance above the future Sydney Metro station, thus improving accessibility and opportunities for increased rail patronage. The design principles implemented for the Detailed SSD DA reinforce the developments integration with the future station and wider public transport network.

With regards to noise and vibration impacts by rail corridors on development and vice versa, the application is accompanied by an Acoustic Report (refer to **Appendix S**), which in accordance with the SEARs, responds to the following matters:

- Identifies sensitive receivers to noise within the vicinity of the site;
- Identifies the main noise and vibration generating sources and activities at all stages of construction and during operation;
- Assesses cumulative noise and vibration impacts with the approved CSSI works; and
- Outlines measures to minimise and mitigate potential noise and vibration impacts.

The proposal addresses potential noise impacts from the OSD in terms of mechanical services, façade design and construction noise.

A Rail Corridor Impact Assessment has been prepared by Arcadis (**Appendix Z**) to address the potential impacts of the OSD's construction related issues on the Victoria Cross Station (under construction) and future Sydney Metro City and Southwest rail corridor. The primary potential impacts of the OSD relate to structural impacts, earthing and bonding, fire and life safety and building services. These potential impacts have been addressed through both a separated and integrated design solution, depending on the nature of the impact, to ensure the best design solution for both the tower and station below has been implemented.

6.7. NOISE POLICY FOR INDUSTRY

The Environment Protection Authority's (EPA) *Noise Policy for Industry* (2017) is a strategic document in relation to the assessment and management of industrial activities and associated noise sources. Section 1.5 of the *Policy* states that it does not apply to industrial uses associated with transportation corridors or construction activities.

Notwithstanding, potential noise impacts from the OSD has been discussed in **Section 6.6 Development Near Rail Corridors & Busy Roads – Interim Guideline** above, and will be discussed in further detail in **Section 8.1.12**.

6.8. GUIDE TO TRAFFIC GENERATING DEVELOPMENT (RMS)

The RMS' *Guide to Traffic Generating Developments* outlines all aspects of traffic generation considerations relating to developments. The Guide establishes the grounds for traffic impact assessment in terms of daily traffic volumes and peak traffic volumes for office / commercial land uses.

The Detailed SSD DA is accompanied by a Traffic and Transport Impact Assessment (**Appendix T**) which considers the strategic context of this Guideline and the statutory context of the Infrastructure SEPP as the basis for assessment. Traffic generation impacts are also discussed in further detail in **Section 8.1.8**.

6.9. NSW PLANNING GUIDELINES FOR WALKING & CYCLING

These guidelines function to improve the consideration of walking and cycling and their role in the creation of sustainable neighbourhoods and cities. The proposed development aligns with these guidelines by improving walkability and cycle access across North Sydney CBD through the provision of new pedestrian routes, end-of-trip facilities and wayfinding signage. This will contribute to a high-quality pedestrian and cycling environment, which is conducive to use of active transport options by future OSD workers and visitors.

6.10. SYDNEY'S BUS FUTURE

Sydney's Bus Future 2013 outlines the NSW Government's long-term plan to deliver an integrated bus network which is simpler, faster and better within Sydney to meet current and future customer needs. The overarching aim is to provide an integrated bus network which seamlessly connects to other transport services and opportunities.

With regards to North Sydney the plan proposes to continue running local services as peak express services for commuters to the Sydney CBD, providing fast, reliable and convenient access from inner Sydney suburbs such as North Sydney, supported by new bus priority on the network.

There are numerous bus services within the surrounds of the subject site as discussed in **Section 3.7.1**.

6.11. SYDNEY'S CYCLING FUTURE

Sydney's Cycling Future (2013) provides a framework for the way cycling is planned and prioritised in Sydney. It aims to grow the number of people cycling for transport by investing in safe, connected networks, making better use of existing infrastructure and fostering the formation of partnerships to develop cycling infrastructure.

The policy indicates TfNSW are working with North Sydney Council to deliver the *North Shore Link*, that will provide a well-connected cycle network which will connect Naremburn Cycleway and the Sydney Harbour Bridge. This would provide improved accessibility for site users and visitors to North Sydney CBD and the OSD, by encouraging people to use cycling as a means of transport with the availability of high-quality end-of-trip facilities. The site currently has access to nearby cycle networks, include cycle lanes / paths on Miller Street (refer to **Section 3.7.3**).

6.12. SYDNEY'S WALKING FUTURE

Sydney's Walking Future (2013) aims to promote walking as a means of effective transport within Sydney by encouraging investment in safe, permeable walking networks. The actions set out in Sydney's Walking Future will make walking the transport choice for quick trips under two kilometres and will help people access public transport. Increasing the number of people walking will help to reduce the burden on roads and

contribute significantly to community health and wellbeing. At the time of this plan, North Sydney was ranked third highest in number of walking trips per day with an average walk time of 24 minutes.

The surrounding road network provides the site and OSD with pedestrian access to the site largely via Miller Street, Berry Street and Denison Street. Future plans for Denison Street indicate partial transformation of the laneway as a dedicated pedestrian zone (refer to **Section 3.7.4**).

6.13. NORTH SYDNEY SECTION 7.11 DEVELOPMENT CONTRIBUTIONS PLAN

The OSD is subject to North Sydney Council's contributions requirements under the *North Sydney Section 94 Contributions Plan 2013*. The levy aims to assist the funding of public facilities such as facilities, amenities and services required to meet the needs of an increasing workforce population.

For commercial development, the Plan calculates the levy according to the increase in workers, assuming an average of 20sqm gross floor space per employee. The application of the levy for the Detailed SSD DA would be calculated on the proposed GFA of 61,500 sqm of commercial floor space.

6.14. SYDNEY METRO PLANNING STUDY 2016

In response to the NSW State Government's planned new metro rail infrastructure, Council prepared the *Sydney Metro Planning Study (2016)* as a guide to establish key opportunities and principles with respect to public domain and built form massing to inform the planning and design of the Victoria Cross and Crows Nest Metro sites located in the North Sydney LGA. The proposal was adopted on 20 February 2017.

With regards to the Sydney Metro Victoria Cross Station, the Study establishes a range of development opportunities for the site and identifies various principles to guide future development on the site. Consistency of the proposed development with the key relevant principles are outlined in **Table 11** below. It is noted that many of the principles of this study relate to ground level treatments which form part of the CSSI approval.

Table 11 – Detailed SSD DA's Consistency with *Sydney Metro Planning Study 2016*

Guiding Principle	Proposal's Consistency
Transport and Movement	
A quality pedestrian connection will be created linking the Metro with Denison Street via the existing Tower Square site.	A through-site link between Miller and Denison Streets which connects to the station is delivered as part of the CSSI Approval. An entrance to the Metro is provided at Miller Street (ground level) and at Denison Street (lower ground level).
Providing new cycling infrastructure to encourage active transport.	The basements levels of the tower have provisions for bicycle storage and end-of-trip facilities.
Public Domain and Open Space	
New and/or improved public spaces will provide for a number of functions, including pedestrian movement, outdoor dining and passive recreation.	Public domain spaces are provided as part of the CSSI Approval. Zones for outdoor dining associated with the proposed retail tenancies are included at ground level within the through-site link and the Miller Street ground level setback.
The potential for Miller Street to function as North Sydney's key piece of civic space/ public domain will be maximised.	A significant (min. 6m) ground level setback is provided at Miller Street expanding the existing public domain surrounding the site. The integrated OSD improves solar access to the Miller Street Special Area compared to the existing development prior to demolition on the site, whilst providing a

Guiding Principle	Proposal's Consistency
Design of the public domain will make the most of solar access opportunities.	landmark building with streetscape activation (shop/retail uses). The development results in a net gain in solar access to the Miller Street Special Area (refer to Section 8.1.6).
An uninterrupted linear space that includes the MLC building setback along the eastern side of Miller Street is a priority.	The buildings setback from Miller Street aligns with the station design and complies with the NSLEP 2013. Whilst not directly in-line with the MLC building, the lower scale retail podium element of the design has been specifically articulated to run at a continuous height with the building frontage.
Facilitate the activation of both sides of Miller Street.	The eastern side of Miller Street is activated through the ground / podium level retail uses, station entries and OSD lobby.
Land Use	
Support the employment function of North Sydney Centre by providing significant commercial floor space.	The detailed proposal supports employment through the provision of 61,500 square metres of premium grade commercial floor space above a new Metro station.
Maximise opportunities to incorporate retail and other non-residential floor space at ground level.	The proposal seeks consent for retail / commercial uses within the approved CSSI 'metro box'. Ground level activation is maximised through the proposed use of up to four levels of CSSI metro box for retail premises.
Restaurant, bar and retail opportunities at and above ground level will contribute to amenity, diversity and place making objectives.	As mentioned above, retail uses are provided to active the OSD lobby level which integrates with the station's retail uses.
Incorporate community uses into above station development.	The proposal does not seek approval for community uses, however, the OSD accommodates a revitalised public domain for community use.
Built Form	
Facilitate Optimum Public Domain Outcomes	The proposal has been specifically designed to consider Special Areas and public open space, including Greenwood Plaza, Miller Street Special Areas and Brett Whiteley Plaza, by minimising overshadowing to these areas. The ground and podium level setbacks have been designed to comply with the Miller Street Setback. The proposal also features further recession to

Guiding Principle	Proposal's Consistency
	upper levels of the building, thus preserving the integrity of the Miller Street streetscape.
Contribute to Place Making and Centre Amenity	<p>The ground and podium levels are being delivered through the CSSI Approval whilst this application seeks consent over the uses.</p> <p>Notwithstanding, the proposal has been designed to interact with the ground and podium levels to maximise opportunities for active retail frontages.</p>
Connect People and Places	A through-site link is provided as part of the CSSI Approval. As mentioned above, the proposal facilitates active frontages through design and the use consents sought.
Contribute to the Commercial Prestige of North Sydney	<p>The proposal provides a considerable amount of premium grade commercial floor space and contiguous commercial floor-plates commensurate with top market demand.</p> <p>The development provides a commercial landmark which reinforces North Sydney's prominence as a CBD with a premium office floor space market. It also capitalises on the significant investment of the Victoria Cross Station and wider Sydney Metro project.</p>
Provide Exceptional Built Form	The proposal has undergone a competitive tendering process and rigorous design excellence / review process to inform the current design. Overall the design is generally consistent with the NSDCP 2013 and seamlessly respects adjoining and nearby heritage items as discussed at Section 7.10 and Section 0 .

6.15. NORTH SYDNEY CENTRE CAPACITY & LAND USE STRATEGY 2016

The North Sydney Centre Capacity and Land Use Strategy (**NSCCLUS**) was adopted by North Sydney Council on 1 May 2017 and forms the final component of Council's comprehensive, multi-faceted North Sydney Centre review. Key objectives of the NSCCLUS include:

- Develop a framework that allows for the growth of the North Sydney Centre to ensure it maintains its status as a resilient, vibrant and globally relevant commercial centre;
- Accommodate forecast demand for additional commercial floor space in the North Sydney Centre;
- Inform and respond to district planning, particularly employment and commercial floor space targets for the 'strategic centre';
- Take advantage of planned infrastructure upgrades by intensifying land uses surrounding transport infrastructure; and

- Identify and facilitate specific land uses that contribute to the centre's diversity, amenity and commercial sustainability.

The Detailed SSD DA is consistent with the above objectives by adding to the economic prosperity of North Sydney through the provision of 61,500sqm of high-value commercial floor space in the North Sydney Centre. Evidently, being an OSD, the proposal capitalises on the Sydney Metro City & Southwest planned infrastructure project. Furthermore, the project will revitalise and improve amenity of the North Sydney Centre by attracting business, adding to the commercial competitiveness of the area and creating a vibrant and integrated work-life destination.

The NSCCLUS has subsequently informed a Planning Proposal by Council to amend the built form controls within the CBD to facilitate the delivery of increased employment space opportunities, enabling the CBD to grow and strengthen as a major commercial hub. The LEP amendments have been gazetted and the proposed building height controls applicable to the site have been gazetted.

6.16. STAGE 2 DRAFT WARD STREET PRECINCT MASTERPLAN

The Stage draft Ward Street Precinct Masterplan (North Sydney Council, February 2019) relates to an area to the north of the site generally bounded by McLaren Street to the north, Berry Street to the south, Warringah Expressway to the east and Miller Street to the west (**Figure 45**). The draft Masterplan was prepared primarily in response to the impending expiry of the Ward Street car park lease (at which time Council will regain control of the land), a decommissioned substation and the future construction of the Victoria Cross Station OSD. The draft Masterplan recently completed the final public exhibition phase and its adoption by Council is imminent.

The key component of the draft Masterplan is the replacement of the Ward Street car park with multiple new community facilities totalling 4,940sqm, a large central public square totalling 2,080sqm and a smaller Green Square totalling 1,155sqm, supported by two large commercial office towers and active low level retail uses with building heights ranging from 28 to 57 storeys. The draft Masterplan identifies a 'base' maximum height of RL 230 (equivalent to 40 levels), consistent with the maximum height on the subject site, with the potential allowable additional height (up to RL 285 and 57 storeys) being subject to additional public benefit and design excellence tests.

The Victoria Cross Station OSD will complement the vision under the draft Masterplan, and together the two redevelopments will invigorate the northern North Sydney CBD with additional commercial floor space, high quality public domain and improved connectivity to surrounding areas.

The draft Masterplan has been prepared with the understanding of the future over station development building envelope form on the subject site, ensuring the proposal is not considered to result in any land use conflict or amenity issues for the future development of the Ward Precinct envisioned under the draft Masterplan.

Figure 45 – Draft Ward Street Precinct Masterplan



Source: North Sydney Council, 25 February 2019

7. STATUTORY PLANNING CONTEXT

As outlined in the SEARs, the statutory provisions contained in the planning instruments listed below have been addressed for the Detailed SSD DA:

- *Environmental Planning and Assessment Act 1979 (EP&A Act)*
- *NSW Biodiversity Conservation Act 2016*
- *State Environmental Planning Policy (State & Regional Development) 2011*
- *State Environmental Planning Policy (Infrastructure) 2007*
- *State Environmental Planning Policy No. 55 (Remediation of Land)*
- *State Environmental Planning Policy No. 64 (Advertising and Signage)*
- *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005*
- *Draft State Environmental Planning Policy (Environment)*
- *North Sydney Local Environmental Plan 2013.*

The proposals compliance with the relevant statutory provisions is outlined in the following sections.

7.1. ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979 (EP&A ACT)

The EP&A Act establishes the assessment framework for SSD, and in Section 4.36 indicates that a state environmental planning policy may declare a development to be SSD. Under section 4.5(a) of the EP&A Act, the Minister is the consent authority for SSD applications if the Independent Planning Commission has not been declared to be the consent authority for the development by an environmental planning instrument.

The Detailed SSD DA is a staged development application as per Division 4.4 of the EP&A Act. Overall, the detailed SSD DA is consistent with the approved Concept SSD DA which is proposed to be modified concurrently (Refer **Section 2.3**). The EIS and Response to Submissions Report submitted with the original Concept SSD DA, examined all matters affecting or that are likely to affect the environment by the proposed development.

Table 12 below provides an assessment of the proposal against the objects contained within **Section 1.3** of the EP&A Act 1979.

Table 12 – Objects of the EP&A Act

Object	Comment / Response
To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources.	The proposal promotes the social and economic welfare of the community and a better environment through the delivery of an integrated transport-oriented development above the Sydney Metro Victoria Cross Station site.
To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about the environmental planning and assessment.	The ESD commitments are consistent with those included within the Concept SSD DA. This detailed proposal is committed to achieving high standards of ecologically sustainable development and is accompanied by a detailed ESD Report (Appendix K).
To promote the orderly and economic use and development of land.	The proposal promotes the orderly and economic use and development of land through a staged planning process which delivers an integrated

Object	Comment / Response
	design response that responds to the site constraints and complexity of the development. The proposed OSD maximises commercial floor space to be delivered on the site while reducing the overall bulk and massing of the approved building envelope.
To promote the deliver and maintenance of affordable housing.	N/A
To protect the environment, including the conservation of threatened and other species of native animals and plants, ecologically communities and their habitats.	The OSD is located within an established urban environment. In addition, a BDAR waiver has been issued from the DPIE which determined the proposal will have no impact on threatened species or their habitats (Appendix H).
To promote sustainable management of built and cultural heritage (including Aboriginal cultural heritage).	The proposal respects the significance of surrounding built heritage as outlined in Section 0 and the Heritage Impact Assessment (Appendix L).
To promoted good design and amenity of the built environment.	The detailed design of the OSD exhibits design excellence and mitigates adverse amenity impacts. The endorsed design excellence strategy is attached at Appendix DD and discussed in further detail in Section 8.1.1 .
To promote proper construction and maintenance of buildings, including the protection of the health and safety of their occupants.	Construction staging and impact management are discussed in Section 4.12 and Section 8.1.19 . A Construction Site Management Plan is attached at Appendix W .
To promote the sharing of responsibility for environmental planning and assessment between different levels of government in the State.	Relevant Government agencies have been consulted throughout the concept and detailed design processes. It is noted that the Minister for Planning is the consent authority as the development is considered SSD.
To provide increased opportunity for community participation in environmental planning and assessment.	An inclusive public consultation strategy has been implemented throughout the project design process (refer to Section 5 and Appendix CC).

Overall, the proposed development is consistent with the objects and general terms of the EP&A Act.

7.2. BIODIVERSITY CONSERVATION ACT 2016

The purpose of the *Biodiversity Conservation Act 2016* is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and in the future, consistent with the principles of ecologically sustainable development.' Clause 2 of section 7.9 of the *Biodiversity Conservation Act 2016* requires a DA for SSD to be accompanied by a Biodiversity Development Assessment Report (**BDAR**).

It is noted that as part of the assessment of the Concept SSD DA, the NSW DPIE granted a waiver on 11 May 2018 under section 7.9(2) of the *Biodiversity Conservation Act 2016*, concluding that:

- The proposed development is not likely to have any significant impact on biodiversity values; and
- There is no need to submit a BDAR as part of the SSD DA.

A request seeking a waiver for the requirement for a BDAR associated with SSD-10294 was submitted to the NSW DPIE on 24 April 2019. This was accompanied by an assessment of the proposal development against the relevant provisions of the *Biodiversity Conservation Act 2016* and the *Biodiversity Conservation Regulation 2017*.

The assessment determined that the site is within an established urban area known as the North Sydney CBD and has been cleared of all vegetation, buildings and structures and therefore, does not present a habitat that would likely suit the needs of a threatened species. It was identified that there are no endangered populations, threatened species or threatened ecological communities recorded within the site or surrounding locality (NSW ATLAS, 2019). Furthermore, the site and surrounds are not known to connect different areas of habitats for threatened species and thus will not have any likely impact on habitat connectivity.

Overall, the proposal will not have any likely impact on the surrounding natural environment and abundance of species, habitat connectivity, threatened species movement and flight paths of protected animals, nor will it impact upon water quality surrounding the site (sustainability) and the site does not contain abundant vegetation.

Accordingly, a BDAR waiver was issued by the NSW DPIE and OEH on 17 May 2019, thus determining a BDAR is not required as part of this Detailed SSD DA (refer to **Appendix H**).

7.3. STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

The *State Environmental Planning Policy (State and Regional Development) 2011* (**SRD SEPP**) has the purpose of identifying development that is SSD, state significant infrastructure (**SSI**) (including critical) and regionally significant development.

Pursuant to clause 19(2), Schedule 1 of the SRD SEPP indicates that the following development is SSD:

Development within a rail corridor or associated with railway infrastructure that has a capital investment value of more than \$30 million for any of the following purposes:

- a) commercial premises or residential accommodation,*
- b) container packing, storage or examination facilities,*
- c) public transport interchanges.*

As the proposal is for the purposes of a 'commercial premises' associated with railway infrastructure and has a capital investment value of more than \$30 million, it classified as SSD for the purposes of the EP&A Act. The Detailed SSD DA will be assessed under the relevant provisions of Part 4 of the EP&A Act.

It is noted that clause 11 of SRD SEPP states that Development Control Plans (**DCPs**) do not apply to SSD applications.

7.4. STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

The aim of *State Environmental Planning Policy (Infrastructure) 2007* (**Infrastructure SEPP**) is to facilitate the effective delivery of infrastructure across NSW by identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure such a classified roads and prescribing consultation requirements for certain development.

The relevant provisions of the Infrastructure SEPP in relation to the proposed development are considered in the following table.

Table 13 – Relevant Provisions of the ISEPP

Clause	Response	Referral Agency
Part 3, Division 5 Electricity transmission or distribution, Subdivision 2 Development likely to affect an electricity transmission or distribution networks	The application is subject to clause 45 of Infrastructure SEPP as the development is likely to affect an electrical transmission or distribution network. Existing Ausgrid infrastructure has been confirmed to be sufficient to accommodate supply the new substations for the OSD, however additional connections will be required. Early consultation has occurred between the applicant and Ausgrid to determine an appropriate location as described in Appendix W .	Ausgrid
Part 3, Division 15 Railways, Subdivision 2 Development in Rail corridors	The proposed development is on land adjacent to a rail corridor, and as such pursuant to clause 85 of the Infrastructure SEPP the Council will refer this application to the relevant rail authority for the rail corridor. As the proposal relates to the Sydney Metro City & Southwest Corridor and it will be referred to TfNSW for comment.	TfNSW
Part 3, Division 17 Roads and traffic, Subdivision 2 Development in or adjacent to road corridors and road reservations	Pursuant to clause 104 (Traffic Generating Development) and Schedule 3 of the Infrastructure SEPP, the Detailed SSD DA also triggers consultation with the NSW Roads and Maritime Services (RMS), as the commercial GFA is greater than 10,000sqm.	RMS
Clause 104 Traffic-Generating development	Accordingly, this EIS is accompanied by a Traffic and Transport Impact Assessment (Appendix T) and Rail Corridor Impact Assessment (Appendix Y) which further discuss the consideration of matters contained within the Infrastructure SEPP and relevant authority comments.	

7.5. STATE ENVIRONMENTAL PLANNING POLICY NO.55 – REMEDIATION OF LAND (SEPP 55)

State Environmental Planning Policy No.55 – Remediation of Land (SEPP 55) provides a State-wide approach to the remediation of contaminated land, and primarily promotes the remediation of contaminated land for the purpose of reducing risk of harm to human health.

As all demolition and excavation will be completed as part of the Sydney Metro Victoria Cross Station works, SEPP 55 and potential site contaminants will be addressed in accordance with the relevant conditions of the CSSI Approval. Therefore, the provisions of SEPP 55 have been wholly addressed through that approval and are not relevant to the SSD DA.

7.6. STATE ENVIRONMENTAL PLANNING POLICY NO.64 – ADVERTISING AND SIGNAGE (SEPP 64)

The *State Environmental Planning Policy No.64 – Advertising and Signage (SEPP 64)* aims to ensure that signage is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations, and is of high-quality design and finish.

The scope of the detailed SSD DA seeks consent for indicative signage zones. Clause 13 of SEPP 64 indicates that a consent authority must not grant consent to display signage unless it is consistent with the objectives of the *policy* and complies with the assessment criteria contained within Schedule 1. An assessment of the indicative signage zones included as part of the SSD DA against the beforementioned provisions is provided below.

Table 14 – SEPP 64 Compliance Table

CONTROL	PROPOSAL	COMPLIANCE
3 – POLICY AIMS AND OBJECTIVES		
<p>Clause 3(1)(a) – to ensure that signage:</p> <ul style="list-style-type: none"> Is compatible with the desired amenity and visual character of an area; Provides effective communication in suitable locations; and Is of high-quality design and finish. 	<p>The proposal for top of building identification signage is consistent with the visual character of the North Sydney CBD, being a precinct characterised by commercial and retail development and top of building signage zones.</p> <p>The detailed design of the top of building signage will be determined through the future detailed applications.</p>	YES
SCHEDULE 1 – ASSESSMENT CRITERIA		
1 – Character of the Area		
<ul style="list-style-type: none"> Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located? 	<p>The proposal for top of building identification signage is consistent with the visual character of the North Sydney CBD.</p>	YES
<ul style="list-style-type: none"> Is the proposal consistent with a particular theme for outdoor advertising in the area or locality? 	<p>North Sydney CBD includes several large-scale business and building identification signs which take advantage of high visibility from key commercial precincts within Sydney. The proposal is consistent with this theme.</p>	YES
2 – Special Areas		
<ul style="list-style-type: none"> Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas? 	<p>The proposal is not located within an environmentally sensitive areas or a heritage conversation zone. The proposal will not adversely impact the visual qualities of nearby heritage items which are located at a different height datum from the proposed signage. The site is located within a B3 Commercial Core zone, located away from residential areas. The proposed signage located adjacent to nearby residential buildings is to be managed through illumination restrictions and limits.</p>	YES
3 – Views and Vistas		
<ul style="list-style-type: none"> Does the proposal obscure or compromise important views? 	<p>The proposed signage is contained wholly within the Concept Building Envelope and the building façade. As such, the proposed signage will not</p>	YES

CONTROL	PROPOSAL	COMPLIANCE
<ul style="list-style-type: none"> Does the proposal dominate the skyline and reduce the quality of vistas? 	adversely impact important views or view corridors. The proposed signage is contained wholly on the building façade and therefore will not dominate the skyline or reduce the quality of vistas.	YES
<ul style="list-style-type: none"> Does the proposal respect the viewing rights of other advertisers? 	Not applicable.	N/A
4 – Streetscape, Setting or Landscape		
<ul style="list-style-type: none"> Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape? 	The proposed signage is contained wholly within the Concept Building Envelope and the building façade. The scale of the signage is consistent with surrounding commercial towers which include top of building signage across the upper levels of commercial towers, on up to four facades.	YES
<ul style="list-style-type: none"> Does the proposal contribute to the visual interest of the streetscape, setting or landscape? 	The proposed signage will be visible from a distance and surrounding buildings, rather than the immediate streetscape.	YES
<ul style="list-style-type: none"> Does the proposal reduce clutter by rationalising and simplifying existing advertising? 	Not applicable.	N/A
<ul style="list-style-type: none"> Does the proposal screen unsightliness? 	Not applicable.	N/A
<ul style="list-style-type: none"> Does the proposal protrude above buildings, structures or tree canopies in the area or locality? 	The proposed signage is contained wholly on the building façade and does not protrude above the building or structures.	YES
<ul style="list-style-type: none"> Does the proposal require ongoing vegetation management? 	No.	YES
5 – Site and Building		
<ul style="list-style-type: none"> Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located? 	The proposed signage zones have been nominated by the design architect of the proposed building.	YES
<ul style="list-style-type: none"> Does the proposal respect important features of the site or building, or both? 	The proportion of the proposed signage zones align with the height of façade articulation and fins proposed.	YES

CONTROL	PROPOSAL	COMPLIANCE
<ul style="list-style-type: none"> Does the proposal show innovation and imagination in its relationship to the site or building, or both? 	The proposed signage zones have been considered in the context of the building achieving design excellence and its role in identifying the site as the location of the Sydney Metro Victoria Cross Station.	YES
7 – Illumination		
	Illumination will be controlled within the applications for the detailed design of the signage.	YES
8 – Safety		
<ul style="list-style-type: none"> Would the proposal reduce the safety for any public road? 	The proposed signage zones are located at the top of the building and will have a limited impact on the public road, pedestrians, or cyclists.	YES
<ul style="list-style-type: none"> Would the proposal reduce the safety for pedestrians or bicyclists? 		
<ul style="list-style-type: none"> Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas? 		

7.7. SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005

The *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP)* is a regional planning instrument that aims to ensure the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected, enhanced and maintained as a natural and public asset of national significance.

The site is located within the Sydney Harbour Catchment area but not within the Foreshores and Waterways area. Therefore, clause and 26 of the SREP is relevant to the consideration of the proposed development with regards to the maintenance, protection and enhancement of views. Matters to be taken into consideration in relation to clause 26 include:

- Development should maintain, protect and enhance views (including night views) to and from Sydney Harbour;*
- Development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items; and*
- The cumulative impact of development on views should be minimised.*

A View and Visual Impact Analysis report (**Appendix U**) has been prepared to assess the proposal impacts on key views, including views to and from Sydney Harbour. Visual and view impacts are discussed in further detail in Section 8.1.4 of this EIS. In summary, the proposal does not pose additional view and visual impacts above what has been considered as part of the Concept SSD DA approval (building envelope).

7.8. DRAFT STATE ENVIRONMENTAL PLANNING POLICY (ENVIRONMENT)

In October 2017 the NSW DPIE released an Explanation of Intended Effect (**EIE**) for the proposed *Draft State Environmental Planning Policy (Environment SEPP) 2017*. The overarching aim of the Draft Environment SEPP is to combine seven existing SEPPs into a simple, modern and accessible instrument

which promotes the protection and improvement of key environmental assets for their intrinsic value and social and economic benefits.

In summary, the new *Environment SEPP* will repeal and replace the following seven existing SEPPs:

- State Environmental Planning Policy No. 19—Bushland in Urban Areas
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011
- State Environmental Planning Policy No. 50—Canal Estate Development
- Greater Metropolitan Regional Environmental Plan No. 2—Georges River Catchment
- Sydney Regional Environmental Plan No. 20—Hawkesbury-Nepean River (No.2-1997)
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- Willandra Lakes Regional Environmental Plan No. 1—World Heritage Property.

The proposed new *Environment SEPP* will set out provisions under four parts including *bushland*, *catchments*, *protected areas* and *waterways*.

Of relevance to this proposal are changes proposed to the SREP as the subject site is located within this catchment area. In summary, the draft policy aims to improve protections for Sydney Harbour by:

- *reaffirming the vision for Sydney Harbour as an outstanding natural, public asset of national and international significance to be maintained and enhanced for current and future generations*
- *maintaining the current principles for the Foreshores and Waterways Area, such that:*
 - *the Harbour is to be recognised as a public resource, owned by the public, to be protected for the public good*
 - *the public good has precedence over the private good whenever and whatever change is proposed for Sydney Harbour or its foreshores*
 - *protection of the natural assets of Sydney Harbour has precedence over all other interests*
- *better reflecting the current uses, needs and future of Sydney Harbour in the aims of the new SEPP by providing a framework for appropriate uses that are consistent with the vision for the Harbour*
- *better aligning waterway zones with the Standard Instrument Local Environmental Plan*
- *removing inconsistencies in the current instrument in regard to boat storage facilities*
- *refining heads of consideration for consent authorities when assessing Development Applications in the Foreshores and Waterways Area*
- *updating critical habitat provisions to be consistent with the Biodiversity Act 2016.*

The proposal is consistent with the objectives contained within the Draft Environment SEPP pertaining to the *Sydney Harbour* catchment area. Specifically, the proposal maintains the significance of Sydney Harbour by providing a landmark vantage point which enhances the asset for future employment uses without impacting upon key existing vistas. It is noted that the site is not located within the *Foreshores and Waterways Area*.

7.9. NORTH SYDNEY LOCAL ENVIRONMENTAL PLAN 2013 (NSLEP 2013)

The *North Sydney Local Environmental Plan 2013 (NSLEP)* is the principal environmental planning instrument applying to the site, establishing (amongst other things) the permissible land uses, key development standards, and heritage conservation requirements. It is noted that the approved Concept SSD DA complied with the amended NSLEP 2013 development standards with the exception of the height of building control (clause 4.3) and Miller Street setback area (clause 6.4). The Concept SSD DA was supported by two clause 4.6 variations to permit the development notwithstanding the exceedance of these two development standards.

The proposed modification to the Concept Approval marginally increases the exceedance of the maximum height control at RL 201 and this Detailed SSD DA is capable of approval without a clause 4.6 variation if the

proposed modification is approved. As for the non-compliance with the Miller Street setback area, the proposed modification seeks approval for a greater setback to Miller Street at the mid-rise level than that approved under the Concept Approval. The modification is therefore consistent with the envelope approved under the Concept Approval without the need for a further clause 4.6 variation request. Notwithstanding this, two revised clause 4.6 variations have been prepared in support of the proposed variation to the height of building control and the Miller Street setback area as included at **Appendix I** and **Appendix J**.

The proposal has been assessed against the relevant development standards contained within the NSLEP 2013 and discussed in detail below. As a point of reference, the North Sydney Centre Map is illustrated in **Figure 46**.

Figure 46 – North Sydney Centre Map



Source: NSLEP 2013

7.9.1. Zoning and Permissibility

The site is located within the B3 Commercial Core zone. The objectives of the zone are:

- To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community.
- To encourage appropriate employment opportunities in accessible locations.
- To maximise public transport patronage and encourage walking and cycling.
- To prohibit further residential development in the core of the North Sydney Centre.
- To minimise the adverse effects of development on residents and occupiers of existing and new development.

The proposed Detailed SSD DA includes a commercial office development with retail premises which are permitted with consent in the zone. The proposed development is consistent with the zone objectives as it:

- The proposed development serves the needs of the local and wider community by providing an increase in commercial floor space including retail premises and office premises within the commercial core of the North Sydney Centre.
- The proposed development encourages employment in a highly accessible location as it is positioned immediately above the approved Metro station and within proximity to North Sydney Station, bus routes, taxis and active transport networks for walking and cycling.
- The proposed development promotes public transport use and encourages active transport use through minimising private car parking provision on site and enabling users of the OSD to efficiently access the new Metro station and surrounding public transport and active transport options.
- As described in the Concept SSD DA modification application, the amended building envelope and Detailed SSD DA design delivers highly accessible and visible Metro Station entrances.
- The proposal does not include any residential development on the site.
- The proposed development minimises adverse effects on residents of existing development in relation to overshadowing, privacy and visual impacts. Specifically, the proposed variation to the height of building standard at the central portion of the site does not adversely impact the amenity of existing residents or occupiers of existing or approved surrounding residential development as the overall building envelope has been reduced compared to the approved building envelope.
- Views and visual impacts are also further addressed within **Section 8.1.4**, which demonstrates that the proposed variation to the height of building standard does not unreasonably impact views from the public domain or surrounding residential properties.

7.9.2. Key Development Standards

The Detailed SSD DA proposal has been assessed against the relevant development standards contained within the NSLEP 2013 as discussed in detail below (refer to **Table 15**).

Table 15 – NSLEP 2013 Compliance with Development Standards

Clause	Control	Proposal / Compliance
Clause 4.3 – Height of Buildings	<p>The site is subject to four (4) height controls:</p> <ul style="list-style-type: none"> • RL. 230m (north); • RL. 201m (central) • RL. 193m (south) • RL 135 (east) 	<p>Generally, the Victoria Cross OSD is proposed to comply with the maximum height standard applying to the site, however, exceeds the central portion height control of RL 201m for a small part of the envelope. It is noted that the approved building envelope under the Concept DA (SSD 17_8874) included a height exceedance of the RL 201m building height through the central portion of the site. The proposed modification seeks approval for a partial height variation at RL 201. If the proposed modification is approved, the proposed Detailed SSD DA will be consistent with the Concept Approval as modified.</p> <p>Notwithstanding, this Detailed SSD DA is accompanied by a clause 4.6 variation request to the height of building standard (see Appendix I) which justifies the partial height variation sought as part of the modified building envelope. Overall, compliance with the height development standard is unreasonable and unnecessary in the context of the variation approved under the concept proposal. The proposed development is in the public interest as it remains consistent with the land use objectives of the B3 Commercial Core Zone. Specifically, the proposal serves the local and wider community by providing an increase in commercial floor space including retail and office premises that maximises active and</p>

Clause	Control	Proposal / Compliance
		<p>public transport opportunities. In addition, it poses no additional amenity impacts to surrounding sensitive land uses above what has previously been assessed, and most importantly, does not impact upon the solar access plane to Greenwood Plaza (contained within the NSLEP 2013). This is discussed further in Section 8.1.2 and Section 8.1.4.</p> <p>The height variation does change the maximum height of buildings at RL 230 approved under Condition A17 of DA Consent SSD 8874.</p>
Clause 4.4 – Floor Space Ratio	There is no applicable FSR applying to the subject site.	<p>Nonetheless, the approved maximum GFA for the site under the Concept DA (SSD 17_8874) is 60,000sqm. The concurrent modification application seeks to increase this to 61,500sqm.</p> <p>The detailed proposal provides for 61,500 sqm of GFA for the OSD.</p>
Clause 5.6 – Architectural Roof Features	The proposal does not include an architectural roof feature	N/A
Clause 5.10 – Heritage Conservation	<p>The site is within the vicinity of two (2) local heritage items:</p> <ul style="list-style-type: none"> • MLC Building at 105 Miller Street (Item I0893); and • Rag & Famish Hotel (I0901). 	<p>As previously identified, the EIS discusses the heritage impacts to surrounding heritage items associated with the detailed design of the proposal in Section 8.1.3, and includes a Heritage Impact Assessment at Appendix L.</p> <p>Overall, the detailed design of the proposal has appropriate regard for adjoining heritage items and has been specifically designed to integrate with the built form of the MLC Building (south) and the Rag & Famish Hotel (north).</p>
PART 6, DIVISION 1 – NORTH SYDNEY CENTRE		
Clause 6.3(2) – Building Heights and Massing	<p><u>Clause 6.3(2)</u> controls building height in terms of overshadowing impacts to sensitive uses. Development consent cannot be granted for the erection of a building on land in the North Sydney Centre (Figure 46) where development would result in a net increase in overshadowing between 12:00pm and 2:00pm from the March equinox to the September equinox (inclusive) on land that is within Zone RE1 Public Recreation or that is identified as “Special Area”.</p> <p>In relation to the Detailed SSD proposal, the relevant areas requiring consideration are the <i>Miller Street Special Area</i>, <i>Greenwood Plaza</i> and <i>Brett Whiteley Plaza</i>. A detailed shadow study was provided with the building envelope modification application and includes an analysis of the shadow impacts from the summer to winter solstice and equinox for the existing buildings, approved building envelope and modified building envelope. It is noted that the detailed proposal is contained wholly within the building envelope as modified. The Urban Design Report (Appendix E) provides a comparative analysis of the modified building envelope and the detailed OSD design proposal.</p>	

Clause	Control	Proposal / Compliance
		<p>In summary, when comparing the approved and modified envelope:</p> <ul style="list-style-type: none"> • The modifications to the approved building envelopes do not impact overshadowing of the Miller Street Special Area in mid-winter; • Despite the minor portion of overshadowing (25sqm) to the Miller Street Special Area for approximately 10 minutes on the Autumn equinox, the modified envelope does not result in a net increase in overshadowing compared to buildings prior to demolition occurring on the site; • The modified envelope does not result in any overshadowing impacts to Greenwood Plaza; and • There is no additional overshadowing to Brett Whiteley Plaza above what has previously been considered and assessed under the approved envelope. <p>Overall, the shadow study indicates that the modified OSD envelope (which the detailed OSD design is contained within) would not result in a net overall increase in overshadowing to any Special Areas or RE1 Public Recreation zones between 12pm and 2pm from the March to September equinox (inclusive) when compared to the previous conditions of the site.</p> <p><u>Clause 6.3(3)</u> allows for consent to be granted for development which exceeds the maximum height of buildings (clause 4.3) provided the consent authority is satisfied that any increase in overshadowing between 9:00am and 3:00pm from the March to September equinoxes will not result in any private open space, or window to a habitable room, located on land outside of the North Sydney Centre, receiving less than 2 hours of sunlight or less direct sunlight than it has if currently less than 2 hours, immediately before commencement of the NSLEP 2013..</p> <p>In conjunction with the approved Concept SSD, the detailed design of the OSD causes additional overshadowing between 9:00am and 3:00pm in mid-winter to three terrace dwellings on Whaling Road, North Sydney. Although there is some overshadowing to these properties at 3:00pm, it is considered minor lasting for only a short duration and would have negligible impact on the amenity of the dwellings.</p> <p>Specifically, it is recognised that both the approved envelope, modified envelope and this proposal (detailed design) result in a very minor reduction in direct sunlight to the rear private open space areas of these terrace dwellings on Whaling Road. This minor reduction however does not preclude consent being granted as clause 6.3(3) is not a requirement that must be met by the development, but rather an “in-built” dispensation provision which allows a development to be approved which breaches the height control in clause 4.3, without the need for submission of a clause 4.6 variation request.</p> <p>It is noted that a clause 4.6 variation request for an exceedance of the height controls is provided at Appendix I. Clause 6.3(3) is therefore considered irrelevant to the assessment of the proposal as is not relied upon for the variation in height of clause 4.3. Further, the Concept Approval was approved with a clause 4.6 variation in relation to the height of the proposal.</p> <p>Notably, the modified building envelope and detailed OSD design do not result in a greater impact than that already assessed and deemed acceptable within the Concept SSD DA. Refer to Section 8.1.6 for further discussion of overshadowing impacts.</p>

Clause	Control	Proposal / Compliance
		<p>Clause 6.3(4) applies to the adjacent land at 105-153 Miller Street (known as the MLC Building) and is therefore not applicable to the site. Notwithstanding, an assessment of the modification proposed on Brett Whiteley Plaza has been provided in Section 8.1.6.</p>
<p>Clause 6.3(5) – Buildings Height and Massing</p>		<p>Clause 6.3(5) establishes three considerations that the consent authority must take into account when granting consent. The Detailed SSD DA proposal, responds positively to these considerations in that it:</p> <ul style="list-style-type: none"> • Is compatible with the existing and future (expected) scale, form and massing in the North Sydney Centre area; • Poses no adverse impacts on the surround natural environment which have not been addressed; • Poses no unmanageable impacts on the neighbouring development or development outside the North Sydney Centre; • Would not unreasonably impact upon significant views and vistas as there is no material difference in new impact of the proposal and modified envelopment when compared to the approved Concept scheme (discussed in Section 8.1.4 and Appendix U); and • Enhances the Miller, Berry and Denison Streets active frontages and streetscapes in relation to scale, materials and external treatments.
<p>Clause 6.4 – Miller Street Setback</p>		<p>This clause requires specific setback requirements on the eastern side of Miller Street between McLaren Street and Mount Street to maintain the landscaped setting of the 'Miller Street Special Area'. In relation to the subject site, a setback ranging between 6-11.5 metres is required.</p> <p>The Detailed SSD DA proposal maintains the approved 6-metre setback for the building envelope up to a height of RL 127 in alignment with the CSSI approved 'metro box'. The envelope then steps forward up to 4.5 metres between RL 127 to RL 230.</p> <p>Technically the setback and cantilever arrangement to Miller Street presents a non-compliance with clause 6.4 of the NSLEP 2013 but is consistent with the approved setbacks under the Concept Approval. The OSD is setback in accordance with the required Miller Street Setback up to a height of RL 127. However, the non-compliance occurs between RL 127 to RL 179.5, where the envelope protrudes 3.5 metres into the setback area (which is a greater setback than the approved setback under the Concept Approval), and between RL 179.5 to RL 230, where the envelope protrudes 4.5 metres into the setback area as approved under the Concept Approval. Non-compliance with the setback standard was subject to a variation request under clause 4.6 and approved as part of the Concept Approval. This Detailed SSD DA is consistent with the approved envelope which provided for a protrusion into the setback area between RL 127 to RL 179.5 of 4.5 metres. Further, the Detailed SSD DA is similar to the proposed modification, which provides for a smaller protrusion into the setback area at this level of 3.5 metres.</p> <p>The building envelope is considered to adequately address the objectives, which aim to maintain the established setback and landscaped setting along this strip of Miller Street.</p>

Clause	Control	Proposal / Compliance
		<p>The reduced setback steps forward gradually and is situated multiple storeys in the air, thus, it does not obstruct the activated podium and ground level landscaping associated with the Detailed SSD DA proposal.</p> <p>Nonetheless, a clause 4.6 variation request is included Appendix J which further justifies this setback variation sought. As indicated above the approved envelope under the Concept SSD DA was more intrusive than the cantilever arrangement of the detailed design and therefore, complying with the Miller Street Setback control above RL 124 would be unreasonable and unnecessary in the circumstances.</p>

7.10. NORTH SYDNEY DEVELOPMENT CONTROL PLAN 2013 (NSDCP 2013)

The Concept Proposal and the associated Victoria Cross OSD Design Guidelines set the parameters for the subject site and act as a site-specific DCP. Together, they establish the parameters for future development in the form of building envelopes and apply detailed objectives and design principles to shape the design development of buildings.

In accordance with Section 4.22 of the EP&A Act, a Concept DA can be made to establish the concept proposal for the development of a site to which separate and future detailed proposals (i.e. this Detailed SSD DA) must adhere to. A Concept Proposal may also be undertaken in lieu of the preparation of a site-specific DCP in accordance with Section 4.23 of the EP&A Act.

As previously stated, clause 11 of the SRD SEPP states that development control plans do not apply to State significant development.

Notwithstanding, the North Sydney Development Control Plan 2013 has been considered as a reference point for the detailed design of buildings including local design considerations such as waste management, access and loading, and local character. These have been considered in the development of the detailed design. A summary of key NSDCP 2013 provisions relevant to the *North Sydney Planning Area* (Part C, Section 2) are discussed in **Table 16**.

Table 16 – Summary of NSDCP 2013 Compliance Table

Section	Provision	Proposal / Compliance
Part C, Section 2 – North Sydney Planning Area (s.2.1 Central Business District)		
2.1.1 Significant Elements	P20 – Development is to take advantage of the accessibility provided by existing and planned public transport infrastructure.	<p>Complies</p> <p>The proposal locates commercial floor space directly above the approved Victoria Cross Metro Station.</p>
2.1.2 Desired Future Character	P1 – High rise and medium density, commercial and mixed-use developments.	<p>Complies</p> <p>The proposal aligns with desired future character through the delivery of a high-density commercial development.</p>
	P2 – Provision of a variety of different sized office, retail, community and entertainment spaces.	<p>Complies</p> <p>The proposal supports a mix of uses throughout the OSD and CSSI at the site.</p>
	P4 – The commercial focus of the Centre is to be preventing any further	<p>Complies</p>

residential development from occurring in its core (i.e. B3 Commercial Core zone).	No residential uses are proposed.
P5 – Development above the Victoria Cross Metro station will provide significant commercial floorspace, as well as retail, dining and community uses that will contribute to the overall amenity and vitality of the CBD.	<p>Complies</p> <p>An abundance of high value commercial floor space is proposed to be intertwined with a podium which supports a range of retail and dining uses, together with a through-site link for the community and access to the metro station.</p>
P6 – Council will pursue its vision for Miller Street as the civic heart of North Sydney. This will involve significant interventions and public domain improvements aimed at creating a vibrant place for people, with vehicle movements removed or minimised as much as practicable and both sides of Miller Street activated.	<p>Complies</p> <p>The podium levels of the proposal are centred around activation of the Miller Street frontage and the proposed through-site link between Miller and Denison Streets.</p>
P7 – Brett Whiteley Place is a key public space for the North Sydney CBD which will incorporate an expanded Elizabeth Plaza, as well as portions of Denison Street and Mount Street. This expanded plaza will provide dedicated space for outdoor dining, large and small events, and other activities.	<p>Complies</p> <p>The detailed design maintains solar access to Brett Whiteley Place (refer to Section 8.1.6).</p>
P8 – The Central Laneways precinct will become a major focal point of pedestrian activity and amenity.	<p>Complies</p> <p>The proposal supports the Central Laneways precinct with enhance vitality and improved connectivity for future site users, particularly for pedestrians accessing the site from the streets and laneway east of the site.</p>
P9 – Active frontages at the Metro site, 1 Denison Street and the MLC building will contribute to the activation of the public domain in the Central Laneways Precinct.	<p>Complies</p> <p>Active frontages are implemented as part of the proposal.</p>
P14 Development should maximise opportunities to incorporate retail, restaurant, bar facilities and other non-residential floor space at ground level to promote street level	<p>Complies</p> <p>The detailed design seeks approval to incorporate retail and commercial lobby uses</p>

2.1.3 Desired Built Form	activation, amenity, diversity and place making objectives.	at the ground levels to promote diversity and improved amenity for users.
	P18 Victoria Cross metro station is designed to enhance the North Sydney CBD as a major commercial centre and further encourage the use of public transport. Pedestrians are prioritised throughout the CBD with a number of interconnected pedestrian routes that facilitates all direction movement and encourages fine grain retail and dining uses.	Complies The detailed OSD proposal is centred around delivering these principles. A through-site link is provided as part of the proposal linking pedestrian movement between Victoria Cross Station, Miller Street and Denison Street with activate retail frontages and footpath dining opportunities.
	P20 New development focuses on the use of public transport, cycling and walking.	Complies The strategic location of the OSD above Victoria Cross Station provides direct linkages for pedestrians and cyclists. This is accommodated through the provision of end-of-trip facilities to encourage active transit methods for future site users.
	P23 The following through site links are to be provided, retained and enhanced: (l) An east-west pedestrian link through the Victoria Cross metro station linking Miller Street and Denison Street	Complies A through-site link is provided in the southern portion of the site between Miller Street and Denison Street. The increased setback allows for solar penetration to the activate laneway in which retail tenancies and commercial spaces spill out into the public domain.
	P1 Development sites should be of a size which enables the creation of large high quality floor plates which helps to reinforce the Centre's role as a Global City as identified within the Metropolitan Strategy.	Complies The detailed design provides high-value large contiguous commercial floor plates.
	P3 Buildings should be carefully designed to minimise the impact of their height and bulk on surrounding residential areas. P6 Zero setback to all street frontages at the ground floor level and adjacent to heritage items, with the following exceptions: (a) In accordance with Cl. 6.4 of the LEP for all properties on the eastern	Complies As outlined through the Concept SSD DA the design incorporates a design which minimises overshadowing where possible and breaks up the built form bulk through vertical and horizontal articulation.
		N/A The proposed development achieves a minimum 6m setback up to a height of RL 127.

	<p>side of Miller Street, north of the Pacific Highway.</p>	<p>A variation to clause 6.4 of the NSLEP 2013 as it applies above RL 127 is supported by a comprehensive justification at Appendix J. In summary the proposed variation does not undermine the ability to achieve the objective of clause 6.4 and deliver a landscape and setback character that contributes to the North Sydney Centre (refer Table 15 in Section 7.9.2).</p>
	<p>P7 Buildings must be setback to conserve views to, and the setbacks and settings of, heritage items at 86 and 146-150 Walker Street, 94 Pacific Highway (Post Office, 36 Blue Street (Greenwood), 153 Miller Street (MLC Building), 168-172 Pacific Highway and 1-7 Napier Street.</p>	<p>Complies</p> <p>The proposed design incorporates a setback of 28 metres to the MLC building situated to the south. Views to nearby heritage buildings are promoted through the compliance of the 6m Miller Street setback up to a height of RL 127.</p>
	<p>P9 A maximum podium of 5 storeys to all streets, with a weighted setback of 5m above the podium</p>	<p>Does not comply</p> <p>In relation to Berry Street, the proposed building envelope provides a 4.5 metre setback above the station generally in accordance with this control. The reduction in setback is proposed under the modification to the Concept SSD DA and this Detailed SSD DA is consistent with the proposed modification. The proposed reduction in setback does not adversely affect view corridors as demonstrated at Appendix U and it results in a negligible additional impact to pedestrian amenity.</p> <p>A significant (26.5m) setback is proposed above the CSSI Approval at Denison Street exceeding the requirement of this control.</p> <p>In relation to Miller Street, the proposed built form does not provide a setback above the station. However, this is considered appropriate, as there is no established above-podium setback along Miller Street in the vicinity of the site, as established within the Concept SSD DA EIS.</p>
	<p>P11 Podium heights should match the height of adjacent heritage items.</p>	<p>Complies</p> <p>The detailed design incorporates horizontal integration with the heights of adjacent heritage items, as described at Section 8.1.3.</p>

8. KEY IMPACTS ASSESSMENT

The EIS accompanying this Detailed SSD DA is required to consider and assess impacts from the proposal pertaining to the natural and built environment and the social and economic landscape, whilst determining the suitability of the site and the overall public interest associated with the proposal. These aspects are assessed accordingly in the following components of this EIS.

8.1. NATURAL AND BUILT ENVIRONMENT

The following sections of the EIS provide an assessment of the key natural and built environment impacts associated with the Detailed SSD DA proposal. Where appropriate, technical consultant inputs and reports are discussed by summarising key components of the applicable methodology, existing environment, assessment and mitigation measures associated with a specific impact.

8.1.1. Design Excellence and Design Guidelines

As part of the Concept SSD DA, a Design Excellence Strategy for the project was approved by the Minister for Planning. The endorsed Design Excellence Strategy included at **Appendix CC** establishes the rigorous process undertaken to ensure that the future detailed design of the tower achieves design excellence. It is noted that the GANSW and the Council support the Design Excellence Strategy as endorsed by the Secretary of the DPIE in accordance with condition A28 of the Concept SSD DA.

The approved design excellence process, which applies to this subsequent Detailed SSD DA, involves:

- The establishment of a DEEP for the detailed design of the OSD, comprising three members of the Sydney Metro DRP (including the chair) and two new members, one nominated by Council.
- The DRP reviewing and providing advice on the detailed building design to ensure the achievement of design excellence, having regard to the Sydney Metro Victoria Cross Station Precinct Consolidated Design Guidelines; and
- The applicant having to obtain that advice prior to the lodgement of the Detailed Development Application(s), and throughout the assessment and post approval stages.

The DRP was therefore established in accordance with the terms of the Concept SSD DA, and comprised the following members:

- Olivia Hyde (Acting GA)
- Yvonne von Hartel AM
- Kim Crestani
- Robert Nation AM
- Peter Phillips
- Tony Caro
- Jenny Davis
- Marcelo Occhiuzzi (North Sydney Council)

The applicant presented to the DRP nine times prior to the lodgement of the Detailed SSD DA. A summary of how the advice and feedback from the DRP has been incorporated into the proposal is provided at **Section 5.3**.

As a result of incorporating this feedback, the DRP has endorsed the detailed design of the proposal against the Design Excellence Strategy, the project benchmarks and the Victoria Cross Station Design Guidelines as endorsed by the Secretary of the DPIE pursuant to conditions A26 and A27 of the Concept SSD DA. The proposal is consistent with the Victoria Cross Station Design Guidelines as described in the following table. The schedule of the minutes demonstrating the DRP's and DEEP's endorsement is provided at **Appendix HH**.

Table 17 – Consistency with the Victoria Cross Station Design Guidelines

Design Guideline	Proposal
5.1 Land Use	
1. Development is to be designed to accommodate predominantly commercial employment activities.	The proposal incorporates the use of 61,500 sqm of commercial floor space. Commercial land uses are accommodated in both the OSD and CSSI 'metro box' components of the development.
2. The built form is to provide for large, contiguous and efficient commercial floorplates suitable for achieving A Grade office space.	As indicated in Section 4.6.4 of this EIS and the Urban Design Report (Appendix E), the OSD has been specifically designed with the tower core to the east of the floorplate to enable contiguous floor space situated to meet the needs of A Grade office tenants.
3. The location of the uses shall generally be in accordance with <i>Figure 2</i> .	Retail uses are provided at the ground floor and podium levels with the commercial OSD tower above. Further, the through-site link supports two low-medium rise buildings (within the CSSI Approval) included varying retail tenancies. The main Sydney Metro entrance is located on the Miller Street frontage adjacent the through-site link as desired.
4. Where possible, the development should maximise opportunities to incorporate retail, restaurant, bar facilities and other non-residential floor space to promote the activation, amenity, diversity and place-making objectives and contribute to the night-time and weekend economy of the CBD.	As discussed previously, the development supports a mix of retail land uses within the ground floor plane and podium levels (including through-site link). The design ensures these uses 'spill out' into the public domain areas to provide an activate space which fosters social interaction. The legibility and uses provided in the through-site link generates a vibrant laneway comprised of restaurants, cafes and bars to stimulate the weekend and night-time economy in the North Sydney CBD.
5. A retail strategy should be prepared and submitted with the detailed SSD Application which demonstrates how the retail opportunities proposed best respond to the market and user's needs. In addition, the strategy is to demonstrate how the OSD retail fits into the overall retail strategy for the integrated station development and contributes to the place-making and vibrancy of the development.	A Retail Strategy accompanies the Detailed SSD DA and is included at Appendix FF . The Retail Strategy establishes the retail vision of "an urban experience", key principles and retail opportunities for the site to ensure the future operation of the proposal provides vibrant retail experiences for future Sydney Metro users, commercial workers, North Sydney residents and site visitors. Refer to Section 8.2.2 for further discussion of the Strategy.

Design Guideline	Proposal
5.2 Building Siting, Scale and Mass	
1. Development must not exceed the building envelope identified by the Building Envelope Diagram in Figure 3 and Figure 4.	The detailed OSD design does not exceed the overall building height (RL 230m) approved under the Concept SSD DA. The proposal is consistent with the overall building envelope proposed for the site.
2. The lower levels of the development must be designed to address the pedestrian scale environment along the surrounding streets and the through-site link between Miller Street and Denison Street, and should not compromise quality of the public domain.	<p>The podium design is clearly defined from the OSD tower above and interacts with adjacent buildings such as the Rag & Famish Hotel.</p> <p>The through-site link significantly contributes to the activation of the public realm and provides clear and concise connectivity for site users and visitors.</p>
3. The south-east corner of the development is to respect the scale and composition of buildings in Denison Street.	The south-east corner of the through-site link interacts with the surrounding built form in a respectful manner which enables appreciation of existing and expected future built form (i.e. 1 Denison Street).
4. The tower is to result in no net additional overshadowing to surrounding Special Areas and land zoned RE1 between 12pm and 2pm.	The detailed OSD design results in no net increase in overshadowing to Special Areas identified in the NSLEP 2013 (refer to Section 8.1.6).
5. Miller Street setback shall respond to the predominant street frontage alignment.	The Miller Street setback is consistent with the adjoining MLC building and other development along the east side of the streetscape.
6. The commercial building must provide commercial floor plates commensurate with premium office buildings in order to reinforce the commercial character of the North Sydney centre.	The development provides large contiguous commercial floor plates which enable prospective tenants with a high degree of flexibility, solar penetration and ease of subdivision. The commercial building offers a range of floor plate sizes in a tower which is both integrated with new public transport infrastructure and a vibrant public domain.
5.3 Building Design	
1. Development of the site is to reinforce the urban character and aesthetically integrate with the urban context.	The development facilitates interaction with the surrounding urban character and context of the North Sydney commercial core.
2. The ground floor areas must be designed to enable pedestrians in the adjoining public domain to perceive activity within the building and to provide heightened visual interest through innovative or dynamic architectural treatments.	The detailed design radiates a vibrant public domain which fosters social interaction and a high degree of legibility and permeability. A clearly defined podium provides a point of dynamic visual interest for passers-by.

Design Guideline	Proposal
<p>3. The building form within the 'articulation zone' of the Miller Street frontage of the building envelope (as illustrated in Figure 5) may utilise some (not all) of the nominated zone. The future built form within this articulation zone is to achieve design excellence and be justified through an assessment of the following:</p> <ul style="list-style-type: none"> a. compliance with overshadowing requirements in NSLEP 2013 b. respecting the datum of the adjoining MLC building c. maintaining sky view d. acceptable amenity and microclimate in the public domain particularly in respect to wind impacts 	<p>The detailed OSD design, in conjunction with the modified building envelope (lodged concurrently):</p> <ul style="list-style-type: none"> • complies with overshadowing requirements in the NSLEP 2013; • provides increased separation to the MLC Building and a scale which respects the heritage fabric; • maintains sky views and provides a landmark development; and • appropriately mitigates potential wind impacts (Appendix M).
<p>4. At ground level, the OSD and Metro elements of the development should be physically separated and should be differentiated in form, function or appearance, while maintaining a coherent overall design.</p>	<p>The proposal provides an entirely integrated development which clearly delineates a defined and active building podium from the commercial tower above which utilises muted tones and finishes.</p>
<p>5. There is to be integration of the structure for the station with the structure for the Over Station Development, so as to maximise space, cost efficiency and structural consistency.</p>	<p>Integration between the Victoria Cross Metro Station and the OSD underpins the design rationale and is evident throughout the various design elements.</p>
<p>6. Buildings are to respond to environmental site conditions including to minimise the impact of wind on pedestrians and the public domain.</p>	<p>Potential wind impacts associated with the proposal have been mitigated through the design development (refer to Appendix M).</p>
<p>7. The articulation and exterior design of the tower within the proposed envelope form should consider view and amenity impacts for residents of the Alexander Apartments building and neighbouring buildings.</p>	<p>View and visual impacts to surrounding sensitive land uses such as the Alexander Apartments has been appropriately considered (refer to Section 8.1.4)</p>
<p>8. Roofs are to be designed to make a positive contribution to the quality of the CBD skyline.</p>	<p>The upper levels of the development do not compromise the quality of the North Sydney CBD skyline.</p>
<p>9. The tower core should be designed to minimise intrusion into the Metro Station.</p>	<p>The tower core is situated to the east of the site and does not interfere with the future Metro Station.</p>
<p>10. Opportunities for outdoor areas and terraces should be considered in order to enhance the amenity for future building occupants.</p>	<p>A Level 29 terrace is provided as part of the design of the OSD. In addition, the ground plane has been specifically designed to integrate with the public</p>

Design Guideline	Proposal
	domain and open space area (particularly along Miller Street).
11. Outlook from the OSD towards Sydney Harbour and distance views across Metropolitan Sydney should be maximised from within the tower floorplates.	The contiguity of the design for the commercial floor plates maximises views to Sydney Harbour from the mid-high rise levels.
12. Internal amenity of the tower should be optimised through: <ul style="list-style-type: none"> a. maximising daylight penetration into the floorplate; and b. Incorporating passive design measures which allow for a good level of thermal comfort without excessive reliance on mechanical heating and cooling systems. 	Office floor plates have been specifically designed to create a workplace which maximises natural light, physical connectivity and flexibility, whilst remaining efficient in terms of the circulation spaces and being easily subdivided.
13. The visible light reflectivity from building materials is not to exceed 20%.	Solar reflectivity impacts have been mitigated through the detailed design (Appendix EE).
14. The location and aesthetic treatment of all mechanical service (including rooftop plant) is to achieve a high standard of architectural design and is to include materials and detailing appropriate to integrate with the architectural expression of the building.	Rooftop plant equipment has been adequately incorporated into the design so as not to compromise the architectural integrity of the development.
5.4 Heritage	
1. The design of the Over Station Development should respect the surrounding heritage items through an appropriate response to height, scale, materials and articulation.	The detailed design respectfully responds and integrates to the height, scale, materials and articulation of the surrounding built heritage. HIS is attached at Appendix L .
2. The building podium shall be designed to sensitively respond to the scale and siting of the Rag and Famish Hotel	The building podium detailed design integrates with the scale and siting of the Rag & Famish Hotel (refer to Appendix L).
3. Development should respond to and protect the significance of the MLC Building in the following ways: <ul style="list-style-type: none"> a. the tower form should have a minimum 18m separation from the MLC Building; b. the tower form should feature a lowered south-east corner to respond sympathetically to the scale of the MLC building; c. the southern edge of the through-site link is to be defined by a low-rise building that respects 	<p>The detailed design responds to the MLC building in the following ways:</p> <ul style="list-style-type: none"> • Increased building separation to MLC Building compared to the approved building envelope (increased to between 26 and 28 metres); • The scale and height of the laneway buildings is comparable with the MLC Building; • The setback to the proposed development is consistent with the MLC Building and other development along the eastern side of Miller Street.

Design Guideline	Proposal
<p>the scale and maintains the legibility of the north façade of the MLC Building; and</p> <p>d. The setback of the southern end of the development to Miller Street shall respect the alignment of the MLC Building.</p>	
5.5 Public Domain	
<p>1. Quality of the public domain to be enhanced with the provision of street trees, paving upgrades and public art, especially within the proposed setback to Miller Street.</p>	<p>The proposed Public Domain Concept Plan illustrates the street landscaping provisions which enhance the public domain and Special Area along Miller Street (refer Appendix F).</p>
<p>2. Well demarcated street address to each interface will be provided through strong form modulation and activation of all edges.</p>	<p>Streetscape activation is enhanced along the Miller Street and Denison Street frontages. A two-storey entry to the OSD enables interaction with the development on the corner of Berry and Miller Streets.</p>
<p>3. Alignment with the vision of the Miller Street Special Area of a linear urban space, including the creation of a large public plaza along Miller Street, designed with zones for the circulation of large numbers of pedestrians, restful sun zones, public and private seating areas and space for programmed events.</p>	<p>As discussed, an extensive linear urban space is enabled along the Miller Street frontage with wide footpaths and landscape treatments. The detailed design allows greater solar penetration to this area.</p>
<p>4. A continuous awning or coverings of a sufficient depth are to be provided above the Miller Street frontage and extend as far as practical to the Berry Street frontage. The covered area is to:</p> <ul style="list-style-type: none"> a. provide protection to pedestrians from the weather b. provide active retail uses with opportunities for complementary outdoor uses c. integrate and support capacity for pedestrian access and connection to and from the station entrance and the over station development 	<p>The detailed design incorporates an appropriate canopy design along the Miller Street frontage, Metro entry at the start of the laneway and above the OSD entry on Berry Street which provides weather protection for pedestrians.</p> <p>Active retail uses are incorporated along the Miller Street frontage which spill out into the public domain areas with operable retail shopfronts and outdoor dining opportunities.</p> <p>The canopy is articulated along the streetscape at an appropriate human scale which encourages high pedestrian usage with access and connection from the Metro entry on Miller Street and the OSD lobby on the corner of Berry Street.</p>
<p>5. Provision of a food and beverage zone to activate the precinct.</p>	<p>Provided accordingly. Food and beverage premises are incorporated throughout the podium levels.</p>
<p>6. Provision of an active retail through-site link at Miller Street level providing retail activation along Miller Street.</p>	<p>Provided accordingly.</p>

Design Guideline	Proposal
7. Extend the public domain into the Miller Street station entry.	Provided accordingly. The main Metro Station entry is on the Miller Street frontage at the corner of the proposed through-site link.
8. Minimise the impact of structural columns on transparency and circulation.	Structural columns do not obstruct circulation spaces throughout the public domain.
9. Create a safe and user-friendly environment including weather protection, security measures and wayfinding. This should include: <ul style="list-style-type: none"> a. Minimising opportunities for criminal and anti-social behaviour. b. Incorporating canopy cover along all frontages, with strong relationships to surrounding buildings to create a continuous weather protection edge. c. Seamless integration of all signage with the architectural character of the scheme and surrounding context, providing a clear and uncluttered approach to location and positioning. 	The CPTED Report (Appendix BB) demonstrates how the detailed design of the proposal supports a safe, accessible and activated public realm which mitigates anti-social behaviour through activation and passive surveillance.
5.5.1 Signage	
1. Signage opportunities are to respond to and complement the architectural design of the building and contribute positively to the appearance of the building, the streetscape and the CBD skyline.	Signage zones ensure the architectural integrity of the respective façades are not compromised. They will enable major future tenants to provide clear and concise building/business identification signage which identifies the landmark development and contributes to the North Sydney skyline in the CBD.
2. Signage must integrate with the requirements of North Sydney Council DCP 2013 – Section 9 – Advertising and Signage.	Proposed signage zones are in accordance with the NSDCP 2013 and SEPP 64 (refer Section 7.6).
3. Signs are not to conceal or detract from integral architectural features or cover any mechanical ventilation systems.	Signage zones do not conceal significant architectural features or plant equipment.
4. A signage strategy should be prepared for the Over Station Development, providing the location, dimension, illumination and types of signage proposed on the building. The signage strategy should ensure signage is of high quality, integrated with the overall building design, and compatible with, whilst not detracting from the broader Sydney Metro Station Wayfinding Strategy.	Details of the proposed signage zones are included within the Urban Design Report at Appendix E .

Design Guideline	Proposal
5.5.2 Public Art	
1. The development is to incorporate high quality public art as an integral part of the building design.	Public Art is to be delivered by Sydney Metro as part of the CSSI Approval. Notwithstanding this, the inclusion of art in the OSD entry / lobby spaces will be considered as part of the fitout under this Detailed SSD DA.
2. Public art is to be located to be perceivable from the public domain.	
3. Public art placement and selection is to consider the opportunities of the site, its history and context when developing a theme and concept.	
5.6.1 Pedestrian Access	
1. Provision of a pedestrian through site link between Miller and Denison Streets, with opportunities for active food and beverage retailing.	Through-site link is provided with active retailing opportunities (speciality retail, cafes, bars, restaurants etc.).
2. Primary pedestrian access to the station to be from the east side of Miller Street, between Berry and Mount Streets, with a secondary access to the shared zone in Denison Street.	Access to the future Sydney Metro Victoria Cross Station has been provided accordingly.
3. Denison Street to be enhanced with a pedestrianised link and a lower station entry creating direct pedestrian flow to the new station. This new at-grade connection is also activated with retail on route to the station entry.	At-grade pedestrian access is provided from Denison Street and acts as the lower or sunken level of the through-site link. This pedestrian thoroughfare features separate access to the Sydney Metro Station.
4. Retail must enhance the customer experience and not impinge on circulation.	The design ensures there is no conflict between legibility and retail offerings and the Sydney Metro customer experience.
5.6.2 Transport Integration	
1. Provision of clear and legible access to all transport modes, including: <ul style="list-style-type: none"> a. Bus stops on Miller Street and the Pacific Highway b. The existing cycle route along Miller Street, Angelo Street and Pacific Highway c. A future cycle connection on Miller Street and the Pacific Highway d. Future taxi stands and kiss-and-ride on McLaren Street. 	The proposed development ensures adequate access to existing and future transport opportunities within the vicinity including bus stops, cycling routes and car manoeuvrability.

Design Guideline	Proposal
2. Bicycle parking is to comply with the rates specified in the North Sydney Development Control Plan 2013.	Bicycle parking is provided in accordance with Green Star requirements and is located within the basement levels of the development.
3. End-of-trip facilities are to be provided in the building in accordance with North Sydney Development Control Plan 2013.	End-of-trip facilities are provided in accordance with Green Star requirements and are located within the basement levels adjoining the bicycle parking area.
4. Pedestrian access and connectivity must be provided generally in accordance with the Pedestrian and Vehicular Access Diagram at <i>Figure 6</i> .	Pedestrian access is provided accordingly, as indicated in Section 4.7.2 of this EIS.
5. Development should promote pedestrian movement and integration with the neighbouring public domain including the planned pedestrianisation of Denison Street.	The design and location of the through-site link encourages pedestrian interaction and access, capitalising on its proximity to the future pedestrianised Denison Street. As discussed, activated retail tenancies along Miller Street spill out into the public domain areas and enable clear and legible access to the surrounds.
6. The pedestrian movements to, from and within the site associated with the Metro station are to be considered and accommodated in the design.	Pedestrian movements have been crucial to the overall design of the integrated podium and CSSI 'metro box' areas.
5.6.3 Parking and Servicing	
1. Car parking must be provided in the basement of the building and be accessible from Denison Street.	Vehicle parking provided accordingly.
2. Basement parking and service vehicle entry and exit points are to be provided in locations nominated on the Pedestrian and Vehicular Access Diagram in <i>Figure 6</i> .	Service vehicle loading and unloading is provided off Denison Street in accordance with the OSD Design Guidelines.
3. Servicing and access is to be designed to minimise potential conflicts with pedestrians and ensure pedestrian amenity and safety.	Vehicle movements and accessways are clearly delineated from the pedestrianised areas along Denison Street and the south-east corner of the site.
4. The development should safeguard a potential future underground connection south into the MLC Building to enable future consolidation of vehicular entrances to loading zones and facilitate safe pedestrianisation of Denison Street.	The development has capacity to integrate with the basement parking area of the neighbouring MLC Building as detailed in the Traffic and Transport Impact Assessment (Appendix T).
5. Off-street loading and servicing facilities must be provided on site.	Off-street loading is provided in the upper levels of the basement which is accessed off Denison Street. The proposal includes a detailed Loading Dock Management Plan (Appendix T) which

Design Guideline	Proposal
	demonstrates the overall efficient operation of the loading dock.
5.7.1 Sustainability	
1. Development at the site is to take advantage of best practice sustainability standards available and feasible at the site.	Best practice has been incorporated into the proposal and ongoing design throughout the construction phases. Refer to ESD Report (Appendix K).
2. Development should aim to reduce environmental impacts through the selection of materials.	Construction materials have been carefully chosen to reduce environmental impacts where possible.
3. The façade should be designed to minimise energy use by reducing heat gain while improving user comfort through glare control.	Façade louvres contribute to the minimisation of energy use and improve internal amenity by control glare levels resulting from the glass finish.
4. Development should retain existing and incorporate new street trees to reduce the heat island effect and supplement existing avenue planting.	The public domain concept plan retains existing trees where possible and incorporates the planting of canopy street trees to improve user amenity and mitigate heating resulting from extensive hard surface coverings.
5. Compliance should be achieved with the minimum sustainability requirements of Council.	Achieved as per the ESD Report included at Appendix K .
5.7.2 Integration	
The design and integration of the Victoria Cross OSD with the Metro Station must:	
1. not have any adverse impact on the design and/or operation of the Metro Station;	The detailed OSD has been specifically designed to integrate with the Metro Station whilst ensuring efficient operation as separate components.
2. be capable of complete demolition and reconstruction, or major maintenance or modification, without significant interference to the operation of the Metro Station;	The site will be established to ensure construction or modification of the OSD can occur without compromising the operation of the Metro Station (refer to CSMP at Appendix W).
3. allow independent access, servicing and maintenance from normal station activities and operation;	Access and servicing between the OSD and the Sydney Metro Station have been designed as independent.
4. integrate efficiently with the station structure;	The detailed design achieves seamless structural integration operating as one structure from ground to roof.
5. achieve unity in design through connecting the Station entry, podium and tower, as a single readable piece of architecture including to provide continuity in the façade design; and	Design integration and interaction between the OSD and Sydney Metro Station is central to the design philosophy and outcome of the proposal. This is

Design Guideline	Proposal
provide visual connectivity between the OSD lobby and public domain.	evident throughout this EIS and the Urban Design Report (Appendix E).

Conclusion

In conclusion, it is considered that the proposal exhibits design excellence in accordance with the terms of the Design Excellence Strategy, given it addresses all the requirements of the Strategy, has been informed by feedback from the DRP and is compliant with the Sydney Metro Victoria Cross Station Precinct Design Guidelines.

8.1.2. Built Form and Urban Design

The proposed OSD is detailed in the Architectural Plans (**Appendix D**) and Design Report (**Appendix E**) prepared by Bates Smart. In conjunction with the Concept proposal, the ongoing detailed design development has established a vision for the site to be the new 'beating heart' of the North Sydney CBD through the delivery of a landmark development which seamlessly interacts with the Sydney Metro public infrastructure.

Overall, the proposed development delivers a built form that is responsive to the context of the existing and future desired character of the site and the surrounding area of the North Sydney CBD. Further, the design of the OSD responds to the site-specific constraints and opportunities of the site and features of the surrounding area which are evolving over time. Key impacts associated with the built form of proposed development are discussed in further detail in the following sections.

Built Form

The tower massing incorporates a series of blocks each with a composition which creates various vertical and horizontal articulations. These articulations of the tower form are supported by the varying depths of the cantilever volumes within the "articulation zone" (Miller Street frontage). Expression of these individual blocks with varying volumes maintains the legibility of a singular tower form within the context of the North Sydney skyline. At a closer context however, the design uses shadow and depth to detail the delineations between individual volumes which also has the effect of reducing the perception of scale compared to a sheer façade.

The west elevation of the tower fronting Miller Street uses these horizontal and vertical expressions to interact with the surrounding built form elements in terms of scale and height. This clearly articulates a series of stacked volumes which cascade towards the Sydney Metro entry and reduce the perceived building scale and overall built form when viewed from the key areas of public domain surrounding the site.

Figure 47 – Artist's Impression of western and southern façades



Source: Bates Smart

Each of the stacked volumes are finished with solar shading devices which have a vertical emphasis to provide clear proportions for the tower form and reduce energy requirements for the ongoing operation. Specifically, the west elevation shading devices are 600mm deep vertical fins oriented to the south (rotated) with 1800mm spacings.

North Sydney Skyline

The proposed development has been designed to create a visually interesting landmark building which significantly contributes to views of the North Sydney commercial core without dominating the skyline of the CBD.

The proposed development is located centrally within the North Sydney CBD and the height of the tower is viewed within the context of the North Sydney centre skyline. The height and building massing assist in identifying the Sydney Metro Victoria Cross Station and OSD site as the geographical centre when viewed from the perspective of the wider Sydney Metropolitan region.

The Urban Design Report (**Appendix E**) provides the following photomontage which illustrates the minimal impact of the proposal when viewed from key vantage points and streetscape locations. An extract of the view from Barangaroo indicating the Victoria Cross OSD, and 1 Denison Street (under construction) and 100 Mount Street (approved for construction) provides a contextual view of these buildings amongst the North Sydney Centre Skyline.

Figure 48 – View of the proposed OSD from Barangaroo



Source: Bates Smart

The increased separation to the southern property boundary adjacent the MLC Building allows for increased solar penetration to the through-site link and primary Victoria Cross Station entrance as well as clear delineation to the surrounding existing and future built form elements such as 1 Denison Street. This ensures the OSD respectfully stands alone as a landmark building without dominating the skyline.

The materiality of the OSD tower is deliberately comprised of low-saturation and non-distracting metal and glass to ensure the tower sits harmoniously amongst surrounding buildings within the North Sydney skyline.

An image illustrating the proposed OSD design in the context of the North Sydney CBD is illustrated in **Figure 49** below.

Figure 49 – Modelling of OSD in the North Sydney Skyline



Source: Bates Smart

The Miller and Berry Streets podium includes a canopy (approximately two-storeys) above the plaza level to present a human scale element for the street level and future public domain area / green spine along the Miller Street frontage. The canopy provides wind protection for the public domain and additional weather protection.

Vertically expressed columns at the podium levels provide a sense of a civic scaled rhythm along the streetscape similar to the rhythm and spacing of the colonnades on the adjoining MLC Building. Overall this creates a sense of individual bays which contribute to providing an appropriate scale at the street level which interacts with podium levels on surrounding built form elements.

The ground floor level is activated with retail shop fronts and outdoor dining / seating opportunities while the upper level features balconies that spill out onto the public domain. The linear progression along the Miller Street frontage enables seamless interaction and pedestrian access to the main Metro entrance and through-site link situated towards the south of the site.

As previously discussed, the through-site link consists of two laneway buildings with a built form of an appropriate human scale and height which integrates with the podium levels of the OSD tower, Sydney Metro entrance and surrounding context. The two buildings (delivered in the CSSI Approval) provide ample opportunity for outdoor dining and other retail experiences in conjunction with the site's primary pedestrian access path to stimulate the night time and weekend economy.

Figure 50 – Artist's impression of Miller and Berry Street streetscapes



Source: Bates Smart

Denison Streetscape

The Denison Street streetscape provides at-grade pedestrian access to the Metro Station via the eastern entrance to the through-link activated with retail on both sides. It is anticipated that the Denison Street entrance to the laneway will accommodate approximately 63 per cent of passengers accessing the Metro Station. This primary access to the Metro Station will significantly reduce pedestrian congestion along the Miller Street laneway level and primary activated public domain area.

The Denison streetscape has been specifically designed to enhance pedestrian movement and wayfinding with ideal opportunities to integrate with the future pedestrianised southern portion of Denison Street towards Mount Street. The eastern street wall height and scale of the laneway buildings are compatible with a human scale and surrounding built form elements.

Figure 51 –Artist's impression of Denison Street streetscape



Source: Bates Smart

Conclusion

The orientation, height, setbacks, street walls, activation and articulation of the proposed development will integrate with the context of the existing and future desired character of the site and North Sydney CBD as demonstrated above. Further, the proposed built form and detailed design of the OSD sits comfortably above the building podium levels which are compatible with the streetscape elements along the Miller Street and Denison Street elevations.

8.1.3. Heritage

A Heritage Impact Statement (**HIS**) has been prepared by OCP Architects and is attached at **Appendix L**. The HIS identifies and assesses the potential impacts associated with the detailed design of the Victoria Cross Station OSD on the significant characteristics of neighbouring heritage items, their context and setting.

The HIS provides a comprehensive assessment of key heritage impacts, establishes the heritage management framework for development of the site. The assessment of heritage impacts has been prepared in accordance with the condition B4 of the Concept SSD DA, the SEARs and the relevant provisions of the applicable planning instruments. In particular, the assessment provides a discussion of the potential impacts of the development on the adjoining MLC Building and the Rag & Famish Hotel regarding their setting and streetscape presence.

Assessment

As discussed previously (**Section 3.6**), the site is located within the vicinity of a number of locally listed heritage items under the NSLEP. The site also previously contained an item of local heritage significance in the form of a shop at 187 Miller Street (I0898) which was demolished as part of the CSSI Approval.

The HIS has been prepared in accordance with the NSW Heritage Branch guideline for the preparation of Assessments of Heritage Impact. Further, the report adopts the principles contained within the Australian ICOMOS *Charter for the Conservation of Places of Cultural Significance (The Burra Charter)* 2013 as a methodology for assessing heritage impacts.

A Heritage Interpretation Strategy has been prepared separately in fulfilment of condition E21 of the CSSI Approval and in accordance with the terms of condition B4 of the Concept Approval.

MLC Building

The MLC Building was the first high-rise office block in North Sydney and was the largest building in North Sydney for many years after its construction. At the time of its construction the building was an example of the height of innovation through the use of a curtain wall with a thin aluminium framed glass skin, an open-plan office environment, and contemporary weather systems.

The detailed design of the Victoria Cross Station OSD provides a considered response which respects the aesthetic qualities and notable façade of the MLC Building. The regularly placed vertically expressed mullions on the OSD building form introduces a rhythm which sympathetically relates to the regular geometry of the MLC Building façades. In addition, the use of a curtain wall façade provides an appropriate design response to the MLC Building.

Horizontally connected workplaces and large vertically connected villages expressed in the architectural form of the OSD represents the highest standard of contemporary workplaces just as the MLC Building did in 1957 at the time of its construction. The vertical emphasis of the OSD façade and building massing is broken at the height of the MLC Building and creates a dialog between the two buildings.

Other ways that the proposed design provides a sensitive response to the adjoining MLC Building include:

- The provision of a 28m separation between the lower levels of the OSD tower (to RL 124) and the MLC Building, which maintains views of the northern tiled elevation of the MLC Building from Miller Street;
- Providing an overall massing and scale relationship which provides a reference to the height of the MLC Building, in particular, with cantilevered building forms occurring above a height of RL 127; and
- Maintaining a minimum 6m setback of the lower levels of the OSD to Miller Street which will maintain views north and south along Miller Street.

Despite being part of the CSSI Approval, the street level podium and laneway buildings feature materials, finishes and building forms which are compatible with the north façade and significant geometry and form of the MLC Building.

Rag & Famish Hotel

The two-storey scale of the Rag & Famish Hotel means that the relationship with the Victoria Cross OSD is predominantly read at the lower levels which form part of the CSSI Approval. The 6-metre setback from the 'metro box' to Miller Street results in a building form which generally aligns with the established building line of multi-storey buildings along Miller Street. This setback arrangement allows for substantial views towards the Rag & Famish Hotel from the south along Miller Street.

The building podium of the OSD at the Miller Street level sensitively responds to the Rag & Famish Hotel reinforcing a two-storey scale through its form, detailing, materials and use. The two-storey high glazed wall provides a sense of openness to view the heritage item and the grid form of the podium features columns which divide the façade into bays. These 'bays', together with the 'L-shaped' awning, reinforce a finer grain scale at street level which sympathetically responds to the scale of the Rag & Famish Hotel.

The design of the OSD incorporates a richness of materials for the podium street level to accentuate the relationship with the Rag & Famish Hotel, whilst lightweight and neutral materials for the structure above provide a clear transition to the tower form.

The detailed design of the proposed OSD (i.e. from level 4 and above) would not detract from the heritage fabric and significance of the Rag & Famish Hotel. The design and materials proposed are consistent with existing contemporary multi-storey buildings in the vicinity and further reinforce delineation between the podium level ('metro box') and OSD tower.

Other heritage items within the vicinity

The proposed OSD has been carefully designed to respond to the existing urban environment of the North Sydney CBD and numerous heritage items in the vicinity of the site through its scale, form, architectural detailing and selection of materials. Overall, the proposed design of the OSD would not result in any additional adverse impacts on the heritage significance of items in the vicinity of the site given the existing high-rise context of the North Sydney CBD.

Conclusion

The detailed design of the OSD is sympathetic to the heritage fabric of significant heritage items within the vicinity of the site. Notably, the proposal implements various design strategies, including:

- Incorporating horizontal and vertical recesses in the building facades and cantilevered architectural elements to break up the built form massing;
- Provide a reference to other surrounding buildings through horizontal built form articulations which are sympathetic to the mid-rise scale of the MLC Building and street level scale of the Rag & Famish Hotel; and
- Use of high-quality materials with neutral colours and a simple detailed lightweight tower structure which blends into the North Sydney CBD and does not detract from the views within the locality from nearby heritage listed items.

8.1.4. View and Visual Impact

The Detailed SSD DA is accompanied by a detailed View and Visual Impact Assessment (**VVIA**) prepared by Urbis using images prepared by Virtual Ideas (refer **Appendix V**). In accordance with Item 10 of the SEARs, the VVIA provides an assessment of existing views, the modified building envelope and the proposed detailed design from:

- Key vantage points within North Sydney and the public domain (including iconic views from south of Sydney Harbour); and
- Adjacent the residential apartment building, the Alexander Apartments.

It is noted that the Detailed SSD DA design of the Victoria Cross OSD is contained wholly within the proposed building envelope as proposed to be modified with the minor exception of louvres on the northern and southern façade's and is consistent with the approved building envelope as viewed from key surrounding locations. The modification to the Concept SSD DA establishes the 500mm flexible zone on the northern and southern elevations of the building envelope which allow for non-habitable architectural detailing and expression (e.g. sunshades). As such, the view and visual impacts resulting from the proposal have largely been previously under the Concept SSD DA.

Public Domain Views

The VVIA concludes that from the perspective of long-distance views and iconic views from Sydney Harbour, the comparison of the detailed design of the OSD and the approved building envelope will be virtually unperceivable compared to the approved building envelope. From long-distance views the development will be read in the context of its location amongst other high-rise development and the North Sydney skyline.

From the medium-distance views obtained from public locations within North Sydney and neighbouring suburbs, the proposed detailed design of the OSD compared to the approved building envelope results in view impacts which range from minor to negligible.

From the perspective of short-distance views obtained to the site from within the immediate surrounding streetscaping (including from the corner of Miller Street and McLaren Street and the corner of Pacific Highway and Miller Street) the modifications to the building envelope associated with the detailed design while may be observable, are minor in the context of the overall height, massing and scale of the approved building envelope.

Specifically, additional massing can be observed within the high-rise section of the tower from certain views, however this does not obstruct any significant view corridors or solar access to significant public spaces and is therefore considered acceptable within a CBD environment. Further, this impact is mitigated by a reduction in building massing and visual bulk at the low-rise portion of the building which will have a greater impact on pedestrian amenity and public views to the site and adjacent heritage items (MLC Building and Rag & Famish Hotel).

The detailed design of the OSD is further addressed through the articulation of the Miller Street western façade, whereby the development is articulated vertically through a series of mullions and building indentations to create visual interest and present to the public domain as a series of stacked elements rather than a singular form.

Private Views

The VVIA concludes that impacts from the detailed design compared to the approved envelope are predominantly negligible to private residential apartments located within Alexander Apartments. While elements of the detailed design may be perceptible from Apartments such as 1501 (looking south west), 2001 (looking south west), and 2701 (looking south west), the OSD building form does not obstruct longer-distance views to the Harbour and beyond compared to visual impacts assessed under the approved building envelope (refer to **Appendix V**).

View impacts to some apartments such as 2015 (looking west and south west) are marginally improved as a result of the proposed detailed OSD design compared to the approved building envelope.

The proposed OSD design does however impact on views from the Rooftop Level 37 of the Alexander Apartments. In particular, the OSD's building form obstructs views towards a portion of the Sydney Harbour tributaries as illustrated in **Figure 52**. The view impacts from this vantage point under this Detailed SSD DA is consistent with the approved envelope as proposed to be modified.

Figure 52 – Comparative views from Rooftop Level 37 of Alexander Apartments (looking south west)



Picture 22 – OSD Modified Concept Building Envelope
Source: Visual Impact Photomontage Report



Picture 23 – Proposed OSD Detailed Design
Source: Visual Impact Photomontage Report

Whilst it is acknowledged that there is view impacts from Rooftop Level 37, these are considered acceptable insofar as this is the rooftop level which does not provide useable or habitable space for residents.

Notwithstanding the proposed OSD detailed design, the Rooftop Level 37 of the Alexander Apartments retains significant views towards Barangaroo and Sydney Harbour tributaries. As such, the proposed detailed design does not obstruct iconic views and the principles of view sharing have been achieved.

Overall the VVIA demonstrates that the detailed OSD design will have a low visual impact on the existing visual catchment compared to the impacts assessed as part of the approved building envelope. The VVIA concludes that the impacts on views from the Alexander Apartment building is consistent with view sharing principles established in the case of *Tenacity Consulting v Warringah Council [2004] NSWLEC 140*. Refer to the VVIA at **Appendix V** for further clarification of negligible view impacts.

8.1.5. Visual Privacy

The Apartment Design Guide (ADG) does not technically apply to this SSD which is for commercial land uses, but the ADG nonetheless provides a useful guide against which to assess visual impact and privacy to adjacent residential development.

The proposed OSD tower is located approximately 40m from the westernmost balcony or window to a habitable room within the Alexander Apartments, which exceeds the minimum building separation distance required by *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development* and the ADG. As such, the location of habitable rooms on the eastern façade of the tower is appropriate and consistent with the design criteria contained in the ADG.

Notwithstanding the above, the detailed design of the tower includes blank walls and windows to transitional areas within the commercial tower to improve visual privacy to the Alexander Apartments and to the commercial development at 65 Berry Street to the east of the site. The proposed amendments to the approved building envelope also reduces the OSD envelope within the south-eastern podium (located 23m from the Alexander Apartments) which further improves visual privacy for the south-western facing Alexander Apartments.

It is noted that there is an existing childcare centre with an outdoor play area located in the lower-rise southern portion of the adjacent 65 Berry Street commercial development. The proposed development and its proximity to the childcare centre is considered appropriate given the play area is already overlooked by surrounding development within a CBD context. A solid noise barrier associated with the CSSI Approval has further been constructed adjacent to the childcare centre to shield it from constructed related impacts.

8.1.6. Solar Access and Overshadowing

The proposal is accompanied by a detailed shadow analysis contained within the Urban Design Report prepared by architects Bates Smart (**Appendix E**). The shadow study illustrates the impacts from the existing situation and the approved and modified building envelope on surrounding Special Areas, RE1 Public Recreation zoned land and residential areas both within the North Sydney CBD (Alexander Apartments) and those outside the North Sydney CBD (Whaling Road). The detailed design of the Victoria Cross OSD is situated within the modified building envelope.

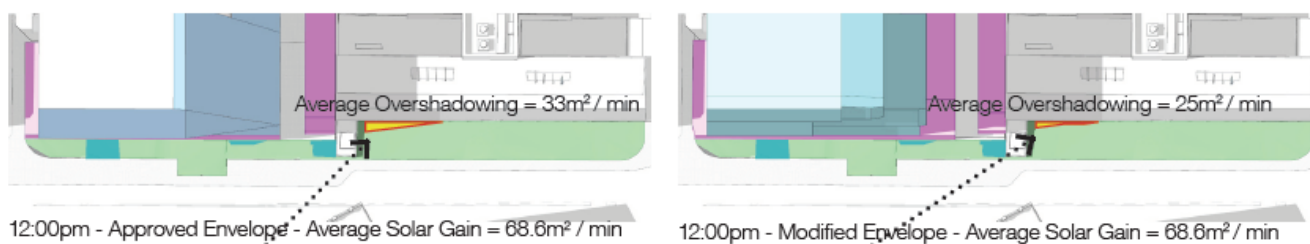
Key criteria for assessing overshadowing impacts are contained within clause 6.3 of the NSLEP 2013, as described in **Section 7.9.2**, except for clause 6.3(3) which provides for an exception to the height development standard but is irrelevant for the purposes of this application as a variation to the height development standard is sought in accordance with clause 4.6 of the NSLEP.

Miller Street Special Area

The shadow analysis for the Miller Street Special Area illustrates the shadows cast by the proposed development does not result in any additional overshadowing impact to the Miller Street Special Area during mid-winter, Autumn Equinox or Spring Equinox compared to the development that existed on the site prior to the demolition of buildings on site.

The modified building envelope, of which the detailed design is within, results in an average net solar access gain of 60.5sqm per minute to the Miller Street Special Area between 12:00pm and 2:00pm on the Autumn Equinox when compared to existing buildings on site. Further, as illustrated below the modified building envelope reduces the average overshadowing at 12pm when compared to the approved building envelope.

Figure 53 – Comparison of overshadowing impacts on Miller Street Special Area (approved and proposed envelopes)



Source: Bates Smart

Greenwood Plaza

The proposed development does not result in any additional overshadowing throughout the year to the Greenwood Plaza Special Area which is consistent with the Concept SSD DA modified building envelope. From 12:00pm to 12.15pm on the 21 June, the shadow cast by the proposed design of OSD is close to overshadowing Greenwood Plaza, however, it is wholly confined within existing shadows cast by existing North Sydney CBD buildings.

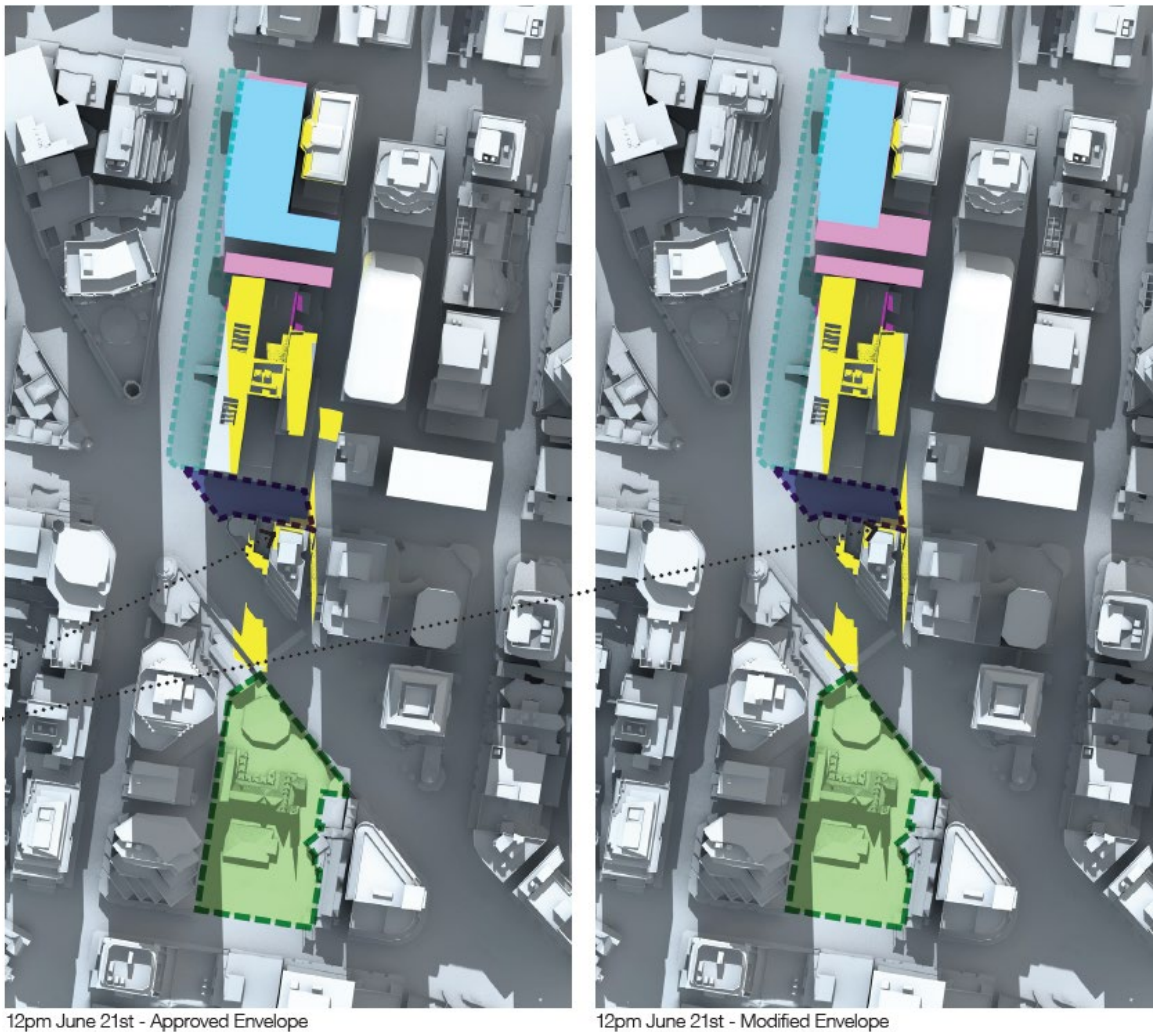
Brett Whiteley Plaza

The shadow analysis for Brett Whiteley Plaza (refer **Appendix E**) illustrates the shadows cast by the approved and modified building envelope at 15-minute increments from 12:00pm to 2:00pm for the winter and summer solstice and equinox.

In summary, there is no additional overshadowing to Brett Whiteley Plaza resulting from the proposed development from 12:00pm to 2:00pm on the 21 March and 21 September. However, the shadow diagrams indicate the proposed OSD design creates a minor portion of overshadowing (approximately 37sqm) between 12:00pm and 12:30pm on 21 June. It is noted that the shadow cast by the detailed OSD design does not increase the overshadowing of this area from that previously approved building envelope (see **Figure 54**).

The overshadowing extent from both the approved and modified OSD envelope falls on the awning of a shopfront building located in the south-east corner of Brett Whiteley Plaza and not specifically on the plaza itself. Based on this assessment, it is determined that the overshadowing from the modified envelope on the shopfront awning within Brett Whiteley Plaza from 12:00pm to 12.30pm on 21 June does not result in any adverse impacts above what was previously considered and approved under the approved OSD envelope.

Figure 54 – Comparison of overshadowing to Brett Whiteley Plaza



Source: Bates Smart

Residential Areas

Alexander Apartments

The shadow analysis demonstrates that both the modified envelope and detailed design cause no impact on the Alexander Apartments building on 21 June (Winter Solstice) until approximately 2:30pm. At this time some overshadowing occurs to the western façade of the Alexander Apartments building from Levels 22-24 as a result of the proposed development.

Overall however, there is no change in the number of residential apartments with reduced solar access when comparing the previously approved envelope and the proposed development. Both schemes reduce the total number of apartments by 3 percent of the total number (i.e. 8 out of 145 apartments). This minor increase in overshadowing to the Alexander Apartments is consistent with the ADG design guidance that development is not to reduce an adjacent residential development by more than 20%.

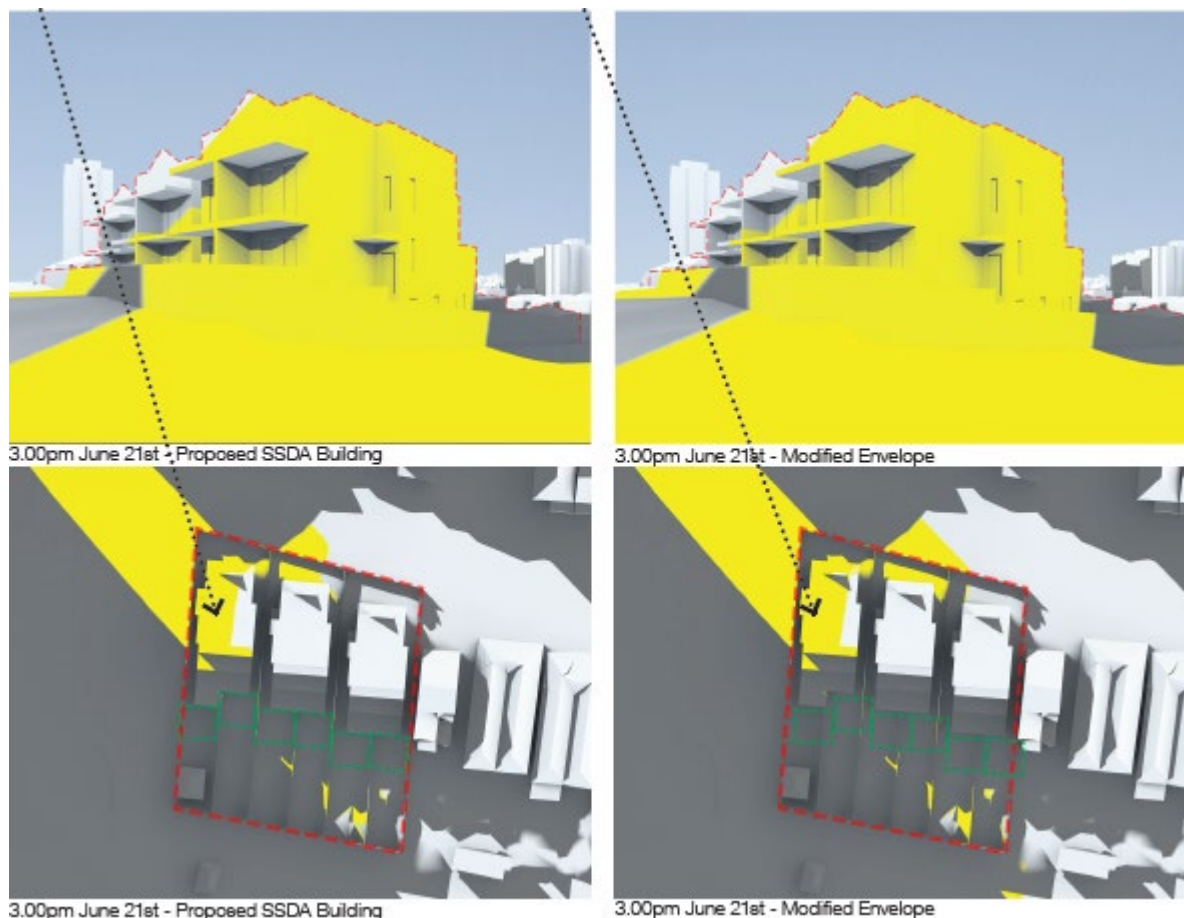
The shadow impacts resulting from the proposed development are consistent with the Concept SSD DA, the guidance contained in the ADG, and is appropriate in a CBD commercial core context. As such, the proposed development is supportable on grounds of overshadowing to adjacent residential properties.

Whaling Road

The shadow analysis demonstrates the shadow impact created by both the modified building envelope and detailed proposal on residential areas outside the North Sydney Centre. The diagrams indicate that both schemes create a shadow over three residential properties on Whaling Road at 3:00pm on 21 June. Notwithstanding the overshadowing cause by both envelopes and the proposal, as discussed previously the detailed design does not rely upon clause 6.3(3) of the NSLEP for an exceedance of the height control under clause 4.3, but rather a clause 4.6 variation request which is provided at **Appendix I**.

When comparing the impact of the approved and modified building envelopes and the proposal, it is recognised that the extent of the shadows caused by the proposed development does not increase the shadow impacts previously addressed under the approved OSD envelope (refer **Figure 55**).

Figure 55 – Comparison of overshadowing at the Whaling Road Terraces



Source: Bates Smart

As demonstrated in the shadow diagrams, the dwellings at these three residential properties receive at least two hours of direct sunlight between 12:30pm and 2:30pm on 21 June. The south facing private open space areas of all the dwellings are already significantly overshadowed from 2:45pm to 3:00pm and aerial images of the properties (Nearmap 12 May 2019) indicate that much of the rear yards which are affected by overshadowing contain significant canopy tree vegetation which would impact solar access. It is also noted that Alfred Park situated directly to the west contains a number of significant mature trees that would impact solar access, particularly to the western façade of No. 1 Whaling Road.

Overall, it is considered that the overshadowing impacts to the three residential properties on Whaling Road would not reduce the amenity of these dwellings and specifically, the proposed detailed design of the Victoria Cross OSD does not increase the shadow impacts previously assessed as part of the Concept SSD DA approval.

8.1.7. Ecologically Sustainable Development

An Ecologically Sustainable Development (ESD) Report has been prepared by Lendlease in accordance with SEARs item 7 and is provided at **Appendix K**. The report demonstrates that the proposed development is committed to achieving:

- 6 Star Green Star Design and As-Built v1.2 rating;
- Gold WELL Core – Building Standard Rating – v2;
- 5.5 Star NABERS Energy rating; and
- Occupant wellbeing.

It is noted that the certified ratings will apply to the OSD components of the project. In accordance with the SEARs, an analysis of the proposal against the principles of ecologically sustainable development set out in the clause 7(4), Schedule 2 of the EP&A Regulation 2000 is provided within the ESD Report at **Appendix K**.

The sustainability framework for the project implements both the Green Star rating scheme and the WELL Building Standard. Green Star assesses projects based on their performance in the categories of management, indoor environmental quality, energy, transport, water, materials, land use and ecology, emissions and innovation. The table below identifies how these sustainability initiatives are currently being considered throughout design development of the project.

Table 18 – Sustainability Initiatives

Category	Project Initiatives
Management	<ul style="list-style-type: none"> The applicant's sustainable design personnel for the OSD project are Green Star Accredited Professionals with many years' experience. A comprehensive commissioning and tuning plan will be prepared and implemented for the project with an Independent Commissioning Agent overseeing the process, ensuring the base building systems operation is optimised for efficiency and occupant comfort. A climate change risk assessment will be undertaken for the site and an adaptation and resilience plan developed for the OSD. A comprehensive Operations and Maintenance Manual and Building Users; Guide will be prepared to ensure information access for occupants. A comprehensive energy and water monitoring and metering strategy will be prepared to ensure ongoing management. The construction team will operate the site using a site-specific Environmental Management Plan.
Indoor Environmental Quality	<ul style="list-style-type: none"> The design of the outdoor air supply system will ensure the ingress of pollutants is minimised and a dedicated mechanical exhaust riser will be provided for tenant general exhaust to enable tenants to remove pollutants. The design of the building ensures that background noise levels within the office spaces are well below recommended levels. The design of the typical open plan lighting solution will maximise user visual comfort. Low VOC paints, adhesives and sealants and floor coverings will be specified. The building façade and mechanical systems will ensure a high level of thermal comfort is achieved.
Energy	<ul style="list-style-type: none"> The design has the capability of achieving a 5.5 Star NABERS Energy rating through implementing various energy efficient strategies.
Transport	<ul style="list-style-type: none"> The project benefits from being located above the Sydney Metro Victoria Cross Station. Secure bike storage and supporting end of trip facilities including secure showers and lockers, will be provided for office staff to encourage the use of active transport.
Water	<ul style="list-style-type: none"> The project is seeking a water sensitive urban design.

Category	Project Initiatives
	<ul style="list-style-type: none"> Water efficient fixtures and fittings underpin the projects water usage.
Materials	<ul style="list-style-type: none"> An environmental life cycle assessment of the proposed project will be undertaken in the early design to identify opportunities to reduce the environmental impact of material selection. The construction team will aim to recycle at least 90% of construction and demolition waste.
Land Use and Ecology	<ul style="list-style-type: none"> The OSD is to be constructed on a brownfield site. The OSD meets requirements in Green Star Land Use and Ecology category as the site is home to no endangered, threatened or vulnerable species.
Emissions	<ul style="list-style-type: none"> The stormwater system will be designed to ensure that run-off from the site will not exceed the pre-development condition when assessed on current climate data as well as under the projected impacts climate changes.
Innovation	<ul style="list-style-type: none"> The provision of sustainable site sheds and sustainability training for subcontractors. The integrity of energy metering data will be improved through the provision of a sophisticated automatic data validation process. Prospective tenants will be educated about the sustainability benefits of the building.

Overall, the development will reflect leading industry practice by incorporating the measures documented in this report, and by benchmarking against world's best practice to improve environmental performance.

8.1.8. Access, Parking and Traffic

Arcadis and Mott Macdonald has prepared a Traffic and Transport Impact Assessment (**TTIA**) in accordance with SEARs Item 8 and the conditions of consent for the Concept SSD DA, which is included at **Appendix T**. This report provides an assessment of the surrounding traffic and transport network following the introduction of the proposed development, provides a preliminary plan for managing service vehicles within the loading dock and summarises the framework for the management of pedestrians and traffic during the construction of the proposed development (in conjunction with the CSMP at **Appendix W**).

The report also includes a swept path analysis, the Green Travel Plan and the detailed Framework for Construction Pedestrian and Traffic Management Plan (**CPTMP**).

Mode Share

Census 2011 *Journey to Work* data has been used to assess the current commuter travel behaviour in the proposed development area whereas the future mode share for the site has been estimated based on existing and predicted future travel patterns. For employees travelling to the area surrounding the proposed OSD, the existing and future journey to work mode share for the site is summarised in **Table 18** below.

To understand the likely trends from the progressive intensification of North Sydney CBD, a review of more established areas within the Eastern Harbour City such as Pitt Street and Martin Place were used as benchmarks. The proportion of employees and persons using private vehicles for journey to work purposes is significantly lower (14-15%) in more established areas when compared to the portion of car usage in North Sydney (30%). This is largely a result of less parking provisions together with a higher concentration of high density, mix of uses and accessibility to other key catchments.

Given its proximity to the proposed Sydney Metro Victoria Cross Station, the proposed OSD will directly benefit from ease of access to the Sydney Metro. Together with the existing public transport network, it is anticipated that the public transport mode share to the site will increase in line with places such as Pitt Street and Martin Place.

In summary, mode share to the site post development is anticipated to result in increased active and public transit methods from the existing situation whilst a significant decrease in private vehicle usage is expected.

Table 19 – Comparative mode share breakdown for the site and proposal

Mode	Existing (North Sydney) *	Pitt Street	Martin Place	Proposed Share for the Site **
Train	47%	47%	42%	55.5%
Bus	12%	21%	22%	16%
Ferry / Tram	0%	0%	0%	0.4%
Car	31%	14%	15%	13.2%
Walk	6%	6%	6%	6.4%
Other (including cycling)	3%	11%	11%	7.5%
Mode not stated	1%	0%	0%	1%
Total	100%	100%	100%	100%

*Note: The Bureau of Transport Statistics (BTS) uses ABS data to determine the mode used to travel to work by 'travel zones' (TZs). Where relevant, these were used for the purpose of this analysis.

**Note: Proposed mode share for the site is based on BTS TZ 1953 and proposed adjustments which are derived from key aspects of the proposal.

Traffic Generation and Road Network Impact

Given the existing buildings on the site had been demolished prior to the preparation of the TTIA, Arcadis and Mott Macdonald have adopted an alternative approach to determining the existing and proposed trip generation which is consistent with the methodology used in the Concept SSD DA (AECOM, 2018). This approach utilised information from similar commercial uses at 1 Denison Street and 177 Pacific Highway as well as traffic surveys carried out at 65 Berry Street to provide a baseline for the study.

Based on the assessment of traffic generation rates for similar commercial developments at 1 Denison Street, 177 Pacific Highway and 65 Berry Street, a rate of 0.3 trips per parking space has been adopted to assess the previously approved developments trip generation. Application of this rate equates to an existing approved generation of the following:

- AM Peak Hour = 62 vehicles per hour (50 vehicles entering and 12 exiting); and
- PM Peak Hour = 52 vehicles per hour (42 entering and 10 exiting).

A total of 150 car parking spaces are being provided as part of the OSD component and 11 car parking spaces is being provided under the CSSI component, the combined total of which is less than the 208 off-street spaces existing on site prior to the CSSI demolition works. As such, any related net increase in traffic generation will be generated by servicing and deliveries.

The proposed OSD site is expected to generate up to 43 deliveries per hour (based on 61,500sqm GFA) which is approximately one vehicle every two minutes. Vehicles travelling to and from the site are likely to approach and depart using the Pacific Highway via Walker Street, Miller Street or Berry Street. As the operating conditions of existing intersections surrounding the site are identified within the TTIA operate at Level of Service (LoS) C or better, the minor increase in traffic generation from service vehicles combined with the reduced car parking spaces on the site are unlikely to result in a substantial impact to these intersections.

As there is a limited number of loading bays proposed on site, a pre-booking system is proposed to manage delivery and arrival times. In consideration of the estimated number of servicing and delivery trips, the provision of a pre-booking system and the timing of deliveries throughout the day, the impact to the road

network is considered negligible. Road safety audits will be carried out during design and construction phases.

Pedestrian Access and Movements

The main pedestrian access point to the OSD is proposed on Berry Street near to the intersection with Miller Street. Secondary access to the Level 1 OSD lobby is proposed along the through-site link. The main station access point to the Sydney Metro Victoria Cross Station is located on Miller Street adjacent to the pedestrian laneway towards the southern end of the site which links Miller Street to Denison Street and other surround developments (refer to **Section 4.7.2**). The secondary Sydney Metro Victoria Cross Station entrance is located via a lower ground retail arcade from Denison Street.

As stated within the EIS for the CSSI application, the OSD is not expected to generate a significant number of pedestrian movements compared to the Metro Station. The increased number of pedestrian movements as a result of the OSD is less than 10 per cent forecast to be generated by the Metro Station. Nonetheless the TTIA assesses key walkways within the precinct statically under normal operations for the 2036 peak minute demand, noting a number of assumptions, to determine the relevant pedestrian LoS. Most sections of the key walkways are capable of achieving the required LoS with the following exceptions:

- One of the bus stops on the east side of Miller Street in front of 105 Miller Street (noted as key area 13 **Figure 56**) achieves LoS D in the AM peak due to the obstruction of the bus stop to the pavement leaving under 2.3 metres of width. To achieve LoS C the pavement would need to be 10mm wider. Due to the negligible difference to achieve a LoS C it is considered that sufficient walkway width exists to accommodate the anticipated flow generated by the OSD.
- The southern end of Denison Street (X – Y, **Figure 56**), operates at a poor LoS under the assumption that all pedestrians use the west footway only. It could achieve a higher LoS if the footway on both sides of the road is available for station access. However, it is understood that North Sydney Council have plans to pedestrianise Denison Street in the future which would mitigate this non-compliance.

As such, the TTIA concludes that the impact of the increase in pedestrian flows on the surrounding street network as a result of the OSD is considered acceptable.

Cycle Access and Parking

The site is served by the surrounding North Sydney bicycle network and planned cycleway facilities in North Sydney (refer **Section 3.7.3**). Once complete, the OSD will be located adjacent to designated on-road cycle routes along Miller Street and planned changes to the road and cycle networks.

As such the quantity and location of the proposed bicycle parking and end of trip facilities are appropriate for the site and the proposed development.

Servicing and Loading

Arcadis & Mott Macdonald have developed a Loading Dock Management Plan included as part of the TTIA (refer **Appendix T**), which details the operational loading and servicing logistics required for the Victoria Cross Station OSD site. The loading dock will have a dock master on-site during the hours of operation to coordinate safe movement of goods, vehicles and personnel within the loading dock area.

Loading dock operating hours will be 14 hours per day seven days per week (6:00am to 8:00pm), with 24 hours per day availability for exceptional out-of-hours deliveries. This 14-hour period allows for operational flexibility to schedule deliveries with non-priority deliveries scheduled to occur during lower demand periods. The provision of access outside of operational hours will be at the discretion of, and special arrangement by, the Facilities Manager who may grant access as required, with booking required. Assessment of noise impacts of out-of-hours HRV delivery movements to the loading dock has been undertaken by, Wilkinson Murray (refer Acoustic Assessment Report, **Appendix S**) and concludes that noise emissions will have minimally impact with compliance with the Department of Environment, Climate Change and Water NSW's NSW Road Noise Policy provided the residences windows are closed at periods during night periods where sleep disturbance could be affected.

A delivery book system will be utilised to enable the demand for the loading bay to be managed and optimised. The allocation of deliveries to specified timeslots prevents congestion of the loading dock, circulation areas and entrances to the site. There are various commercial deliver booking systems available. Waste and recycling will be collected outside of operating hours to reduce impacts on the ongoing operation of the loading dock.

The TTIA includes a swept path analysis which confirms the loading dock arrangements are capable of supporting Small Rigid Vehicles (SRVs) and Medium Rigid Vehicles (MRVs) (refer **Appendix T**). The analysis discovered that the installation of convex mirrors would be required at ramp entrances to allow enhanced vehicle visibility where larger delivery vehicles require both access lanes to complete required manoeuvres.

Green Travel Plan

A preliminary Green Travel Plan (**GTP**) accompanies the TTIA prepared by Arcadis and Mott Macdonald (refer **Appendix T**). The GTP outlines how future tenants will encourage users of the development to make sustainable travel choices, including walking, cycling, public transport and car sharing. This plan will be implemented prior to and during future operation and occupation of the commercial office space.

It is anticipated that the GTP initiatives will naturally evolve over time, however, the current plan supports the estimated mode share detailed previously and outlined in the TTIA. General marketing and promotion of the availability and benefits of adopting sustainable travel options is highly important in meeting the objectives of the GTP. General GTP initiatives include:

- Introduce a travel coordinator role as part of the building's management activities to execute the recommendations of this plan during the operation of the OSD (during operation);
- The provision of easily accessible travel information about available sustainable transport options and facilities, as well as useful mobile applications and travel information websites. This could potentially be incorporated into the building's management activities. A dedicated website could also be considered to provide a portal for travel information specific for the site (during occupation);
- As part of building management activities, recommendations can be made to tenants of the OSD that staff inductions provide information about sustainable travel options, and potentially a tour of the available bicycle parking and end-of-trip facilities (during operation) and
- Monitor the mode share, use and demand of facilities to inform future updates of the GTP (during operation).

These initiatives demonstrate the applicant's commitment to benchmarking sustainable transport as the idealistic travel method. In addition to these general requirements, the GTP outlines potential measures relating to walking, cycling, public transport, carpooling and car share, car parking and reducing network travel demand. For the GTP to be effective, it should be reviewed on a regular basis to ensure that the objectives are achieved whilst staying updated with changes in the surrounding context.

Conclusion

The car parking spaces proposed to support the CSSI retail tenancies and the OSD tenancies are fewer than the total number of spaces existing on the site prior to the CSSI demolition works. The proposed increase in

traffic generation resulting from additional service vehicles to the site will be negligible and are considered unlikely to result in a significant impact on the LoS of surrounding intersections which currently operate at a LoS C or better. The proposal includes an appropriate number and provision of bicycle spaces and end of trip facilities to encourage active transport and with the location of the OSD above the Sydney Metro the proposed development supports a mode share transition away from private vehicles.

8.1.9. Rail Corridor Impact

In response to Condition B3 of the Concept SSD DA and ongoing consultation with the relevant government agencies / key stakeholders (refer to **Section 5**), a Rail Corridor Impact Assessment has been prepared by Arcadis & Mott Macdonald at **Appendix Z**.

The proposed detailed design of the OSD and future Victoria Cross Sydney Metro Station has been designed to be a fully integrated proposal and therefore impacts on the Sydney Metro rail corridor have been fundamental considerations and an integral part of the ongoing detailed design phase.

Key impacts on the future Sydney Metro rail corridor relate to earthing and bonding and electrolysis and structural impacts. As discussed previously (refer to **Section 4.4.5**), the Sydney Metro Victoria Cross South Station shaft forms the base of the OSD tower itself (**Appendix Z**). The two elements have been specifically designed as one integrated structure form from foundation to rooftop and will be constructed accordingly.

The Victoria Cross Station and OSD will utilise a combined earthing arrangement which has been designed in accordance with TfNSW Technical Note ETN 11/02 to mitigate step, touch and transfer potential hazards to the public, personnel and equipment during a fault on the AC high voltage (HV) reticulation network. The following methods will be implemented during the construction and installation of equipment at Victoria Cross Station in conjunction with Sydney Metro's line-wide earthing, bonding and electrolysis strategy:

- Insulated reinforcement or Epoxy coated steel bars.
- Use of non-metallic ferrules.
- Epoxy coated ferrules.
- Insulated Chemical Anchor Systems.
- Insulated Mounting Materials, washers, brushers and top hats.

From a fire and life safety perspective, the OSD tower has been specifically designed to be separated from the station below to mitigate potential impacts, thus allowing the station to continue operations in the event of a fire in the OSD and vice-versa.

The OSD building services have been specifically designed to operate independently to the Victoria Cross Station building services, with the interface areas to be managed through building management control systems interfaces and the Building Management Statement which has been developed concurrently with the design. Therefore, any potential impacts associated with the OSD building services on the Sydney Metro rail corridor are adequately addressed through the design.

Overall, potential rail corridor impacts have been considered and addressed through a detailed design solution that has been developed on a basis of separation or integration, depending on the nature of the impact, to provide the best design solution for both the OSD tower above and the Sydney Metro Station below.

8.1.10. Structural Engineering

Arcadis & Mott Macdonald have undertaken an assessment of the stability of the OSD tower lateral system, gravity load transfers and the floor plate structures where the Victoria Cross Station structure and OSD tower structure (refer to **Section 4.4.5** for further details). Arcadis & Mott Macdonald have identified that all structures will achieve compliance with the following design criteria:

- All current relevant Australian Standards;
- Building Code of Australia NCC 2019;
- Sydney Metro / TfNSW standards and requirements (where applicable); and
- Sydney Metro Victoria Cross Scope of Works and Technical Criteria (where applicable).

Overall, the design of the OSD Tower is structurally integrated with the future Victoria Cross Station currently under construction. The structural design will comply with relevant design criteria and ensures integration with other key engineering services. Further, the structural design is capable of integrating with the adjacent MLC Building in the future via the basement loading dock and incorporated soft zones.

8.1.11. Wind Assessment (Pedestrian Safety and Comfort)

A Wind Impact Assessment has been prepared by Arcadis & Mott Macdonald is included at (**Appendix M**). The report included wind tunnel testing to determine the potential wind impacts on the surrounding pedestrian level wind environment and assesses pedestrian safety, comfort and amenity in terms of footpaths (including through-site link), building entrances and private terraces.

The assessment adopts the Lawson Comfort Criteria (Lawson and Penwarden, 1975) and Beaufort Scale. The wind comfort criteria selected for the project site have been proposed based on, similar projects of this nature, local area mapping and requirements, and the various conditions related to the different site uses, with the wind effects at the station entrances at Southern Metro entry and Denison Street concourse complying with the Lawson Comfort Criteria for Business walking criteria (C1), as required by Sydney Metro.

Methodology

In conjunction with wind tunnel modelling of the near-field flow, for this analysis, Irwin sensors were used to measure wind speeds at twenty different locations around the site. Measurements from the sensors of ground-level wind speeds were obtained at the various locations and combined with a probability distribution of reference wind speed and direction to provide predictions of full-scale pedestrian-level wind speeds.

In summary, the following method of analysis was adopted:

- Ground-level wind speeds are obtained from the calibrated Irwin sensor data.
- The average of these ground-level wind speeds for each 60-second test are calculated.
- The average ground-level wind speeds are translated to reference level using the measured speed ratios for each direction.
- The probability of exceedance of the reference speed is determined for each direction.
- The total probability of exceeding a given ground-level wind speed is determined.
- The ground-level wind speed is varied to achieve an exceed probability of 5 per cent (comfort) and 0.02 per cent (safety).
- These speeds are compared to the pedestrian comfort and safety criteria (refer **Appendix M**).

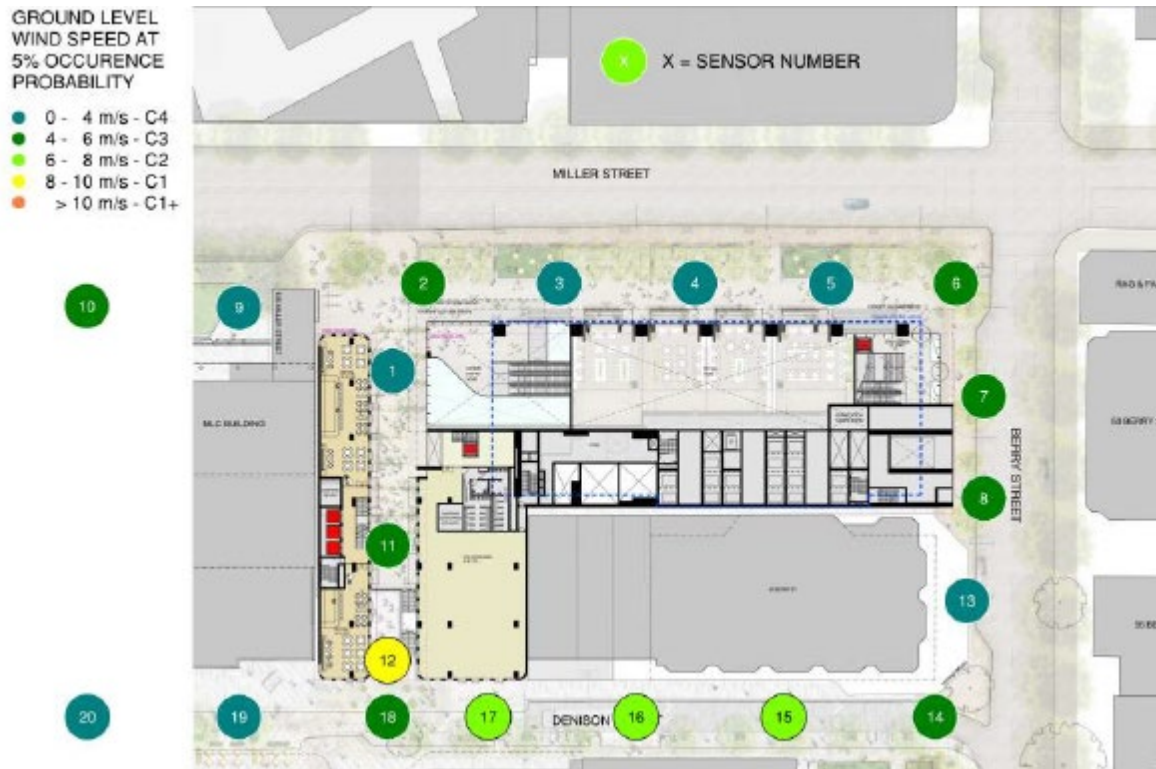
Assessment

The wind speeds for both comfort and safety exceedance probabilities at each sensor location are shown in **Figure 57**.

The comfort wind speeds were compared with the comfort assessment criteria for all areas of concern and the results indicated that the comfort criteria of C1 or lower (acceptable for fast or business working) were achieved at all locations. Similarly, the safety wind speeds measured are below the applicable safety criteria at all locations, with the highest speed reached at the Denison Street entrance to the through-site link (Sensor 12).

In summary, the Wind Impact Assessment (**Appendix M**) confirms the proposed detailed OSD design complies with the project specific criteria established, with all areas achieving appropriate ground-level wind speeds for their intended use. This has been achieved through the design and use of awnings and landscape features to mitigate wind impacts, to be delivered by the CSSI Approval, though as shown in the proposed Architectural Plan (**Appendix D**) and Landscape Plans (**Appendix F**).

Figure 57 – Location and results of ground-level wind speeds from wind tunnel testing of proposal



Picture 24 – Comfort criteria ground-level wind speeds, occurrence probability of 5%



Picture 25 – Safety criteria ground-level wind speeds, occurrence probability of once in a year

Source: Arcadis & Mott Macdonald

8.1.12. Solar Reflectivity

Arcadis and Mott Macdonald have prepared a Solar Reflectivity Report to assess the potential for hazardous glare from the façade of the Victoria Cross Station OSD (**Appendix EE**). A summary of the methodology, assessment and recommended mitigation measures is provided below.

Methodology

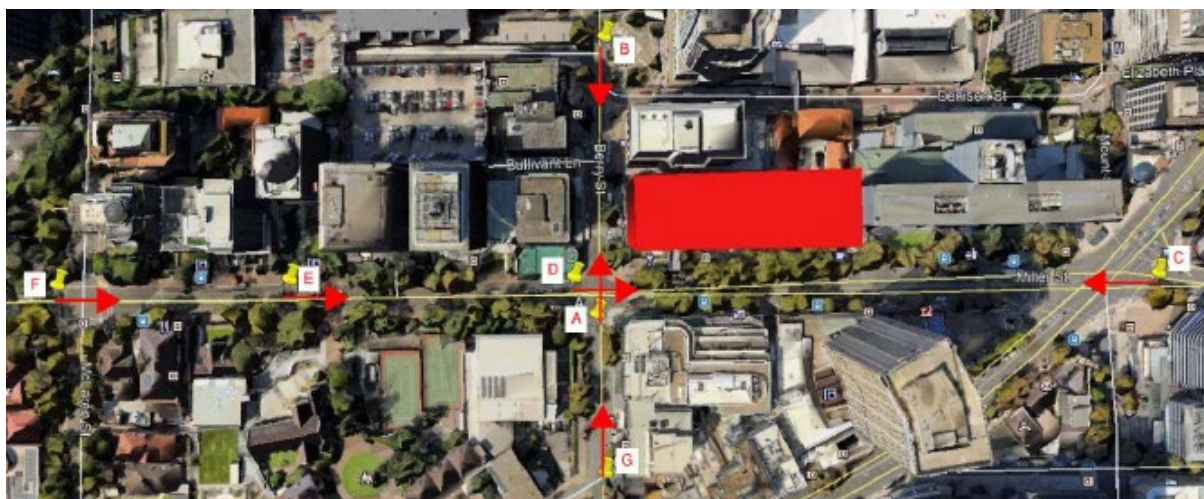
The reflectivity analysis adopts a methodology technique that is consistent with that published by David N. H. Hassall in 1991 which uses solar charts to calculate veiling luminance as a measure of glare which is considered appropriate when $<500 \text{ cd/m}^2$.

In summary, the method of analysis is as follows:

- Identify appropriate study points – seven (7) study points were established along Berry Street and Miller Street as drivers along these routes were identified to be at risk (**Figure 58**). Three (3) additional study points were assessed to the east of the subject site for drivers travelling north on the Pacific Highway and Warringah Freeway
- Use solar charts to identify times of interest – “check zones” were identified for each “study point” by finding the angles from the point of interest to the base corners of the façade of interest, and plotting them on the solar chart, thus determining time periods of concern. If the solar chart coincided with the check zones, there is a potential for glare effects during the periods identified.
- Calculate veiling luminance – veiling luminance is a parameter to estimate the reduction in visibility due to light scatter. Where check zones coincided with the solar charts, veiling luminance is calculated to ensure the glare occurring is not dangerously high.
- Verify exceeds with Grasshopper – if veiling luminance exceeds 500 cd/m^2 , parametric modelling is utilised for an in-depth analysis of how the sun reflects off the building surface. This approach considers the shielding effects of surrounding buildings (realistic approach). Grasshopper is a visual program of solar studies which allows instantaneous feedback on design modifications.

A worst-case scenario was considered by assuming entirely glass glazed façades and ignoring the shielding effects of surrounding buildings and external shading elements on the façade.

Figure 58 – Study point locations and viewing direction



Source: Arcadis and Mott Macdonald

Assessment and Mitigation Measures

The results of veiling luminance were calculated for the various study points to identify the severity of glare on drivers and pedestrians. While compliance is achieved based on a ‘worst case scenario’ to the majority of surrounding points, the results identified three scenarios which exceed the 500 cd/m^2 limit, including:

- Point B, North building face at 5pm on 31 August resulted in a veiling luminance of $1,600 \text{ cd/m}^2$;
- Point C, West building face at 11am on 21 June resulted in a veiling luminance of 580 cd/m^2 ; and
- Point G, North building face at 7am on 9 March resulted in a veiling luminance of $4,300 \text{ cd/m}^2$.

Drivers heading West along Berry Street (Point B)

At Point B drivers experience high levels of glare (1,600 cd/m²) from the north façade for an hour during the late afternoon in late August. Similarly, this exceedance was further assessed using parametric modelling which illustrates clear glancing reflections. However, surrounding buildings within the vicinity shield glare on motorists and the north façade has been design with external fins which block glare impacts.

Drivers heading North along Miller Street (Point C)

At Point C drivers will experience some adverse levels of glare (580 cd/m²) from the west façade during the late mornings in winter for approximately half an hour. This exceedance was further assessed using parametric modelling which illustrates an apparent glancing reflection from the west façade. However, given the suns elevation at midday, it is anticipated that sun-visors will provide sufficient glare control. In addition, the west façade includes vertical fins which further mitigate glancing reflections from the façade.

Drivers heading East along Berry Street (Point G)

Point A located on the intersection of Berry and Miller street results in no adverse levels of glare given its proximity to the OSD tower. However, Point G indicates a high level of glare (4,300 cd/m²) from the north façade in mid-May during the early morning for an hour. This exceedance was further assessed using parametric modelling which illustrates a glancing reflection with limited shielding from surrounding buildings. To offset these impacts, the design of the north façade includes external fins which significantly mitigate glare, completely blocking glancing reflections and ensuring compliance (i.e. <500 cd/m²).

Conclusion

The three scenarios which exceeded the acceptable level of veiling luminance (500 cd/m²) were assessed rigorously using parametric modelling which accounted for shielding of surrounding built form elements and the proposed façade fins and blades. The additional mitigation measures including the proposed external shading elements of the façade were shown to provide good control of glancing reflections from the façade.

In summary, the proposed façade glazing system and external shading elements will ensure compliance with the veiling luminance criterion to prevent glare causing discomfort or being hazardous to road users and the surrounding built environment. As such, the reflectivity impacts are considered acceptable given the detailed design (external fins) of the OSD. Please refer to the Solar Reflectivity Assessment report at **Appendix EE** for further detail.

8.1.13. Noise and Vibration

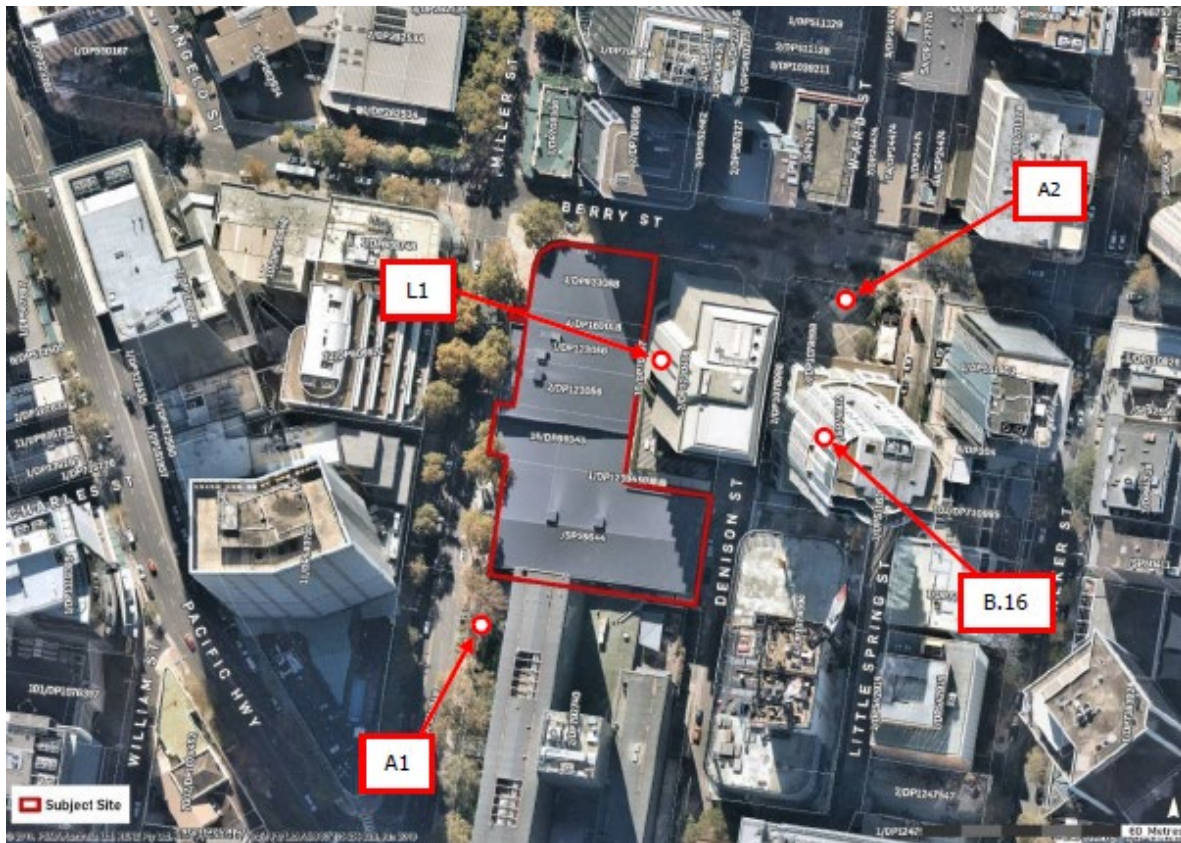
An Acoustic Assessment Report has been prepared by Wilkinson Murray and is included at **Appendix S**. This report addresses the effect of construction noise, mechanical noise and vibration, and the intrusion of ambient noise (mechanical, traffic and future rail corridor noise) into and out of the development (i.e. construction and operation). A summary of the assessment and proposed mitigation measures is provided below.

The Acoustic Assessment Report identified sensitive noise receivers in proximity to the site, including the following locations:

- Childcare centre – Ground Floor 65 Berry Street, North Sydney
- Commercial offices – 65 Berry Street, North Sydney
- School – Monte Sant' Angelo Mercy College, 128 Miller Street, North Sydney
- Residential – Alexander Apartments, 79-81 Berry Street, North Sydney

The sensitive noise receivers informed four key surrounding noise measurement locations of which attended and unattended measurements were conducted (refer **Figure 59**).

Figure 59 – Noise measurement locations



It is noted that Victoria Cross Station site is located in the B3 Commercial Core zone which predominantly comprises commercial office, business, and retail premises.

Assessment and Mitigation Measures

In accordance with relevant Australian Standards, to ensure high quality offices within the OSD are achieved the internal noise level should not exceed 40dBA. The tower will be exposed to traffic noise from Miller Street and Berry Street as well as noise from surrounding commercial buildings. The highest levels measured affected the northern and western façades of the OSD tower.

Construction of the respective façades with the detailed design elements outline in the Urban Design Report (**Appendix E**) achieves an internal noise level below standards which will be suitable for commercial uses, ensuring no additional façade treatment is required. Operational noise impacts have been assessed against the relevant criteria contained within the *NSW Noise Policy for Industry 2017 (NPfI)* as identified in the Acoustic Assessment Report and in conjunction with the Concept SSD DA conditions of consent.

The OSD will include mechanical plant equipment on Level 3, mid-level and the roof of the tower. This plant equipment has the potential to affect nearby commercial and residential receivers. The noise emission of mechanical equipment associated with the development from the Level 3 podium, Level 15 plant, tower roof, as well as the northern and southern laneway building rooftops, will be controlled so that the operation does not adversely impact sensitive noise receivers in proximity to the OSD.

As specific mechanical equipment has not been selected, typical levels have been assumed for equipment emissions based on performance criteria and preliminary locations of equipment. Mechanical plant is capable of complying with the respective sound power level criterion specified in the DCP and *NPfI* provided the standard mechanical noise mitigation measures outlined in the acoustic report are implemented. Such mitigation measures will be finalised as part of the construction detailed design however likely to include:

- Acoustic louvres around the roof top cooling towers;
- Residential type exhaust silencers on the Level 15 generators;
- Intake and exhaust attenuators within the generator room ventilation system; and

- Attenuators to some ventilation fans.

With regards to internal operational noise (i.e. plant equipment affecting the tower), the two diesel generators operating on the Level 3 podium have the potential to affect the OSD tower (Level 4) considering the generators (in emergency scenario) are likely to exceed the respective sound power level criterion without appropriate mitigation measures. Achievement of criterion will be ensured with mitigation measures implemented, such mitigation measures will be finalised as part of the construction detailed design however likely to include:

- Lining of the plantroom walls with 100mm acoustic insulation faced with perforated metal;
- Installation of an acoustic enclosure around each diesel generator; and/or
- Mounting of the generators on high deflection steel springs, possibly with a floating plinth.

Vibration impacts from plant equipment installed within the OSD is unlikely to be transmitted into the surround area at perceptible levels.

Assessment of noise and vibration from the future rail corridor will also been undertaken in the detailed design to ensure noise and vibration will not impact the OSD areas. Noise and vibration impact during construction is discussed further in **Section 8.1.20**.

Conclusion

In summary, potential mechanical and other operation impacts of the proposal as identified in the Acoustic Assessment Report have been mitigated through the selection of façade glazing and establishing requirements for future mechanical equipment selection and installation. Potential construction impacts will be mitigated for the adjacent childcare centre including the installation of noise barriers, respite periods, and noise monitoring as required by the relevant industry standards.

8.1.14. Services and Infrastructure

Arcadis & Mott Macdonald have prepared a Services and Infrastructure Report (**Appendix X**) that identifies the existing services and infrastructure within the vicinity of the site, establishes the impact on existing utility assets from the proposed development and the proposed augmentation / connection required to service the proposal.

Preliminary agency consultation has been undertaken with relevant service authorities such as Sydney Metro, Sydney Water, Jemena and North Sydney Council, as outlined in **Section 5.2** of this EIS. It is recognised that significant consultation will be ongoing throughout the continued design development and construction stages of the project.

The Report adopts a simple methodology of engaging with relevant service authorities to understand any required augmentation works and undertaking a desktop review of existing available information, including, Dial-Before-You-Dig plans, detailed Survey Plans, and the Reference Design Station Contractor – Victoria Cross Utilities Status Document.

Generally, the design approach identifies construction impacts on existing utility infrastructure and development treatment measures to avoid, diver, protect, upgrade, or reinstate utility assets to the satisfaction of relevant authorities. Treatment strategies considered as part of the proposal include the following:

- Avoid – e.g. refining the construction footprint to maintain separation from the existing asset, to avoid it completely or incorporate it within the proposed design;
- Protect – e.g. through engineering temporary or permanent protection measures; and
- Relocate/Remove – e.g. diverting the utility to an alternative route or disconnecting/removing abandoned or redundant infrastructure.

Formal discussions have been undertaken with the utility authorities regarding impacts on the existing infrastructure. These discussions are ongoing throughout the refinement process of utilities design associated with the proposed Victoria Cross Station and OSD.

A capacity check was undertaken to assess the capabilities of existing utilities to supply the anticipated demand for the proposed Station and OSD works. In summary, capacity exists or can be feasibly provided in

order to service the proposed development for electrical, communications, gas, potable water and sewer infrastructure utilities.

Further, new connections to a number these utilities will be required for the Victoria Cross Station OSD as detailed within the Services and Infrastructure Report (**Appendix X**), including potable water, fire services, sewer, gas, electrical and communications. Services connection locations are included within the attachments of **Appendix X**.

In conclusion, Arcadis & Mott Macdonald have outlined existing utilities in the vicinity of the site and augmentation works required as part of the proposal. Following extensive and ongoing consultation with relevant service authorities and the review of available information, there is capacity in the existing service infrastructure supply to service the proposed OSD development with minor augmentation measures identified.

8.1.15. Stormwater Management and Flooding

Arcadis & Mott Macdonald have prepared a Stormwater Management Plan and Flood Impact Assessment attached at **Appendix Q** which considers the flood risks and sets out the stormwater management works associated with the detailed design of the Victoria Cross OSD.

Flooding

A preliminary flood assessment was undertaken by Sydney Metro as part of the Concept SSD DA based on 2017 North Sydney Council Flood Model tool. The assessment confirmed that the site is located within a flood affected area, noting the previous building courtyard at Tower Square (demolished under CSSI Approval) provided informal flood storage during major storms greater than the 5-year Average Recurrence interval (**ARI**) event.

The Concept SSD DA design refined Council's flood model to provide greater detail within the area of interest and in consultation with the Council and Sydney Water, developed a preliminary flood management strategy. In summary, the strategy incorporated a compensatory flood storage be included in the Sydney Water trunk main in Denison Street to offset the loss of flood storage and the consequential impact on flows. The preliminary location for the compensatory flood storage was proposed below ground in Denison Street however was indicative only and subject to further design development in consultation with Sydney Water and the Council.

Following discussions with the Council and Sydney Water, a modified strategy has been developed, whereby the proposed storage is located in the verge in Miller Street as opposed to the roadway in Denison Street. Surface runoff would be directed into the proposed new stormwater detention tank in Miller Street, via Council's pit and pipe network, before discharging into the re-aligned Sydney Water trunk main and continuing downstream.

A "base case" condition which incorporates best available information regarding the existing or soon to be existing street and drainage infrastructure has been adopted as the pre-developed or existing condition for the purposes of the Stormwater Management Plan. Similarly, a post-development scenario has been adopted which incorporates the design aspects of the proposed OSD.

Preliminary flood modelling of these two scenarios has been undertaken considering the impact of the 1 in 100-year ARI + 10% rainfall increase flood event and the Probable Maximum Flood (PMF) level to demonstrate how the building might impact upon flooding in the area, including:

- The post-development scenario results indicate that the 100-year ARI + 10% rainfall increase flood levels are comparable with the base case condition where any observable increases in depth do not exceed 10mm, except for isolated areas on Miller Street, Denison Street, Mount Street and around the northern buildings, where the flood level increase is less than 20mm. post-development scenario results in a minor decrease in 100-year ARI + 10% rainfall increase flood level occurs in Denison Street.
- The 100-year ARI + 10% rainfall increase flood water does not flow through the pedestrian through-site link between Miller Street and Denison Street.
- A minor flood level increase occurs during PMF event across the site in the post-development scenario, including some locations on Miller Street and Denison Street where the afflux is between 50mm and 100mm, however the increase is comparable to the Concept SSD DA approval results.

Significant improvement has been made to the site itself through careful grading and the upgraded trunk stormwater infrastructure which allows stormwater flows to be collected and conveyed underground for storm

events up to the 1% AEP (100 year ARI) + 10% rainfall increase rather than overland as is currently the case. In the case of extreme nature of storms exceeding the 1%AEP (100year ARI) and up to the Probable Maximum Flood (PMF), it is not practical to convey flows underground so allowance has been made in the design to convey this flow through the site. The development's design and incorporated safety measures respond to this overland flow with integration of flood barriers as well as careful grading to ensure that hazard is managed to relatively safe levels (ARR categories H1 and H2) and building entrance levels have been set to prevent these flows from entering the building. The flood modelling conclusively indicates that flood waters surrounding and internal to the development have been managed through design to mimic or improve existing flood impacts and do not have a significant impact on adjoining and downstream properties.

Stormwater Management

Key components of the proposed OSD Stormwater Management Plan are outline as follows:

- Stormwater drainage from the roof and terraces of the OSD tower is collected and will drain to Council's pit and pipe stormwater drainage system on Denison Street. Stormwater drainage from the OSD will be combined in a discharge pit with the drainage from the station before discharging externally to the external network via a single connection point. However, it is noted that the OSD system is separate from the station stormwater system.
- Stormwater from the roof level and lower terraces will collected via symphonic drainage system with a primary symphonic system and secondary overflow capacity system. Pipework will terminate at a syphonic break tank located adjacent to the on-site detention tank at the B1 level.
- Seepage water from the OSD carpark will be collected via a perimeter spoon drain at each level, downpipes will transfer water to the Basement Level 6 level sump. All sub-soil and ground water drainage surrounding and under the station box is collected via a wall membrane system, water is then diverted under slab and collected in a pit at Basement Level 6 and subsequently pumped into the groundwater sump at platform level.
- In accordance with the Council requirements, the on-site stormwater detention system is provided by a tank on the mezzanine of Basement Level 1 and improves the performance of the existing under capacity stormwater pit and pipe network in the subject area. The on-site detention system ensures site discharge does not exceed that which would occur during a 5-year to 100-year ARI event.

Discharge from the site is required to meet the following pollutant load reduction targets outlined by Sydney Water and the Council:

- Gross pollutants – 90%
- Total Suspended Solids – 85%
- Total Phosphorous – 65%
- Total nitrogen – 45%

These pollutant reduction targets will be achieved for the site via a rainwater collection tank and proprietary stormwater treatment devices. The rainwater tank is located in the Level 40 plant room collects roof water for reuse in the station cooling towers. The stormwater treatment cartridges are to be located in the onsite detention tank on the mezzanine of Basement Level 1.

Given the nature of stormwater runoff being predominantly from roof areas it is anticipated that discharge will be relatively clean from pollutants. As such, dispensation of these requirements will be sought from the relevant authorities.

Conclusion

As concluded in the Stormwater Management Plan and Flood Impact Assessment (**Appendix Q**), the proposed symphonic drainage system and on-site detention tanks indicate stormwater collected and discharged from the OSD can be managed in accordance with relevant requirements.

Further, preliminary flood modelling of the OSD indicates flooding can be managed without having a significant impact on adjoining and downstream properties. For rainfall events including 1% of the Annual Exceedance Probability (AEP) flood water does not enter the pedestrian through-site link. During extreme storm events (i.e. up to PMF) some flooding of the site including the pedestrian through-site link occurs. However, progressive detailed design development has been ongoing to introduce mitigation measures which improve pedestrian safety within the laneway.

It is noted that ground level Finished Floor Levels and basement entrances (including lift cores and fire stairs), and detailed gradients of the public domain and through-site link levels are approved under the terms of the CSSI Approval and do not form part of the Detailed SSD DA. As such any mitigation measures required to address the PMF increased flooding and the safety in design requirements will be prepared in satisfaction of the CSSI Approval conditions of consent.

8.1.16. Waste Management

A Waste Management Plan (WMP) has been prepared by Waste Audit and Consultancy Services (**Appendix R**) which outlines the operational and construction waste management principles associated with the Victoria Cross Station OSD. The report discusses estimated waste generation/volumes (including recyclables) and guides management, minimisation and storage requirements which reflect best-practice requirements and promote strong sustainability initiatives.

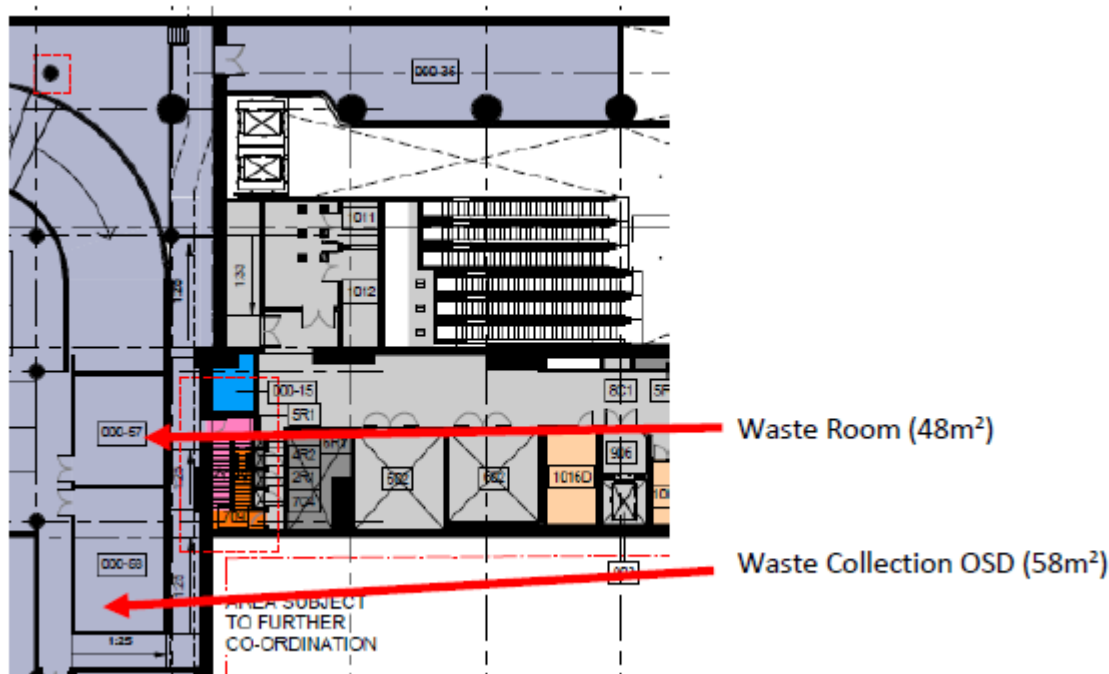
Operational Waste

Based on the scale and use of the proposed development, waste streams to be accommodated include general waste, commingled recycling, paper and cardboard recycling and organic waste. Other waste streams on an *ad-hoc* basis include toner cartridges, e-waste, unwanted furniture, confidential documents and maintenance waste.

In accordance with the NSDCP 2013 (*Section 19 Waste Minimisation & Management*) and the *City of Sydney Guidelines for Waste Management in New Developments*, it is estimated that the development will generate a total of 158,274 litres (158.3m³) of waste and recyclables per week through the previously mentioned waste streams. As indicated in the Waste Management Plan (*2.2 Waste Generation Estimates*), the estimated waste generation will require 43 bins with a total capacity of 159,500 litres (weekly). This equates to a required total footprint of 40.2 sqm to accommodate these bins (30.2sqm total plus an additional 30% for bin movement).

The Architectural Plans accompanying this application (**Appendix D**) indicate that the allocated waste storage rooms have the required 40.2 sqm of space to accommodate for the estimated waste/recycling generation and associated bin and baler footprint required (refer to **Figure 60**).

Figure 60 – Proposed Waste Storage Rooms



Construction Waste

The WMP includes a waste hierarchy of guiding principles which range from most preferable to least preferable, including:

- **Avoid and Reduce** – minimise the production of waste materials in the construction process;
- **Reuse** – ensure, wherever possible, that materials are reused either on site or offsite;

- **Recycling** – identify all recyclable waste products to be produced on site (note: in some instances, it may be more economical to send unsorted waste to specialised contractors); and
- **Disposal** – waste products which cannot be reused or recycled will be removed and disposed of.

Other considerations discussed within the WMP with regards to construction waste include mitigation measures which minimise impacts of liquid waste, stormwater pollution prevention and litter management. Records will be kept of all wastes and recyclables generated and whether they are used on site or transported off-site.

All waste and recycling materials will be stored on-site in appropriately coloured and signed bins which will be provided by the appointed contractor(s). These bins will be specifically located so as to avoid contaminating surface and stormwater run-off and all will include active litter control boxes. There will be no treatment of wastes or recyclables on-site expect for possible removal of contaminants prior to forwarding to off-site waste sorting contractors.

The types, quantities and management systems for the anticipated construction materials generated for the entire site during the construction stages of the development are illustrated in **Table 20** below. Waste generation quantities are estimations only and therefore the systems to be implemented incorporate a degree of flexibility to allow for variations. Active site management throughout the construction stages will ensure appropriate disposal of materials and on-site capacities. The systems that will be implemented for recovery and disposal will be finalised by the respective contractors.

Table 20 – Waste Management Systems (Construction Waste)

Material Type	Estimated Volume (m ³)	On-site (reuse or recycle)	Off-site Destination	Disposal
Concrete	20m ³	Separated on site and crushed for use in pavement construction where possible	Collected by contractor and disposed at concrete recycling facility	Facility TBA
Timber	15m ³	Managed by the Formwork contractor and reused where possible	Collected by specialist timber subcontractor for recycling	Facility TBA
Ferrous Materials	60m ³	No on-site reuse	Collected by subcontractor for recycling	Facility TBA
Non-Ferrous Materials (e.g. cables)	20m ³	No on-site reuse	Collected by subcontractor for recycling	Facility TBA
Plasterboard	45m ³	No on-site reuse	Collected by subcontractor for recycling	Facility TBA
Carpet	20m ³	No on-site reuse	Disposed of into designated bin for recycling. Disposal to landfill if poor quality.	Facility TBA
Mixed Hard Plastics	50m ³	No on-site reuse	Collected by contractor for recycling. Facility TBA	No disposal to landfill
Soil / Sand / Gravel	15m ³	Will be stockpiled for reuse	Excavation materials will be collected and used as clean fill by the waste	All remaining material will be disposed at

Material Type	Estimated Volume (m ³)	On-site (reuse or recycle)	Off-site Destination	Disposal
			contractor with appropriate notification as to location.	landfill. Facility TBA
Mixed Recyclables	75m ³	No on-site reuse	Collected by contractor	No disposal to landfill
General Waste	180m ³	No on-site reuse	Collected by contractor	Facility TBA

In conclusion, the WMP indicates that the detailed design of the OSD has sufficient space within the allocated waste storage rooms to accommodate the estimated waste generated by the future use and development across the site. Further, the WMP outlines the waste management obligations of sub-contractors and site managers as well as requisite site-specific induction trainings all employees and sub-contractors will attend.

In addition, the WMP will inform future Waste Policies associated with future respective Construction Certificate applications and detailed management plans of specific retail tenancies.

8.1.17. Building Code of Australia (BCA)

Steve Watson and Partners have undertaken an assessment of the proposed OSD against the Deemed-to-Satisfy (DTS) provisions of the relevant sections of the Building Code of Australia (BCA) and applicable Building Regulations (Appendix N).

The assessment identifies a number of matters which are considered “compliance readily available” with a recommendation of what is required to achieve compliance. The alternative solutions will be assessed against the performance requirements of the BCA by a suitably qualified person at the relevant subsequent Construction Certificate stage. Further, some issues have been identified with regards to fire safety provisions which are proposed to be addressed by the Fire Safety Engineer through an appropriate Performance Solution. Fire Safety is discussed further in **Section 8.1.19**.

Overall the OSD detailed design is capable of complying with the relevant requirements of the EP&A Act, the Regulation and the BCA through a combination of deemed-to-satisfy provisions and performance-based solutions. Compliance is subject to resolution with the recommendations provided by Steve Watson and Partners and further detailed regulatory reviews which will be undertaken throughout the design development stage. These matters do not preclude issuing of Construction Certificate as they will be resolved prior to construction.

8.1.18. Accessibility (DDA Compliance)

Morris Golding Access Consulting has assessed the proposed OSD with regards to accessibility objectives under the *Disability Discrimination Act 1992 (DDA)*, requirements of the *DDA Access to Premises Standards 2010*, BCA Access Code and the AS 1428 Series (Refer to **Appendix O**).

The Accessibility Report considers user groups, staff and members of the public to deliver equality, independence and functionality to people with a disability. The assessment provides advice and strategies to maximise reasonable provisions of access for people with disabilities to ensure the development achieves DDA compliance as part of the detailed design phase. In many instances the report provides recommendations, indicating the current design is readily available to provide compliance with the relevant DDA requirements subject to ongoing refinement through the design development stages.

In conclusion, the detailed design of the proposed OSD will be capable of complying with the applicable accessibility requirements of the *DDA Access to Premises Standards 2010*, relevant Australian Standards and requirements of the BCA pertaining to external site linkages, building access, common area access and sanitary facilities. The building design and the external domain design of the OSD will be continuously refined through the design development phase to ensure appropriate outcomes will meet applicable performance requirements.

8.1.19. Fire Safety

Arcadis and Mott Macdonald have undertaken a Fire Engineering Review which analyses the operational compatibility of the fire and safety systems for the proposed OSD and uses within the CSSI 'metro box' (**Appendix P**). Fire systems between the OSD and Sydney Metro are required to be independent.

The Fire Engineering Review outlines an extensive list of fire safety measures for the detailed design of the both the OSD and CSSI 'metro box' to achieve compliance with the relevant performance requirements of the NCC. The requirements of the fire safety measures will be further reviewed and developed following the completion of a detailed fire safety engineering assessment and further consultation with Fire and Rescue NSW to determine whether additional measures are required.

Where relevant Deemed-to-Satisfy (**DTS**) provisions of the National Construction Code (**NCC**) are not suitable and compliance cannot be satisfied, alternative performance solutions have been developed to demonstrate an acceptable level of fire safety can be achieved.

As concluded within the Fire Engineering Review at **Appendix P**, it is possible to develop performance solutions for the issues identified to demonstrate compliance with the relevant performance requirements of the NCC without major changes to the proposed OSD design. The details of the proposed performance solutions are subject to the outcome of the fire engineering brief and analysis which will be carried out generally in accordance with the International Fire Engineering Guidelines.

The performance solutions for the building will be developed as part of the ongoing design and development process and documented in a format suitable for submission to the relevant approval authorities. Overall, the Fire Engineering Review addresses the relevant SEARs item's and the Conditions of Consent (B8) of the Concept Plan Approval (refer to **Appendix P**).

8.1.20. Construction Management

A Construction and Site Management Plan (**CSMP**) has been prepared by Lendlease (**Appendix W**) which details the procedures and processes associated with the overall construction methodology for the proposed development.

The applicant is responsible for delivering the construction of project works including the Metro Station works and the OSD works. They will be required to engage with two other contractors, the Line Wide Contractor who will be installing the bulk power system, traction power and tunnel ventilation, and the TSOM Contractor, who will be installing the communication equipment, controls and platform screen doors. The applicant will also collaborate with the Tunnel and Station Excavation Works Contractor following the completion of permanent tunnel structures and subsequent handover and demobilisation. As such, it is in the applicant's interest to ensure construction management of the OSD is in alignment with and does not conflict with construction work required for the Sydney Metro and the Victoria Cross Station Work.

Construction Pedestrian and Traffic Management Plan (Framework CPTMP)

The applicant has engaged Arcadis & Mott Macdonald to develop a Framework CPTMP which is included as an appendix of the TTIA (**Appendix T**) to address SEARs Item 8 and Concept Plan Approval condition B9. The Framework CPTMP includes the following components:

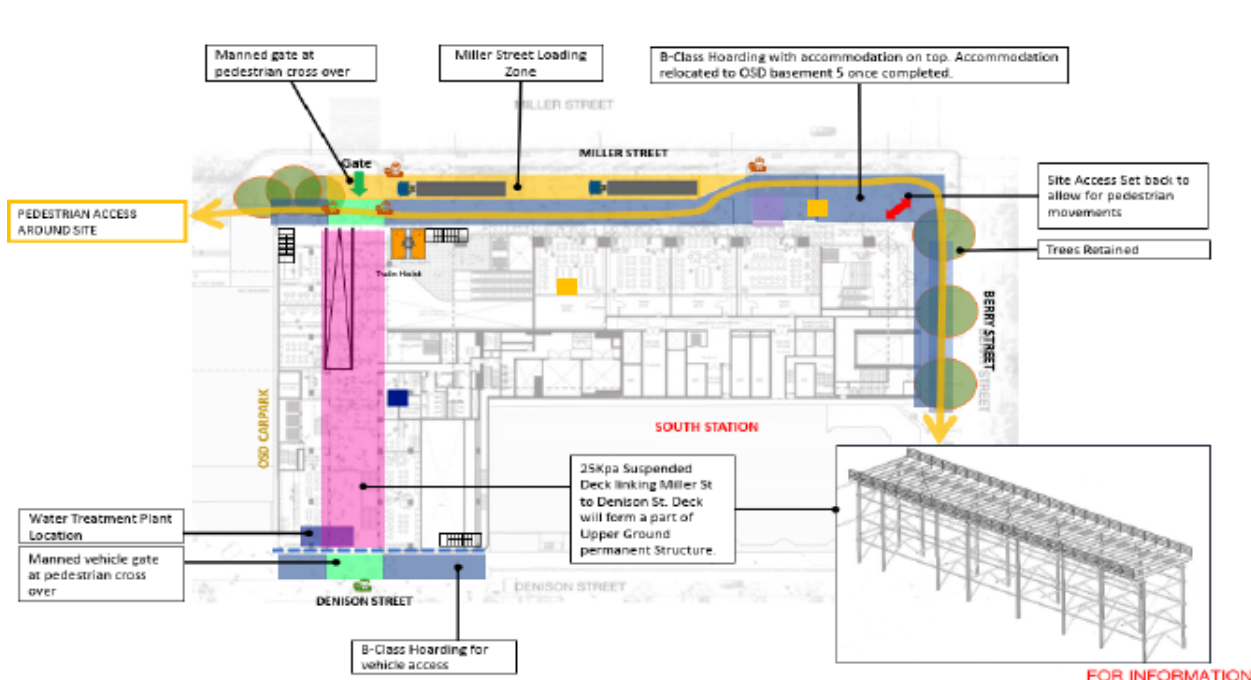
- Proposed construction vehicle loading and unloading;
- Proposed pedestrian management and control;
- Locations of proposed construction zones;
- Proposed construction traffic management and control (including haulage routes);
- Proposed peak hour and daily truck movements and access arrangements (swept path analysis);
- Proposed construction hours and construction programming;
- Cumulative construction impacts; and
- Potential impacts and mitigation measures for traffic, cyclists, pedestrians and public transport within the surrounding area resulting from the construction phase

Importantly, traffic management and control will be established for all major roads and interfaces areas across the project site. Control and mitigation measures include traffic controllers, warning lights and pedestrian boom gates at all site access/egress and construction zones to ensure:

- Segregation of the public from truck movements;
- Segregation of construction worker access from construction vehicle access;
- Materials and deliveries don't impede public roadways or footpaths; and
- Coordination of truck movements to and from the site.

During construction Lendlease will be responsible for ensuring surrounding stakeholders, commuters and visitors to North Sydney CBD are well informed of required footpath closures and the alternate travel paths to major destinations provided. Generally, a pedestrian access route will be provided around the southern site along Berry Street and Miller Street where pedestrian/vehicle crossover areas are manned by gates and qualified traffic controllers (refer to **Figure 61**). As there is no parking available on site, subcontractor and construction workers access to the site will be encouraged through the use of existing public transport networks as part of the GTP.

Figure 61 – Indicative Site Construction Zone and Pedestrian Movement



Source: Lendlease

The framework is currently under iterative development in conjunction with the relevant authorities to identify, document and implement the strategy for managing pedestrian vehicular traffic construction movements for the precinct. This document will be updated accordingly as required.

Impacts on Surrounding Area and Public Domain

Site Access

During construction of the OSD, hoardings will be managed by Lendlease. B Class hoardings will be erected to the Miller Street, Berry Street, and MacLaren Street frontages. As stated in the CSMP all hoardings will be design, installed and maintained to ensure segregation of pedestrians, workforce and vehicles. The site perimeter will be secure at all times with no unauthorised access permitted.

Noise and Vibration

Construction noise levels have been modelled and assessed in accordance the relevant Interim Construction Noise Guideline (**ICNG**). The CSMP indicates noise management mitigations including an acoustic shed to be installed to encase the concrete pump in order to comply with the noise criteria at all receivers. Noise levels at the Alexander Apartments will comply with the noise management levels.

Construction noise will marginally exceed noise management levels by up to 1dB for the adjacent child care centre. To offset these impacts, the Construction Noise Management Plan (contained within **Appendix V**) identifies likely noise mitigation measures including:

- Noise barriers for temporary works;
- Notification to surrounding receivers of excessively noisy activities;
- Respite periods for construction works; and
- Noise monitoring during construction.

Construction Waste Management

Lendlease is currently developing a detailed Construction Waste Management Plan that outlines the ongoing maintenance of a clean, clear and safe working environment. Key components which will feed into the construction waste management include the following:

- Rubbish bins will be provided to all works areas and will be emptied / removed regularly;
- Bins will be move via the man and materials hoists or by the crane depending on respective loading locations and the type of materials being removed from the site;
- Crane lifted steel bins will be used to service upper floors structure trades are working;
- Large Otto bins will service lower levels where fit-out and service trades are working;
- Site skips will be centrally located at loading dock zones to ensure an easier pick up by bin contractor;
- Rubbish will be separated at an approved waste management centre;
- Auditable records will be kept of quantities of all materials both recycled and disposed to landfill; and
- Records will be monitored to ensure recycling targets are achieved.

8.1.21. Aeronautical Airspace

An Aeronautical Impact Assessment (**AIA**) has been prepared by Avlaw Consulting (**Appendix Y**) to supplement the Detailed SSD DA for controlled activity approvals. The AIA determines if any aeronautical surfaces relative to the Sydney Airport (Kingsford Smith Sydney Airport) or the helicopter operations at the Royal North Shore Hospital helipad will be adversely affected by the proposed OSD.

The prescribed airspace assessment includes a review of Sydney Airport's available airspace charts through their website which provide the basis for determining the aeronautical impact of any development on the safety, efficiency and regulatory aspects of aircraft operations.

Avlaw has determined that the *Navigation Aids Protected Surfaces*, *High Intensity Light Protected Surfaces* and *Precision Approach Path Indicator system protection surfaces* are not relevant to the proposal as the site is 12.4 kilometres from Sydney Airport and clear of the horizontal limits of these surfaces. However, the *Obstacle Limitation Surfaces (OLS)*, *PANS-OPS*, *Combined Radar Departure Assessment Surfaces* and *Radar Terrain Clearance Chart (RTCC)* require further assessment.

Assessment

The site is situated within the 156 metre AHD Outer Horizontal Surface of the OLS for Sydney Airport. As the OSD and temporary crane activity will penetrate the OLS by 74 metres, both are considered controlled activities and require aeronautical assessment. The proposed maximum building height of RL 230 (to top of roof) inclusive of all plant and ancillary features, and temporary crane activity to a maximum height of RL 305 do not exceed the PANS-OPS surfaces level for instrument flight procedures of 340 metres AHD. Further, the proposal does not penetrate above the RTCC surface of 335 metres AHD or the *Combined Radar Departure Assessment Surfaces* of Sydney Airport.

Helicopter operations at the St Leonards RNSH helipad are covered by standard procedures which require helicopter flights paths to the SE and NW which is clear of the site. The site is clear of the helicopter access lane to the RNSH helipad described as "North Shore Lane" in AIP.

The AIA concludes that the proposed height of the OSD and the temporary crane activity is clear of all aircraft operational surfaces and the controlled activities will not adversely affect safety, efficiency or regularity of operations of aircraft at Sydney Airport or helicopter operations at Royal North Shore Hospital.

8.2. SOCIAL AND ECONOMIC IMPACTS

8.2.1. Crime and Safety

A Crime Prevention Through Environmental Design (CPTED) Report has been prepared by Harris Crime Prevention Services (**Appendix BB**) to address the potential for anti-social and criminal behaviour within the public domain footprint and more broadly, throughout the entire detailed OSD design. Further, the reports mitigation focus and strategy includes assessing and mitigating crime risks by applying CPTED principles.

The current 'crime' context of the North Sydney CBD and pedestrian activity around North Sydney Station is exemplified by the following extract from the CPTED Report:

We are advised that weekend and night-time circulation and activation around the CBD and in the Station walkways is sparse. Night-time pedestrian circulation and activation is mainly confined to eateries, formal dining outlets, club and hotel patronage spread beyond the immediate CBD blocks.

Police and Council advice (Section 6), indicates that most CBD streets and laneways are deserted at night and there are seldom any reports of anti-social or criminal behaviour targeting people or property. Late night alcohol or drug 'fuelled' behaviour leading to or from the Station is relatively minor and, if reported receives prompt police attention. There are no identified crime hot spots'.

A review of crime statistics from the NSW Bureau of Crime and Statistics Research (**BOSCAR**) are indicative of reported criminal activity from 2014 to 2018 in the North Sydney suburb. Relevant trends for North Sydney demonstrate that there is an increase in drug offence related crime (up 28.3% per year), whilst malicious damage to property is decreasing (down 11.3% per year).

The five CPTED principles applied in the assessment of the detailed OSD design are as follows:

1. Territorial definitions – clarity about spatial identity, separation, boundaries and purposes;
2. Natural surveillance – architecture facilitating natural observation and surveillance;
3. Access control – who goes where, when and why;
4. Activity support – the supportive influences of (external) lighting, landscaping and signage; and
5. Target hardening – adding specific and robust architecture and technology.

The assessment of the detailed OSD design against the CPTED principles are outlined in the CPTED Report and are summarised in **Table 21** below. The assessment has been conducted to measure and minimise the level of crime risk associated with the proposal.

Table 21 – CPTED Assessment and Mitigation Measures

CPTED Principle	Assessment / Mitigation Measures
Territorial Definitions	<ul style="list-style-type: none"> • The OSD perimeters are unmistakable. There is no confusion as to available from-perimeter access and circulation options. • Definitions and location of built form, Sydney Metro Station functions and other built form approaches, entrances and exits are clearly delineated and identifiable in the detailed design (as outlined in Architectural Drawings at Appendix D). • Spatial separation of uses combine to maximise safe casual connectivity and site circulation control. • Station and tower approaches, vehicle ingress portals, streetscape design and the public domain legibility, minimise the potential for opportunistic and/or targeted anti-social behaviour or criminal intent. • There is no internal or external form or function confusion. Site and building clarity reinforce safe pedestrian connectivity and circulation.

CPTED Principle	Assessment / Mitigation Measures
Natural Surveillance	<ul style="list-style-type: none"> Architectural Drawings (Appendix D) demonstrate clear sightlines along each street perimeter. Appropriate landscaping and lighting will enable adequate perimeter surveillance along and around Miller, Berry and Denison Streets. Effective natural surveillance is expressed through adequate sightlines in and around the public domain, including the through-site link and from above ground commercial tenancies. More vulnerable areas including the tower, retail entry spaces, car park, public amenities, loading dock and utilities infrastructure will require surveillance technology, signage and lighting to reduce the temptation of criminal behaviour. These will be addressed in future detailed design.
Access Control	<ul style="list-style-type: none"> The nature and use of the site have the potential for one or more of the identified crime risks and risk levels to escalate when access control design or management systems fail. Future design development therefore requires coordinated multi-risk mitigation access control measures. Architectural Drawings (Appendix D) indicate intentional separation of 'unrestricted and 'restricted' circulation throughout the public domain, Sydney Metro Station forecourt and built form spaces.
Activity Support	<ul style="list-style-type: none"> External lighting, landscaping and signage treatments for the external and internal way-finding in the OSD and informal gathering spaces must reflect the vulnerability of high pedestrian traffic to and through those spaces, generated simultaneously by varied circulation and activation purposes. This is to be resolved during detailed design.
Target Hardening	<ul style="list-style-type: none"> Target hardening treatment of the most vulnerable spaces should include high lux level, directional (4000k) lighting, help – alarm points, surveillance camera coverage and anti-graffiti façade coatings. Camera surveillance, public domain furniture design, anti-graffiti façade protections and the location of a high visibility security office, are all practical 'target hardening' mitigation measures recommended for the entire site to strengthen implementation of CPTED principles. Design consideration should be given to preventing hostile vehicle penetration, likely to target the more vulnerable open spaces including the public domain and Station forecourt spaces, basement car park approaches and building façades fronting street edges. Treatment shouldn't be invasive. Future design development plans can specify combination solutions without creating a sense of fortressing.

Overall, Harris Crime Prevention Services confirm that the Victoria Cross Station OSD proposal has considered relevant CPTED principles in the detailed design of the OSD and will implement recommended mitigation measures associated with future design development (i.e. lighting, surveillance cameras). The inclusive multi-space concept will promote 'welcoming and safe' day / night circulation and activation throughout the site for the benefit of all future stakeholders.

Further, the design of the OSD demonstrates compliance with regulation guidelines contained within the EP&A Act, the NSW Police Crime Prevention Check List and the crime prevention policy of the Council.

8.2.2. Retail Strategy

A Retail Strategy has been prepared by Lendlease (**Appendix FF**) to guide the future use and fit-out of the CSSI 'metro box' retail tenancies located within the OSD building podium. The Retail Strategy establishes the retail vision of "an urban experience", key principles and retail opportunities for the site to ensure the future operation of the proposal provides vibrant retail experiences for future Sydney Metro users, commercial workers, North Sydney residents and site visitors.

The key guiding principles of the Strategy include:

- *Move from an office dominated CBD to a city (and village) experience.*
- *Blurring the edges of public and retail spaces.*
- *Multi-level activity is a part of the CBD life, and we will celebrate it.*
- *Convenient when customers want convenience.*
- *Great retail developments can stimulate new experiences and transform an area.*
- *Lease only to the best retailers.*

The applicant has undertaken extensive customer and retail economic research as part of the development process including customer profiling, economic performance and forecasting together with market trend analysis. This ongoing work has informed the development of the retail vision through design of the various retail components, as discussed in the following sub-sections.

Miller Street Plaza Retail

- Street-based food and beverage precinct that trades out and visibly response to the open civic public space of Miller Street.
- The retail mix is intended to offer a choice of food experiences (e.g. casual dining experiences).
- Area to drive evening and weekend customers and to signal the precinct is open and trading.

Miller to Denison Street Through-site Link (Laneway)

- Combination of food and beverage, service and convenience-based retail offer.
- The standalone retail building will be designed to trade throughout the day, into evening and onto weekends. The building will include casual food, bar and supporting services.

Denison Street Concourse

- Some emphasis on convenience-based retailing commensurate with the location on a pedestrian journey to the Sydney Metro Victoria Cross Station platforms.
- Looking to also integrate with other Denison Street retailers to create a seamless movement in the precinct.

Sky Lobby

- A café that provides break-out spaces and small informal meeting spaces, including overflow onto the balconies overlooking Miller Street.

Overall, the Retail Strategy (**Appendix FF**) provides a strong basis to guide future selection and detailed design of individual retail tenancies located within the building podium levels and laneway buildings, thus ensuring the retail vision for Victoria Cross OSD is achieved and the proposal contributes to the wider activation of the North Sydney commercial core.

8.2.3. Employment Generation

The proposal will generate a total of 430-450 FTE construction jobs. The proposal will make a significant contribution to employment within North Sydney CBD, providing for 4,900 FTE ongoing jobs.

8.3. SUITABILITY OF THE SITE

Overall, the Detailed SSD DA proposal is considered suitable for the site for the following reasons:

- The project is consistent with the NSW Government and North Sydney Council policies for the site and surrounding area including the Greater Sydney Region Plan, the North District Plan and recent amendments to the NSLEP 2013.
- The proposal is permissible in the B3 Commercial Core zone pursuant to the NSLEP 2013 and delivers 61,500sqm of additional A-grade commercial floor space within the commercial core of the North Sydney CBD to facilitate employment generation in proximity to future transport infrastructure.
- The proposal maximises integration with the new Sydney Metro Victoria Cross Station, leveraging significant NSW government investment in public transport to the site.
- The OSD tower is compatible with the scale of the surrounding existing and future built form typology which currently comprises a mix of medium to high rise commercial office buildings.
- The proposal contributes to the viability of the North Sydney CBD by providing a landmark development which compliments and strengthens the commercial core.

The proposal is considered suitable for the site as it delivers a world class integrated public transport and commercial development which aligns with relevant strategic and statutory planning policies and significant NSW Government investment in public infrastructure.

8.4. PUBLIC INTEREST

Overall, the Detailed SSD DA proposal is considered to be in the public interest for the following reasons:

- The project supports the concept of the '30 minute' city envisioned within State and Regional strategic planning policy by locating a commercial premise proximate to public transport infrastructure.
- The proposal provides significant employment opportunities in the short-term through construction (430-450 jobs) and in the long-term during ongoing operation (4,900 jobs).
- The detailed design of the proposal supports an activated public domain at both day and night with improved pedestrian connectivity and access to new commercial and retail opportunities (shops, bars, cafes, restaurants etc.).
- The detailed design maintains solar access to nearby Special Areas including Miller Street and Greenwood Plaza Special Areas and Brett Whiteley Plaza. Further, the proposal does not pose any unreasonable impacts to the solar amenity of residential properties outside of the CBD.
- The detailed design respectfully integrates with adjacent significant local heritage items such as the MLC Building and Rag & Famish Hotel.
- The detailed design provides an activated podium and public domain which affords increased natural surveillance to ensure minimised anti-social and criminal behaviour within the locality.

The proposal is in the public interest as it provides significant public benefits for the local and wider community by creating an exceptional experience for future site users and a landmark destination for public transport patrons.

9. ENVIRONMENTAL RISK ASSESSMENT

9.1. RISK ASSESSMENT

The SEARs require an environmental risk analysis to identify potential environmental impacts associated with the proposal.

This analysis comprises a qualitative assessment consistent with the methodology used for the Concept SSD DA and the *Australian Standard AS4369:1999 Risk Management and Environmental Risk Tools*. The level of risk was assessed by considering the potential impacts of the proposed development prior to application of any mitigation or management measures.

The significance of impact is assigned a value between 1 and 5 based on:

- The sensitivity of the environment receiving the impact
- The level of understanding of the type and extent of impact
- The likely response to the environmental consequence of the project.

The manageability of the impact is assigned a value between 1 and 5 based on:

- The complexity of mitigation measures
- The known level of performance of the mitigation measures proposed
- The opportunity for adaptive management

The sum of the significance and manageability values provides an indicative ranking (between 1 and 10) of the potential residual impacts after the mitigation measures are implemented. The risk levels for likely and potential impacts were therefore derived using the following risk matrix.

Table 22 – Risk Matrix

		MANAGEABILITY OF IMPACT				
		A – COMPLEX	B – SUBSTANTIAL	C – ELEMENTARY	D – STANDARD	E – SIMPLE
SIGNIFICANCE	5	High	High	Medium	Low	Very Low
	4	High	High	Medium	Low	Very Low
	3	Medium	Medium	Medium	Low	Very Low
	2	Low	Low	Low	Low	Very Low
	1	Very Low	Very Low	Very Low	Very Low	Very Low

The results of the environmental risk assessment for the Detailed SSD DA, are presented in **Table 23**.

Following the application of each of the mitigation measures, only two residual risks are identified that have a risk profile of 'medium' or greater including:

- Potential flooding of aspects of the CSSI 'metro box' including the public domain; and
- Adverse external noise conditions to surrounding development during construction.

These risks can be appropriately managed through the minimisation and mitigation measures which are proposed as part of this application.

Table 23 – Risk Assessment

Aspect	Potential Impact	Significance	Manageability	Risk Level
Design excellence	The development does not achieve design excellence.	2	D	Low
Overshadowing	Increase in shadows to surrounding public domain, Special Areas, and RE1 Public Recreation zoned land	2	D	Low
	Increase in shadows to surrounding residential properties including Alexander Apartments and to the properties outside the North Sydney Centre	2	D	Low
Privacy	Adverse impact on visual and acoustic privacy of surrounding residential properties	2	D	Low
Traffic and Transport	Increased traffic on local roads (Operational).	2	D	Low
	Increased traffic on local roads (Construction).	2	D	Low
	Additional demand for on street car parking spaces (Operational and Construction).	2	D	Low
Pedestrian Management	Conflict with pedestrian and cycle/vehicle operations (Operational)	2	D	Low
	Conflict with pedestrian and cycle/vehicle operations (Construction)	3	D	Low
Pedestrian Amenity	Adverse impact on the pedestrian wind environment of surrounding streets.	3	D	Low
	Pedestrian volumes and footpath/public domain capacity.	1	B	Low
Reflectivity	Adverse impact on reflectivity of the proposed buildings on public domain, pedestrians and motorists.	3	D	Low
Safety and Security	Adverse impact on the safety and security of local community	2	D	Low
Acoustic Impacts	Adverse noise conditions within the OSD	2	D	Low
	Adverse external noise conditions to surrounding development (Construction)	3	C	Medium
	Adverse external noise conditions to surrounding development (Operation)	2	D	Low
ESD	Irreversible increase in energy usage.	2	D	Low

Aboriginal Heritage	Potential impacts on Aboriginal places of significance (Construction)	1	D	Very Low
Non-Indigenous Heritage	Impact on the significance of heritage items in the vicinity	2	D	Low
Infrastructure Provision	Adequate connection to infrastructure and utilities and adequate infrastructure capacity	2	D	Low
Water, Drainage, Stormwater and Groundwater	Potential flooding of the OSD.	1	E	Very Low
	Potential flooding of aspects of the CSSI 'metro box' including the public domain.	4	B	High
	Adverse impact on the quality of stormwater runoff (Operation)	2	D	Low
	Adverse impact on the quality of stormwater runoff (Construction)	2	D	Low
Contamination	Exposure of contamination or hazardous materials during construction	1	D	Very Low
Air Quality	Dust associated and emissions associated with construction vehicles (Construction)	3	D	Low
Biodiversity	Impacts on street trees	1	D	Very Low
Waste	Waste production (Operation)	2	D	Low
Building Standards	Adequate access for people with a disability	2	D	Low
Airspace	Impact on prescribed and protected airspace	2	D	Low
Social Impact	General disruption to community associated with large scale construction	2	D	Low
	Potential anti-social behaviour associated with operation of the various tenancies	1	D	Very Low
Cumulative Impacts	Cumulative impacts (traffic, noise, dust, etc.) associated with concurrent construction of station and OSD, and other development in the area.	2	D	Low
	Cumulative impacts (traffic, noise emissions, etc.) during concurrent operation of station and OSD, and other development in the area	1	D	Very Low

9.2. MITIGATION MEASURES

A consolidated set of mitigation measures required for each of the environmental and social impacts ...

Table 24 – Mitigation Measures

Item	Potential Impact	Mitigation Measure
Design excellence	The development does not achieve design excellence.	<p>Comply with the requirements of the Design Excellence Strategy.</p> <p>Maintain engagement with the 'Design Architect' through the detailed design of the proposed development.</p>
Overshadowing	Increase in shadows to surrounding public domain, Special Areas, and RE1 Public Recreation zoned land	Proposed development has been designed to ensure no net increase in overshadowing to these protected areas.
	Increase in shadows to surrounding residential properties including Alexander Apartments and to the properties outside the North Sydney Centre	Proposed development has been designed to ensure additional overshadowing to residential properties is not greater than 20% outlined in the ADG.
Privacy	Adverse impact on visual and acoustic privacy of surrounding residential properties	<p>Position of the building core and blank walls for a large portion of the eastern façade, while balancing design objectives to provide an activated building façade.</p> <p>Ensure consistency with ADG building separation guidelines.</p>
Traffic and Transport	Increased traffic on local roads (Operational).	<p>Reducing the number of car parking spaces proposed on site compared to that existing before CSSI demolition works.</p> <p>Implementing a loading dock management plan to schedule services and deliveries to mitigate traffic movements from and to the site.</p>
	Increased traffic on local roads (Construction).	Do not provide parking spaces on site during construction for workers. Implementation of a Green Travel Plan.
	Additional demand for on street car parking spaces (Operational and Construction).	Implementation of a Green Travel Plan.
Pedestrian Management	Conflict with pedestrian and cycle/vehicle operations (Operational)	<p>Cyclists to dismount when traversing the Denison Street arcade.</p> <p>Position of end of trip facilities and bicycle parking lifts away from primary pedestrian access to the Sydney Metro.</p> <p>Position of the proposed driveway away from primary pedestrian desire lines and access to the Sydney Metro.</p>

Item	Potential Impact	Mitigation Measure
	Conflict with pedestrian and cycle/vehicle operations (Construction)	All hoardings will be design, installed and maintained to ensure segregation of pedestrians, workforce and vehicles.
Pedestrian Amenity	Adverse impact on the pedestrian wind environment of surrounding streets.	<p>Proposed development has been designed to ensure built form can comply with the relevant standards for the intended use of each tested area.</p> <p>Landscaping and podium awning design to be delivered in the CSSI Approval must address the requirements of the wind assessment.</p>
	Pedestrian volumes and footpath/public domain capacity.	The southern end of Denison Street operates at a poor LoS. It could achieve a higher LoS if the footway on both sides of the road is available for station access. However, it is understood that the Council have plans to pedestrianise Denison Street which would mitigate this non-compliance.
Reflectivity	Adverse impact on reflectivity of the proposed buildings on public domain, pedestrians and motorists.	Inclusion of mullions and vertical fins on the building façade to mitigate reflectivity.
Safety and Security	Adverse impact on the safety and security of local community	<p>Detailed design to include additional surveillance devices, mechanised access controls, and clear way-finding signage.</p> <p>Design consideration should be given to preventing hostile vehicle penetration.</p> <p>Implementation of camera surveillance, public domain furniture design, anti-graffiti façade protections and the location of a high visibility security office.</p>
Acoustic Impacts	Adverse noise conditions within the OSD	The façade design incorporates a double-glazed system using an 11.52mm laminated glass panel and a 6mm standard glass plane with a 12mm cavity.
	Adverse external noise conditions to surrounding development (Construction)	<p>An acoustic shed to be installed to encase the concrete pump in order to comply with the noise criteria at all receivers. Noise levels at the Alexander Apartments will comply with the noise management levels.</p> <p>Construction noise will marginally exceed noise management levels by up to 1dB for the adjacent child care centre. To offset these impacts, the following noise mitigation measures including:</p> <ul style="list-style-type: none"> • Noise barriers for temporary works; • Notification to surrounding receivers of excessively noisy activities; • Respite periods for construction works; and

Item	Potential Impact	Mitigation Measure
		Noise monitoring during construction.
	Adverse external noise conditions to surrounding development (Operation)	<ul style="list-style-type: none"> Acoustic louvres around the roof top cooling towers; Residential type exhaust silencers on the Level 15 generators; Intake and exhaust attenuators within the generator room ventilation system; and Attenuators to some ventilation fans.
ESD	Irreversible increase in energy usage.	Achievement of relevant standard including: <ul style="list-style-type: none"> 6 Star Green Star Design and As-Built v1.2 rating; Gold WELL Core – Building Standard Rating – v2; and 5.5 Star NABERS Energy rating.
Aboriginal Heritage	Potential impacts on Aboriginal places of significance (Construction)	<ul style="list-style-type: none"> Excavation is approved as per the terms of the CSSI Approval.
Non-Indigenous Heritage	Impact on the significance of heritage items in the vicinity	Proposed development has been designed to comply with building envelope and to be articulated to align with the heights of adjacent heritage items.
Infrastructure Provision	Adequate connection to infrastructure and utilities and adequate infrastructure capacity	Lendlease will undertake detailed enquiries and arrange for final connections and any associated approvals based on the final design where these final connections cannot reasonably be provided as part of the station works under the CSSI Approval.
Water, Drainage, Stormwater and Groundwater	Potential flooding of the OSD.	OSD is positioned significantly higher than the relevant flood planning levels.
	Potential flooding of aspects of the CSSI 'metro box' including the public domain.	The current design proposal considers flood management measures to accompany the Victoria Cross ISD, flood modelling indicates that flood waters surrounding and internal to the development can be managed to mimic or improve existing flood impacts without having a significant impact on adjoining and downstream properties proposed design.
	Adverse impact on the quality of stormwater runoff (Operation)	Given that the significant majority of OSD stormwater runoff from the site comes from roof areas the stormwater discharge will be relatively clean and free from pollutants.
	Adverse impact on the quality of stormwater runoff (Construction)	Temporary groundwater and stormwater collection, treatment and discharge systems and measures required to achieve discharge water quality required by all relevant Authorities and Approvals.

Item	Potential Impact	Mitigation Measure
Contamination	Exposure of contamination or hazardous materials during construction	Excavation and demolition are approved as per the terms of the CSSI Approval.
Air Quality	Dust associated and emissions associated with construction vehicles (Construction)	Dust suppressions and air monitoring shall be implemented at various stages of the project.
Biodiversity	Impacts on street trees	Demolition is approved as per the terms of the CSSI Approval. Proposed new public domain landscaping illustrated at Appendix C is to be provided within the terms of the CSSI Approval.
Waste	Waste production (Operation)	Implementation of the Operational Waste Management Plan.
Building Standards	Adequate access for people with a disability	Complying with the applicable accessibility requirements of the DDA Access to Premises Standards 2010, relevant Australian Standards and requirements of the BCA pertaining to external site linkages, building access, common area access and sanitary facilities.
Airspace	Impact on prescribed and protected airspace	Maintaining proposed maximum building height and crane operation below PANS-OPS surfaces level for instrument flight procedures and receipt of approval under the <i>Airports (Protection of Airspace) Regulations</i> .
Social Impact	General disruption to community associated with large scale construction	A stakeholder management plan will be developed to address the implementation of project specific mitigation and management strategies in order to minimise the potential for negative impacts on the community in and around the construction site.
	Potential anti-social behaviour associated with operation of the various tenancies	Conditions of approval for specific tenancies (or groups of tenancies) to include operational management plans as per the requirements of Sydney Metro.
Cumulative Impacts	Cumulative impacts (traffic, noise, dust, etc.) associated with concurrent construction and operation of the station OSD, and other development in the area.	Implementation and finalisation of the Draft Construction Pedestrian and Traffic Management Plan (CPTMP) (attached to the TTIA at Appendix T) and the Construction and Site Management Plan (CSMP) (Appendix W). Key components include site inspection and record keeping, contingency plans and monitoring programs (e.g. complaints and hazard incident registers). These will be implemented through construction managers, environmental officers and site supervisors.

10. EVALUATION AND CONCLUSION

This EIS has been prepared to accompany a Detailed SSD DA which seeks consent for a commercial mixed-use OSD above the new Sydney Metro Victoria Cross Station. This EIS has comprehensively addressed the general and key issues relating to the proposed development and has included the plan and document requirements identified in the SEARs and in Schedule 2 of the Regulation. This EIS is submitted to the NSW DPIE pursuant to Part 4 of the EP&A Act. The Minister for Planning, or their delegate, is the consent authority for the Detailed SSD DA.

The lodgement of the Detailed SSD DA (SSD-10294) follows the approval of a Concept SSD DA (SSD 17_8874) granted by the Minister for Planning on 18 December 2018. A section 4.55(2) modification application which seeks amendments to the approved building envelope is lodged concurrently with the Detailed SSD DA.

The Detailed SSD DA seeks approval for the detailed design, construction and operation of a new 42 storey commercial office building to be constructed above the new Sydney Metro Victoria Cross Station. The proposed development also includes the use of secondary commercial office floorspace and retail uses within four storeys of the podium and lower levels of the development which are to be constructed in accordance with the terms of the Sydney Metro project approval (**CSSI Approval**).

The proposed commercial floor space and retail uses support the operation and user experience of the Sydney Metro, in addition to providing destination food and drink premises to enliven the site and surrounds during and outside typical business hours. The proposal will generate significant employment growth within the North Sydney CBD and optimise the NSW Government's major investment in public transport infrastructure. The proposal also includes 'The Hub' at Level 2 of the commercial tower for a multi-purpose area envisioned to be a publicly accessible space utilised for community uses, meetings, events, and as a workspace or exhibition space.

The detailed design of the commercial OSD tower has been the subject of design development and testing and ongoing review from various government and independent parties to ensure that it achieves the highest standard in architectural design, while ensuring a functional interface is delivered with the Sydney Metro.

Overall the proposed development sought within the Detailed SSD DA is considered appropriate for the site and warrants approval from the Minister for Planning for the following reasons:

- The proposal contributes to the achievement of the objectives for development within the North Sydney CBD as outlined within the relevant strategic plans and policies.
- The proposal results in an orderly and economic use of the land that leverages significant NSW Government investment in public transport to the site, specifically Sydney Metro.
- The proposal supports a GFA of 61,500sqm which is capable of contributing to an estimated 4,900 workers to contributed to the job targets of the North District Plan.
- The proposal satisfies the applicable state planning policies, and relevant environmental planning instruments that apply to the site:
 - The proposed uses are permitted with consent and meets the objectives of the B3 Commercial Core zone in NSLEP 2013.
 - The proposal does not create a net additional impact to protected public places including 'Special Areas' and land zoned RE1 Public Recreation in NSLEP 2013.
 - The proposal complies with the maximum height control that applies to the site and the development is supported by a clause 4.6 variation to exceed the building height control that applies to the minor, central portion of the site. The clause 4.6 variation provides a comprehensive justification that compliance with this part of the height control is unreasonable and unnecessary in the circumstances of the case as:
 - The objectives of the development standard including maintaining solar access and privacy to existing dwellings, public reserves and streets and encouraging an appropriate scale and density of development which promotes and is compatible with the character of the area, are achieved by the proposed development; and

- There are sufficient environmental planning grounds to support the proposed development, in that the proposal does not result in any non-complying overshadowing to public space, and does not have any unacceptable heritage impacts or unacceptable impacts to the views and privacy of the Alexander Apartments.
- The proposed setback to Miller Street at RL 127 is within the approved envelope under the Concept Approval and a clause 4.6 variation to comply with this standard has already been approved as part of the Concept Approval. Determination of this Detailed SSD DA cannot be inconsistent with the Concept Approval and therefore the Miller Street Setback provisions in Clause 6.4 of the NSLEP 2013 no longer constrains approval of this Detailed SSD DA. Notwithstanding this, the proposal is supported by a clause 4.6 variation to protrude into the Miller Street setback area as prescribed by clause 6.4 of the NSLEP 2013. The clause 4.6 variation provides a comprehensive justification that compliance with this part of the height control is unreasonable and unnecessary in the circumstances of the case as:
 - The objective of the development standard will be achieved as a landscaped setback and character is delivered along Miller Street, notwithstanding the protrusion to the Miller Street setback area above RL 127 (approximately 15 storeys above ground); and
 - There are sufficient environmental planning grounds to support the proposed development, in that the approved Concept SSD DA included a similar request to exceed the setback area, and the amended proposal reduces the extent of the approved non-compliance with the setback area, and the proposed setback does not adversely impact the ability to deliver a significant setback and landscape setting on the eastern side of Miller Street.
- The proposal will have an acceptable level of environmental impact for the following reasons:
 - The proposal has no unacceptable traffic impacts.
 - The proposal is sympathetic to the heritage items in the vicinity of the site, including the MLC Building and the Rag & Famish Hotel.
 - The proposal minimises impacts on neighbouring residential development, in particular through minimising overshadowing to 3% of apartments that will fall below the ADG design criteria (in line with the ADG guidelines), providing blank walls and transition areas on the eastern façade of the building to mitigate privacy impacts, and having regard to view sharing principles.
 - The bulk and scale of the podium has been reduced significantly from the previously approved envelope to improve the bulk and scale of the development from Denison Street and the through-site link.
 - The proposed reduction in the bulk and scale at the podium has removed the need for a full width awning across the through-site link and has improved sunlight access to this link.
 - The proposal provides ground level activation through the positioning of retail tenancies along Miller Street and the through-site link, at both ground level and in the podium levels to increase activation, activity outside typical business hours, and passive surveillance of the public domain.
- The variation to the height of building standard allows for the delivery of large high-rise commercial office floor plates to meet anticipated tenant demand that encourages additional employment opportunities on the site
- The proposed detailed design of the OSD has considered, and is integrated with, the detailed design of the Sydney Metro Victoria Cross Station and its related works including the construction of the development up to the transfer slab and the public domain.
- The proposal satisfies the SEARs as demonstrated in this EIS and accompanying specialist reports.

In view of the above, we submit that the proposal is in the public interest and that the Detailed SSD DA should be approved subject to appropriate conditions.

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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 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)

APPENDIX B QUANTITY SURVEYORS COST REPORT

APPENDIX C SITE SURVEY

APPENDIX D ARCHITECTURAL DRAWINGS

APPENDIX E URBAN DESIGN REPORT

APPENDIX F LANDSCAPE ARCHITECTURE PLANS & REPORT

APPENDIX G SUBDIVISION PLANS

APPENDIX H BIODIVERSITY DEVELOPMENT ASSESSMENT REPORT (BDAR) WAIVER

APPENDIX I CLAUSE 4.6 VARIATION – HEIGHT OF BUILDING

APPENDIX J CLAUSE 4.6 VARIATION – MILLER STREET SPECIAL AREA SETBACK

APPENDIX K ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD) REPORT

APPENDIX L HERITAGE IMPACT STATEMENT

APPENDIX M WIND IMPACT ASSESSMENT

APPENDIX N BCA ASSESSMENT

APPENDIX O DDA ACCESSIBILITY REPORT

APPENDIX P FIRE SAFETY / FIRE ENGINEERING REPORT

APPENDIX Q STORMWATER MANAGEMENT PLAN AND FLOOD REPORT

APPENDIX R WASTE MANAGEMENT PLAN

APPENDIX S ACOUSTIC IMPACT ASSESSMENT

APPENDIX T TRAFFIC AND TRANSPORT IMPACT ASSESSMENT

APPENDIX U DRAFT GREEN TRAVEL PLAN

APPENDIX V VIEW AND VISUAL IMPACT ANALYSIS

APPENDIX W CONSTRUCTION AND SITE MANAGEMENT PLAN

APPENDIX X INFRASTRUCTURE SERVICES AND UTILITIES REPORT

APPENDIX Y AERONAUTICAL IMPACT ASSESSMENT

APPENDIX Z STRUCTURAL ASSESSMENT

APPENDIX AA CPTED ASSESSMENT

APPENDIX BB PRE-CONSULTATION REPORT

APPENDIX CC ENDORSED DESIGN EXCELLENCE STRATEGY

APPENDIX DD REFLECTIVITY ASSESSMENT

APPENDIX EE RETAIL STRATEGY REPORT

APPENDIX FF RAIL CORRIDOR IMPACT ASSESSMENT

APPENDIX GG HERITAGE INTERPRETATION STRATEGY

**APPENDIX HH DRP AND DEEP ENDORSEMENT SCHEDULE
MINUTES**

