



Sydney Metro City & Southwest: Crows Nest Over Station Development

Accessibility and DDA Impact Assessment Report

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Executive Summary

The following report is a review of the indicative OSD design prepared by Sydney Metro and submitted with the Concept State Significant Development Application (concept SSD Application) for the Over Station development (OSD) proposed above the Crows Nest metro station. It provides a summary of the compliance strategy of the proposed works highlighting the key principles of accessibility as well as the technical requirements of future development to ensure the public, staff and visitors, have equitable and dignified use.

The report is prepared in relation to the formation of four buildings, two of which share a common podium, above the proposed Sydney Metro Station of Crows Nest in the inner Sydney suburb of the same name.

Compliance Summary

As members of the Access Consultants Association of Australia (ACAA), we have reviewed the indicative OSD design prepared by Sydney Metro (refer appendix A) for compliance with the current building assessment provisions, including (but not limited to) the following:

- *Disability Discrimination Act (DDA) 1992.*
- *Building Code of Australia 2016, Amendment One 2018, and referenced Australian Standards; and*
- *The Disability Access to Premises (Buildings) Standard 2010.*

Subject to addressing the actions identified, McKenzie Group Consulting confirm that the concept proposal project documentation provides appropriate accessibility and is capable of complying with the BCA & Disability (Access to Premises – Buildings) Standards 2010 and the spirit and intent of the DDA.

Performance Based Solutions

The assessment of the design documentation is at an early concept phase and accordingly no specific elements that could be enhanced through the provision of accessibility performance solutions are noted.

1.0 Introduction

1.1 Purpose of this report

This report supports a concept State Significant Development application (concept SSD Application) submitted to the Department of Planning and Environment (DPE) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The concept SSD Application is made under Section 4.22 of the EP&A Act.

Sydney Metro is seeking to secure concept approval for a mixed use development comprising four buildings above the Crows Nest Station, otherwise known as the over station development (OSD). The concept SSD Application seeks consent for building envelopes and land uses, maximum building heights, maximum gross floor areas, pedestrian and vehicular access, circulation arrangements and associated car parking and the strategies and design parameters for the future detailed design of the development.

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

As the development is within a rail corridor, is associated with railway infrastructure and is for commercial premises and residential accommodation with a Capital Investment Value of more than \$30 million, the project is identified as State Significant Development (SSD) pursuant to Schedule 1, 19(2)(a) of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). The development is therefore, State significant development for the purposes of Section 4.36 of the EP&A Act.

This report has been prepared to specifically respond to the Secretary's Environmental Assessment Requirements (SEARs) issued for the concept SSD Application on 26 September 2018 which states that the Environmental Impact Statement (EIS) is to address the following requirements:

Reference	SEARs Requirement	Where Addressed in Report
Section 5	Assessment of the Built Form and Urban Design to encompass accessibility considerations.	The report covers off all sections of the built form.
Section 6	Seek to provide design excellence through elements such as ensuring enhanced equity in building usage and circulation.	Section 6.15.
Section 8	The buildings amenity is to achieve equity in use.	The report covers off all sections of the buildings amenity.

Based on the above requirements, this report provides a summary of the compliance strategy for the proposal highlighting the key principles of accessibility as well as the technical requirements for the future development to ensure the public, staff, residents and visitors have equitable and dignified use.

1.2 Overview of Sydney Metro in its context

Sydney Metro is Australia's biggest public transport project. A new standalone metro railway system, this 21st century network will deliver 31 metro stations and 66km of new metro rail for Australia's biggest city — revolutionising the way Sydney travels. Services start in the first half of 2019 on Australia's first fully-automated railway.

Sydney Metro was identified in *Sydney's Rail Future*, as an integral component of the *NSW Long Term Transport Master Plan*, a plan to transform and modernise Sydney's rail network so it can grow with the city's population and meet the future needs of customers. In early 2018, *the Future Transport Strategy 2056* was released as an update to *the NSW Long Term Transport Master Plan* and *Sydney's Rail Future*. Sydney Metro City & Southwest is identified as a committed initiative in the *Future Transport Strategy 2056*.

Sydney Metro is comprised of three projects, as illustrated in **Figure 1**:

- **Sydney Metro Northwest** — formerly the 36km North West Rail Link. This \$8.3 billion project is now under construction and will open in the first half of 2019 with a metro train every four minutes in the peak.
- **Sydney Metro City & Southwest** — a new 30km metro line extending the new metro network from the end of Sydney Metro Northwest at Chatswood, under Sydney Harbour, through the CBD and south west to Bankstown. It is due to open in 2024 with an ultimate capacity to run a metro train every two minutes each way through the centre of Sydney.
- **Sydney Metro West** — a new underground railway connecting the Parramatta and Sydney central business districts. This once-in-a-century infrastructure investment will double the rail capacity of the Parramatta to Sydney CBD corridor and will establish future capacity for Sydney's fast growing west. Sydney Metro West will serve five key precincts at Westmead, Parramatta, Sydney Olympic Park, The Bays and the Sydney CBD. The project will also provide an interchange with the T1 Northern Line to allow faster connections for customers from the Central Coast and Sydney's north to Parramatta and the Sydney CBD.

Sydney's new metro, together with signalling and infrastructure upgrades across the existing Sydney suburban rail network, will increase the capacity of train services entering the Sydney CBD — from about 120 an hour currently to up to 200 services beyond 2024. That's an increase of up to 60 per cent capacity across the network to meet demand.

Sydney Metro City & Southwest includes the construction and operation of a new metro rail line from Chatswood, under Sydney Harbour through Sydney's CBD to Sydenham and on to Bankstown through the conversion of the existing line to metro standards.

The project also involves the delivery of six (6) new metro stations, including at Crows Nest, together with new underground platforms at Central. Once completed, Sydney Metro will have the ultimate capacity for a train every two minutes through the CBD in each direction - a level of service never seen before in Sydney.



Figure 1: Sydney Metro alignment map

On 9 January 2017, the Minister for Planning (the Minister) approved the Sydney Metro City & Southwest - Chatswood to Sydenham application lodged by TfNSW as a Critical State Significant Infrastructure project (reference SSI 15_7400), hereafter referred to as the CSSI Approval.

The CSSI Approval includes all physical work required to construct the CSSI, including the demolition of existing buildings and structures on each site. Importantly, the CSSI Approval also includes provision for the construction of below and above ground structures and other components of the future OSD (including building infrastructure and space for future lift cores, plant rooms, access, parking and building services, as relevant to each site). The

rationale for this delivery approach, as identified within the CSSI application is to enable the OSD to be more efficiently built and appropriately integrated into the metro station structure.

The EIS for the Chatswood to Sydenham alignment of the City & Southwest project identified that the OSD would be subject to a separate assessment process.

Since the CSSI Approval was issued, Sydney Metro has lodged five modification applications to amend the CSSI Approval as outlined below:

- **Modification 1** - Victoria Cross and Artarmon Substation which involves the relocation of the Victoria Cross northern services building from 194-196A Miller Street to 50 McLaren Street together with the inclusion of a new station entrance at this location referred to as Victoria Cross North. The modification also involves the relocation of the substation at Artarmon from Butchers Lane to 98 – 104 Reserve Road. This modification application was approved on 18 October 2017.
- **Modification 2** - Central Walk which involves additional works at Central Railway Station including construction of a new eastern concourse, a new eastern entry, and upgrades to suburban platforms. This modification application was approved on 21 December 2017.
- **Modification 3** - Martin Place Station which involves changes to the Sydney Metro Martin Place Station to align with the Unsolicited Proposal by Macquarie Group Limited (Macquarie) for the development of the station precinct. The proposed modification involves a larger reconfigured station layout, provision of a new unpaid concourse link and retention of the existing MLC pedestrian link and works to connect into the Sydney Metro Martin Place Station. It is noted that if the Macquarie proposal does not proceed, the original station design remains approved. This modification application was approved on 22 March 2018.
- **Modification 4** - Sydenham Station and Sydney Metro Trains Facility South which incorporated Sydenham Station and precinct works, the Sydney Metro Trains Facility South, works to Sydney Water's Sydenham Pit and Drainage Pumping Station and ancillary infrastructure and track and signalling works into the approved project. This modification application was approved on 13 December 2017.
- **Modification 5** - Blues Point acoustic shed modification which involves the installation of a temporary acoustic shed at Blues Point construction site and retrieval of all parts of the tunnel boring machines driven from the Chatswood dive site and Barangaroo through the shaft at the Blues Point temporary site. This modification application was approved on 2 November 2018.

The CSSI Approval as modified allows for all works to deliver Sydney Metro between Chatswood and Sydenham Stations and also includes upgrade of Sydenham Station.

The remainder of the City & Southwest alignment (Sydenham to Bankstown) proposes the conversion of the existing heavy rail line from west of Sydenham Station to Bankstown to

metro standards. This part of the project, referred to as the Sydenham to Bankstown upgrade, is the subject of a separate CSSI Application (Application No. SSI 17_8256) for which an EIS was exhibited between September and November 2017, and a Submissions and Preferred Infrastructure Report was exhibited in June and July 2018. This application is currently being assessed by DPE.

1.3 Planning relationship between Crows Nest Station and the OSD

While Crows Nest Station and the OSD will form an Integrated Station Development, the planning pathways defined under the *Environmental Planning & Assessment Act 1979* require separate approval for each component of the development. In this regard, the approved station works (CSSI Approval) are subject to the provisions of Part 5.1 of the EP&A Act (now referred to as Division 5.2) and the OSD component is subject to the provisions of Part 4 of the EP&A Act.

For clarity, the approved station works under the CSSI Approval included the construction of below and above ground structures necessary for delivering the station and also enabling construction of the integrated OSD. This includes but is not limited to:

- demolition of existing development
- excavation
- integrated station and OSD structure (including concourse and platforms)
- lobbies
- retail spaces within the station building
- public domain improvements
- pedestrian through-site link
- access arrangements including vertical transport such as escalators and lifts
- space provisioning and service elements necessary to enable the future development of the OSD, such as lift cores, plant rooms, access, parking, retail, utilities connections and building services.

The vertical extent of the approved station works above ground level is defined by the 'transfer level' level, above which would sit the OSD. This delineation is illustrated in **Figure 2**.

The CSSI Approval also establishes the general concept for the ground plane of Crows Nest Station including access strategies for commuters, pedestrians, workers, visitors and residents.

Since the issue of the CSSI Approval, Sydney Metro has undertaken sufficient design work to determine the space planning and general layout for the station and identification of those spaces within the station area that would be available for the OSD. In addition, design work has been undertaken to determine the technical requirements for the structural integration of the OSD with the station. This level of design work has informed the concept proposal for the Crows Nest OSD. It is noted that ongoing design development of the works to be delivered

under the CSSI Approval would continue with a view to developing an Interchange Access Plan (IAP) and Station Design Precinct Plan (SDPP) for Crows Nest Station to satisfy Conditions E92 and E101 of the CSSI Approval.

All public domain improvement works around the site would be delivered as part of the CSSI Approval.

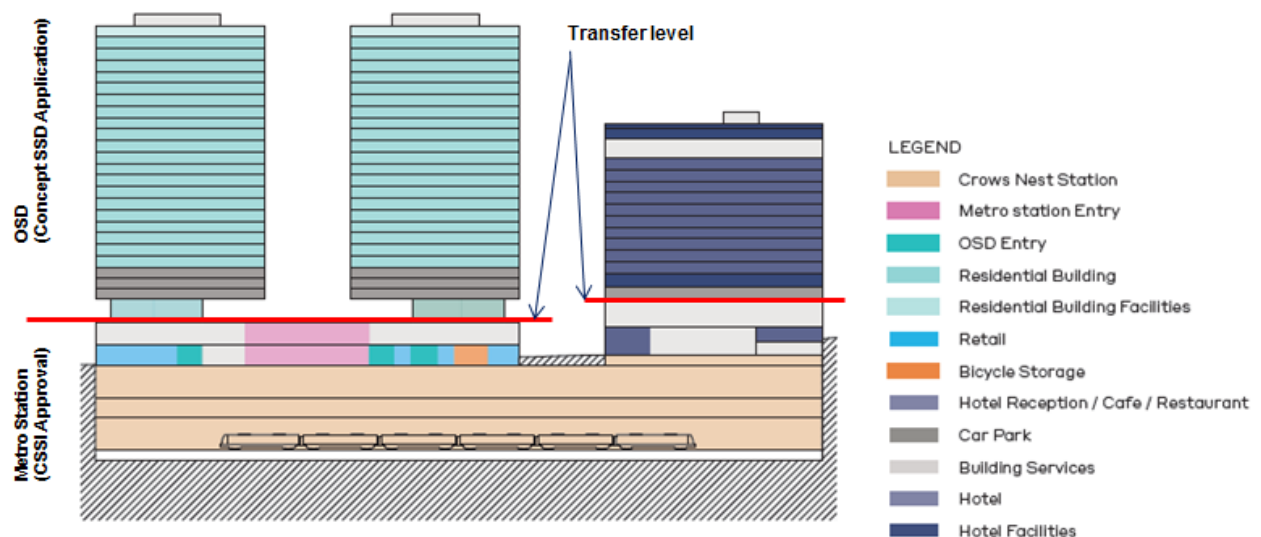


Figure 2: Delineation between the Metro station and OSD (based on indicative OSD design)

1.4 The strategic planning context

DPE is currently undertaking strategic planning investigations into revitalising the area surrounding St Leonards railway station and the metro station at Crows Nest. In August 2017, DPE released the *St Leonards and Crows Nest Station Precinct Interim Statement* and in October 2018 DPE released the *St Leonards and Crows Nest 2036 Draft Plan* (2036 Draft Plan) and supporting documents which detail recommended changes to land use controls in the precinct. These documents recommend new developments be centred around the Pacific Highway corridor and the Crows Nest Station while protecting the amenity of Willoughby Road.

In October 2018, DPE also placed on public exhibition the *Crows Nest Sydney Metro Site Rezoning Proposal* (Planning Proposal). The Planning Proposal outlines the State led rezoning of the subject site, on the basis that the current planning controls in the *North Sydney Local Environmental Plan 2013* do not reflect the opportunities for improved accessibility associated with the new metro station enabling people to live, work and spend time close to public transport. This concept SSD Application is aligned with the planning controls proposed in the Planning Proposal.

1.5 The site

Crows Nest Station precinct is located between the Pacific Highway and Clarke Street (eastern side of the Pacific Highway) and Oxley Street and south of Hume Street, Crows Nest (Figure 3).

The site is located within the North Sydney Local Government Area.

The Crows Nest Station precinct is divided into three separate sites as illustrated in Figure 4 and described below:

- **Site A:** Six lots in the block bound by the Pacific Highway, Hume Street, Oxley Street and Clarke Lane (497-521 Pacific Highway, Crows Nest)
- **Site B:** Three lots on the southern corner of Hume Street and Pacific Highway (477-495 Pacific Highway, Crows Nest)
- **Site C:** One lot on the north-western corner of Hume Street and Clarke Street (14 Clarke Street, Crows Nest).

Sites A, B and C have a combined site area of 6,356 square metres.

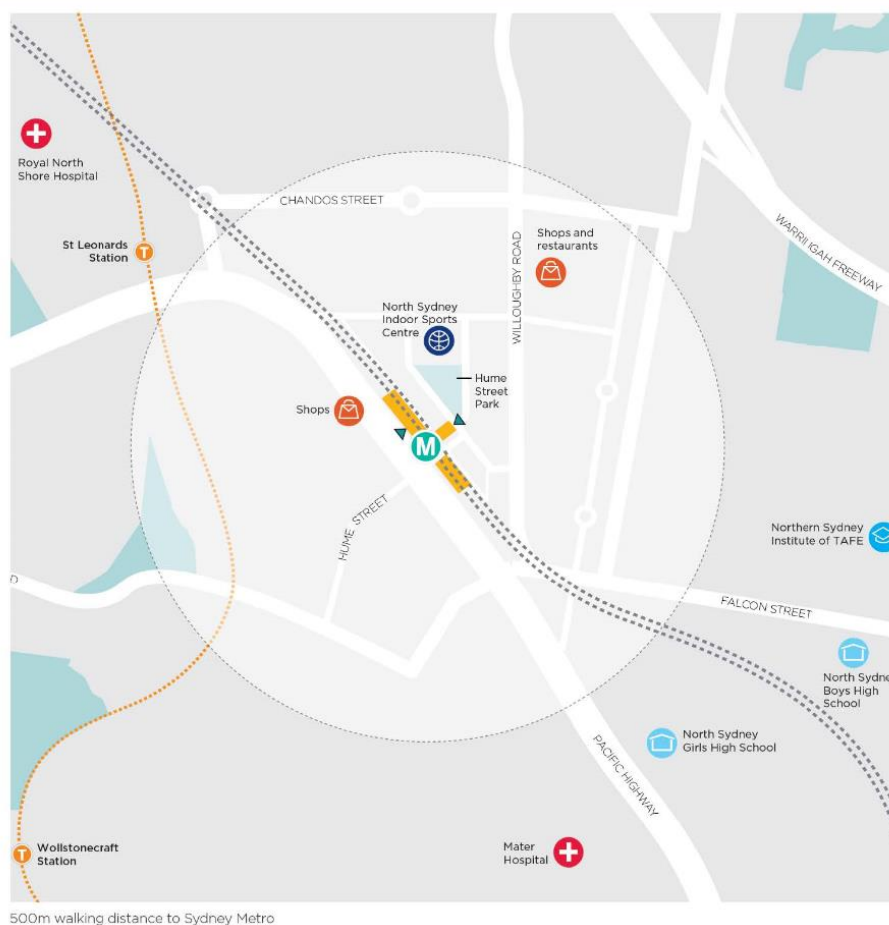


Figure 3: Crows Nest Station location plan



Figure 4: The subject site

The site comprises the following properties:

- **Site A:**
 - 497 Pacific Highway (Lot 2 in DP 575046)
 - 501 Pacific Highway (Lot 1 in DP 575046)
 - 503-505 Pacific Highway (Lot 3 in DP 655677)
 - 507-509 Pacific Highway (Lot 4 in DP 1096359)
 - 511-519 Pacific Highway (SP 71539)
 - 521-543 Pacific Highway (Lot A and Lot B in DP 374468)
- **Site B:**
 - 477 Pacific Highway (Lot 100 in DP 747672)
 - 479 Pacific Highway (Lot 101 in DP 747672)
 - 491-495 Pacific Highway (Lot 100 in DP 442804)
- **Site C:**
 - 14 Clarke Street (Lot 1 in SP 52547)

1.6 Overview of the proposed development

This concept SSD Application comprises the first stage in the Crows Nest OSD project. It will be followed by a detailed SSD Application for the design and construction of the OSD to be lodged by the successful contractor who is awarded the contract to deliver the Integrated Station Development.

This concept SSD Application seeks approval for the planning and development framework and strategies to inform the future detailed design of the Crows Nest OSD.

The concept SSD Application specifically seeks approval for the following:

- maximum building envelopes for Sites A, B and C, including street wall heights and setbacks as illustrated in the plans prepared by Foster + Partners for Sydney Metro
- maximum building heights:
 - **Site A:** RL 183 metres or equivalent of 27 storeys (includes two station levels and conceptual OSD space in the podium approved under the CSSI Approval)
 - **Site B:** RL 155 metres or equivalent of 17 storeys (includes two station levels and conceptual OSD space approved under the CSSI Approval)
 - **Site C:** RL 127 metres or 8 storeys (includes two station levels and conceptual OSD space approved under the CSSI Approval)

Note 1: the maximum building heights defined above are measured to the top of the roof slab and exclude building parapets which will be resolved as part of future detailed SSD Application(s)

 - maximum height for a building services zone on top of each building to accommodate lift overruns, rooftop plant and services:
 - **Site A:** RL 188 or 5 metres
 - **Site B:** RL 158 or 3 metres
 - **Site C:** RL 132 or 5 metres

Note 1: the use of the space within the building services zone is restricted to non-habitable floor space.

Note 2: for the purposes of the concept SSD Application, the maximum height of the building envelope does not make provision for the following items, which will be resolved as part of the future detailed SSD Application(s):

 - communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like, which are excluded from the calculation of building height pursuant to the standard definition in NSLEP 2013
 - architectural roof features, which are subject to compliance with the provisions in Clause 5.6 of NSLEP 2013, and may exceed the maximum building height, subject to development consent.
- maximum gross floor area (GFA) of 55,400sqm for the OSD comprising the following based on the proposed land uses:
 - **Site A:** Residential accommodation - maximum 37,500 square metres (approximately 350 apartments)
 - **Site B:** Hotel / tourist accommodation and associated conference facilities or commercial office premises GFA - maximum of 15,200 square metres (approximately 250 hotel rooms)
 - **Site C:** Commercial office premises GFA - maximum of 2,700 square metres
 - **Site A or C:** social infrastructure GFA inclusive of the GFA figures nominated above for each site, with provision optional as follows:
 - Site A: podium rooftop (approximately 2,700 square metres)

- Site C: three floors and rooftop (approximately 1,400 square metres)

Note 1: GFA figures exclude GFA attributed to the station and station retail space approved under the CSSI Approval

- a minimum non-residential floor space ratio (FSR) for the OSD across combined Sites A, B and C of 2.81:1 or the equivalent of 17,900 square metres
- the use of approximate conceptual areas associated with the OSD which have been provisioned for in the Crows Nest station box (CSSI Approval) including areas above ground level (i.e. OSD lobbies and associated spaces)
- a maximum of 150 car parking spaces on Sites A and B associated with the proposed commercial, hotel and residential uses
- loading, vehicular and pedestrian access arrangements
- strategies for utilities and services provision
- strategies for managing stormwater and drainage
- a strategy for the achievement of ecological sustainable development
- a public art strategy
- indicative signage zones
- a design excellence framework
- the future subdivision of parts of the OSD footprint, if required.

As this is a staged development pursuant to section 4.22 of the EP&A Act, future approval would be sought for the detailed design and construction of the OSD.

The proposed location of the buildings on the site is illustrated in the location plan provided at **Figure 5**.

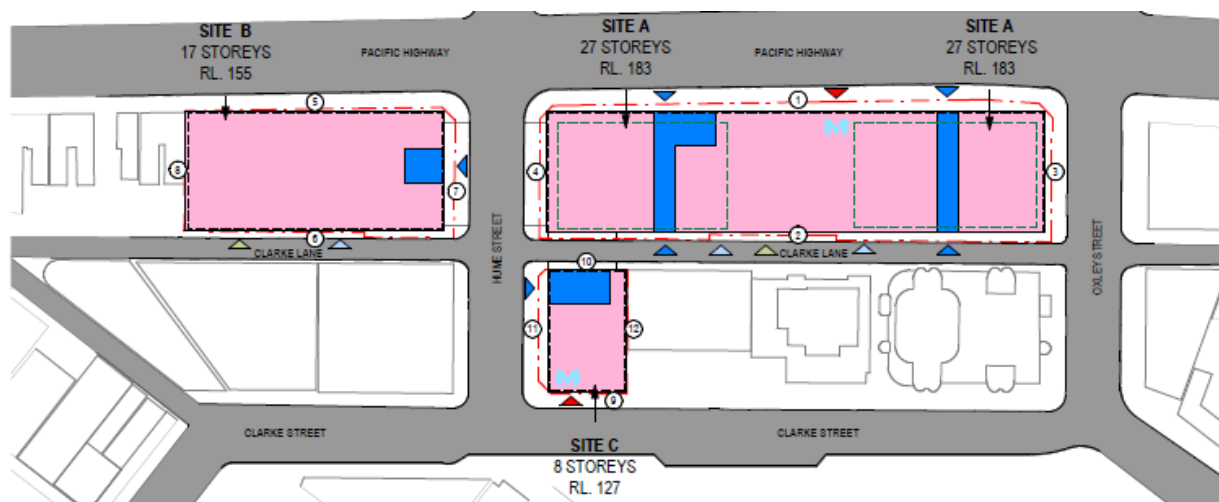


Figure 5: Proposed location of buildings on the

The total GFA for the integrated station development, including the station GFA (i.e. retail, station circulation and associated facilities) and the OSD GFA is 60,400 square metres, equivalent to a floor space ratio (FSR) of 9.5:1.

The concept proposal includes opportunities for community uses in the development on either Site A or Site C. This space has the potential to be used for a range of uses including community facilities, child care centre, recreational area/s, library, co-working space, which can take advantage of the sites accessibility above the metro station.

Through design development post the CSSI Approval, pedestrian access to the metro station is proposed from the Pacific Highway and from Clarke Street, opposite the Hume Street Park. Vehicular access to the site including separate access to the loading docks and parking is proposed from Clarke Lane.

Public domain works around the site would be delivered as part of the CSSI Approval. Notwithstanding, the OSD will be appropriately designed to complement the station and activate the public domain. Provision for retail tenancies to activate the public domain are included in the ground floor of Sites A, B and C, as part of the CSSI Approval. Future detailed development applications will seek approval for the fitout and specific use of this retail space.

Drawings illustrating the proposed building envelopes are provided in Figures 6A and 6B. The concept SSD Application includes an indicative design for the OSD to demonstrate one potential design solution within the proposed building envelope (refer to Figure 7).

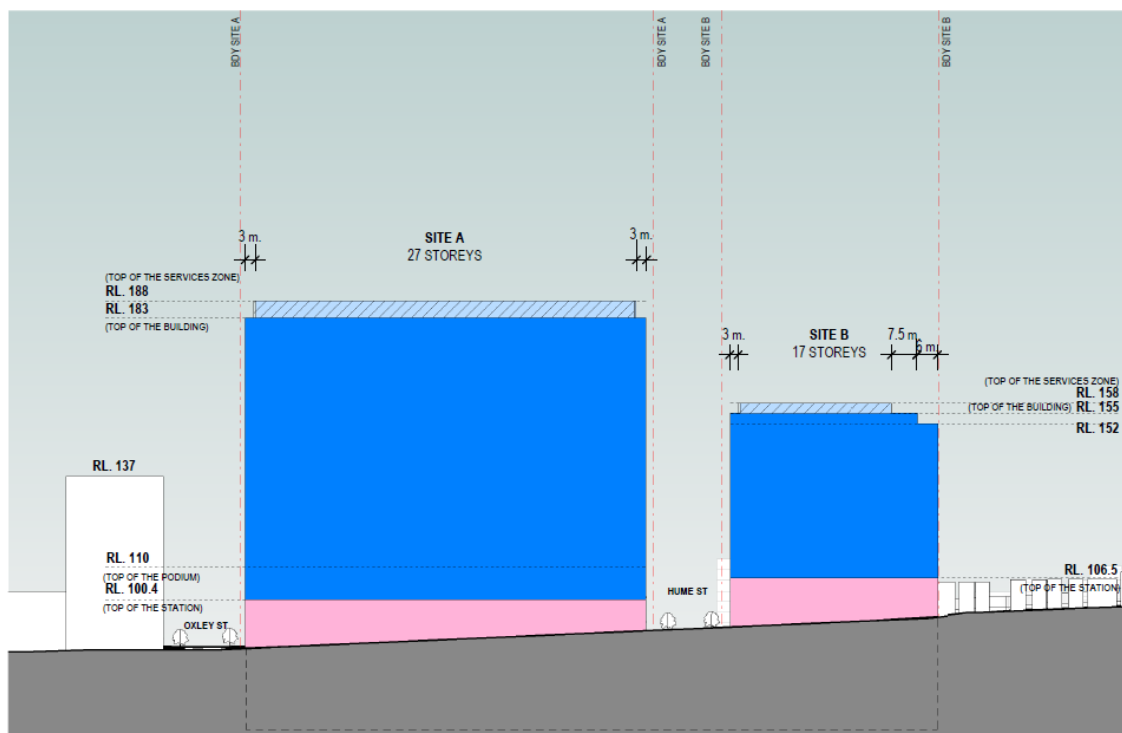


Figure 6A: Proposed Crows Nest OSD building envelopes – west elevation (Pacific Highway)

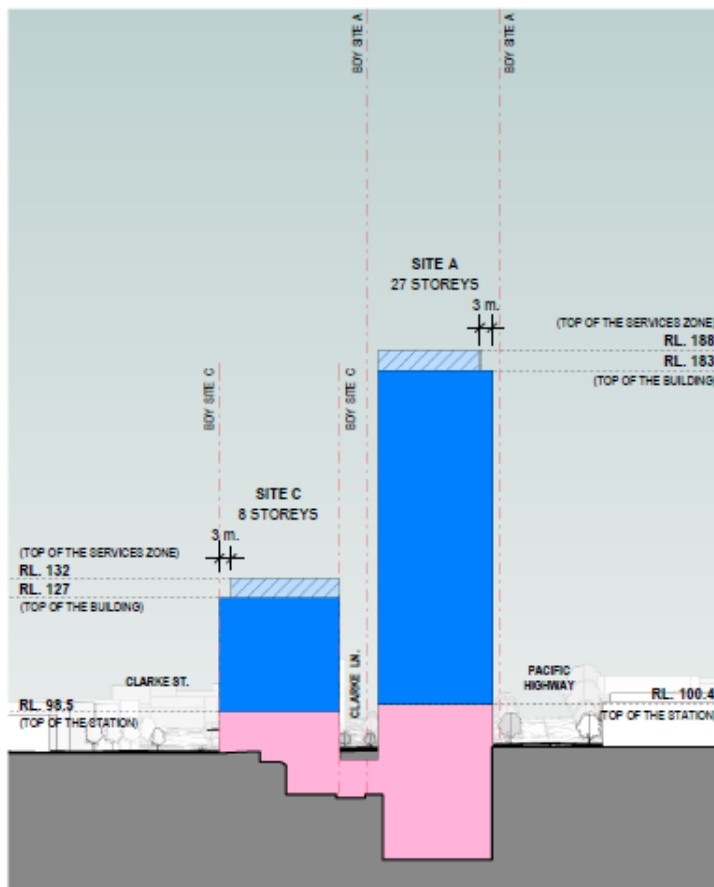


Figure 6B: Proposed Crows Nest OSD building envelopes – cross section through the site (east-west)



Figure 7: Crows Nest OSD indicative design

2.0 Scope of assessment

This report documents the accessibility assessment that has been undertaken for the OSD indicative design prepared by Sydney Metro for the OSD at Crows Nest.

This report provides a compliance overview of the project with respect to achieving compliance with the *Building Code of Australia* (BCA) and the *Disability Discrimination Act 1992* (and Disability Standards) (DDA), within the project scope. Detailed design documentation and compliance assessment will be undertaken as the design develops. The assessment is provided in two parts, the first part relates to areas of compliance that are mandatory under the BCA, with the second part relating to advisory recommendations/enhancements that could be adopted to improve building functionality, accessibility and the safety of occupants.

2.1 Report Objective

A key objective of the access requirements of the Premises Standards and NCC is to provide, as far as is reasonable, all people with safe, equitable and dignified access to a building and the services and facilities within that building.

A key objective of this report is to provide assessment commentary to assist the design process to provide equivalent access to the degree necessary to facilities to suit visitors, residents and workers with a range of disabilities in an equitable and dignified manner.

2.2 Project Description

The proposed works include the formation of four new buildings split over three sites noted to comprise the following:

2.2.1 Site A

- Level Two – Podium Deck with common landscaped space; Child Care Centre; Community Centre;
- Level Three to Five – Residential car parking provision;
- Level Six to Twenty Seven – Class 2 Residential Sole Occupancy Units;

2.2.2 Site B

- Level Two – Hotel car parking provision;
- Level Three – Hotel business centre;
- Levels Four to Thirteen – Hotel suites;
- Level Fourteen – Hotel Plant provision;

- Level 15 and Sixteen – Hotel common space, encompassing Roof Terrace, Pool, gym and restaurant space;

2.2.3 Site C

- Level One – Crows Nest Station;
- Level Two to Six – Commercial Space (2,700 square metres of commercial floor space)

Site A is noted to cover several lots running in a northwest to south-east direction between Oxley Street and Hume Street, with the principal entrance to the station and OSD noted to be predominantly from the Pacific Highway.

Site B is noted to have a similar orientation, with its principal entrance off Hume Street.

Site C is one lot on the north-western corner of Hume Street and Clarke Street and also includes a secondary entry to the station.

3.0 Relevant Standards and Guidelines

3.1 Legislative Requirements

The legislative requirements for this project comprises both Federal and State legislation, as detailed below:

Federal

The Disability Discrimination Act 1992 (DDA -) is Federal Government legislation enacted in 1993 that seeks to ensure all new building infrastructure, refurbishments, services and transport projects provide functional and equitable accessibility. The DDA is a complaints based legislation, which is administered by the Australian Human Rights Commission (AHRC). For any built environment the key requirement of the DDA is to ensure functionality, equality and dignity of people with disabilities, their companions, family and carer givers.

The DDA utilises statutory instruments known as Disability Standards to provide detailed requirements. The Disability Standards are: *Disability (Access to Premises – Buildings) Standards 2010*, *Disability Standards for Education 2005* and *the Disability Standards for Accessible Public Transport 2002*. These Disability Standards draw extensively on technical provisions in the Australian Standard 1428 series details technical requirements related to design for access and mobility.

State

The Building Code of Australia has adopted key accessibility and DDA legislation into the 2011 and subsequent BCA. In particular adherence to the *Access to Premises Standard (2010)* (APS); AS1428.1 2009; AS1428.4.1 2009 and AS2890.6 2009 has become mandatory. This means that compliance with the relevant sections of the BCA, ensures compliance with the relevant 'Premises' component of the DDA.

However, compliance with the BCA alone does not necessarily mean compliance with the DDA if the elements of equality, dignity and functionality remain compromised within an environment. The building owner/occupier should therefore ensure that their policies, practices and procedures promote equality in all employment, education and services provided, within their built environment.

3.2 Referenced Legislation and Standards

The review of the project has been undertaken against the following legislation;

- *Disability Discrimination Act 1992 (DDA)*.
- *Disability (Access to Premises – Buildings) Standards 2010 (DAPS 2010)*.
- *Disability Standards for Education 2005*
- *Disability Standards for Accessible Public Transport 2002*

- *Building Code of Australia (BCA)* and BCA referenced standards including:
 - i. AS1428.1 2009 Part 1: General Requirements for access – new building work
 - ii. AS1428.2 1992 Part 2: Enhanced & additional requirements – Buildings & facilities
 - iii. AS1428.4.1 2009 Part 4.1: Means to assist the orientation of people with vision impairment – TGSi
 - iv. AS2890.1 2004 Part 1: Off-street car parking
 - v. AS2890.6 2009 Part 6: Off-street parking for people with disabilities
 - vi. AS1735.12 1999 Lift facilities for people with disabilities.
- AS4299 - 1995 Adaptable Housing
- NSW: North Sydney Development Control Plan 2013
- NSW: *State Environment Planning Policy (SEPP) Housing for Seniors or People with a Disability 2004*.

4.0 Assessment Criteria

4.1 Exemptions and Performance Based Solutions

Based on the use of some areas within a building, it is reasonable to not provide access to some spaces where it is deemed inappropriate because of the required duties to be carried out in the space or if the area poses as a health or safety risk for people with a disability. These areas include:

- an area where access would be inappropriate because of the particular purpose for which the area is used
- an area that would pose a health or safety risk for people with a disability
- any path of travel providing access only to an area exempted by (a) or (b)
- plant including plenums, service routes, equipment rooms for computers or data (including persons with ambulant aids)
- pathways used to gain access exempted plant spaces only
- cleaner's rooms used only by cleaners
- rooms used only by central staff associated with linen, waste and supply
- production parts of the kitchen and servery rooms used only by central kitchen staff
- store rooms where the door is left open while accessing them- only to have required door clearance on the outside.

4.2 Exemptions

As highlighted earlier, no performance based solution items have been identified at this stage of design. These may be considered at future detailed SSD Application stage and as the project is refined for construction.

5.0 Assessment

The report has been prepared based on a review of the drawings listed in Appendix A, Consultants Drawings prepared by Sydney Metro.

The compliance assessment is set out in tabular format. The comment/issue identifies the item for discussion, followed by the Accessibility Requirement and the Action required to be undertaken to meet compliance. BCA Compliance refers to meeting the minimum mandatory compliance of the BCA and the Premises Standard component of the DDA.

In addition, the report makes recommendations on improving the accessibility design outside BCA parameters and the Access to Premises Standards. These 'DDA' recommendations relate to best practice design for accessible environments. These recommendations, in conjunction with the owner/occupier's policies, practices and procedures will maximise DDA compliance and meet the spirit and intent of the DDA.

5.1 General Building Access Requirements (BCA D3.1)

Buildings and parts of buildings must be accessible in accordance with Table 3.1 of the BCA. This component will be addressed as part of the separate Crows Nest Station Development itself.

A continuous accessible path of travel is to be provided within the OSD as follows:

Part Of Building	Accessibility Requirements
Class 2 – Residential	<ul style="list-style-type: none"> From the pedestrian entrance to the entrance doorway of each sole-occupancy unit (SOU). To and within not less than 1 type of common room used by residents i.e. laundry, gym, swimming pool etc.
Class 3 – Residential (Hotel)	<ul style="list-style-type: none"> Not more than 2 accessible SOUs may be located adjacent each other; Where more than 2 accessible SOUs are required, they must be representative of the range of rooms available; From the pedestrian entrance to the entrance doorway of each sole-occupancy unit (SOU); To and within not less than 1 type of common room used by residents i.e. laundry, gym, swimming pool etc.
Class 5 – Office/Administration ; Class 9b – Public Realm/Function Areas	To and within all areas normally used by the occupants.
Class 7a – Car parking	To and within any level containing accessible car parking spaces.
Class 10b – Swimming Pools	To and within a swimming pool with a total perimeter greater than 40m.

5.2 Car Parking (BCA D3.5, AS1428.1, AS/NZ 2890.6)

Item	Comment	Accessibility Requirement	
1	Number of Carparking Spaces It is noted a provision for accessible car parking spaces have been detailed at this stage of the design. As design develops ensure provision of accessible parking numbers is in accordance with the BCA.	In accordance with Table D3.5 of the BCA, accessible carparking is required to be provided as follows. <ul style="list-style-type: none"> – Class 2 – No BCA requirement – Class 3 & 5 part - 1 space per 100 – Class 6 and 9b – 1 space per 50. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Detailed assessment required as design develops.		
2	Dimensions Accessible car parking bays and shared zones shall be 2400mm wide x 5400mm long in accordance with Clause AS/NZS 2890.6-2009.		
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
3	Headroom Confirm existing conditions and vertical clearances to the carpark.	In accordance with the current requirements of AS1428.1, the vertical clearance along the vehicular path to a carpark must achieve a minimum of 2200mm and 2500mm above the PWD space and shared zone.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Item	Comment	Accessibility Requirement	
4	Access to Building	The approach from the accessible carparking bays to the main entrance/s of the building to be accessible: <ul style="list-style-type: none"> – Located as near as possible to the main entrances – Must be step-free – Include kerb ramps 	
<input checked="" type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops, although initial indication would be that compliant paths of travel can be achieved from the car parking provision detailed in all towers.		
5	Design of Carparking Spaces	The design of the accessible carparking bays must be in accordance with AS/NZS 2890.6-2009. <ul style="list-style-type: none"> – A bollard is required in the shared area in accordance with AS2890.6-2009 	
<input checked="" type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Key Car parking and transport design criteria:

- Accessible spaces are to be designed in accordance with AS/NZS 2890.6-2009.
- Dimensions of angled accessible parking bays 2400 x 5400mm with adjacent 2400mm x 5400mm shared area and bollard in shared area.
- Dimensions of parallel parking bays 3200mm x 7800mm.
- Provide direct kerb ramp access from adjacent to the accessible parking space to pathway.
- Accessible bays to be located near entrances.
- Provide a designated area for accessible drop off from private vehicles, taxis and community vehicles with kerb ramp access to the pathway.
- Height of vehicular path of travel to accessible parking space to be 2200mm and height above accessible parking space to be 2500mm.

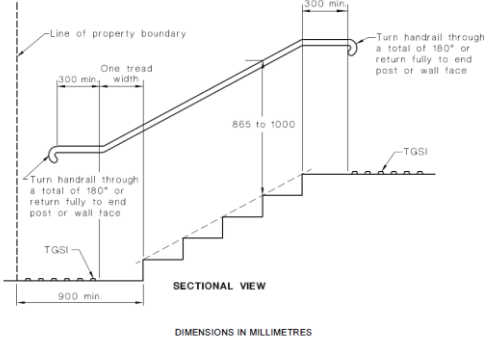
5.3 Lifts / Escalators (D3.1, E3.6, AS 1735.12)

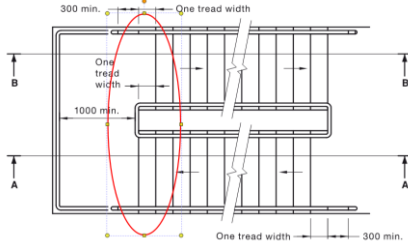
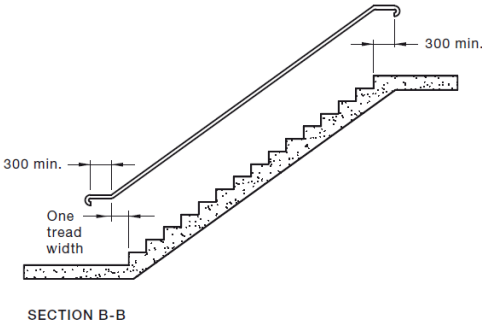
Item	Comment	Accessibility Requirement	
1	Lift Size Any new lift is to comply.	<ul style="list-style-type: none"> Any new lift travelling >12m requires a minimum compartment size of 1400mm wide x 2000mm depth (requires 2000mm depth where stretcher use indicated and travelling >12m). Any lift travelling <12m requires a minimum compartment size of 1100mm wide x 1400mm depth. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
2	Lift Fit-out Fit-out to include handrail/s, Braille & Tactile symbols, audible and visual indicators.	<ul style="list-style-type: none"> Fit-out must comply with AS1735.12 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Key lift design criteria:

- Lift dimensions to be 1100mm x 1400mm (up to 12m) or 1400mm x 1600mm (>12m minimum).
- Lift doorway opening clearance to be 900mm.
- Fitout of lifts to include: Handrail 600mm (min) length; at height between 850-950mm, Tactile and Braille symbols on control buttons and panels, Automatic auditory information detailing lift stops. Control buttons set back from corner.

5.4 Stairs (D3.1, D3.3, D3.11 & AS1428.1)

Item	Comment	Accessibility Requirement	
1	Stair Design	All general circulation stairs are to be designed to comply with AS1428.1-2009 i.e. clear width not less than 1m, handrails both sides, TGSIs and nosings.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	It is anticipated that there will be a stair provision between Level 15 and 16 in Site B, with further assessment required as design develops.		
2	Setback of Stairs Stairs are to be setback from the boundary/internal corners.	<p>Where located at the boundary, stairs shall be set back a minimum of 900mm so that handrails and TGSIs do not protrude into transverse path of travel (Fig 26(A))</p>  <p>FIGURE 26(A) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT BOUNDARY</p>	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Initially anticipated to not be applicable to the development.		

Item	Comment	Accessibility Requirement	
3	Offset Stairs Ensure the stair design caters for compliant handrail extensions, particularly the inner handrail.	All stairs shall be designed and constructed in accordance with Clause 11(f), (g) and Clause 12. Offsetting the stair at the mid landing will allow a continuous single handrail which will not require vertical sections. 	
<input checked="" type="checkbox"/>	Complies	<input type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
4	Handrail Extensions/Termination Handrails protrude in multiple locations. Stairs require setback at an internal corner/boundary to ensure compliance (refer above)	Handrails must extend at the top and bottom of the stair in accordance with Clause 11.2 of AS1428.1-2009 i.e.: <ul style="list-style-type: none"> – One tread depth plus 300mm horizontally before returning/termination – 300mm horizontally before returning/termination Ensure handrails/extensions do not protrude into transverse path of travel Refer Fig 28(b) of AS1428.1-2009 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

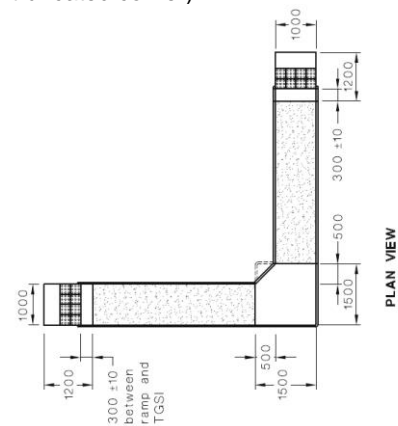
Item	Comment	Accessibility Requirement	
5	Fire-Isolated Stairs (FIS)	<ul style="list-style-type: none"> Fire-isolated stairs (FISs) are exempt from full compliance. FIS design to include a single handrail compliant to Clause 12 of AS1428.1 (circular) and provision of stair nosings as a minimum. If FISs are to be encouraged for general circulation use, the stairs should be upgraded to full compliance with AS1428.1-2009 features. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
6	Stair Nosings	<ol style="list-style-type: none"> Stair nosing shall not project beyond the face of the riser and the riser may be vertical or have a splay backwards up to a maximum 25mm. Stair nosing profiles shall <ul style="list-style-type: none"> Have a sharp intersection; Be rounded up to 5mm radius; or Be chamfered up to 5mm x 5mm 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

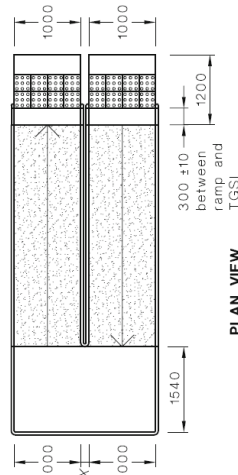
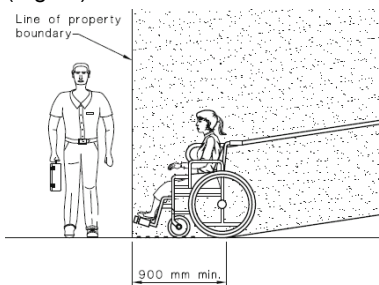
Key stair design criteria:

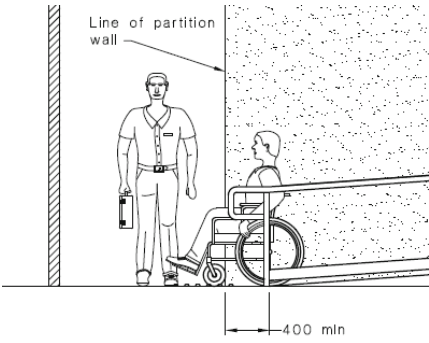
- Stairs to be set back 900mm at property boundaries or sufficient space to accommodate required handrails internal corners.
- Circular or spiral stairs are generally unsafe due to their inconsistent tread width.
- Common use stairs require AS1428 series compliant handrails, tread features and TGSi.
- Tactile ground surface indicators (TGSi) shall be installed for the full width of the path of travel.
- TGSi's shall be located at both the top and bottom of the stairs.
- Fire-isolated stairs required a single handrail compliant to Clause 12 of AS1428.1 and stair nosings as a minimum.

5.5 Ramps (D3.1, D3.3, D3.11 & AS1428.1)

Item	Comment	Accessibility Requirement	
1	Ramp Design Whilst none are currently detailed, consideration to be had as the design develops.	All general circulation ramps are to be designed to comply with AS1428.1-2009 i.e. clear width not less than 1m, handrails both sides, TGSIs compliant landing sizes, gradient and kerb rails.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
2	Gradient/Length	The maximum gradient for a ramp/walkway is: <ul style="list-style-type: none"> – 1:8 threshold ramp max. 280mm – 1:8 kerb ramp max. 1520mm – 1:10 step ramp max. 1900mm – 1:14 ramps max. 9m – 1:20 ramps max. 15m length – 1:33 walkways max. 25m length 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
3	Landings	Landings shall be of sufficient size to enable circulation <ul style="list-style-type: none"> – Where there is no change in direction, 1200mm length – Where a change in direction <90 degrees, the landing will require 1500mm x 1500mm (with truncated corner). 	



Item	Comment	Accessibility Requirement
		<ul style="list-style-type: none"> For a 180 degree turn, landing length shall be 1540mm  <ul style="list-style-type: none"> A landing for a step ramp must not overlap another step ramp or ramp landing (D3.11)
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/> Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.	
4	<p>Setback of Ramps</p> <p>Ramps are to be setback from the boundary/internal corners.</p>	<p>Where located at the boundary, ramps shall be set back a minimum of 900mm so that handrails and TGSIs do not protrude into transverse path of travel (Fig 16)</p> 

Item	Comment	Accessibility Requirement	
		<p>Where located at an internal corridor, stairs shall be set back a minimum.</p> 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
5	Handrail Extensions/Termination	<p>Handrails must extend at the top and bottom of the ramp in accordance with Clause 10.3(h) and 12 of AS1428.1-2009 i.e.:</p> <ul style="list-style-type: none"> – 300mm horizontally before returning/termination <p>Ensure handrails/extensions do not protrude into transverse path of travel.</p> <p>Refer Fig 14 of AS1428.1-2009</p>	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Key ramp design criteria:

- Maximum gradient of a ramp exceeding 1900mm is 1:14. Gradient to be consistent throughout ramp.
- Ramp required to have unobstructed width of 1000mm .
- Ramps to be provided with landings at bottom and top of ramp.
- Landings required every 9m where grade 1:14, Landings required every 15m where grade 1:20.
- Landings in direction of travel 1200mm long; landings at 90° directional change 1500mm x 1500mm. Landings at 180° directional change 1540mm x 2070mm length.
- Ramps require AS1428 series compliant handrails and TGSi.
- Ramps to be set back 900mm at property boundaries or 400mm at internal corners.
- A series of connected ramps must not exceed 3.6m (D3.11)

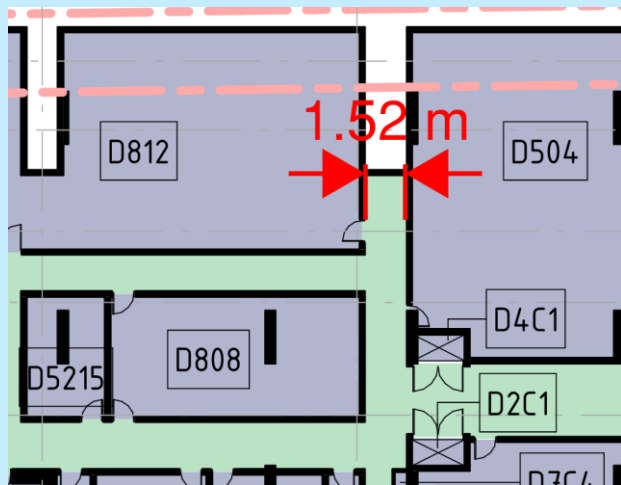
5.6 Tactile Ground Surface Indicators and hazard identification (BCA D3.8, D3.12, AS1428.1 & AS1428.4.1)

Item	Comment	Accessibility Requirement	
1	TGSI Location Tactile Ground Surface Indicators (TGSIs) are to comply	TGSIs are required to be installed in accordance with AS1428.4.1, to the top and bottom of every stair, ramp and escalator and to external areas such as where the pedestrian walkway is at grade with the roadway, kerb ramps.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Refer to separate commentary relating to external access paths.		
2	Hazards Review as design progresses	Hazards with <2000mm head clearance will require to be identified	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Ongoing review, although initially understood as not being applicable.		
3	Glazing Decals All glazed doors, sidelights and glazing that could be mistaken for a door or opening must be marked with contrast marking.	Provide contrast marking no less than 75mm wide for full width of glazing at 910-1000mm height.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Key TGSI and hazard identification criteria:

- Standard warning TGSI size is 600-800mm for full width of path of travel.
- TGSIs to be set back 300mm +/- 10mm from hazard.
- TGSIs to have min 30% luminance contrast for integrated TGSIs and 45% for discrete TGSIs.
- Contrast marking to achieve minimum 30% luminance contrast against floor or surfaces within 2m.

5.7 Internal Walkways (BCA D3.1, D3.3, AS1428.1)

Item	Comment	Accessibility Requirement	
1	Width of corridor Public paths of travel and internal corridors throughout shall be designed to comply.	<ul style="list-style-type: none">– Ensure a minimum unobstructed clear width of 1000 mm along all corridors to rooms or spaces.– 1500mm will permit an able bodied person and wheelchair to pass.– 1800mm width will allow two wheelchairs to pass.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing review required as design develops, however initial assessment would indicate compliance is achieved to the buildings.		
2	Passing Bays/Turning Spaces	<ul style="list-style-type: none">– Provide turning spaces of 1500x1500 (corner may be truncated) where a user is required to make a directional turn.– Provide turning space within 2000 mm at the ends of corridors, where it is not continuous to offer turning space: minimum width 1540 mm x 2070 mm length.– Turning spaces (1500mm x 1500mm) are to be provided every 20m.– Passing bays (1800mm wide x 2000mm length) are required every 20m where no direct line of sight is provided	
<input checked="" type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	<p>Corridor widths are suitable for passing spaces in most instances.</p> <p>To the Hotel unit levels, it is noted that in some areas corridor width is scaled to be marginally, undersized. Whilst this is anticipated to be a component of the scaling at this early stage of design, consideration should be had to increase corridor widths to allow for construction tolerance.</p> 		

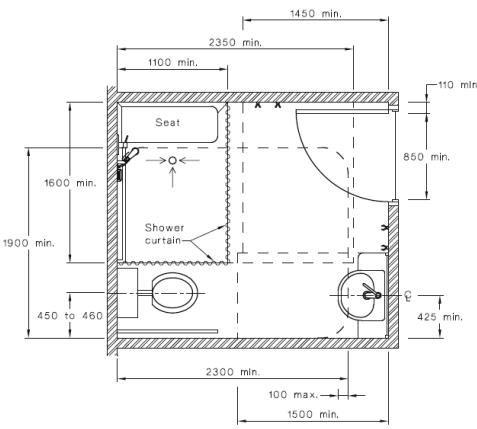
Item	Comment	Accessibility Requirement	
3	Circulation Suitable circulation spaces are to be provided to enable circulation to and within accessible areas, rooms and workstation areas.	<ul style="list-style-type: none"> – Provide an internal circulation space of 1540mm x 2070mm to enable occupants to undertake a 180 degree turn. – Circulation space is to be clear of fixed/heavy furniture. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
4	BOH Corridor / Staff Access A continuous accessible path is not currently provided to the plant spaces.	Access to and within the BOH areas is to be provided unless considered exempt under D3.4 based on the nature and use of the area, the required duties of staff members, or if it would be considered a health and safety matter.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Confirm any areas/rooms that could be considered exempt under D3.4.		

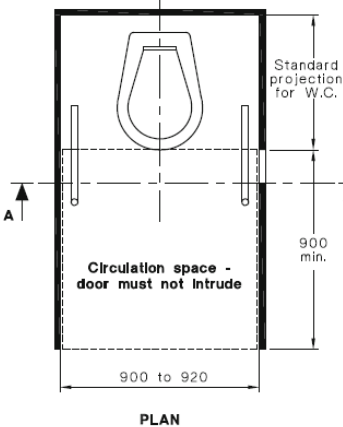
Key internal walkway and surface criteria:

- Walkways to be provided with passing bays (1800 x 2000mm) every 20m.
- Minimum width of internal walkway 1000mm.
- Path of travel in front of doorways or those accessed from a frontal approach required to be 1450mm width (minimum).
- Path of travel in front of doorways accessed from the latch side to be 1240mm minimum width.
- Landing spaces at directional changes of: at 90° - 1500mm x 1500mm (corner can be truncated); at 180° - 1540mm x 2070mm.
- Turning space at corridor terminations to be 1540mm width x 2070mm length.

5.8 Sanitary Facilities (BCA D3.1, F2.4, AS1428.1)

Item	Comment	Accessibility Requirement	
1	Number/Design of Unisex Accessible Sanitary Facilities (UASF)	<ul style="list-style-type: none"> Unisex Accessible Sanitary Facilities (UASF) must be provided on each level where other sanitary facilities are also provided and if the storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks. Where two or more unisex accessible sanitary facilities are installed there shall be an even distribution of mirror imaged layouts to provide left hand and right hand transfer. (BCA F2.4(g)). Where two or more accessible showers are provided, at least one shall be of the opposite hand (Clause 15.5.1(c) of AS1428.1-2009). 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
2	Location of UASF	<ul style="list-style-type: none"> The accessible facilities should be located adjacent/opposite the gender facilities. Where a unisex accessible sanitary facility is not provided, directional signage must be installed identifying the path of travel to the nearest accessible sanitary facility. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Item	Comment	Accessibility Requirement	
3	Design of UASF The fitout of the facility is to comply.	<p>The design of accessible sanitary facilities shall comply with Clause 15 of AS1428.1-2009.</p> <ul style="list-style-type: none"> – The minimum compartment size of a WC is 1900x2630mm (Refer Fig 43 of AS 1428.1 2009). – The minimum compartment size of a combined WC/shower facility is 2300mm x 2630mm (Refer Figure 50 of AS 1428.1 2009).  <p>FIGURE 50 SANITARY COMPARTMENT SHOWING OVERLAP OF WASHBASIN FIXTURE INTO SHOWER CIRCULATION SPACE</p>	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
4	Ambulant Cubicles	<p>Where one or more pans are provided, an ambulant toilet within each of the male and female facilities is to be provided.</p>	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Item	Comment	Accessibility Requirement	
5	Design of Ambulant Cubicles	<p>Ambulant male and female facilities shall be designed in accordance with Clause 16, AS1428.1-2009:</p> <ul style="list-style-type: none"> Minimum compartment width of 900-920mm 900mmx900mm circulation space in front of the pan (Fig 53(A) of AS 1428.1 2009) 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
6	Airlock /Doors – Ambulant	<ul style="list-style-type: none"> Ensure that the distance between doorways in an air lock on a path of travel to ambulant toilets shall be in accordance with Figure 34(B), AS1428.1-2009. Ensure a 900mmx900mm circulation space is provided to the cubicle door as per Fig 53(B) in AS 1428.1 2009. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
7	Toggle Switches	<p>To comply with Clause 14.2:</p> <ul style="list-style-type: none"> Rocker action and toggle switches with a minimum dimension of 30mmx30mm shall be provided Push-pad shall have a diameter of 25mm 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Key sanitary facility criteria:

- Accessible sanitary facilities to be in same location as gender facilities and located on all levels of a multi-level building.
- Minimum room dimension with WC and basin: 1900mm x 2630mm or 2330mm x 2200mm.
- Provide AS1428 series compliant fixtures inclusive of shelf, clothes hooks, full length mirror.
- A sanitary compartment suitable for a person with an ambulant disability must also be provided for use by males and females.
- Baby change tables are not permitted to encroach on fixture circulation spaces and are to be installed in accordance with Clause 15.2.8.2

5.9 Switches & GPO's (BCA D3.1, AS1428.1)

Item	Comment	Accessibility Requirement	
1	General All switches and controls on an accessible path of travel.	To comply with Clause 14.1 of AS1428.1-2009: <ul style="list-style-type: none"> – All switches and controls to be located between 900-1100mm AFFL and – >500mm from an internal corner as per Fig 37 of AS1428.1-2009. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
2	Rocker Action & Toggle Switches Applicable within all accessible sanitary facilities and where defined to the Adaptable / Liveable Housing Guidelines.	To comply with Clause 14.2 of AS1428.1-2009 and must: <ul style="list-style-type: none"> – Minimum dimension 30mmx30mm (<i>push-pad shall have minimum dimension of 25mm</i>) 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
3	General Purpose Outlets (GPOs) Applicable within all accessible sanitary facilities and within Accessible SOUs.	To comply with Clause 14.2 of AS1428.1-2009: <ul style="list-style-type: none"> – be located between 600-1100mm AFFL and – >500mm from an internal corner. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

5.10 Signage (BCA D3.6, AS1428.1)

Item	Comment	Accessibility Requirement	
1	General	BCA D3.6: Mandatory Braille and tactile signage must be provided to: <ul style="list-style-type: none"> – sanitary facilities (except SOUs), – spaces with hearing augmentation, – for required exit signage and – directional signage to alternative accessible entrances, paths of travel or alternative sanitary facilities. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
2	Wayfinding A successful wayfinding system in an external public realm should provide information for users to navigate the built environment.	Accessible way finding should highlight the pathway from entrance to reception to lifts/stairs, amenities and to key components of the facility.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
3	Directional Signage	<ul style="list-style-type: none"> – Where an entrance is not accessible, directional signage is required to be installed at the non-accessible entrance, directing a user to the location of the accessible entrance. – At gender toilets, where no unisex accessible sanitary facility is provided, directional signage is required to direct an occupant to the location of the nearest accessible sanitary facility. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
4	Sanitary Facilities	Braille & Tactile Signage to be provided as per D3.6 to identify sanitary facilities.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Item	Comment	Accessibility Requirement	
5	Exit Door Braille & Tactile signage is required to identify each exit door as per D3.6 of the BCA.	Provide signage that identifies each door required by BCA E4.5 to be provided with an exit sign and state "Exit" and "Level" and either floor level number, level descriptor or a combination of both.	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Key Signage design criteria:

Braille and tactile signage complying with Specification D3.6 must identify each:

- Accessible sanitary facility
- areas with required hearing augmentation provided
- door required by BCA E4.5 to be provided with an exit sign and state "Exit" and "Level" and either floor level number, level descriptor or a combination of both.

Accessible way finding should highlight the pathway from entrance to reception to lifts/stairs, amenities and to key components of the facility.

Ensure accessible way finding signage is:

- Incorporates the international symbol of access or deafness
- Located at appropriate viewing heights
- Perpendicular to the path of travel or beside identifiable features (e.g. door faces)
- Of suitable colour contrast (luminance contrast min 30%)
- Of compliant notation inclusive of use of the international symbol of access.

Signage to accessible sanitary facilities requires identification with the international symbol of access, raised tactile and Braille signage and letters RH or LH to indicate side of transfer to the WC pan.

5.11 Accessible Sole-Occupancy Units (SOUs)

A Class 3 Hotel requires the provision of accessible SOUs in accordance with Table D3.1 of the BCA. The following commentary relates in the first instance the requirements for the Hotel only.

Item	Comment	Accessibility Requirement																			
1	Overall number of units is not currently defined, however using Level 04 as a benchmark through the hotel, a conservative number of 250 hotel units are to be provided. Based on the adjacent table this would require eleven accessible units to be provided.	Number of Accessible SOUs In accordance with Table D3.1 of the BCA, accessible SOUs are to be provided as follows: <table><tr><th>No. SOUs</th><th>Req. Acc. SOUs</th></tr><tr><td>1-10</td><td>1</td></tr><tr><td>11-40</td><td>2</td></tr><tr><td>41-60</td><td>3</td></tr><tr><td>61-80</td><td>4</td></tr><tr><td>81-100</td><td>5</td></tr><tr><td>101-200</td><td>5 + 1/25 >100</td></tr><tr><td>201-500</td><td>9 + 1/30 >200</td></tr><tr><td>>500</td><td>19 + 1/50 >500</td></tr></table>		No. SOUs	Req. Acc. SOUs	1-10	1	11-40	2	41-60	3	61-80	4	81-100	5	101-200	5 + 1/25 >100	201-500	9 + 1/30 >200	>500	19 + 1/50 >500
No. SOUs	Req. Acc. SOUs																				
1-10	1																				
11-40	2																				
41-60	3																				
61-80	4																				
81-100	5																				
101-200	5 + 1/25 >100																				
201-500	9 + 1/30 >200																				
>500	19 + 1/50 >500																				
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review																		
Action	Note only. Ongoing assessment required as design develops.																				
2	SOU Doors	<p>All doors to and within the unit must comply with the door circulation space requirements of AS1428.1-2009.</p> <p>Front approach doors require:</p> <ul style="list-style-type: none">– Clear width: 850mm– Length: 1450mm– Latch: 510/530mm– Hinge: 0/110mm <p>Depends on direction of approach and swing of door.</p> <p>Either side approach doors require, range:</p> <ul style="list-style-type: none">– Clear width: 850mm– Length: 1240mm or 1670mm– Latch: 900/660mm– Hinge: 660/560mm <p>Refer Figures 31 & 32 of AS1428.1 for further details.</p>																			
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review																		
Action	Note only. Ongoing assessment required as design develops.																				

Item	Comment	Accessibility Requirement	
3	SOU Bathroom	<p>The layout, fixtures and fittings are to be designed to comply with AS1428.1 2009</p> <p>Considering the proposed layout, ensure a minimum compartment size of:</p> <ul style="list-style-type: none"> – Combined WC and shower facility: 2300x2630mm <p>Refer to Figure 50 of AS1428.1 for required compartment size and layout of fixtures and fittings.</p>	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
4	LH & RH Bathroom	<p>Provide an equal proportion of LH and RH transfer accessible facilities throughout the building.</p>	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
5	Room Circulation	<p>To comply;</p> <ul style="list-style-type: none"> – Required circulation space to make 90 degree turns - 1500x1500 (corner may be truncated), and – Provide a minimum of 1000mm each side of the bed and – Provide a required circulation space for 180 degree turn of 1540x2070mm in direction of travel at the end of bed <p>Circulation spaces around fixtures and heavy furniture shall comply with Clause 6 of AS1428.1 to enable a user to safely manoeuvre within the unit.</p>	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

5.12 Site Specific Components (BCA D3.1, D3.9, AS1428.1-2009)

Item	Comment	Accessibility Requirement	
1	Refuse Chute Access to and within the refuse chute must be provided.	Compliant door circulation and internal circulation is required to the refuse chute room within the residential and serviced apartment lobbies: <ul style="list-style-type: none"> – Door circulation to meet Clause 13.3 of AS1428.1-2009, and – Provide an internal circulation space within the room of 1540mm width x 2070mm length – Alternatively, consider a 'hardware' solution that will allow the door to be operated with minimal force, stay open long enough for a person to enter, dispose of their trash and then reverse out of the room. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

5.13 DDA – Enhanced Design Recommendations

The following recommendations for design enhancement are provided for areas in which potential compliance risks have been identified with respect to the DDA or where improved outcomes with respect to accessibility, functionality and safety have been identified.

Item	Comment	Accessibility Requirement	
1	Landscaping The common outdoor podium to Site A and the outdoor terraces to the rooftop of Site B offers significant opportunities to enhance the existing scheme. There will be minimum BCA requirements in terms of access paths, gradient, stairs etc., however, many aspects of good design in external spaces, fall outside these minimum requirements.	The following are some design considerations for providing equitable access to the common terraces; <ul style="list-style-type: none"> – Surface treatments e.g.; grass, gravel, stone, pavers – be aware of abutment detail with other surfaces; both level difference and slip resistance differences. – Careful design of drainage grates, surface falls and gradients generally – Provision of rest seating opportunities along walkways, stair landings etc. – Lighting designs that minimise glare. – Luminance contrast of features such as; steps, seats, bollards, bins etc. – Consistent/compliant use of TGSIs to create a predictable environment – Landscape planting can offer tactile and olfactory clues to the environment to enhance different areas. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

Item	Comment	Accessibility Requirement	
2	Obstacles Ensure obstacles abutting a path are readily identifiable and do not obstruct a user on the path	<ul style="list-style-type: none"> – Ensure bollards, bike racks, rest seating and bins possess a 30% luminance contrast to the surroundings – Ensure fixtures and furniture is recessed a minimum of 500mm from required minimum width of path 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
3	Furniture & Fixtures Future design should consider accessible requirements teapoint, vending machines, drinking fountains, telephones, controls etc.	<ul style="list-style-type: none"> – Future fitout/design of fixtures, furniture and fittings should consider accessible requirements in accordance with AS1428.2 – Items shall be a minimum of 500mm away from the path of travel. 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		
4	Locker Facilities Provide accessible locker facilities for staff/guest use.	Ensure lockers are positioned at an accessible height for End of Trip users: <ul style="list-style-type: none"> – Provide clear circulation in front of the fixtures of 800mm x 1300mm – Position lockers at an height of between 700-1200 above FFL 	
<input type="checkbox"/>	Complies	<input checked="" type="checkbox"/>	Capable of complying / For Review
Action	Note only. Ongoing assessment required as design develops.		

6.0 Conclusion

This report presents the results of an Accessibility Design Review assessment of the indicative OSD design proposed by Sydney Metro above Crows Nest Station.

This report has been prepared to outline the impacts of the OSD and to specifically respond to the SEARs issued for the concept SSD Application on 26 September 2018.

As members of the Access Consultants Association of Australia (ACAA), we have reviewed the concept design documents prepared by Metron (refer appendix A) for compliance with the current building assessment provisions, including (but not limited to) the following:

- *Disability Discrimination Act (DDA) 1992*
- *Building Code of Australia 2016* and referenced Australian Standards
- *The Disability Access to Premises (Buildings) Standard 2010*

This report provides a compliance overview of the project with respect to achieving compliance with the above legislation. In the next phase of the design process it is anticipated that as additional detail is provided - particularly floor plans, dimensions and features- the accessibility of this development can be further detailed.

Subject to addressing the actions identified, McKenzie Group Consulting confirm that the project documentation provides appropriate accessibility capable of complying with the BCA & Disability (Access to Premises – Buildings) Standards 2010 and the spirit and intent of the DDA.

Assessed by:

A handwritten signature in black ink, appearing to be 'SM'.

Senan Mescall

Senior Associate / Access Consultant
**McKenzie Group Consulting (Qld)
Pty Ltd**
ACN 140 159 486

Approved by:

A handwritten signature in black ink, appearing to be 'AC'.

Angela Chambers

Access Consultant
Accredited Member - ACAA
Membership No 406
**McKenzie Group Consulting (Qld) Pty
Ltd**
ACN 140 159 486

Appendix A

Document List

Site A

Drawing No.	Rev	Title
NWRLSRT-MET-SCN-AT-DWG- 060310	P01	L00 Street Level
NWRLSRT-MET-SCN-AT-DWG- 060311	P01	L01 STME North Levels
NWRLSRT-MET-SCN-AT-DWG- 060312	P01	L02 Podium Community Roof
NWRLSRT-MET-SCN-AT-DWG- 060313	P01	L09 Tower Car Park & Plant
NWRLSRT-MET-SCN-AT-DWG- 060314	P01	L04 Tower Car Park & Plant
NWRLSRT-MET-SCN-AT-DWG- 060315	P01	L05 Tower Car Park & Plant
NWRLSRT-MET-SCN-AT-DWG- 060316	P01	L06 Tower Apartment Floor
NWRLSRT-MET-SCN-AT-DWG- 060319	P01	L09 Tower Apartment Floor
NWRLSRT-MET-SCN-AT-DWG- 060336	P01	L27 Tower Apartment & Communal Floor
NWRLSRT-MET-SCN-AT-DWG- 060337	P01	L28 Tower Roof Plant Floor

Site B

Drawing No.	Rev	Title
NWRLSRT-MET-SCN-AT-DWG- 070309	P01	B1 M Station Level
NWRLSRT-MET-SCN-AT-DWG- 070310	P01	L00 Street Level
NWRLSRT-MET-SCN-AT-DWG- 070311	P01	L01 STME South Levels
NWRLSRT-MET-SCN-AT-DWG- 070312	P01	L02 Hotel Car Park & Plant
NWRLSRT-MET-SCN-AT-DWG- 070313	P01	L03 Hotel Business Centre
NWRLSRT-MET-SCN-AT-DWG- 070314	P01	L04 Typical Hotel Room Floor
NWRLSRT-MET-SCN-AT-DWG- 070324	P01	L14 Hotel Plant Room Level
NWRLSRT-MET-SCN-AT-DWG- 070325	P01	L15 Hotel Pool and Bar Level
NWRLSRT-MET-SCN-AT-DWG- 070326	P01	L16 Hotel Roof Level