

ART GALLERY OF NSW TRUST

**ART GALLERY OF NSW EXPANSION
PROJECT - SYDNEY MODERN**

ACCESS REVIEW

Morris Goding Accessibility Consulting

FINAL v2

1 November 2017

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1. EXECUTIVE SUMMARY

The Access Review Report is a key element in the design development of the Art Gallery of NSW Expansion Project - Sydney Modern, and an appropriate response to the AS1428 series, Building Code of Australia (BCA), DDA Access to Premises Standards (including DDA Access Code) and ultimately the Commonwealth Disability Discrimination Act (DDA).

Morris Goding Accessibility Consulting has prepared the Access Report to provide advice and strategies to maximise reasonable provision of access for people with disabilities.

The Art Gallery of NSW proposes to undertake a major expansion of the existing art gallery adjacent to the Phillip Precinct of the Domain. The expansion, proposed as a separate, stand-alone building, is located north of the existing gallery, partly extending over the Eastern Distributor land bridge and includes a disused Navy fuel bunker located to the north east of this land bridge.

The new building comprises a new entry plaza, new exhibition spaces, shop, food and beverage facilities, visitor amenities, art research and education spaces, new roof terraces and landscaping and associated site works and infrastructure, including loading and service areas, services infrastructure and an ancillary seawater heat exchange system.

In general, the development can achieve accessible paths of travel that are continuous throughout. In line with the report recommendations, the proposed development has demonstrated an appropriate degree of accessibility. The design drawings indicate that compliance with statutory requirements, pertaining to site access, common area access, accessible parking and accessible sanitary facilities, can be achieved with continuing design development and ongoing consideration of universal design principles.

The recommendations in this report are to be considered and developed in the ongoing design development phase of the project. The main key recommendations include:

- (i) Ongoing design development will be needed to ensure suitable access provisions are made for people with mobility and vision impairment with regards to new footpath areas with blended kerbs or flush roadway crossing areas within development in accordance with AS1428.1 and AS1428.4.1.
- (ii) The public external passenger lift and main internal passenger lifts to have a minimum 1400mm (W) x 1600mm (D) internal dimensions, compliant with AS1735.12 and DDA Premises Standards Part E3.6. Particular attention needed for the min. 1600mm depth dimension of the internal lifts.
- (iii) The public external passenger lift to be accessed via lift landing areas with min. dimensions of 1800mm W x 2000mm L for wheelchair passing and general manoeuvrability and be connected to accessible paths of travel, compliant with AS1428.1.
- (iv) Ensure the new designated accessible street parking and various required accessible vehicular pick up/drop off areas (private vehicles, taxi, kiss and ride, uber etc.) on Art Gallery Road are designed in compliance with AS2890.6 and AS1428.1.
- (v) Connecting kerb ramps or continuous access is required from accessible car bays and vehicular drop off lay-back areas to enable access from roadway to footpath and

safety for users, compliant with AS1428.1 and AS2890.6 and will be developed at design development stage.

- (vi) The developed design of the bus stop and taxi stand to be in accordance with DSAPT (Disability Standards Accessible Public Transport).
- (vii) Within Entry Plaza and Entry Pavilion, ensure 1:20 gradient walkways and level landing areas are developed to ensure cross-fall not steeper than 1:40 and compliance with AS1428.1.
- (viii) Ongoing advice and consultation between ergonomic consultant, access consultant and BCA consultant is needed to ensure adequate provisions are made for people with disability to satisfy BCA performance requirements for various building design elements where proposed geometry falls outside of BCA and AS1428.1 design parameters/requirements such as 'stepped rest area' on Outdoor Roof D terrace.
- (ix) Ensure Roof D Viewing Area/Terrace (both internal and external areas) provides level surfaces no steeper than 1:40 in any direction to ensure equitable and safe access for people with disability and people with prams, compliant with AS1428.1.
- (x) Ensure location of the freestanding columns on each level are either on/directly adjacent to walls or sufficiently away from walls to maintain clear accessible paths of travel that are at least 1000mm width and to help minimise columns being potential obstacles for people with vision impairment.
- (xi) Provide at least one accessible toilet within staff areas on LL3 and LL4 adjacent to at least one bank or 50% of toilets if more than one bank to meet BCA and DDA Premises Standards Part F2.4.
- (xii) Provide at least one ambulant cubicle for people with ambulant disabilities, compliant with AS1428.1 within all new male and female toilets, (adjacent to a required accessible toilet facility) as required under the BCA and DDA Premises Standard Part F2.4.
- (xiii) All new communication stairs, non-fire isolated egress stairs and fire-isolated egress stairs for both emergency and communication use are to be designed with suitable stair configuration to enable provision of consistent height handrails with extensions on both sides that do not obstruct transverse paths of travel, compliant with AS1428.1.
- (xiv) Ensure access walkways and ramps are designed with gradients and access features in compliance with AS1428.1:2009, noting that inclined walkways and ramps cannot overlap required level landing areas for escalators or stairs.
- (xv) Provide an accessible path of travel (eg. platform lift or 1:14 ramp) from the accessible car bay in the on-site staff car-park to and through the building entrance at LL3, compliant with AS1428.1.
- (xvi) Access to and within all common-use staff areas is required, compliant with AS1428.1:2009, unless a formal concession/exemption from access is sought by the operator from the PCA and supported under a BCA Part D3.4 Exemption. Ongoing review by the client and design team of Staff BOH areas is needed to identify and document any areas seeking a part D3.4 exemption and/or a performance based solution so that accessibility and BCA performance requirements will be satisfied.

- (xvii) As a Class 9b building, all multipurpose halls/auditorium, conference areas, meetings rooms, educational spaces that provide inbuilt amplification systems (except those solely for emergency warning purposes) require a hearing augmentation system to comply with BCA and DDA Access Code Part D3.7.
- (xviii) Consider providing a “Changing Places” facility eg. at LL4 adjacent to Parents Room and First Aid Room or in another location that has improved accessibility to Entry level. While this is above and beyond current building codes it is a best practice inclusion to support people with disability (severe or multiple) and/or their carers unable to use a standard accessible toilet that may wish to visit this significant new public building (advisory).

2. INTRODUCTION

2.1. General

The Art Gallery of NSW Trust has engaged Morris-Goding Accessibility Consulting, to provide an accessibility review of the proposed State Significant Development (SSD) application documentation for the Art Gallery of NSW Expansion Project - Sydney Modern, located at Art Gallery Road, Sydney NSW.

The development intends to provide a 21st century global art museum for Sydney, that reflects the global nature of the city and create new and increased possibilities for people to engage, experience and enjoy the possibilities of art within the unique heritage site.

2.2. Detailed Description of Works

The Art Gallery of NSW proposes to undertake a major expansion of the existing art gallery adjacent to the Phillip Precinct of the Domain. The expansion, proposed as a separate, stand-alone building, is located north of the existing gallery, partly extending over the Eastern Distributor land bridge and includes a disused Navy fuel bunker located to the north east of this land bridge.

The new building comprises a new entry plaza, new exhibition spaces, shop, food and beverage facilities, visitor amenities, art research and education spaces, new roof terraces and landscaping and associated site works and infrastructure, including loading and service areas, services infrastructure and an ancillary seawater heat exchange system.

Development consent is sought for:

- Site preparation works, including:
 - Site clearing, including demolition of former substation, part of road surfaces, kerbs and traffic islands, pedestrian crossings, foot paths, retaining walls, stairs, and part of disused underground former Navy fuel bunkers;
 - Tree removal;
 - Excavation and site earthworks;
 - Remediation works;
- Construction of the new building comprising:
 - Covered public entry plaza;
 - Five building levels, including entry pavilion following the site topography down to Lincoln Crescent;
 - Retention of part of existing former underground Navy fuel bunker for use as gallery space and support spaces;
 - Art exhibition spaces;
 - Outdoor publicly accessible terraces;
 - Shop and cafe;
 - Multipurpose space;
 - Education spaces;

- Entry level loading dock (accessed via Lincoln Crescent) with associated art handling facilities, workshops, service parking, plant, and storage areas.
- Landscaping and public domain improvements including:
 - Continuation of the east-west pedestrian link over the land bridge between the Domain and Woolloomooloo Bay, including dedicated lift structure for universal access;
 - Improved public access of the north south pedestrian link
 - Enhancement of the public open space on the land bridge to create a landscape and art connection between the two buildings
 - Hard and soft landscaping to roofs and terraces;
 - Plantings and new pathways;
 - Increased landscaped area to forecourt of existing Art Gallery building and removal of car parking
 - Relocation of selected trees to the south-eastern corner of the site;
 - Sound barrier to edge of land bridge;
- Upgrade works to part of Art Gallery Road, Cowper Wharf Road, Mrs Macquarie's Road, and Lincoln Crescent, including new pedestrian crossings;
- Provision of vehicle drop off points including a taxi stand, private vehicle drop off and bus/coach drop off, at Art Gallery Road;
- Installation of an ancillary seawater heat exchange system to act as the new building's cooling system, adjacent to and within Woolloomooloo Bay;
- Diversion, extension and augmentation of physical infrastructure and utilities as required.

2.3. Heritage Background

The existing Art Gallery of NSW building is listed as a local heritage item on the City of Sydney Planning Scheme. The existing building has social, architectural, historical and locational heritage significance.

The existing Art Gallery of NSW building is surrounded by the Royal Botanic Gardens and Domain, which is listed on the NSW State Heritage Register as a State heritage item.

2.4. Scope

The requirements of the investigation are to:

- Review supplied drawings of the proposed development,
- Provide a report that will analyse the accessibility provisions of the proposed development, and
- Recommend solutions that will ensure the design complies with the Disability Discrimination Act (DDA), DDA Access to Premises Standards (including DDA Access Code), Building Code of Australia (BCA) and AS 1428 series.

2.5. Objectives

The Art Gallery of NSW Expansion Project – Sydney Modern, will have a high public profile and a prominent role within the local and broader community.

This report seeks to consider all potential user groups across the three main stakeholders that include the public/visitors, presenters/performers and staff/personnel. The report attempts to deliver equality, independence and functionality to all people with disability inclusive of:

- ✧ People with sensory impairment (hearing and vision)
- ✧ People with mobility impairment (ambulant and wheelchair)
- ✧ People with dexterity impairment
- ✧ People with cognitive impairment

In addition, through considering universal design principles, the report also seeks to encourage increased inclusion of:

- ✧ Older people
- ✧ People with Children
- ✧ People of non-English speaking backgrounds
- ✧ Diverse community groups

This report seeks to provide compliance with the DDA. In doing so, the report attempts to eliminate, as far as possible, discrimination against persons on the ground of disability.

2.6. Universal Design Principles

Universal Design is a philosophy and approach that uses principle based thinking within the design and planning process. It is based on seven recognized principles that were developed in 1997 by a working group of architects, product designers, engineers and environmental design researchers, led by the Centre for Universal Design, North Carolina State University, USA.

The Principles were developed to *“guide the design of environments, products and communications to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design”* (Mace 1985). They include:

- ✧ Principle 1: Equitable Use
- ✧ Principle 2: Flexibility in Use
- ✧ Principle 3: Simple and Intuitive Use
- ✧ Principle 4: Perceptible Information
- ✧ Principle 5: Tolerance for Error
- ✧ Principle 6: Low Physical Effort
- ✧ Principle 7: Size and Space for Approach and use

The consideration and application of universal design principles within the early planning and design stages of the Art Gallery of NSW Expansion Project – Sydney Modern, will assist in creating an inclusive environment that can be accessed, understood and used by as many people as possible.

An accessible environment that is designed on universal design principles is one that considers all people including older people, families with children and people pushing prams, people from other cultures and language groups, tourists in transit and people with disability.

Moving beyond the minimum mandatory compliance levels set by the current access legislation for buildings will help to future-proof the building to ensure it can achieve and maintain its goal as a 21st century global art museum for Sydney that reflects the global nature of the city.

2.7. Limitations

This report is limited to the accessibility provisions of the building and its surrounds in general at schematic design stage. It does not provide detailed comment on detailed design issues, such as: internals of accessible/ambulant toilet, fit-out, lift specification, slip resistant floor finishes, door schedules, hardware and controls, glazing, luminance contrast, ramp and walkway design, stair nosing, TGSI's, handrail design, signage, hearing augmentation, detailed landscape design, kerb-ramps etc. that will be developed during design development phase and will be included in ongoing documentation.

2.8. Statutory Requirements

The following standards are to be used to implement the Report:

- Disability Discrimination Act 1992
- DDA Access to Premises Standards 2010 (including DDA Access Code)
- BCA 2016 - Building Code of Australia
- AS 1428.1 – 2009 (General Requirements for Access)
- AS 1428.4.1 – 2009 (Tactile Ground Surface Indicators)
- AS 1735.12 - (Lifts, Escalators, & Moving Walks)
- AS2890.6 – 2009 (Off-street Parking for People with Disabilities)

Reference has also been made to advisory disability planning principles including:

- Universal Design Principles
- AS1428.2 – 1992 (Enhanced and Additional Requirements - Buildings & Facilities)
- AS1428.5 – 2010 (Communication for People who are Deaf or Hearing Impaired)

3. EXTERNAL DOMAIN & PEDESTRIAN LINKAGES

3.1. General

The proposed development is located in an area surrounded by the Royal Botanical Garden to the north, Lincoln Crescent to the east, the existing Art Gallery and Domain to the south and Art Gallery Road to the west.

The development site extends over various existing lots. It is understood the site allotment boundary for the development is currently under review and that ownership is by Art Gallery of NSW Trust and others for new work to external domain areas that form part of the proposed development are being defined.

In general, a broad and integrated approach to improving public accessibility to and throughout the development site is proposed by landscaping and public domain improvements that are strongly connected to the design of the new building and the existing building.

3.2. Art Gallery Road

The principal point of pedestrian entry to the development site is from Art Gallery Road (Entry level). An accessible path of travel is achievable from the public footpath within the new work areas as required under the DDA Premises Standards. There is step free access from the Domain and Woolloomooloo Botanic Garden Gate entry point that are located on the western side of Art Gallery Road to the Entry Plaza via new proposed raised designated pedestrian crossings. The proposed locations of the new crossings (x3) will connect common public domain journeys/circulation routes and new vehicular pick-up and drop-off points to the new and existing building, which will improve way-finding and safety for users.

On the eastern side of Art Gallery Road from north and south approaches of the new work areas there are reasonable walkway gradients that are traversable by people with disability in line with intent of AS1428.1. These paths of travel provide reasonably level access to the Entry Plaza and Vernon Plaza that will be activated public domain spaces that provide access to new and existing building entrance points and connecting pathways within external landscape areas.

The existing service road at the south-east side of Art Gallery Road that leads to the existing building loading dock and dedicated staff entrance is outside of this development scope of works and will be retained.

Recommendations:

- (i) Ongoing design development will be needed to ensure suitable access provisions are made for people with mobility and vision impairment with regards to any new footpath areas where there are blended kerbs or flush roadway pedestrian crossing areas within the development in accordance with AS1428.1 and AS1428.4.1.
- (ii) Ensure continuous, hardstand, slip resistant paths of travel traversable by people with mobility issues are utilised in all areas required to be accessible in accordance with AS1428.1 and HB198/AS4586.
- (iii) Ensure any raised walkway areas (eg. Domain viewing plaza on western side of Art Gallery Road) are developed during design development to include suitable edge protection, compliant with AS1428.1.

3.3. Through-site Linkage and External Public Lift

The external domain through-site linkage can be accessed from the Entry Plaza to the new building (Entry Level), facing Art Gallery Road and from Lincoln Crescent (LL3), near the Woolloomooloo finger wharf. The existing height variation (approx. 25 metres) from the Entry Plaza to Lincoln Crescent is significant.

The proposal seeks to improve and continue the east-west pedestrian linkage between the Domain and Woolloomooloo Bay, including provision of a new public external lift that will connect via an accessible path of travel to an existing lift facility (outside the development site but associated) as well as new and existing external stairways to street level at Woolloomooloo.

The development seeks to improve access provisions and choice for all users, including people with disability, whilst respecting tree retention, maximising green landscape and considering heritage constraints that are of high importance and concern within this area.

The current accessible route from Lincoln Crescent to the existing public elevated walkway (over Lincoln Crescent) is outside of this development scope of works and will be retained. This step free path of travel involves use of an existing passenger lift access managed by the Concierge/Security of The Wharf Terraces, residential complex, Woolloomooloo. The existing passenger lift is available for escorted use (after contacting security), but is not currently available for independent public use/operation. The existing lift provides continuous access to the rooftop area of the residential building that then connects to an existing public elevated walkway over Lincoln Crescent.

The proposal will improve the accessibility of the through-site linkage within the new works area by providing a new public lift facility, compliant with AS1735.12 and DDA Premises Standards from the existing public elevated walkway (over Lincoln Crescent) to the Entry Plaza level.

The new lift is proposed adjacent to new and existing refurbished external stairways. This will enable people to start and arrive in a similar location for equitable use and ease of location. While not all of the landscape areas can be physically accessible to people with mobility issues due to steep site topography, the public lift will improve access and promote inclusion by providing a step free route to parts of the landscape that are not currently accessible.

In addition there are new and existing stairways being refurbished are proposed as part of the through-site linkage as described in the following section.

Recommendations:

- (i) The public external passenger lift to have a minimum 1400mm (W) x 1600mm (D) internal dimensions, compliant with AS1735.12 and DDA Premises Standards Part E3.6.
- (ii) The public external passenger lift to be accessed via lift landing areas with min. dimensions of 1800mm W x 2000mm L for wheelchair passing and general manoeuvrability and be connected to accessible paths of travel, compliant with AS1428.1 within the new works area.
- (iii) The lift lobbies and lift car requires operating and internal components (control panel, handrails, visual & audio devices etc.) that comply with AS1735.12.

- (iv) Liaison with the existing residential complex at Woolloomooloo by the client is recommended for the through-site linkage accessible route via the existing lift access to improve public access and ensure equitable and dignified use for people with disability to the new development.

3.4. Landscaped Pathways and Stairs

Within the constraints of the existing topography, continuous step-free paths of travel suitable for people with disability are achievable from Art Gallery Road, Vernon Plaza and the Entry Plaza to and within most landscape pathway areas at the upper zone and lower level between the new and existing building.

This includes a new circular external pathway around lawn area and external artwork commissions that will connect the Entry Plaza, a new small Café Coffee point, new public lift facility (as described above) and new and existing stairs being refurbished on the through-site linkage.

From information provided, the wide circular pathway has gradients that will generally be level to gentle and not exceed 1:20 gradient which is suitable for a walkway surface for 15 metre max. lengths under AS1428.1. This will be developed further during design development stage to ensure compliance with AS1428.1.

The proposal includes a range of hard and soft landscaping to the public domain and building roof terraces with integrated art as well as planter beds and connecting pathways. Various new and existing stairways being refurbished will be integrated with the improved landscape design with configuration that can achieve access provisions, compliant with AS1428.1 to assist ambulant users. These include connections to the existing public domain stairs on either side of the Cahill Expressway that link the new Entry Plaza level down to Woolloomooloo street level.

In general, the clear width of the external public stairways exceeds 1500mm min. clear width (to allow two people walking to pass one another) between handrails on both sides and they can achieve access features to meet AS1428.1. The provision of well-designed stairs, in addition to passenger lifts promotes choice and flexibility in use (UD principle 2) for ambulant people that may prefer this form of vertical access.

At LL2 (RL 14.90) there are a series of ‘step landings’, assumed for use as external bleacher style seating. The external stairways located on the through-site linkage that lead to this external LL2 area are separate vertical circulation elements that can be developed to meet AS1428.1.

Recommendations:

- (i) Ensure landscape pathways within public domain areas of the site that can achieve suitable gradients (ie. areas where access achievable from the Entry Plaza and new lift) are developed to provide well connected, continuous, hardstand, slip resistant paths of travel traversable by people with mobility issues in accordance with AS1428.1 and HB198/AS4586. Secondary non-accessible pathways will be developed during design development stage to ensure safe gradients/provisions for ambulant people.
- (ii) Ensure stairs are designed with suitable stair configuration and set-back from transverse paths of travel to enable provision of handrails on both sides with extensions that do not protrude or create safety hazards, compliant with AS1428.1.

- (iii) Consideration for access features for 'step landings', compliant with AS1428.1 (eg. compliant handrails on both sides of steps, step nosing) to be included, even though not technically 'stairs' under BCA definition (advisory).
- (iv) Consider providing increased areas of hardstand pathway with rest seating that is adjacent and connected to the main paths of travel within the accessible and non-accessible zones of through-site linkage (60m max. distances recommended) that is reflective of differing height ranges, including some with backrests and side arms for support, compliant with AS1428.2 (advisory).

4. TRANSPORT LINKAGES

4.1. General Street Parking

The proposed development has replaced the existing on-street public car-parking spaces (including 22 standard car bays and 2 x accessible car bays) from the front of existing Gallery building with increased and improved public domain plaza and landscaped areas. General public parking facilities will continue to be provided by the Domain Car-park and/or metered on-street parking available on Mrs Macquarie's Road.

To assist mitigate removal of the current 2 x accessible car bays and increased travel distances from other parking facilities to the development, the design proposes 6 x new designated parallel accessible street parking bays on eastern side of Art Gallery Road, located near the Entry Plaza. From the information provided there is a raised kerb and bollards are indicated within this zone to protect pedestrians (and building) from vehicles.

The proposed location is within approx. 150M of the existing building main entrance and 100M to new building main entrance. The Entry Plaza is covered by a permeable roof which will provide some overhead protection for people waiting and this will be developed further at design development stage. Continuous paths of travel from the accessible car parking spaces along the public footpath that are traversable by people with disability, under AS1428.1 are achievable.

In addition, other new measures to improve the external access linkages to the development and improve pedestrian safety are proposed, including a range of dedicated vehicular, taxi stand, bus stops and coach drop off areas in close proximity to the existing building and new Entry Plaza leading to the new building.

Recommendations:

- (i) Ensure the new designated accessible street parking on Art Gallery Road is designed in compliance with AS2890.6. The minimum dimensions for a parallel accessible car-parking bay is 3.2 metre wide x 7.8 metre length.
- (ii) Connecting kerb ramps or continuous access is required from the accessible car bays to enable access from roadway to footpath and safety for users, compliant with AS1428.1 and AS2890.6 and will be developed at design development stage.
- (iii) Ensure continuous, hardstand, slip resistant paths of travel traversable by people with disability are utilised in all areas required to be accessible in accordance with AS1428.1 and HB198/AS4586.
- (iv) Ongoing design development will be needed to ensure suitable access provisions are made for people with mobility and vision impairment with regards to any new footpath areas where there are blended kerbs or flush roadway crossing areas within the development in accordance with AS1428.1 and AS1428.4.1.

4.2. Vehicle Pick Up/Drop-Off Areas

There are four (4) dedicated vehicle drop off points within lay-back areas from the roadway proposed at Art Gallery Road, including a taxi stand, private vehicle drop off, bus stops and a coach drop off area. It is noted that this is a significant improvement from the current vehicular drop off provisions that are located directly in front of the existing building which are limited in size which often obstructs the dedicated pedestrian crossing area.

The proposed private vehicle drop off is located on eastern side of Art Gallery Road, between the existing building main entrance and the Entry Plaza. The proposed location is within approx. 40M of the existing building main entrance and 80M to new building main entrance.

The taxi stand area is proposed on eastern side of Art Gallery Road, located near the existing building and approx. 150M to the new building entrance, and approx. 100M to the existing building entrance. The Entry Plaza is covered by a permeable roof which will provide some overhead protection for people waiting and this will be developed further at design development stage.

There is a bus stop proposed on eastern side of Art Gallery Road, near service road (to existing building loading dock) and on western side of Art Gallery Road, near the Woolloomooloo gate and these are connected by reasonably level footpaths that can meet the intent of AS1428.1.

The coach drop off area is proposed on western side of Art Gallery Road, in front of the new building. This area also provides dedicated bike parking for cyclists outside of required paths of travel.

From the information provided there are raised kerbs provided at the drop off zones. While some new kerb ramps are shown along Art Gallery Road (near new pedestrian crossings), they do not currently connect to/from the dedicated vehicular drop off zones. Further review at design development stage will be required to safe and continuous paths of travel from the roadway to the footpath within drop-off areas for people with mobility impairment.

Continuous accessible paths of travel to connect the taxi stand, private vehicle drop off area, bus stop and coach drop off areas from the Entry Plaza are achievable, compliant with AS1428.1. This will be developed further during design development stage.

Recommendations:

- (i) Ensure continuous access to/from the vehicular roadway surface to public footpath via kerb ramps or similar, compliant with AS1428.1 to ensure that the vehicle, taxi, bus and coach pick up and drop off bays are accessible for people with disability. Connecting kerb ramps should be located at rear of the vehicular drop off lay-back areas for functionality and improved safety for users, compliant with AS2890.6 and will be developed at design development stage.
- (ii) All accessible vehicle pick up and drop off bays, including taxi stand to have minimum dimensions compliant with AS2890.6 ie. for parallel bay: 3.2 metre wide x 7.8 metre length.
- (iii) The design of the bus stop and taxi stand to be in accordance with DSAPT (Disability Standards Accessible Public Transport).
- (iv) Contrasting and textual surface material such as TGSi are required where any public footpath areas are flush with the vehicular roadway surface to assist people with vision impairment.
- (v) Consideration for bus and coach stop/drop off, and taxi stand/drop off to have shelter from weather conditions, given increased distance from overhead protection provided by the building main entrances (advisory).

- (vi) Consideration for any bollard spacing to be 1.55m min. clear width (allows a wheelchair or pram and a person walking or a 180 degree wheelchair turn) or 1.8m clear width (preferred which allows two wheelchairs to pass - advisory).

4.3. On-site Car Parking for Staff

A small basement car-park for staff and presumed administrative visitor use is proposed in close proximity to loading dock at LL3 at rear of the new building with vehicular access from Lincoln Crescent.

The car-park has 3 x standard car-spaces and 1 x accessible car-parking space. The number of accessible-car parking satisfies the BCA/DDA Access Code Table D3.5 for at least 1% min. accessible parking bays for commercial car bays (Class 5).

From the information provided the identified accessible car parking bay and adjacent required shared zone can achieve minimum dimensions (2.4m wide x 5.4m length for both bays) compliant with AS2890.6.

Currently there is not a continuous accessible path of travel from the required accessible car bay into the building at this level as required under AS2890.6 as there are only stairs indicated at each of the two loading docks.

Recommendations:

- (i) The gradient and cross-fall within accessible car parking bay, adjacent required shared zone to be no steeper than 1:40 (or 1:33 if bitumen seal) in any direction, compliant with AS2890.6.
- (ii) Provide an accessible path of travel (eg. platform lift or 1:14 ramp) from the accessible car bay in the on-site staff car-park to and through the building entrance at LL3, compliant with AS1428.1.
- (iii) Ensure 2.5 metres min. vertical clearance above accessible car bay and adjacent shared area and 2.2 metres min. vertical clearance along vehicular aisles, leading to the accessible car bay.

5. BUILDING - INGRESS & EGRESS

5.1. Entry Plaza

The Entry Plaza is a large covered public space with a permeable roof structure supported by a freestanding column grid system. The roof area nearest to Entry Pavilion is proposed to be weatherproof. The Plaza is a transitional zone located between the public footpath on Art Gallery Road, the main entrance to the Entry Pavilion building, and connecting pathways through landscape/public open space. It serves as the pedestrian linkage to the building entrance and is intended as a flexible external Plaza space associated with the Gallery.

The Entry Plaza has a continuous sloping floor level that is step-free and descends from the public footpath in the west towards the east as an architectural universal design feature. From the information provided the cross-falls for the Plaza (from south to north), are reasonably level based on the 1:50 gradients indicated within the central area.

The Entry Plaza includes 1:20 gradient walkways that do not exceed 15 metres length from the Art Gallery Road footpath when moving from the west to east (between RL 23.80 and RL22.30), which is suitable under AS1428.1. The location of a wide level landing zone between the 1:20 walkways (RL23.05) provides a suitable central rest/manoeuvring area that will aid orientation and way-finding towards the building main entrance. This will be developed further during design development stage to ensure compliance with AS1428.1.

The provision of the wide central level landing in the Entry Plaza (that will be developed to not exceed 1:40 gradient/crossfall) will ensure equitable access for people with disability to enjoy unique outdoor elements such as 'gathering areas', bag stores and artworks that may be located either on or to either side of the central zone as well as promoting general use and flexibility for the Gallery.

Recommendations:

- (i) Ensure 1:20 gradient walkways and level landing areas are developed to ensure cross-fall not steeper than 1:40, compliant with AS1428.1.
- (ii) Consider providing 30% min. luminance contrast between freestanding columns and surrounding/adjacent surfaces ie. flooring surfaces to improve detectability for people with vision impairment and safety by design for all (advisory).
- (iii) Consider providing textural and luminance contrast between the 1:20 gradient walkways and the central level landing area in the Entry Plaza to enhance safety, orientation and way-finding (advisory).
- (iv) Consider providing rest seating within Entry Plaza eg. on the wide central level landing area at key facilities/waiting areas (and at 60m max. distances throughout development) that is reflective of differing height ranges, including some with backrests and side arms for support, compliant with AS1428.2 (advisory).

5.2. Entry Pavilion – Main Entry

From the Entry Plaza, a level and accessible path of travel to and through the main accessible entrance to the Entry pavilion of SMP building at Entry level on south side of building is provided from the wide central level landing in the Entry Plaza.

The same 1:20 gradient walkways and 1:50 gradient central level landing area of the external Entry Plaza are proposed to continue into the Entry pavilion floor surface as a

universal architectural feature and will be developed to facilitate equitable access to key areas and facilities, compliant with AS1428.1.

Beside the 2 x revolving doors currently shown there is 1 x alternate accessible entry door (outward opening hinged) with 850mm min. clear opening located directly adjacent that can achieve circulation space, compliant with AS1428.1.

The accessible entrance connects into the Entry Pavilion, which is the primary circulation and orientation space to the building at Entry level. It connects the key facilities associated with building entry sequence ie. Information/Ticketing, Cloak; Entry escalators and Lift lobby to the Gallery spaces, Roof terrace and Function/Hospitality spaces within the building.

The Information/Ticketing desk area is within a direct line of sight to main entry doors to enable direct access and assistance to visitors if/as required. The Information/Ticketing desk is positioned between Entry escalators (visible from desk) and the 'bridge' over void that lead to Entry Lifts (not visible from desk) and the circulation space to the outdoor Roof terraces at this level.

The passenger lifts provide continuous access to all lower building levels in accordance with DDA Premises Standards. The passenger lift lobby has generous dimensions to facilitate circulation paths outside lift waiting areas and enable manoeuvrability for people using mobility aids.

The circulation areas around the required accessible main entrance and throughout Entry Pavilion are sufficient for two wheelchair users to travel together or pass one another in the opposite direction, compliant with AS1428.1:2009 and DDA Premises Standards. The Cloak and storage facilities near the main entrance are proposed as an independent circular pod structure that sits independently within a freestanding column grid system.

Recommendations:

- (i) The accessible main entrance doorway to the building (adjacent to revolving doors) will be developed at design development stage to ensure safe and accessible operation (either automated or manual operation) and identification signage, compliant with AS1428.1.
- (ii) Ensure 1:20 gradient walkways and level landing areas are developed to ensure cross-fall not steeper than 1:40, compliant with AS1428.1.
- (iii) Directional signage is required to direct people to the Entry Lifts for people with disability unable to use the Entry escalators, compliant with AS1428.1, due to Lifts not being visible from within the Entry Pavilion.
- (iv) Consider providing a universal accessible main entrance (entry airlock with automatic sliding doors, compliant with AS1428.1) so that people can be welcomed and enter the main entrance to the building together (advisory).
- (v) Consider providing textural and luminance contrast between the 1:20 gradient walkways and the central level landing area in the Entry Pavilion to enhance safety, orientation and way-finding (advisory).
- (vi) Consider providing 30% min. luminance contrast between freestanding columns and surrounding/adjacent surfaces ie. flooring and wall surfaces to improve detectability for people with vision impairment and safety by design for all (advisory).

- (vii) Consider providing rest seating within Entry Pavilion (and at 60m max. distances throughout development) that is reflective of differing height ranges, including some with backrests and side arms for support, compliant with AS1428.2 (advisory).

5.3. Emergency Egress

The required main accessible entry point to the building described above will also be the main accessible egress points at Entry level from the building. There are additional doors on Entry level from Gallery 1, Entry Pavilion presumed as egress only doors and the ingress and egress doors to/from the Outdoor Roof Terraces D and E.

As there are multiple storeys provided below the Entry level (in stepped form following the site topography to Lincoln Crescent); there will also be emergency egress doors that discharge directly to external areas from some lower building levels.

There are numerous fire isolated egress stairs within the building that connect lower building levels up or upper levels down to levels where they discharge to external areas. In addition there are numerous non-fire isolated stairs that are required for egress, some stairs will be restricted to egress purposes only eg. south egress stair from Gallery 3, LL2 and some stairs which will be shared for communication and egress purposes eg. south stair from Roof D, LL1 to Roof F, LL2.

In general, the doors to egress stairs and egress doors to external areas can achieve 850mm clear width doors (920mm door leafs), compliant with AS1428.1.

Recommendations:

- (i) Fire-isolated egress stairs and ramps for emergency use only are to be designed with suitable stair/ramp configuration for provision of at least one continuous consistent height accessible handrail that meets BCA Part D2.17 and AS1428.1 Clause 12. For stairs, this could be achieved by provision of off-set tread at base of each flight or increasing the length of intermediate landings to accommodate the consistent handrail return and will impact on some current stair configurations shown eg. fire-isolated egress stair near Multipurpose room, LL2/LL3. Clarification with PCA will be required during design development stage.
- (ii) Fire-isolated egress stairs/ramps for emergency and communication use and/or non fire-isolated egress stairs/ramps to be designed with suitable stair/ramp configuration to enable provision of consistent height handrails with extensions on both sides that do not obstruct transverse paths of travel, compliant with AS1428.1.
- (iii) Ensure that all stair treads/nosings, ramps, stair/ramp landings on required egress routes are slip resistant in accordance with BCA Table D2.14 (AS4586:2013).
- (iv) Consider providing all fire egress doors with 850mm min. clear opening width to enable a person using a wheelchair or other mobility aid to use (advisory).
- (v) Consider installing visual and audible emergency warning systems so as to be accessible to people with sensory and cognitive impairment in all building areas (advisory).
- (vi) Consider developing an accessible egress strategy, particularly for people with mobility impairment unable to use egress stairs/ramp. Eg. wheelchair refuge areas within fire-isolated egress stairs and/or the main lift lobbies could form an emergency evacuation refuge and route for people who are unable to use egress stairs. Note:

clarification would be needed that lift lobbies have the capacity to be smoke isolated and/or that passenger lifts can operate during an emergency to evacuate occupants unable to use egress stairs/ramp (advisory).

- (vii) Consider developing an overall emergency management plan, which would also include the use of a fire warden, to identify additional strategies to facilitate emergency egress for people with disability in line with AS3745-2010. This is in addition to the potential development of Personal Emergency Evacuation Plans (PEEPs) for any staff members that have identified with disability (advisory).

6. BUILDING - PATHS OF TRAVEL

6.1. Gallery and associated Circulation Spaces

A continuous accessible path of travel can be achieved from the required accessible entrance at Entry level to and throughout the main common-use facilities at Entry level which include: Entry Pavilion, Gallery 1, Lift lobby circulation space and accessible areas of Outdoor Roof terraces D and E via circulation areas and ramps in accordance with AS1428.1 and DDA Premises Standards.

A continuous accessible path of travel can be achieved from the required accessible entrance at Entry level to and throughout the main common-use facilities on lower building levels which include: Gallery spaces 2 -7, Café and Outdoor Café, Gallery Shop, Outdoor Roof terrace F, Foyer, Multi-purpose Hall, Staff areas and associated amenities via the main passenger lifts (x2) in accordance with AS1428.1 and DDA Premises Standards.

The main passenger lifts are centrally located within the development on Entry level and are located on north western side of building as the building levels descend down the site. The lifts provide continuous paths of travel to and within all building areas as required. The location of passenger lifts is in reasonable proximity to stairs, and with directional signage will promote choice and flexibility in use in accordance with DDA Premises Standards.

In general, the design incorporates large open plan spaces that will allow flexibility and planning of accessible paths of travel to and within all Gallery spaces and associated areas as required by the DDA Premises Standards and AS1428.1. The open plan areas include a freestanding column grid system across each level of the building. The column locations are generally outside of key circulation paths however ongoing consideration will need to occur during design development and for the planning of temporary exhibitions to ensure that columns do not become potential obstacles for people, in particular for people with vision impairment.

Generally, the main paths of travel on all levels can achieve circulation spaces to allow wheelchair users the area to pass another wheelchair user or a person with a pram when traveling in opposite direction (1800mm min. primary path) or to turn 180° (1550mm min. secondary path) compliant with AS1428.1 and DDA Premises Standards. Further review is required of some corridor widths eg. leading to sanitary facilities to ensure turning and door circulation areas and this is achievable.

Alternate vertical circulation throughout the building levels for ambulant users is provided via escalators and stairways. Most stairs and escalators are located within building voids and will become free-standing overhead elements adjacent to required accessible paths of travel.

This will be developed further at design development stage.

Recommendations:

- (i) Provide turning spaces (at least 1540mm width x 2070mm length) within 2m of each corridor end and at 20 metre max. intervals in accordance with AS1428.1 and DDA Premises Standards.
- (ii) All required accessible paths of travel to provide slip resistant floor surface materials in compliance with HB198/AS4586.
- (iii) Ensure continuous access and level surface transitions between all internal and external art gallery space/terrace areas, compliant with AS1428.1.

- (iv) Any freestanding building elements such as escalators and stairs that are located adjacent to accessible paths of travel will need suitable barriers developed to inhibit physical access to overhead hazards within 2000mm min. height clearance above FFL.
- (v) Ensure location of the freestanding columns on each level are either on/directly adjacent to walls or sufficiently away from walls to maintain clear accessible paths of travel that are at least 1000mm width and to help minimise columns being potential obstacles for people with vision impairment.
- (vi) Consider providing 30% min. luminance contrast between freestanding columns and surrounding/adjacent surfaces ie. flooring and wall surfaces to improve detectability for people with vision impairment and safety by design for all (advisory).

6.2. Multipurpose Space

A continuous accessible path of travel is provided from the required accessible entrance, Entry level to Multi-purpose space, located on LL2 by the public passenger lifts in accordance with AS1428.1 and DDA Premises Standards.

The connecting doors from the LL2 Foyer, Gallery 6 to the Multi-purpose space are large pivot doors (approx. 1800mm wide) which would not meet AS1428.1 requirements for lightweight operation. Ongoing review during design development stage will be required to provide an accessible door, compliant with AS1428.1 for independent access to/from Multi-purpose Space to associated sanitary facilities and amenities.

The design of the space incorporates a large open plan space for flexibility and large connecting doors to an external terrace of similar size to those described above. There is a small Green Room associated with the room that will also need to be accessible.

The space can achieve circulation space to allow a wheelchair user the area to pass another wheelchair user when traveling in opposite direction (1800mm min. primary path) or to turn 180° (1550mm min. secondary path) compliant with AS1428.1 and DDA Premises Standards.

Recommendations:

- (i) Provide at least one accessible hinged door to the Multi-purpose space and associated terrace area with at least 850mm min. clear width and door circulation areas and operation/controls, compliant with AS1428.1.
- (ii) Ensure access to and within associated Green Room, compliant with AS1428.1.
- (iii) Ensure continuous access and level surface transitions between internal and external space/terrace areas, compliant with AS1428.1.
- (iv) All required accessible paths of travel to provide slip resistant floor surface materials in compliance with HB198/AS4586.
- (v) Consider providing 30% min. luminance contrast between freestanding columns and surrounding/adjacent surfaces ie. flooring and wall surfaces to improve detectability for people with vision impairment and safety by design for all (advisory).

6.3. Café and Outdoor Café

A continuous accessible path of travel can be achieved from the required accessible entrance, Entry level to the Café space, located on LL1 by public passenger lifts and the

access walkway in accordance with AS1428.1 and DDA Premises Standards. It is understood the Café areas are being designed to operate in both typical and function modes.

The design of the Café space incorporates an open plan indoor area around a void with the kitchen proposed as an independent circular pod structure that sits independently within a freestanding column grid system. At this stage there is only indicative loose table/seating furniture. There is no detail on proposed kitchen servery/point of sale areas.

There is direct access to the external Café Terrace seating area, located on Outdoor Roof F via dual hinged doorways that can achieve compliance with AS1428.1. There is reasonable access to and through the indicative loose table/seating furniture externally that is partially covered for improved weather protection.

The main circulation paths to and around the doors are sufficient for two wheelchair users to travel together or pass one another in the opposite direction, compliant with AS1428.1:2009 and the DDA Premises Standards.

It is assumed that the café fit-out will be subject to a separate building approval process by the future tenant to meet DDA Premises Standards and AS1428.1.

Recommendations:

- (i) Ensure there is at least 1550mm min. clear space (1800mm preferred) provided in front of all servery and service points, on primary circulation paths and at all corridor ends for turning spaces and manoeuvrability, compliant with AS1428.1.
- (ii) Maintain 1000mm min. clear width paths (1200mm min. preferred) for all secondary circulation paths where no turning is required, compliant with AS1428.1.
- (iii) Ensure all manual door components are developed to ensure ease of access and lightweight operation (20N), in compliance with AS1428.1. Where this cannot be achieved automated doors should be implemented to ensure ease of access for all.
- (iv) Ensure continuous access and level surface transitions between internal and external café seating/terrace areas, compliant with AS1428.1.

6.4. Common Use Walkways & Ramps

There are identified floor level changes where access walkways or ramps are proposed in public areas of the building located at:

- Entry Level, external ramp between Outdoor Roof E and the Viewing Area of Outdoor Roof D (currently 1:12 gradient for 13m ramp length)
- LL1, internal ramp between the main Circulation Foyer and the Café (currently 1:12 gradient for 8.6m ramp length)
- LL4, internal ramp between lifts and Gallery 8 (currently 1:6.5 gradient for 6.5m ramp length)
- LL4, internal curved walkway (currently 1:33 gradient for 15m length) and straight ramps between raised platform in Gallery 8 (currently 1:7 gradient for 1.7m length)

With further review the access walkway and ramps can achieve continuous access between level landings in compliance with AS1428.1:2009 and DDA Premises Standards. This will need be developed further at design development stage.

Recommendations:

- (i) Further review is required of all ramps to ensure they do not exceed 1:14 max. gradient for 9m max. ramp length between level landings and will include ramp access features developed in compliance with AS1428.1.

Note: Access ramps can have a 1:14 max. gradient for 9m max. lengths or an access walkway can have 1:20 gradient for 15m max. lengths. For any ramp gradients between 1:14 and 1:20, the intervals need to be obtained by linear interpolation, compliant with AS1428.1.

- (ii) The curved walkway proposed at LL4 in Gallery 8 will require suitable edge protection on both sides, compliant with AS1428.1.

6.5. Roof Terraces

The building proposes various outdoor Roof Terraces, some of which are accessible to the public. These include:

- Roof E, Entry level
- Roof D, upper Entry level
- Roof F, LL2

The above roof terrace areas have a combination of hardstand floor surfaces that are intended to be trafficable and physically enjoyed by the public and green landscape areas that are intended to be enjoyed by other sensory means eg. visual access.

A continuous accessible path of travel can be achieved from the required accessible entrance, Entry level to outdoor Roof E and part of Roof D via level pathways and an access ramp that can achieve compliance with AS1428.1.

A continuous accessible path of travel can be achieved from the required accessible entrance, Entry level to outdoor Roof F via the public passenger lifts and the Café access ramp that can achieve compliance with AS1428.1.

Both Roof E and Roof F have hardstand level floor surface areas where continuous access to and within, compliant with AS1428.1 can be achieved. However Roof D is a continuous sloping terrace that has been proposed as an architectural feature to maximise views across the building and the surrounding landscape areas. The terrace slopes in two directions: with a height variation of approx. 2350mm fall from north to south and approx. 940mm fall from west to east.

An accessible Viewing Area/Terrace (both internal and external areas) is proposed at the top of Roof D (approx. 20% of total roof area) with continuous access provided via the access ramp from Entry level. This hardstand surface area will need to provide level surfaces no steeper than 1:40 in any direction to ensure equitable and safe access for people with disability and people with prams.

The remainder of Roof D (both internal and external areas) is proposed as an architectural element that can be trafficable, used for seating or enjoyed visually as a sculptural feature. It is comprised of a series of continuous curved 'steps' that continue across the full width of the terrace. The 'steps' have irregular geometry that does not meet BCA requirements to be classified as a 'stair' (ie. 100mm riser height and varying curved treads between 624-1433mm depth). However it may function as 'a stair' due to its stepped formation and location between the external accessible Viewing Area/Terrace and an external

communication/egress stair that connects from lower portion of Roof D down to Roof F where Outdoor café area is located on LL2.

While appreciated as an architectural/sculptural element within the Art Gallery context, and noting that the Entry level passenger lifts (within 50m travel distance from the Accessible Viewing terrace) provide an alternate accessible path of travel between LL1 and LL2, the stepped nature of this element will remain a potential DDA and safety by design issue for the operator.

This could be partially mitigated by the provision of access features in line with AS1428.1 and AS148.4.1 however expert advice from an ergonomic/safety by design consultant is required for general access and safety by design.

Recommendations:

- (i) Ensure Roof D Viewing Area/Terrace (both internal and external areas) provides level surfaces no steeper than 1:40 in any direction to ensure equitable and safe access for people with disability and people with prams, compliant with AS1428.1.
- (ii) Ongoing advice and consultation between ergonomic consultant, access consultant and BCA consultant is needed to ensure adequate provisions are made for people with disability to satisfy BCA performance requirements for various building design elements where proposed geometry falls outside of BCA and AS1428.1 design parameters/requirements such as 'stepped rest area' on Outdoor Roof D terrace.
- (iii) All required accessible paths of travel to provide slip resistant floor surface materials in compliance with HB198/AS4586.
- (iv) Consideration for access features for stairways, compliant with AS1428.1 (ie. compliant handrails on both sides of steps, step nosing and TGSI's) to be included for the stepped landing element on through-site linkage, and stepped rest area on Roof D terrace (both internal and external areas), even though not technically 'stairs' under BCA definition (advisory).
- (v) Consideration to be made to improve the relationship and/or increase the visibility to/from the main passenger lifts within the building to Roof D and surrounding environment by increasing the void areas and/or considering the use of glass lifts Between Entry level and LL1 (advisory).
- (vi) Consideration to be made to include rest seating (fixed and/or loose furniture) that is reflective of differing height ranges, including some with backrests and side arms for support, compliant with AS1428.2 (advisory). Seating options are strongly recommended on the outdoor roofs and in particular on Roof D Viewing Area/Terrace (both internal and external areas).

6.6. Doors

In general, the internal doors within the SMP building (i.e. shop, halls, meeting, multi-purpose rooms etc.) and doors to external terrace areas are single or double- hinged doors, which can achieve 850mm min. clear open width (920mm door leaf) compliant with AS1428.1.

Recommendations:

- (i) All common-use doors to areas required to be accessible to have 850mm min. clear width active leaf and door circulation areas, compliant with AS1428.1. Additional comment has been made on door to/from Multipurpose Space in Section 6.2.

- (ii) Provide level door thresholds/continuous access between all internal and external terrace areas, compliant with AS1428.1.
- (iii) Ensure all manual door components are developed to ensure ease of access and lightweight operation (20N), in compliance with AS1428.1. Where this cannot be achieved automated doors should be implemented to ensure ease of access for all.

6.7. Internal Passenger Lifts

There are 2 x public passenger lifts proposed within the building; 1 x Staff BOH Art goods lift and 2 x Staff BOH goods lifts (Café kitchen and Multipurpose).

The public passenger lifts (x2), located adjacent to Entry Pavilion provide continuous access and serve all levels of building, from Entry level down to LL4 in accordance with DDA Premises Standards. The public lifts have two sided lift cars and more than 12m travel height. They can achieve the min. internal dimensions of 1400mm W x 1600mm D of AS1735.12 and DDA Premises Standards with minor review required. Currently the public lifts appear to only have 2500mm W x 1400mm D.

The Art goods lift will be used for transport artworks across all building levels as well as function as a general BOH staff lift to dedicated Staff BOH areas on LL3, LL4. On this basis it will require access features to meet AS1735.12. It is located adjacent to Entry Pavilion and provides continuous access and serves all levels of building, from Entry level down to LL4 in accordance with DDA Premises Standards. The Art goods lift has more than 12m travel height and has increased dimensions that exceed the min. internal dimensions of AS1735.12 and DDA Premises Standards.

The other BOH staff/goods lifts connect Staff BOH loading/bulk store areas on levels LL4, LL3 to the Café commercial kitchen and Multipurpose Pantry space (presumed to be used for Function catering purposes). If these two spaces are seeking a BCA/DDA Access Code Part D3.4 Exemption from accessibility (due to the particular nature of use and/or potential WH & S risks or restrictions for people with disability of these areas) then, the path of travel leading to them ie. the lift may not need to meet access requirements. Formal clarification from the client will be required if a Part D3.4 access exemption is sought and notwithstanding that BCA min. compliance will still be required.

The public lift lobbies on each level have generous circulation spaces that exceed 2250mm that will allow for appropriate manoeuvrability outside waiting spaces for people using mobility aids and wheelchair, compliant with AS1428.1.

Recommendations:

- (i) Ensure the 2 x public passenger lifts can achieve the required min. internal dimensions of 1400mm W x 1600mm D of AS1735.12 and DDA Premises Standards. Particular attention needed for the min. 1600mm depth dimension.
- (ii) Formal clarification from the client will be required if a Part D3.4 access exemption is sought for Café commercial kitchen and Multipurpose pantry space (due to the particular nature of use and/or potential WH & S risks or restrictions for people with disability) as this will impact on lift compliance level to satisfy BCA and/or DDA Access Code.
- (iii) All passenger lift cars (serving areas required to be accessible) require internal components (control panel, handrails, visual & audio devices) that comply with

AS1735.12. All lift lobbies will require appropriate audio/visual components and call buttons as specified in AS1735.12.

- (iv) Consideration for passenger lifts to form part of a broader accessible egress strategy for people with mobility issues that are unable to use egress stairs (advisory).

6.8. Common Use Building Stairs

There are numerous building communication stairs proposed between levels that provide vertical access throughout building for ambulant users. These include:

- Stair between Gallery 8 and raised platform, LL4 (public)
- Spiral feature stair between Foyer LL2 and Gallery 8, LL4 (public)
- Curved feature stair between Foyer, LL2 and Café, LL1 (public)
- External stair between Roof F Outdoor Café Terrace, LL1 and Roof D, LL1 (public)
- BOH stairs: Shop store, LL1; AHU Gallery 1, LL2; AHU Multi-purpose, LL2; various stairs LL3 (staff)

Most public stairs are located within reasonable proximity (less than 50m distance) to passenger lift lobbies, in accordance with AS1428.1 and DDA Premises Standards. Some exceptions are noted on LL1 where the distance from the external stairs and internal stairs associated with the Outdoor and Indoor Café on Roof F and LL2 to the passenger lifts (that provide accessible path of travel) is approx. 70m. Directional signage will assist location of the lifts from the stairs and improve choice and equity of access for users.

In general, the clear width of most public stairways can achieve 1500mm min. clear width (to allow two people walking to pass one another) between handrails on both sides with access features to meet AS1428.1 and AS1428.4.1.

The provision of well-designed stairs, in addition to passenger lifts promotes choice and flexibility in use (UD principle 2) for ambulant people that may prefer this form of vertical access.

Review will be required of Staff BOH stairs to ensure that 1000mm min. clear width between handrails on both sides with access features to meet AS1428.1 and AS1428.4.1 can be achieved.

Recommendations:

- (i) All communication stairs (public and Staff BOH) to areas required to be accessible to be designed to provide at least 1000mm min. clear width with suitable stair configuration and set-back from transverse paths of travel to enable provision of handrails on both sides with extensions that do not protrude or create safety hazards, compliant with AS1428.1.
- (ii) Ensure that the geometry/configuration of Spiral and curved feature circular stairs will enable the required handrails on both sides to be suitably positioned over the stair tread (given tapered shape) to function as effective support/guide when ascending/descending stairs, compliant with BCA and AS1428.1 requirements.

6.9. Escalators

There are 2 x sets of escalators (each with up and down direction) proposed for vertical access for ambulant users to connect between Entry level and LL1 and between LL1 and LL2.

At the LL1 transfer level, between the escalators there is good visibility to assist people locate the next set of escalators. All escalators are located in reasonable proximity to the passenger lift lobby (within 50m distance to alternate accessible path of travel) on each level however directional/way-finding signage will still be required due to the obstructed view. This will improve choice and equity of access for users.

The escalators appear to have 1000mm min. clear width. While not technically classified as an accessible path of travel, 1000mm min. width is recommended for improved access and inclusion eg. people using guide or assistance dogs and/or for larger people will require this minimum width, in line with AS1428.1 parameters.

The provision of well-designed escalators, in addition to passenger lifts and stairs promotes choice and flexibility in use (UD principle 2) for ambulant people that may prefer this form of vertical access.

Recommendations:

- (i) All escalators to include TGSIs at top and base landing areas, compliant with AS1428.4.1. We strongly recommend using escalators with extended pit lids that can achieve 900mm min. length from the moving handrail, so that required access features (TGSIs) can be installed entirely on the pit lid. Note: Review required of the 1:21 walkway on LL1 where directly adjacent to escalator as identified in Section 6.4
- (ii) Consideration for all escalators to have 1000mm min. clear width between moving handrails (advisory).
- (iii) Consideration for escalators to be set-back from transverse paths of travel to enable moving handrails on both sides and required TGSIs to not protrude or create safety hazards, compliant with AS1428.1 (advisory).

6.10. Staff Back of House (BOH) Areas

The main dedicated Staff BOH areas are proposed on LL3 and LL4. On LL3 there is a small on-site parking area and loading dock with vehicular access from Lincoln Crescent with associated staff administration offices, loading areas, workshops and storage/plant areas. On LL4 there are administration and plant rooms.

There are also small Staff BOH areas proposed on other building levels eg. LL1: AHU space, Shop office, Storage areas, commercial kitchen; LL2: AHU spaces, Hot Desk area, Projector Rooms, Multipurpose Pantry, Storage areas etc. Some of these areas are proposed as split-level with stair only access to the upper level which is not currently accessible for people with mobility impairment and may require design review or a performance based solution to meet BCA performance requirements.

Some BOH staff areas and the paths of travel leading to them may not require accessibility compliant with AS1428.1 due to their particular purpose (eg, Commercial Kitchen, Multipurpose Pantry, Generator, Sub-station, Plant areas, Loading dock vehicular zone) and other areas the client may wish to seek a concession from full access compliance due to the nature of work required within the space that may pose work, health and safety issues for people with disability (eg. Storage and some Workshop zones).

A continuous accessible path of travel within the building to and from Staff BOH areas on LL3 and LL4 is available via the 1 x Staff BOH Art goods lift and 2 x Staff BOH goods lifts (Café kitchen and Multipurpose).

In general the main connecting corridors to/from the Staff BOH Art goods lift can achieve circulation space to allow a person using a wheelchair the area to pass another wheelchair user when traveling in opposite direction (1800mm min. primary path) or to turn 180° (1550mm min. secondary path) compliant with AS1428.1 and DDA Premises Standards.

Recommendations:

- (i) Access to and within all common-use staff areas is required, compliant with AS1428.1:2009, unless a formal concession/exemption from access is sought by the operator from the PCA and supported under a BCA Part D3.4 Exemption. Ongoing review by the client and design team of Staff BOH areas is needed to identify and document any areas seeking a part D3.4 exemption and/or a performance based solution so that accessibility and BCA performance requirements will be satisfied.
- (ii) Any stairs, ramps, doorways etc. either within or leading to Staff BOH areas required to be accessible will need to comply with AS1428.1.
- (iii) All required accessible paths of travel to provide slip resistant floor surface materials in compliance with HB198/AS4586.

7. SANITARY FACILITIES AND AMENITIES

7.1. General

There are no sanitary facilities proposed at the Entry level to the building.

Sanitary facilities that include male and female toilet banks are proposed in the following areas:

Public areas:

- LL1 (public) – 1 bank
- LL2 (public) – 1 bank
- LL4 (public) - 1 bank

Staff only areas:

- LL3 – 3 banks (including 2 x single toilets and 1 x bank of 2 cubicles)
- LL4 1 bank (including 1 x single toilet)

7.2. Accessible Toilets

Public areas:

A separate unisex accessible toilet facility is located adjacent to male and female toilet banks on each level to satisfy BCA and DDA Premises Standards Part F2.4.

In general the overall dimensions of the accessible toilet rooms on LL1, LL2 and LL4 can achieve compliance with AS1428.1 circulation, with minor review of internal fixture layout and entry door location to occur during design development.

An accessible path of travel is generally achievable to each accessible toilet with ongoing review required of required door circulation space and turning spaces within corridor, compliant with AS1428.1 to occur during design development stage.

Staff areas:

A separate unisex accessible toilet facility is not currently shown adjacent to staff male and female toilet banks on level 3 or level 4 to satisfy BCA and DDA Premises Standards Part F2.4 requirements.

Review is required to provide at least 1 accessible toilet located adjacent to male and female toilet banks on each level to satisfy BCA and DDA Premises Standards Part F2.4 unless the areas are seeking an exemption from access under Part D3.4 due to nature of use and/or potential WH & S risks for people with disability.

Recommendations:

- (i) Ensure all required accessible toilets are developed in compliance with AS1428.1-2009 ensuring at least 1900mm (W) x 2300mm (L) around the WC pan with the basin to sit outside this area with required circulation areas at doors and between all fixtures.
- (ii) Ensure a balance of right hand (RH) and left hand (LH) transfer toilet pans building to meet BCA and DDA Premises Standards Part F2.4 and promote flexibility in use (UD principle 2). Currently all WC pans are shown as right hand transfer (RH).

- (iii) Ensure corridors leading to accessible toilets are at least 1550mm min. clear width or have an increased width turning space (1540mm W x 2070mm L) within 2m of corridor ends.
- (iv) Ensure all doors to accessible toilets meet door clearance and circulation requirements or are power operated doors to meet AS1428.1-2009.
- (v) Provide at least one accessible toilet within staff areas on LL3 and LL4 adjacent to at least one bank or 50% of toilets if more than one bank to meet BCA and DDA Premises Standards Part F2.4.

7.3. Ambulant Cubicles

Ambulant cubicles are required to be provided within the above public or staff male and female toilet banks, adjacent to required accessible toilets as required by BCA and DDA Premises Standards Part F2.4. This is to enable use by people with ambulant disabilities, people with sensory impairment and older people that may need additional support within a standard toilet bank.

Recommendations:

- (i) Provide at least one ambulant cubicle for people with ambulant disabilities, compliant with AS1428.1 within all male and female toilets, (adjacent to a required accessible toilet facility) as required under the BCA and DDA Premises Standard Part F2.4.
- (ii) Ensure the ambulant cubicle and path of travel, including door circulation for ambulant users leading to the ambulant cubicle is designed in accordance with AS1428.1:2009.
- (iii) Consideration to be made within the design for at least one urinal within all male toilet banks to be installed at a lower height to assist people of smaller stature and promote flexibility in use (UD principle 3) (advisory).

7.4. Additional Public Amenities

Additional amenities for the public including a small combined Parents Room and First Aid Room are proposed within the building at LL4. The main passenger lifts within building will ensure continuous access can be achieved to these areas as required by AS1428.1 and DDA Premises Standards. These will be developed during ongoing design development to achieve AS1428.1 internal circulation areas between key fitments and fixtures.

It is unclear if any additional baby change facilities are proposed within the public sanitary facilities (either accessible, male, female) on other upper levels LL1, LL2.

It is unclear if any additional adult change facilities (ie. for children/adults with severe disabilities, unable to use a standard accessible toilet) are proposed within the building. Considering that the Parents Room and First Aid Room facilities are to be located on LL4, this is viewed as the most suitable location for a Changing Places facility.

Recommendations:

- (i) Ensure access to and within all common-use areas and amenities, compliant with AS1428.1. It is recommended that separate Parents and First Aid rooms are provided, given the different functions/use for each space.
- (ii) If folding baby-change tables are proposed to be installed within any accessible, male or female toilets, (for increased flexibility in use), this will increase the required

overall size of the toilets as when folded away/not in use, the baby-change must not encroach into the required WC, basin or door circulation areas. This is recommended and should be considered to promote universal design (advisory).

- (iii) Consideration for inclusion of a dedicated “Changing places facility” within the building adjacent to Parents Room and First Aid Room facilities on LL4 given this is a new and significant public building. This provision is above and beyond current building codes and is a best practice inclusion to support people with disability (severe or multiple) and/or their carers unable to use a standard accessible toilet that may wish to visit the development. It will also enable use by people using larger mobility aids eg. mobility scooters that may not fit inside a standard accessible toilet. Refer to www.changingplaces.org.au. If not achievable within the proposed development, we recommend using the development opportunity to create a partnership with City of Sydney and/or other key public institutions (Royal Botanical gardens/Domain Trust) along/ associated with public domain areas along the “Cultural Ribbon” precinct for a partnered solution nearby (advisory).

8. COMMON FACILITIES AND AMENITIES

8.1. New Customer Service and Hospitality Areas

Recommendations:

- (i) To promote inclusion and ensure equitable and dignified access to information and services consider providing an accessible lowered counter area on public side of all new service/information counters (eg. Main Information/Ticketing, Cloaking, cafés, bars, kiosks, serveries, restaurants, reception areas, security points, pop up facilities etc.), compliant with AS1428.2 (advisory).
- (ii) Consideration for the Main Information and Ticketing counter and all accessible service areas, to include hearing counter loops to enhance access for people with hearing impairment. This exceeds minimum requirements of BCA and DDA Access Code (advisory).
- (iii) Ensure a level surface circulation area in front of each accessible service area of at least 2250mm diameter to enable a person using a wheelchair to turn 360 degrees (based on AS1428.2/advisory). This exceeds minimum requirements of BCA and DDA Access Code which is 1540mm x 2070mm (mandatory). Consideration may be needed to increase the size of this area in some high volume areas where extended waiting times and queuing may be required.

8.2. Hearing Augmentation

Recommendations:

- (i) As a Class 9b building, the multipurpose space/auditorium, any spaces used for conference, meetings rooms, educational/lecture spaces that provide inbuilt amplification systems (except those solely for emergency warning purposes) require a hearing augmentation system to comply with BCA and DDA Access Code Part D3.7.
- (ii) This should also apply to any external areas associated with the gallery if they are proposed with inbuilt amplification eg. Entry Plaza, Café and Outdoor Café terrace, Roof Terraces, Gallery spaces and/or areas with in-built electrical, lighting and communications service provisions.
- (iii) Hearing loops are required to at least 80% of floor area with inbuilt amplification system. Infra-red or FM systems (that require the use of receivers) need to ensure coverage to 95% of floor area of room/areas served by inbuilt amplification system. The no. of receivers to be provided for each venue is to be determined based on D3.7 (b) (ii).
- (iv) Consider providing hearing augmentation systems at any areas that are anticipated to regularly use portable amplification systems, all accessible service counters, lift points, communication points, (eg. intercoms to buildings) and warning systems, compliant with AS1428.5 to enable all people making enquiries to clearly hear staff. This is above minimum requirements of BCA and DDA Access Code (advisory).
- (v) Any accessible public payphones to have TTY capabilities and be signed with international symbol for deafness, compliant with AS1428.1 and AS1428.5. This is above minimum requirements of BCA and DDA Access Code (advisory).

- (vi) Consideration to provide computer-aided real time captioning (CART) systems, and/or access to captioning on television sets/video displays in exhibitions as required in addition to hearing loops systems at public meeting areas to enable deaf participants to effectively communicate. This is above minimum requirements of BCA and DDA Access Code (advisory).
- (vii) Consider providing appropriate, even lighting with minimal glare, particularly at Ticketing/information counters to assist people with hearing impairment lip-read/communicate with staff (advisory).

8.3. Signage, Wayfinding & Technology

Recommendations:

- (i) The development will be required to meet BCA and DDA Premises Standards for all statutory signage requirements eg. identification signage for accessible entrances, sanitary amenity signage, hearing augmentation signage, accessible egress signage; and directional signage from non-accessible elements (eg. revolving doors/stairs/escalators) to identify alternative accessible route (eg. accessible entrance/lifts/ramps) to comply with DDA Access Code/BCA Part D3.6 and AS1428.1.
- (ii) A consistent system of way finding and directional signage should be used to assist building orientation and help direct people to building entrances, lifts, accessible toilets, art gallery spaces and interest areas, key transport linkages, taxi and bus stops etc.
- (iii) In addition, there may be best practice opportunities within the developed design to consider/explore the potential of technology as a wayfinding tool for people with disability eg. people who are blind or vision impaired or people who are Deaf or hearing impaired e.g. latest wayfinding automation linking “smart phones” “iBeacon” “Open Access Tours” at/from transport to concierge, lift lobbies, internal transition points, key facilities and gallery exhibitions/guides (advisory/best practice).

8.4. Lighting

Recommendations:

- (i) Consideration for a uniform level of lighting to be provided in accordance with AS1428.2 to and within building areas (advisory).
- (ii) Consideration for the external lighting to be glare free in accordance with AS1680 and take into account safety by design and surveillance (advisory). It is understood that an external lighting report has been prepared by Arup as part of the DA application.
- (iii) As the proposed design of SMP building will utilise significant areas of glazing, consideration to be made for potential shading solutions to assist people with sensory impairments (often highly sensitive to glare), particularly at and around customer service and information areas (advisory). It is understood that a Spate Reflectivity Report has been prepared as part of the DA application.