POWERHOUSE PARRAMATTA
ENVIRONMENTAL IMPACT STATEMENT

APPENDIX CC
ACCESS REVIEW

Morris Goding Access Consulting

NSW GOVERNMENT

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Infrastructure NSW

Powerhouse Parramatta

Access Review – SSDA FINAL

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1. Executive Summary

The Access Review Report is a key element in the design of Powerhouse Parramatta, and an appropriate response to the AS1428 series, Building Code of Australia (BCA), and DDA Access to Premises Standards (including DDA Access Code).

The subject site is located at Phillip Street, Parramatta NSW 2150.

The development is envisaged as a vibrant precinct consisting of a multi-storey arrangement across two major building blocks each connected by sky bridges on several levels. The functional groups within the development are as follows:

- Public Domain and Civic Link
- Concierge
- The Powerlab (consisting of residences, coworking spaces, studios, library, research and education and community spaces, support areas and amenities)
- Presentation spaces
- Retail and Food and Beverage
- Back of House

Morris Goding Access Consulting has prepared the Access Report to provide advice and strategies to maximise reasonable provisions of access for people with disabilities. The proposed development has been reviewed to ensure that ingress and egress, paths of travel, circulation areas, sanitary facilities, and accommodation comply with relevant statutory guidelines.

The recommendations in this report are to be developed in the ongoing design development and should be confirmed prior to construction certificate stage. As the project proceeds, further review of documentation is strongly recommended to ensure that appropriate access is provided to and throughout the development.

2. Introduction

2.1 Background

Infrastructure NSW has engaged Morris Goding Access Consulting, to provide a design review of Powerhouse Parramatta.

The development consists of the following:

- Public Domain and Civic Link
- Concierge
- The Powerlab (consisting of residences, coworking spaces, studios, library, research and education and community spaces, support areas and amenities)
- Presentation spaces
- Retail and Food and Beverage
- Back of House

The proposed development falls under several BCA classifications:

- Class 3 (accommodation)
- Class 5 (commercial)
- Class 6 (retail)
- Class 8 (laboratory)
- Class 9b (public assembly)

The requirements of the investigation are to:

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

2.2 Objectives

The Powerhouse Parramatta project 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.

2.3 Accessibility of Design

The proposed design will utilise the Federal Disability Discrimination Act (DDA), Disability (Access to Premises – Buildings) Standards 2010, BCA/DDA Access Code, Universal Design principles, SEPP Seniors Living Policy, AS1428 Series, and other design guidelines, to develop appropriate design documentation, to provide reasonable access provisions for people with disabilities.

The design will be developed to ensure the principles of the DDA are upheld. Under the DDA, it is unlawful to discriminate against people with disabilities in the provision of appropriate access, where the approach or access to and within a premise, makes it impossible or unreasonably difficult for people with disabilities to make use of a particular service or amenity.

2.4 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 Powerhouse Parramatta project, 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 museum for Sydney that reflects the global nature of the city.

2.5 Statutory Requirements

The statutory and regulatory guidelines to be encompassed in the developed design to ensure effective, appropriate and safe use by all people including those with disabilities will be in accordance with:

- Federal Disability Discrimination Act (DDA);
- Disability (Access to Premises – Buildings) Standards 2010;
- Building Code of Australia 2019 (BCA) Part D3, F2, E3;
- AS 1428.1:2009 - (General Requirement of Access);
- AS 1428.4.1:2009 - (Tactile Ground Surface Indicators);
- AS 1735.12:1999 - (Lift Facilities for Persons with Disabilities)
- Parramatta Development Control Plan 2011

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);

- Human Rights Commission (HEREOC) Advisory Note February 2013 on streetscape, public, outdoor areas, fixtures, fittings and furniture;
- AS1428.4.1 Draft Way-finding Standard;
- AS3745:2010 – Planning for Emergencies in Facilities (to assist with design strategies for provision for escape for people with disability that may require assistance).

2.6 Limitations

This report is limited to the accessibility provisions of the building in general. It does not provide 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, stair nosing, TGSIs, handrail design, signage etc. that will be included in construction documentation.

3 Proposed Scheme and Regulatory Background

3.1 DDA Premises Standards

The Disability (Access to Premises – Buildings) Standards 2010 ('Premises Standards 2010') are a federal legislative instrument that was made under the Disability Discrimination Act 1992 (DDA). The Premises Standards 2010 prescribe minimum design and performance standards of accessibility in relation to built premises in general.

The site is subject to the requirements of the Premises Standards due to proposals for buildings, or spaces, within the development, that are categorised by a particular building classification in the Building Code of Australia.

The BCA building classifications of relevance to the development will include at a minimum:

- Class 3 (accommodation)
- Class 5 (commercial)
- Class 6 (retail)
- Class 8 (laboratory)
- Class 9b (public assembly)

Areas of the development classified under the above BCA building classifications will need to consider the following key issues;

- Access to and within principal entrances to the premises from the allotment boundary.
- Access to and within common use areas.
- Access to and within all areas normally used by the occupants.
- Accessible car parking spaces.
- Signage for persons with disabilities.
- Sanitary facilities for persons with disabilities.
- Accessible accommodation.

4. Ingress & Egress

4.1 External Linkages

The BCA and DDA Premises Standards contain requirements for site approaches for the use of persons with disabilities. These requirements can be summarised as follows:

- An accessible path of travel from main pedestrian entry points at the site allotment boundary to all building entrances compliant with AS1428.1:2009.
- An accessible path of travel between buildings (or parts of buildings) that are connected by a pedestrian linkage, within the site allotment boundary, compliant with AS1428.1:2009 is also required.
- An accessible path of travel to building entrances (required to be accessible) from associated accessible car-parking bays, compliant with AS1428.1:2009 is required.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

The site is accessible from all sides, including at grade from the Phillip Street approaches and major intersections south of the site, and from new, existing and extended access pathways along the river frontage north of the site.

A standalone passenger lift is included in the layout and this feature addresses the level differences between the riverfront walkways and functions and the main entrance level of the building. This passenger lift addresses equity issues raised with the use of the adjacent stairs for the same connection, and significantly reduces cumulative path of travel through the precinct that would otherwise be present.

On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

4.2 Entrances

The BCA and DDA Premises Standards contain requirements for building entry for the use of persons with disabilities. These requirements can be summarised as follows:

- Access through at least 50% of entrances, including the principal pedestrian entrance/s to all buildings or parts of buildings (i.e. when they have a separate function and/or use e.g. external retail tenancy). Note it is preferred that all entrances are accessible.
- A non-accessible entry located no more than 50m distance from an accessible entry (for buildings greater than 500m2).
- All accessible doors with 850mm min. clear width opening and suitable door circulation area, compliant with AS1428.1:2009.

- An accessible path of travel e.g. ramp or lift provided adjacent (or in reasonable proximity) to any stair access. Note: providing choice of access route directly adjacent so that people can start and finish in the same location/travel similar route promotes inclusion and UD principles.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

4.3 Emergency Egress

BCA 2019 Part D2.17 has requirements for all fire-isolated egress stairs from areas required to be accessible (not communication stairs) to include at least one continuous handrail designed to be compliant with AS1428.1 Clause 12. Provision of an off-set tread at the base of stair flights or an extended mid-landing that will allow a 300mm extension clear of egress route is considered appropriate for achieving a consistent height handrail (without vertical or raked sections).

Where fire-isolated egress stairs will also be used for communication stair purposes between levels, they should be designed to meet AS1428.1:2009. Confirmation is required on the likely use of certain stairs for this purpose.

There is currently no mandatory requirement within BCA or DDA Premises Standards for provision of independent accessible egress for people with a disability in accordance AS1428.1 and this remains an important DDA issue. Consideration of an accessible egress strategy with emergency evacuation plan will be needed as a minimum starting point.

Consideration of management systems and fire wardens for emergency egress for people with disabilities.

5. Paths of Travel

5.1 Circulation Areas

The BCA and DDA Premises Standards contain requirements for circulation areas for the use of persons with disabilities. These requirements can be summarised as follows:

- Wheelchair passing bays (1800mm width x 2000 length) when a direct line of sight is not available and are to be provided at 20m max. intervals along access-ways.
- Turning spaces (at least 1540mm W x 2070mm L) within 2m of every corridor end and at 20m.max intervals along all access-ways. This is needed for wheelchairs to make a 180 degree turn, compliant with AS1428.1:2009.
- All common-use doors (i.e. not excluded under Part D3.4) with 850mm min. clear width opening (each active door leaf) and suitable door circulation area, compliant with AS1428.1:2009.
- All common-use corridors and accessible paths of travel with at least 1000mm min. width when travelling in linear direction Note: Increased clear width paths of travel required for doorway circulation, turning areas etc.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

On the basis of the current level of detail all access requirements appear capable of achieving compliance, with suitable spatial provision in place. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

5.2 Passenger Lifts

The BCA and DDA Premises Standards contain requirements for passenger lifts and circulation areas for the use of persons with disabilities. These requirements can be summarised as follows:

- Passenger lifts with min. internal size at floor of 1400mm width x 1600mm depth, compliant with BCA/DDA Access Code Part E3.6 and AS1735.12.
- All lift lobbies and main corridors on each level with 1800mm min. clear width to allow two wheelchairs ability to space pass each other.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

5.3 Stairs, Ramps and Walkways and Escalators

The BCA and DDA Premises Standards contain requirements for stairs and ramps for the use of persons with disabilities. These requirements can be summarised as follows:

- Ramps maximum 1:14 gradient with landings at no more than 9 metre intervals
- Ramps with handrails on both sides with minimum 1 metre clearance in accordance with AS1428.1
- Landings 1200mm length with 1500mm length at 90 degree turns
- Stairs handrails on both sides in accordance with AS1428.1
- Stairs and ramps with offset to ensure no encroachment of handrail extensions into from transverse path of travel at top and bottom of stair/ramp
- Walkway maximum 1:20 gradient with landings at no more that 15m intervals
- Edge protection to walkways
- Tactile indicators to stairs, ramps and escalators

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

On the basis of the current level of detail all access requirements appear capable of achieving compliance. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

6. Facilities & Amenities

6.1 Sanitary Facilities

The BCA and DDA Premises Standards contain requirements for sanitary facilities suitable for the use of persons with disabilities. These requirements can be summarised as follows:

- For Class 5, 6, 7a, 9b: At least 1 unisex accessible toilet, adjacent to every bank of toilets (where provided) on each storey, compliant with AS1428.1 under BCA/DDA Access Code part F2.4. If more than 1 toilet bank provided on each level, accessible toilet is required at 50% min. of toilet banks at each level.
- For Class 9b: If common-use change facilities provided (i.e. both toilets and showers) a separate combined accessible WC/shower adjacent to male and female change rooms is required, compliant with AS1428.1 under BCA/DDA Access Code Part F2.4.
- An even number of left hand (LH) and right hand (RH) transfer WC pans (accessible toilets) within the building. Alternating LH/RH layouts on each subsequent level is the most appropriate and inclusive approach.
- Accessible WC with 2300mm x 1900mm around the pan with the basin to sit outside this area in accordance with AS1428.1.
- An ambulant cubicle within every standard toilet bank adjacent to an accessible toilet under DDA Access Code Part F2.4 compliant with AS1428.1:2009.
- For Class 9b museum, art gallery or the like: A unisex accessible adult change facility must be provided where design occupancy is not less than 1,500 patrons.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

On the basis of the current level of detail all access requirements appear capable of achieving compliance, with suitable spatial provision and indicate amenities arrangements. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

6.2 Common Areas

The BCA and DDA Premises Standards contain requirements for common use areas suitable for the use of persons with disabilities. These requirements can be summarised as follows:

- For class 2 and class 3 buildings, access to a unique common use facility such as swimming pool, sauna, common laundry, entertainment rooms.
- Accessibility to common use courtyards within buildings

- Mailboxes and garbage rooms within residential buildings with appropriate accessibility.
- Wheelchair access is required to any external and outdoor terrace areas including roof terraces compliant with AS1428.1.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

On the basis of the current level of detail all access requirements appear capable of achieving compliance, with no barriers to access evident. Further work will be required during design development stage to ensure appropriate outcomes are achieved.

6.3 New Customer Service and Hospitality Areas

Recommendations:

- 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 (e.g. Concierge, cloaking, cafés, bars, kiosks, serveries, restaurants, reception areas, security points, pop up facilities etc.), compliant with AS1428.2 (advisory).
- Consideration for Concierge 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).
- 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.

6.4 Hearing Augmentation

Recommendations:

- 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.
- This should also apply to any external areas associated with the museum if they are proposed with inbuilt amplification e.g. entry plaza, outdoor and retail terraces, roof

terraces, presentation spaces and/or areas with in-built electrical, lighting and communications service provisions.

- 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).
- 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 (e.g. 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).
- 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).
- 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).
- 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).

6.5 Signage, Wayfinding & Technology

Recommendations:

- The development will be required to meet BCA and DDA Premises Standards for all statutory signage requirements e.g. identification signage for accessible entrances, sanitary amenity signage, hearing augmentation signage, accessible egress signage; and directional signage from non-accessible elements (e.g. revolving doors/stairs/escalators) to identify alternative accessible route (e.g. accessible entrance/lifts/ramps) to comply with DDA Access Code/BCA Part D3.6 and AS1428.1.
- 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, presentation spaces and interest areas, key transport linkages, taxi and bus stops etc.
- 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 e.g. 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 museum exhibitions/guides (advisory/best practice).

6.6 Lighting

Recommendations:

- Consideration for a uniform level of lighting to be provided in accordance with AS1428.2 to and within building areas (advisory).
- Consideration for the external lighting to be glare free in accordance with AS1680 and take into account safety by design and surveillance (advisory).
- As the proposed design of Powerhouse Parramatta 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).

7. Accessible Sole Occupancy Unit

7.1 Accessible SOU Provision

The BCA and DDA Premises Standards contain requirements for accessible SOUs (sole occupancy units) for the use of persons with disabilities. Powerhouse Parramatta includes a mix of accommodation types within The Powerlab (described below). Given this section of the development is considered Class 3 under the BCA there is a requirement for a certain quantity of accessible accommodation.

Table 3.1 of the BCA notes the following for Class 3 development:

1 to 10 sole-occupant units – 1 accessible sole-occupancy unit

11 to 40 sole-occupant units – 2 accessible sole-occupancy unit

41 to 60 sole-occupant units – 3 accessible sole-occupancy unit

The proposed accommodation mix according to the brief is as follows:

“The Residence” – a single 2 bedroom apartment which is accessible

“The Apartments” – 9 off 1 bedroom apartments, 2 of which are accessible

“The Studios” – 30 off 1 bedroom studio apartments, 6 of which are accessible

“The Academy” – Dormitory style accommodation for 60 beds, 6 of which are accessible

Aside from the above quantity of accessible accommodation the following requirements are to be satisfied:

- The accessible units are designed in accordance with AS1428.1.
- The accessible units to be representative of the range of rooms available.

Assessment

The drawings describe a distribution of accessible accommodation which matches the brief and, in the process, exceeds BCA minimum requirements.

7.2 Accessible SOU Design

The BCA and DDA Premises Standards contain requirements for accessible SOUs for the use of persons with disabilities. These requirements can be summarised as follows:

- The entry door of the unit achieves 850mm clear width opening (920 door leaf). Latch side clearance of 530mm needs to be achieved externally and internally of the door in accordance with AS1428.1.
- The bathroom of an adequate size to achieve an AS1428.1 compliant bathroom of shower, WC and basin with required circulation spaces. Normally 2750mm x 2300mm will satisfy the circulation area requirements.
- The bedroom with 1 metre either side of queen size bed and 1550 x 2070mm at the base of bed or similar configuration.

- All doors with 850mm clear opening width from the outset and easily achievable latch side clearances compliant with AS1428.1:2009.

Assessment

MGAC has reviewed the drawings and documentation in relation to the aforementioned requirements.

Although the layouts do not yet describe a great deal of detail the indicative spatial allowance for the accessible accommodation would indicate that a compliant layout is readily achieved at a future detail design stage.

Further work will be required during design development stage to ensure appropriate outcomes are achieved.

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8. Conclusion

MGAC has assessed the proposed scheme for Powerhouse Parramatta.

The proposed drawings indicate that accessibility requirements, pertaining to external site linkages, building access, common area access, sanitary facilities and dwelling design can be readily achieved. It is advised that MGAC will work with the project team as the scheme progresses to ensure appropriate outcomes are achieved in building design and external domain design.