BROOKFIELD MULTIPLEX

SCIENCE AND ENGINEERING BUILDING

UNSW

ACCESS REVIEW

Morris Goding Accessibility Consulting

FINAL

5th July 2016

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REPORT REVISIONS		
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1. EXECUTIVE SUMMARY

The Access Review Report is a key element in the design development of the proposed Science and Engineering Building at UNSW and is an appropriate response to AS1428 series, Building Code of Australia (BCA), 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 provisions of access for people with disabilities.

The proposed Science and Engineering Building has been reviewed to ensure that ingress and egress, paths of travel, circulation areas and sanitary facilities comply with relevant statutory guidelines.

In general, the development has accessible paths of travel that are continuous throughout. In line with the report's recommendations, the proposed development has demonstrated an appropriate degree of accessibility. The drawings indicate that compliance with statutory requirements can be readily achieved. The recommendations in this report are associated with detailed design and are achievable. The main recommendations that have arisen from the access review include:

(i) Ensure a kerb ramp is provided from Union Road to the pedestrian footpaths of Union Road adjacent to the primary entrance, to provide a step free path of travel, in accordance with AS1428.1:2009.

(ii) Equitable entry and access to top and bottom of the amphitheatre is to be achieved in accordance with the DDA Premises Standards.

(iii) Stairs located adjacent to footpaths are to be set back from the pedestrian footpath (boundary) a minimum of 900mm to allow for handrail extensions and TGSI's, compliant with AS1428.1:2009.

(iv) Ensure any walkway/ramps have maximum gradient of 1:20 with landings at intervals of 15M (walkway), or maximum gradient of 1:14 with landings at 9M (ramp) intervals, compliant with AS1428.1. Ramps are required to have handrails to both sides of the stair, handrail extensions and TGSI's.

(v) Provide an accessible dressing room sanitary facility with shower adjacent to the male and female dressing rooms of the IO Meyers Theatre, in accordance with BCA 2016.

(vi) Ensure the 3 wheelchair spaces provided in the lecture halls (fixed seating of approx. 50 seats) are in the arrangement of 1 single space and 1 group of 2 spaces, compliant with BCA2016 Table D3.9.

(vii) In any part of a Class 9b Building if an inbuilt amplification system is installed the provision of hearing augmentation is required, compliant with DDA Premises Standards and BCA2016 D3.7.

2. INTRODUCTION

2.1. General

Brookfield Multiplex has engaged Morris Goding Accessibility Consulting to provide design review of the proposed educational facility located at University of New South Wales, Kensington.

The requirements of the investigation are to:

- Review supplied drawings of the proposed development prepared by Grimshaw Architects.
- Provide a report that will analyse the provisions of disability design of the development, and
- Recommend solutions to ensure the design complies with the Disability Discrimination Act (DDA), Building Code of Australia (BCA) and AS1428 series.

2.2. Objectives

This report considers user groups such as students, teachers, and the general public as visitors. The Report attempts to deliver equality, independence and functionality to people with disabilities inclusive of:

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

The 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. 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, TGSI's, handrail design, signage, hearing augmentation etc. that will be included in construction documentation.

2.4. Statutory Requirements

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

- AS 1428.1:2009 - (Design for Access and Mobility)
- AS 1735.12:1999 - (Lifts, Escalators, & Moving Walks)
- BCA - Building Code of Australia 2016
- DDA Premises Standards 2010 (DDA Access Code)
- DDA - Disability Discrimination Act

3. BUILDING INGRESS & EGRESS

3.1. External Linkage: UNSW _ Science and Engineering Building _ IO Meyers Theatre

The proposed Science and Engineering Building is located at the western end of the campus of University of New South Wales (UNSW) in Kensington. It is located on the corner of internal roads Union Road, Racecourse Walk and Third Avenue. From the information provided, the footpaths of the western end of the UNSW campus are traversable by people using a wheelchair.

There are several pedestrian entrances to the proposed building. The primary pedestrian entrance is located off Union Road between the proposed new building and the existing Material Science and Engineering Building. It is unknown if there is a level difference between Union Road and the pedestrian footpaths, review is required to provide a step free path of travel from Union Road to the pedestrian footpaths of Union Road. There is a series of walkways leading to the main entrance doorway and podium level, which is approximately 1M higher than the pedestrian footpath level. Either side of the walkway are a set of stairs, review is required to ensure the stairs are compliant with AS1428.1:2009.

The podium level to the north of the proposed building provides an east/west pedestrian link to other parts of the UNSW campus. There is ramped access on the north/east side and a set of stairs and a series of walkways adjacent on the north/west side to provide an accessible path of travel to the podium and throughout the campus.

From the pedestrian footpaths of Third Avenue there is an entrance to the proposed IO Meyers Theatre which is located at Lower Ground Level.

To the north of the Science and Engineering Building is a tiered seating area (roof of IO Meyers Theatre), this acts as an amphitheatre to the adjacent proposed Alumni Park. Currently access for people with mobility impairment is to the base of the amphitheatre and to Alumni Park. Review is required to provide access to top and bottom of the amphitheatre to provide equitable access for all, compliant with the DDA Premises Standards.

It is possible to provide an external accessible link from the pedestrian footpath networks to greater than 50% of all pedestrian entrances including the Primary Entrance for people with disabilities in accordance with AS1428.1 and DDA Premises Standards.

Recommendations:

(i) Ensure a kerb ramp is provided from Union Road to the pedestrian footpaths of Union Road adjacent to the primary entrance, to provide a step free path of travel, in accordance with AS1428.1:2009.

(ii) Ensure any walkway/ramps have maximum gradient of 1:20 with landings at intervals of 15M (walkway), or maximum gradient of 1:14 with landings at 9M (ramp) intervals, compliant with AS1428.1. Ramps are required to have handrails to both sides of the ramp, handrail extensions and TGSI's.

(iii) Stairs located adjacent to footpaths are to be set back from the pedestrian footpath (boundary) a minimum of 900mm to allow for handrail extensions and TGSI's, compliant with AS1428.1:2009.

(iv) Equitable entry and access to top and bottom of the amphitheatre is to be achieved in accordance with the DDA Premises Standards.

3.2. Emergency Egress

Within the Science and Engineering Building (SEB) there are several sets of fire isolated stairs. The fire-isolated stairs may also be used as communication stairs. They connect all upper levels of the tower to exit points at Ground level. The unassisted accessible points of egress from the SEB are from the Ground floor teaching spaces and Ground floor corridors opening onto external spaces.

A minimum of 1 constant height handrail is required within fire-isolated stairs, compliant with AS1428.1:2009 Clause 12 under the BCA. This can be achieved by offsetting the stair treads and generally at schematic design stage this has been achieved. Ongoing review is required of all fire-isolated stairs to be compliant with BCA 2016 part D2.17.

At this stage of the documentation the fire doors appear to achieve clear opening width of 850mm; this is sufficient width to provide assistance for a person using a wheelchair to move into the stair wells in the case of an emergency. Providing doors with 850mm opening width to fire egress doors is advisory only. (Best Practice). Any stairs/ramps/walkways that are non-fire isolated and on an egress route will be required to comply with AS1428.1:2009.

Recommendations:

(i) Provide at least one accessible continuous handrail within all fire-isolated stairs compliant with AS1428.1:2009. This requires a handrail at a constant height which can be achieved by off-setting treads and/or extending width of the landing, achieving compliance with BCA 2016 part D2.17.

(ii) Ensure that all stair treads/nosing and stair landings on required egress routes are slip resistant in accordance with BCA 2016 Table D2.14 (AS4586:2013).

3.3. Advisory Emergency Egress

For the Science and Engineering Building consideration should be made to provide at least one fire-isolated passenger lift for egress purposes for people with mobility issues in line with BCA performance requirements from the upper levels of the faculty to the Ground floor exit point. For this situation the nominated fire isolated lobby area would also require a suitable level of fire and smoke protection to ensure a safe waiting area for the lifts to arrive.

The management of the building are advised to consider preparing a documented emergency management plan which would include the use of a fire warden, to identify strategies to facilitate emergency egress for people with disabilities.

Consideration for the emergency system to include audible and visual warning indicators to assist people with sensory disabilities. (Advisory)

4. PATHS OF TRAVEL

4.1. Science and Engineering Building

There are 9 levels of the proposed Science and Engineering Building. The paths of travel from the Primary Entrance at Ground floor to all upper floor levels are accessible via the passenger lifts, in accordance with the DDA Premises Standards and AS1428.1:2009.

The Primary Entrance (northern and southern elevations) is located between the proposed Science and Engineering Building and the existing Material Science and Engineering Building. The main entry doors appear to be automatic sliding doors achieving clear opening widths and circulation spaces inside and outside of the doors. A path of travel is achieved from the Primary Entrance to the lifts. Outside the lift on each floor there is sufficient area to enable a wheelchair passing space (1800 x 2000mm), compliant with AS1428.1:2009.

The main path of travel on each level is via circulation spaces, generally 1800mm min., in width, located around the perimeter of the building. This provides a passing and turning space and sufficient door circulation outside of learning space entrances, sanitary facilities and any common-use facilities located on each level compliant with AS1428.1:2009 and BCA 2016 part D3.3 (c).

Between each of the buildings (SEB and MSEB) there are communication stairs. They access all floors above Ground floor. The communication stairs are located in close proximity to the lifts and provide access to both buildings. The lifts and stairs together provide equitable vertical access throughout the building.

On the northern elevation there are communication stairs that travel to each floor. They are in close proximity to the banks of lifts.

Generally where communication stairs are located adjacent to corridors and walkways, the stairs are to be set back to allow for handrail extensions without protruding into the transverse path of travel. The handrail extensions around the main stair (between each building) will currently protrude into the adjacent door circulation.

Recommendations:

(i) Handrails to communication stairs are to be of a continuous height, provided to both sides of the stair and to have handrail extensions top and bottom of stairs, compliant with AS1428.1:2009.

(ii) Ensure stairways are suitably recessed from transverse paths of travel so that required handrails extensions do not protrude into corridor spaces, door circulation areas etc., compliant with AS1428.1:2009, fig 17.

4.2. IO Meyers Theatre

There are 3 levels of the IO Meyers Theatre and associated facilities. The main entry is located off Third Avenue and the entry doors appear to be automatic sliding doors achieving clear opening widths and circulation spaces inside and outside of the doors.

The path of travel from the Primary Entrance at Ground floor on Third Avenue to the Lower Ground Level is accessible via the passenger lift in accordance with the DDA Premises Standards and AS1428.1:2009. The lift is located in close proximity to the communication stairs, providing equitable access to the Theatre and associated facilities.

4.3. Lifts

The passenger lifts servicing all levels will provide an accessible and continuous path of travel to and from the lift lobby to all levels, in accordance with the DDA Premises Standards and AS1428.1:2009.

The lifts are required to satisfy AS1735.12 and the DDA Premises Standards; the internal dimensions appear to meet the minimum 1400mm width x1600mm depth and the door achieves 900mm clear opening width, compliant with AS1735.12.

There is a lift located on the western section of the building, clarification is required if this is for common or specialist use. (Goods lift)

Recommendations:

(i) Lift lobby call button and arrival indicators to comply with AS1735.12.

(ii) Lift car components (grab rail, control buttons, lighting) to comply with AS1735.12.

5. COMMON FACILITIES

5.1. Science and Engineering Building _ Learning Spaces, Study and Lecture Rooms

The planning of the Science and Engineering Building includes several types of learning spaces.

Within the centre of the building and over Levels 2-7 there are groups of teaching/laboratory rooms with fixed benches. The benches are spaced apart sufficiently to allow a turning area within the room for a person using a wheelchair, compliant with AS1428.1:2009.

At the perimeter of the building on Levels 2-7 there are individual and group study areas. Clarification is required whether the placement of furniture in these areas is fixed or flexible. Currently the space between wall and desk is approx. 1450mm, if the furniture is fixed this does not allow a wheelchair user to make a turn at the end of the row. Review is required of this area, if the furniture is fixed.

On Ground floor there are three lecture halls, 2 rooms appear to have elevated seating areas. At the front of the tiered seating area there are free areas for wheelchair spaces. The 3 spaces provided are compliant with BCA2016 Table D3.9. Review is required of the grouping of the spaces.

It is unclear from the documentation if there is to be any inbuilt amplification system provided to any parts of the building. If inbuilt amplification is provided review is required to provide hearing augmentation, compliant with BCA2016 D3.7.

There appears to be rooms for teaching staff on Levels 2-7 which are enclosed rooms. Generally within these spaces and with furniture placement, the minimum guidelines are to provide a min., path of travel of 1M, door circulation (1450mm) and a turning area of 1540 x 2070mm within the room. This is achievable.

The entry doors to learning areas are generally double leafed hinged doors, single leafed hinged doors and or sliding/operable walls. Any common use entry doors are to achieve 850mm compliant opening width, latch side clearances and door circulation inside and outside of the room.

Recommendations:

(i) Ensure the space between fixed desks allows a wheelchair turning area of 1540 x 2070mm, in accordance with AS1428.1:2009.

(ii) Ensure the 3 wheelchair spaces provided in the lecture halls (fixed seating less than 150 seats) are in the arrangement of 1 single space and 1 group of 2 spaces, compliant with BCA2016 Table D3.9.

(iii) In any part of a Class 9b Building if an inbuilt amplification system is installed the provision of hearing augmentation is required, compliant with DDA Premises Standards and BCA2016 D3.7.

(iv) With furniture placement ensure a min., path of travel of 1M, door circulation (1450mm) and a turning area of 1540 x 2070mm is achieved, compliant with AS1428.1:2009.

(v) Ensure all doors to common areas achieve 850mm compliant opening width in accordance with AS1428.1:2009, if double leafed doors are proposed the operable leaf is to achieve compliant clearance.

5.2. Science and Engineering Building _ Sanitary Facilities

Throughout all levels of the Faculty there is a bank of male and female sanitary facilities with a unisex accessible facility adjacent. The male and female sanitary facilities include an ambulant compartment, to meet BCA2016 F2.4. On each level the accessible facility is of a sufficient size to achieve compliant circulation around a pan and basin in accordance with AS1428.1:2009. There appears to be an equal number of left and right handed accessible WC's, throughout the faculty.

The entry to the accessible WC's achieves compliant clear opening width (850mm), door circulation and latch side clearances, compliant with AS1428.1:2009.

On Basement level there are banks of male and female WC's, and male and female showers. The accessible facility also includes a shower, compliant with BCA 2016 Table F2.4 (b). The room provides for compliant circulation around a WC, pan and shower, in accordance with AS1428.1:2009.

5.3. IO Meyers Theatre

The IO Meyer Theatre is located on the Lower Ground floor. The theatre is a flexible space with no fixed seating and no elevated stage area. The facility consists of store rooms, workshop, studio spaces and breakout areas.

Access appears to be achieved throughout the facility and associated breakout areas with AS1428.1:2009.

5.4. IO Meyers Theatre _ Sanitary Facilities

Associated with the theatre there is a bank of male and female dressing rooms including showers and ambulant cubicles. There is currently no accessible dressing room/shower for performers with disability. Review is required to provide an accessible shower and sanitary facility in accordance with BCA 2016 Table F2.4 (b)

There are also separate male and female sanitary facilities presumably for use by the public. Adjacent to the public sanitary facilities is an accessible sanitary facility.

Recommendation:

(i) Provide an accessible dressing room sanitary facility with shower adjacent to the male and female dressing rooms of the IO Meyers Theatre, in accordance with BCA 2016.