



Provision of Access for People with Disabilities
April 2012

Abercrombie Precinct Redevelopment
The University of Sydney Business School

Review of Planning Application Drawings - Final

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1. Introduction

This review addresses the requirements for access by people with disabilities based on the Building Code of Australia (BCA) and the objectives of the Disability Discrimination Act 1992 (DDA) – section 23, which focuses on equitable and dignified access for all users of a building or facility. This includes meeting the requirements of people who use wheelchairs and people who have ambulatory disabilities and cognitive or sensory impairments. The DDA extends beyond buildings to include outdoor spaces and within, to address furniture, fittings and practices and is concerned with providing equitable, dignified access to services and facilities for people with a disability.

Principles of equitable, dignified, independent access for people with mobility, vision or hearing disabilities underpin comments and recommendations of this report.

Appropriate access for all persons is to be provided to the proposed redevelopment of the Abercrombie Precinct via continuous accessible paths of travel:

- from points of arrival including the footpaths, bus stops, accessible car parking spaces and links to the main campus facilities
- to and through the principal entrance and in addition to not less than 50% of all entrances
- to and throughout all teaching and academic areas within the buildings
- to and throughout student accommodation areas
- to all accessible toilet and shower facilities

Points for consideration in ongoing design are highlighted by a Recommendation throughout the report.

1.1 Drawings Reviewed

All comments written in this access report have been made after discussions with the design team and reviewing the following PDF copies of drawings and the design brief received at this office 13 April 2012 from Woods Bagot Architects.

Dwg. No.	Title	Scale	Date
A0001	Drawing Schedule		13.04.12
A1000	Location Plan		13.04.12
A1001	Site Analysis	1:500	13.04.12
A1002	Survey Plan	1:250	13.04.12
A1003	Extent of Works	1:500	13.04.12
A1004	Existing Subdivision Plan	1:500	13.04.12
A1005	Existing Site and Demolition Plan	1:500	13.04.12
A1006	Proposed Site Overview	1:500	13.04.12
A1007	Proposed Site Plan	1:500	13.04.12
A2200	Plan – Lower Ground	1:250	13.04.12
A2201	Plan – Upper Carpark	1:250	13.04.12
A2202	Plan - Ground Floor Plan	1:250	13.04.12
A2203	Plan – Mezzanine	1:250	13.04.12
A2204	Plan - Level 01	1:250	13.04.12
A2205	Plan - Level 02	1:250	13.04.12
A2206	Plan - Level 03	1:250	13.04.12
A2207	Plan - Level 04	1:250	13.04.12
A2208	Plan - Level 05	1:250	13.04.12
A2209	Plan - Roof	1:250	13.04.12
A2900	GFA Plans – All Levels	1:750	13.04.12
A3000	Rendered Elevation Abercrombie Street	1:250	13.04.12
A3001	Rendered Elevation Codrington St & Darlington St	1:250	13.04.12
A3002	Rendered Elevation West Elevation Facing School	1:250	13.04.12
A3100	Sections A & B	1:250	13.04.12
A3101	Sections D & C	1:250	13.04.12
A9002	Perspective 01	1:1500	13.04.12
A9003	Perspective 02	1:1500	13.04.12
A9004	Perspective 03	1:1500	13.04.12
A9005	Perspective 04	1:1500	13.04.12
A9006	Perspective 05	1:1500	13.04.12
A9007	Perspective 06	1:1500	13.04.12

1.2 References:

The Building Code of Australia (BCA) 2011 parts D3, F2.4 and E3.6

AS1428.1 (2009) (Incorporating Amendment No 1): Design for access and mobility Part 1: General requirements for access – New building work.

AS1428.2 (1992) Design for access and mobility Part 2: Enhanced and Additional requirements-Buildings and facilities

AS1428.4 (2009) (Incorporating Amendment No 1): Design for access and mobility Part 4.1: Means to assist the orientation of people with vision impairment -tactile ground surface indicators

AS1735.12 (1999) Lifts, escalators and moving walks Part 12: Facilities for persons with disabilities

AS2890.6 (2009) Parking Facilities - Off-street parking for people with disabilities

AS3745 (2009) Planning for Emergencies in Facilities

AS1428.5 (2010) Design for access and mobility Part 5: Communications for people who are deaf or hearing impaired

Disability Discrimination Act's (1992) obligations of equitable and dignified access for people with a disability: DDA Advisory Notes on Access to Premises – HREOC, June 1997

Disability (Access to Premises - Buildings) Standards 2010

Australian Human Rights Commission Guideline on the Application of the Premises Standards (2011)

The Disability Discrimination Act 1992 (DDA) and DDA Advisory Notes on Access to Premises – HREOC, June 1997

City of Sydney Access Development Control Plan 2004

Sydney Olympic Park Authority – Access Guidelines – Third Edition – 2010

1.3 Legislative background

In accordance with the principles of the Disability Discrimination Act 1992 (DDA) best practice is to be emphasised in the provision of access for people with a disability in the design of the proposed Business School facilities.

This DA review addresses the requirements for access by people with a disability, to the proposed facilities and reviews the key legislative requirements in the Building Code of Australia (BCA), Disability Discrimination Act and City of Sydney Access development Control Plan 2004.

DDA

The objectives of the Disability Discrimination Act 1992 (DDA) – section 23, focus on the provision of equitable, independent and dignified access to services and facilities for people with mobility, sensory and cognitive disabilities.

The DDA covers existing premises, including heritage buildings, those under construction and future premises. It extends beyond the building itself to include outdoor spaces and within, to address furniture, fittings and practices provided within premises.

DDA Advisory Notes on Access to Premises (June 1997) provides recommendations for provision of access via continuous accessible paths of travel and facilities meeting the requirements of AS1428.2.

Disability (Access to Premises - Buildings) Standard 2010 clarifies how approval authorities, building professionals and owners can meet their responsibilities under discrimination law to ensure new buildings are accessible to people with a disability. The Access to Premises Standard commenced on 1 May 2011.

BCA

Changes to the BCA (2011) reflect the content of the Disability (Access to Premises - Buildings) Standard 2010 and commenced on 1 May 2011.

The BCA (2011) includes the following relevant parts to meet the deemed to satisfy provisions to satisfy the performance requirements DP1, DP4, DP6, DP8 and DP9:

D3 Access for People with Disabilities outlines the general building access requirements, it includes:

- Table D3.1 which outlines the parts of the building required to be accessible that must comply with AS1428.1 (2009)
- D3.2 access to buildings which outlines requirements for accessways, doors and entrances

- D3.3 the parts of buildings required to be accessible and meet the requirements of AS1428.1 (2009)
- D3.4 exemptions
- D3.5 accessible car parking requirements
- D3.6 signage requirements for identification of accessible facilities, services and features
- D3.7 hearing augmentation requirements
- D3.8 tactile ground surface indicators
- D3.9 wheelchair spaces in Class 9b Buildings
- D3.10 swimming pools
- D3.11 ramps
- D3.12 glazing on an accessway

Specification D3.6 Braille and tactile Signs

Specification D3.10 Accessible water entry/exit from swimming pool

E3.6 outlines the requirements for passenger lifts in accessible buildings.

F2.4 outlines the requirements for unisex accessible sanitary facilities, accessible showers and cubicles for people with ambulant disabilities designed to meet the requirements of AS1428.1 (2009).

AS1428.1 (2009) (incorporating Amendment No. 1)

AS1428.1 was revised and updated in 2009 and 2010 and is referenced in BCA 2011. The 2009 version of AS1428.1 adopts in principle the increased circulation space requirements of AS1428.2 (1992) developed to satisfy the needs of 90% of people with a disability in an age range 18-60 years.

We note that the Australian Standards on access and mobility do not include a section for outdoor environments. We recommend that Sydney Olympic Park Access Guidelines (2010) section 6 Public Domain and Outdoor Access be used as guidelines in access provision in outdoor spaces.

AS1428.2 (1992)

AS1428.2 was not referenced in the BCA 2002 - 2010. AS1428.2 is currently only referenced in the BCA 2011 in respect to public transport buildings. The DDA Advisory Notes on Access to Premises – HREOC, June 1997 reference AS1428.2.

AS1428.2 sets out design requirements for the design of buildings and facilities for access for people with disabilities, which are enhanced from the minimum requirements of AS1428.1 (2001). This standard also includes requirements for fittings and items which

are not covered in AS1428.1 (2001). The design data was developed to satisfy the needs of 90% of people with a disability in an age range 18-60 years, so that they could achieve independent access to buildings available for public use.

Proposed updates of AS1428.2 will include fittings and fixtures only.

AS2890.6 (2009)

AS2890.6, referenced in AS2890.1 (2004) was published in 2009 and is referenced in the BCA (2011). To meet the requirements of people driving current models of accessible vehicles we are recommending designers provide the off street car space layouts as per AS2890.6, which include additional circulation space for the operation of vehicle mounted hoists. In our opinion AS2890.6 more fully meets the intent of the DDA.

1.4 Access compliance recommendations:

In principle a design based on AS1428.1 (2009) for this project which is a Crown funded development, will in our opinion meet the following:

- The intent of the DDA
- BCA (2011) and Disability (Access to Premises- Buildings) Standards 2010
- The intent of the City of Sydney Access Development Control Plan 2004

1.5 Management Strategies

In this University facility it is important to design paths of travel and circulation spaces within the concept plan and proposed new building works to meet the intent of the Disability Discrimination Act.

In addition to compliant new building works including accessible paths of travel, accessible parking spaces and accessible sanitary facilities it will be necessary to develop an operational management strategy that includes the proposed intention to provide equipment and adapt areas within the facility to meet the requirements of specific individuals with a disability.

This strategy is to meet the specific requirements of staff and visitors with a disability whose individual requirements cannot be addressed within the base building design and proposed building facilities.

An operational management strategy acknowledges the need to meet full accessibility compliance through the provision of policy strategies. A design that has the potential to be modified as required to suit individuals with a disability is desirable.

Ongoing development of operational management strategies for consideration in ongoing design are recommended for the following:

- accessible parking allocation
- emergency egress for people with sensory and mobility impairment
- allocation of accessible rooms in the student accommodation facility

2. Site and Building Description

The redevelopment of the Abercrombie Precinct of the University of Sydney, located on the southern side of the campus, is proposed to include the new Business School and new student accommodation facilities. The site of approximately 1.92 hectares is bordered by Darlington Lane on the north; Codrington Street on the east, Abercrombie Street on the south and the Darlington Public School on the west. The existing Faculty of Economics and Business on the corner of Darlington Lane and Codrington Street is to be incorporated into the precinct and the existing student accommodation in Mandelbaum House on Abercrombie Street maintained.

The principal entrances to the precinct are proposed via Codrington Street on the east with additional pedestrian entries and links proposed for the northern and southern sides of the site. A vehicular driveway entry/exit via Abercrombie Street provides a link to the car parking on the upper and lower basement levels.

Passenger lifts located adjacent to the entries on the eastern side and centrally within the building are proposed to link all levels of the building. Stairs are indicated adjacent to the lifts and to provide additional links at entries and between levels.

The proposed new facility is proposed to include:

- 2 levels of car parking
- 4 levels of teaching space including:
 - Lecture theatre – 550 seats (over 2 levels) – 1 proposed
 - Lecture theatre – 300 seats (over 2 levels) – 3 proposed
 - Case study rooms – 100 seats - 8 proposed
 - Seminar room – 90 seats – 1 proposed
 - Seminar room – 60 seats – 17 proposed
 - Seminar room – 30 seats – 6 proposed
 - Seminar room – 25 seats – 16 proposed
 - Computer lab – 110 seats – 1 proposed

- Computer lab – 70 seats – 1 proposed
 - Computer lab – 35 seats – 3 proposed
 - Informal learning areas – including meeting rooms, syndicate spaces, interactive lounges and workstations
- 3 levels of academic office space including:
 - Dean's unit – board room, office workstations for admin, academic and casual staff
 - General office areas for academic, admin, casual and postgraduate students
 - Shared staff facilities including reception, interview, meeting rooms and amenities
- Café, landscaped terraces and general amenities throughout the facility
- 4 levels of student accommodation – stand alone building

3. Review of Access Provisions

3.1 Car Parking

Requirements:

BCA (2011) clause D3.5 requires a class 9b building to provide 1 accessible parking space for every 50 car parking spaces or part thereof.

Accessible parking spaces are required to meet the requirements of AS2890.6 (2009).

Proposed

A vehicular entry/exit point to the site is proposed from Abercrombie Street to link to the proposed lower and upper carpark levels. 82 basement car spaces are proposed with 37 spaces on the lower ground level and 45 spaces on the upper car park level. Lift access is indicated to link basement parking levels with the upper levels of the facility.

To meet the BCA part D3.5 two accessible parking spaces are required. One accessible parking space is indicated adjacent to the lift on the lower ground floor level of car park. A total of one (1) accessible parking space is proposed.

New on street parking is indicated in Codrington Street.

Recommendation:

- (i) To meet the BCA part D3.5 we recommend an additional accessible parking space is provided in the car park.
- (ii) To meet the intent of the DDA in the allocation of accessible spaces for both staff and visitors to the facility we recommend development of an operational management strategy to ensure the required allocation is provided.
- (iii) Ensure in ongoing design the accessible parking spaces are provided to meet the BCA D3.5 and include dimensions and a layout to meet the requirements of AS2890.6 (2009) figure 2.3 (car space dimensions: W: non shared 2.4m + shared 2.4m (min 4.8m); L: non shared 5.4m + shared 2.4m; height 2.5m over the accessible space and share area and 2.2m on the path of travel to the space).

3.2 External paths of travel – links

Requirements:

BCA (2011) clause D3.2 - Access to buildings requires accessways to be provided to accessible buildings from the main points of a pedestrian entry at the allotment boundary and from any accessible car parking space or accessible associated buildings connected by a pedestrian link.

BCA (2011) clause D3.2 - Access to buildings requires the principal pedestrian entrance to be accessible in all cases and not less than 50% of all pedestrian entrances, including the principal pedestrian entrance to be accessible. In buildings with a total floor area of more than 500 square meters, an inaccessible entrance cannot be more than 50 meters from an accessible entrance. This ensures that situations where people have to travel an unreasonable distance between entrances are avoided.

Proposed

To meet the BCA (2011) clause D3.2, accessible links are proposed:

- From Codrington Street to the principal entry at the ground floor level via an entries at grade linking the north eastern and south eastern corners of the site with the main entry foyer (public space).
- From the corner of Codrington and Abercrombie Streets via an entry at grade (walkway) linking the principal entry to the lower ground floor level (teaching area)
- From Abercrombie Street via an entry at grade linking to the proposed student accommodation principal entry.(not detailed in current drawings for review)
- From Codrington Street to the existing School of Economics and Business building (northern side of the site) via tapered steps and an adjacent entry at grade. The existing building is proposed to be redeveloped on the southern side to include links to the new facility on the ground floor, via a covered walkway in the courtyard space.

The main 550 seat lecture theatre proposed on the ground floor includes an external entry which is linked via stairs to the western side of the site.

To meet the BCA (2011) clause D3.2 the principal entries to the new facility are proposed to be linked to continuous accessible paths of travel and entries designed to meet AS1428.1.

Recommendations:

- (i) Review of detailed entry design for access compliance is to be undertaken in ongoing design development.

- (ii) In ongoing design ensure: **Walkways** meet the requirements of AS1428.1 clause 10.2 and 7.1 to include:
- A slip resistant surface that is traversable by people who use a wheelchair and those with an ambulant or sensory disability
 - The ground surface abutting the sides of the walkway shall provide a firm and level surface of a different material to that of the walkway at the same level of the walkway; follow the grade of the walkway and extend horizontally for a minimum of 600mm unless one of the following is provided:
 - a kerb
 - a kerb rail and handrail
 - a wall not less than 450mm high
 - Landings at intervals not exceeding 15m (1:20 gradient); 25m (1:33 gradient)
 - A constant gradient between level landings
 - A crossfall no steeper than 1:40; bitumen surfaces may include a camber or crossfall no steeper than 1:33

3.3 Internal paths of travel

Requirements:

To meet the requirements of BCA (2011) part D3.1 continuous accessible paths of travel meeting the requirements of AS1428.1 (2009) are required to and within all areas normally used by the occupants of the building.

In a Class 9B Building fixed seating areas are required to include wheelchair seating spaces to be provided in accordance with clause D3.9. The BCA (2011) part D3.9 requires areas with fixed seating of:

- Up to 150 seats to include 3 spaces; 1 single space and 1 group of 2 spaces
- 151 – 800 seats to provide 3 wheelchair spaces plus 1 additional space for each additional 50 seats; not less than 1 single space; not less than 1 group of 2 spaces and not more than 5 spaces in any group of wheelchair seating spaces, which include a layout and circulation space to meet the requirements of AS1428.1.

BCA (2011) part D3.7 requires a hearing augmentation system to be provided where an inbuilt amplification system, other than one used for emergency warning is installed in an auditorium, conference room or meeting room in Class 9B Building. If required an induction loop must be provided to not less than 80% of the floor area of the room.

Proposed:

Lower ground floor

The lower ground floor teaching facilities are accessed via an external entry, internal stairs and 2 lifts which are each linked to a central open circulation area, which potentially will provide continuous accessible paths of travel meeting AS1428.1 and the BCA part D3.1 linking to the lecture theatres, seminar room, Student Service Centre and informal learning areas on this level. The lecture theatres and the seminar room are indicated to be accessed via outward opening hinged doors.

On the lower ground floor seating areas include:

- 2 Lecture theatres – 300 seats (tiered fixed seating) – 6 wheelchair seating spaces are currently indicated in the rear row of fixed seating in each theatre.
An accessible path of travel, is provided to the front of the lecture theatre via lift access between levels and rear doors
- Seminar room – 25 seats (loose furniture indicated)

Ground floor

The ground floor includes an east west change in level which to meet the BCA part D3.2 is linked via an external pedestrian ramp and internal stairs and adjacent through car lifts.

Central open circulation areas (informal learning areas) which potentially will provide continuous accessible paths of travel meeting AS1428.1 and the BCA part D3.1 link teaching areas on this level. Lecture theatre and learning hubs are indicated to be accessed via outward opening hinged doors and the three case study rooms via single outward opening doors.

New work proposed on the ground floor of the existing Faculty of Economics and Business includes accessible paths of travel via a corridor on the southern side linking to computer labs.

On the **ground floor** seating areas include:

- Lecture theatre – 550 seats (tiered fixed seating) – 6 wheelchair seating spaces are currently indicated in the rear row of seating. 11 spaces will be required to meet the BCA part D3.9.
An accessible path of travel, required for use by a presenter, is not currently indicated to the front of the lecture theatre

- Lecture theatre – 300 seats (tiered fixed seating) – 6 wheelchair seating spaces are currently indicated in the rear row of seating
An accessible path of travel, required for use by a presenter, is not currently indicated to the front of the lecture theatre.
- 3 Case Study rooms – 100 seats (tiered fixed seating) – 2 wheelchair seating spaces are currently indicated in the front row of each room
3 wheelchair seating spaces are required to meet the BCA part D3.9)
An accessible path of travel, required for use by a presenter, is indicated at the entry level to the front of the lecture theatre
- Informal Learning Areas
- Seminar Room (large) – 90 (tiered fixed seating) – seating not currently indicated in seminar space.
- Seminar Room (medium) – 60 seats – seating not indicated
- Seminar Room (small) – 30 seats – seating not indicated
- Seminar Room (small) – 25 seats – seating not indicated

In addition the existing Faculty of Economics and Business is indicated to include:

- 5 Computer labs including 3 with 35 seat capacity, one with 70 seat capacity and one with 110 seat capacity.

Mezzanine Level

The existing Faculty of Economics and Business is indicated to include modifications to include workplace offices, open work areas, a meeting room and staff amenities linked via continuous accessible paths of travel which potentially will meet AS1428.1 and the BCA part D3.1

Level 01

The teaching areas and shared workplace areas on the Level 01, which are accessed via internal stairs from the ground floor and 3 lift banks which each include 2 lifts, are each linked to a central open circulation area which potentially will provide continuous accessible paths of travel meeting AS1428.1 and the BCA part D3.1.

Facilities are proposed to include:

- 5 Case Study rooms – 100 seats (tiered fixed seating) – 2 wheelchair seating spaces are currently indicated in the front row of each room
3 wheelchair seating spaces are required to meet the BCA part D3.9.

An accessible path of travel, required for use by a presenter, is indicated at the entry level to the front of the lecture theatre

- 8 small seminar rooms – 25 seats (loose furniture)
- 3 small seminar rooms – 30 seats (loose furniture)
- 6 Medium seminar rooms – 60 seats (loose furniture)
- Milling spaces and informal learning areas

Level 02

The teaching areas and workplace offices located on Level 02 are accessed via internal stairs and 3 lift banks of 2 lifts, which are each linked to a central open circulation area which potentially will provide continuous accessible paths of travel meeting AS1428.1 and the BCA part D3.1.

On Level 02 facilities include:

- 8 small seminar rooms – 25/30 seats
- 10 medium seminar rooms – 60 seats
- An office area which includes
 - 4 large meeting rooms
 - 4 resource rooms
 - 3 interview rooms
 - a small meeting room
 - 8 offices

Level 03

The workplace offices and facilities Level 03, are accessed via internal stairs and 3 lift banks of 2 lifts, which are each linked to a central open circulation area, which potentially will provide continuous accessible paths of travel meeting AS1428.1 and the BCA part D3.1 to

- 8 general staff areas of workplace offices which include:
 - Offices
 - open work spaces
 - meeting areas
 - kitchens

- reception areas
- an additional area with 2 staff common rooms, 2 resource rooms, an interview room, 8 offices, 2 large meeting rooms and one small meeting room
- 2 areas of Dean administration/academic offices
- Shared Workplace Areas
- Small Meeting Area

Level 04

Level 04 includes 3 areas of Dean administration/academic offices and shared workplace, an area with 3 large meeting rooms, 2 small meeting rooms and 2 interview rooms, an area of dining seating and an external terraces, which are accessed via internal stairs and 2 banks of passenger lifts, which are each linked to a central open circulation area which potentially will provide continuous accessible paths of travel meeting AS1428.1 and the BCA part D3.1

Level 05

The area which includes office facilities and a meeting room and reception area for the Dean and Associate Deans includes circulation spaces which potentially will provide continuous accessible paths of travel meeting AS1428.1 and the BCA part D3.1

Roof Level

The roof level is indicated to include landscaped terrace areas.

Recommendations:

- (i) Ensure in ongoing design that all doorways for public and relevant staff areas include a clear opening (minimum 850mm) and circulation spaces to meet the requirements of AS1428.1 (2009) clauses 13.2 and 13.3 and figures 31 - 34.
- (ii) Ensure in ongoing design to meet the BCA part D3.12 (2011) that the unframed glazed doors and walls are provided with visual indicators to fully comply with AS1428.1 clause 6.6 (2009) and that doorways are provided with luminance contrast to meet the requirements of AS1428.1 (2009) clause 13.1.
- (i) Ensure in ongoing design reception counters include an accessible counter which meets the height requirements of AS1428.2, for visitors on the external side and circulation space for staff internally to meet the requirements of AS1428.1 clause 6.5.

- (ii) Ensure in ongoing design to meet the intent of the DDA, circulation space (1500mm min clear width), to meet the requirements of AS1428.1 clause 6 and to facilitate access by a person using a wheelchair, is provided at fixed desks and benches required to be accessible.
- (iii) Ensure in ongoing design all controls including intercoms and digital access readers are located on level landings and at a height of not less than 900mm and not more than 1250mm to comply with AS1428.1 clause 14.
- (iv) Ensure in ongoing design lecture theatres include wheelchair seating spaces to meet the requirements of the BCA D3.9 and AS1428.1 (2009) clause 18 to facilitate wheelchair access to the proposed fixed seating areas and for a person requiring access to the front of the room to lecture.
- (v) Ensure in ongoing design to meet BCA (2011) part D3.7 a hearing augmentation system is provided in areas where an inbuilt amplification system, other than one used for emergency warning, is installed in areas including auditoriums, conference rooms or meeting rooms in Class 9B Building. If required an induction loop must be provided to not less than 80% of the floor area of the room.

3.4 Sanitary Facilities

Requirements:

To meet the requirements of the BCA (2011) part F2.4 and the DDA not less than one unisex accessible sanitary facility must be provided on every storey containing sanitary compartments. Where two or more accessible sanitary facilities are provided the number of left and right handed mirror image facilities must be provided as evenly as possible.

To meet the requirements of the BCA (2011) part F2.4 (b) one accessible unisex shower must be provided for every 10 showers or part thereof.

To meet the requirements of the BCA (2011) part F2.4 (c) at each bank of toilets in addition to an accessible sanitary compartment a sanitary compartment suitable for a person with an ambulant disability in accordance with AS1428.1 (2009) must be provided for use by males and females.

Proposed:

To meet the BCA part F2.4, the following accessible sanitary facilities are proposed.

Cubicles for people with ambulant disabilities do not appear to be currently indicated.

Lower Ground: Male and female toilets and no unisex accessible sanitary facility indicated
Female shower and lockers in carpark

Ground floor: Male and female toilets and an adjacent unisex accessible sanitary facility are indicated centrally
Male and female toilets and an adjacent unisex accessible sanitary facility are indicated in the north western corner

Mezzanine level: (existing Faculty of Economics and Business) Male and female toilets and an adjacent unisex accessible sanitary facility are indicated

Level 01: Male and female toilets and an adjacent unisex accessible sanitary facility are indicated centrally
Male and female toilets and an adjacent accessible sanitary facility are indicated in the north western corner

Level 02: Male and female toilets and an adjacent unisex accessible sanitary facility are indicated centrally
Male and female toilets and an adjacent accessible sanitary facility are indicated in the north western corner

Level 03: Male and female toilets and an adjacent unisex accessible sanitary facility are indicated centrally

Level 04: No toilets are indicated

Level 05: Male and female toilets are indicated within the Dean's area on level 05

Existing School of Economics and Business Building (Building H69) – the proposed refurbishment is indicated to include:
Removal of the ground floor unisex accessible sanitary facility. Existing male and female toilets are to remain on the ground floor.
Provision of male and female toilets and an adjacent unisex accessible toilet on the mezzanine level

Recommendations:

- (i) To meet the BCA part F2.4 and the intent of the DDA provision of a unisex accessible sanitary facility for use by people on the ground floor of the existing School of Economics and Business Building is recommended.
- (ii) To meet the intent of the DDA and the BCA part F2.4 an accessible sanitary facility will be required on the lower ground floor level and on level 05.
- (iii) Ensure that in ongoing design unisex accessible sanitary facilities include a layout, circulation space (door, WC pan, basin) and fittings to meet the requirements of AS1428.1 clause 15. Circulation space for the WC pan requires minimum dimensions W: 1900mm and L: 2300mm excluding the basin. Provision of left and right handed layouts over the levels is required. Any baby change facility is to be outside required circulation spaces.
- (iv) Ensure that in ongoing design equitable provision of accessible showers is provided. Circulation space for the shower requires minimum dimensions W: 1600mm and L: 2350mm excluding the basin and WC pan fittings.
- (v) Ensure that in ongoing design cubicles for people with ambulant disabilities are included in banks of gender specific toilets. Cubicles for people with ambulant disabilities are required to include features complying with AS1428.1 clauses 13.4 and 16 and figures 34 and 53 (signage, entry airlock and cubicle door circulation, WC pan, grabrails, toilet paper dispenser, clothes hook).

3.5. Vertical Access

3.5.1 Lift

Vertical access to link all levels of the building is proposed to be provided by passenger lifts located at three lift banks (2 lifts per bank).

Recommendations:

- (i) Ensure in ongoing design, to meet the intent of the DDA and BCA part D3.1 that passenger lift access is provided to the roof level and proposed landscaped areas indicated on this level.
- (ii) Ensure in ongoing design that the passenger lift includes features to fully comply with AS1735.12 and the BCA E3.6 to include: floor dimensions not less than 1400mm x 1600mm for lifts travelling more than 12m and 1100mm x 1400mm for lifts travelling less than 12m and accessible features including provision of a handrail and call & control buttons meeting the requirements for tactile and Braille and luminance contrast. The inclusion of auditory announcement in lift cars serving more than 2 levels is required.

3.5.2 .Stairs

New stairs are proposed as follow:

- External stairs link:
 - to the lower ground floor level from the ground forecourt area adjacent to the Codrington Street entry
 - within the new courtyard areas on the northern side of the facility
 - External area to the north of the building
- Internal general use stairs (non fire isolated) link:
 - the lower ground floor and ground floor levels
 - the ground floor level eastern and western sides of the facility
 - the ground floor with Level 01 on western side of the facility
 - Levels 01, 02, 03 and 04 on the eastern side of the facility
- Fire stairs linking each level of the proposed facility (7 indicated on floors Ground – 5; 4 indicated lower ground)

Existing external stairs appear to be maintained at the entry to the School of Economics and Business.

Recommendation:

- (i) In ongoing ensure in ongoing design to meet AS1428.1 clause 11 stairs other than fire isolated stairs include:
 - A setback to accommodate the handrail and tgsi is to be maintained at the site boundary (900mm)
 - Nosing profiles which include 50-75mm wide solid slip resistant highlighting strips on the tread at the nosing that includes a minimum luminance contrast of 30% with the tread to comply with AS1428.1 figures 27a and b
 - Tactile ground surface indicators (tgsi) in a band 600mm deep set back 300mm from the top and bottom tread
 - Handrails on both sides that include a 300mm horizontal extension at the top and bottom set back by a minimum of 300mm so that the handrail does not protrude into the transverse path of travel as per AS1428.1 (2009) figure 26(A)
- (i) Ensure in ongoing design, that the fire isolated stairs meet the requirements of the BCA part D3.3 (b) and AS1428.1 (2009) clause 11.
- (ii) Refurbishment of the existing stairs at the School of Economics and Business entry is recommended.

3.5.3 Ramps

An external ramp is proposed linking the ground floor on the western and eastern sides of the facility

Recommendations:

- (i) In ongoing design ensure ramps meet AS1428.1 clause 10.3 to include:
 - A maximum slope of 1:14 for ramps exceeding 1900mm in length
 - A constant gradient between level landings
 - An unobstructed/clear width minimum 1000mm
 - Landings at intervals not greater than 9m and minimum landing length of 1200mm where there is no change in direction
 - Handrails on both sides that include a 300mm horizontal extension at the top and bottom and set back by a minimum of 300mm so that the handrail does not protrude into the transverse path of travel as per AS1428.1 (2009) figure 17
 - Tactile ground surface indicators (tgsi) in a band 600mm deep set back 300mm from the top and bottom of the ramp (1:14 gradient)
 - A setback to accommodate the handrail and tgsi is to be maintained at the site boundary (900mm) and transverse paths of travel (600mm).

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3.6. Emergency Egress

To meet the objective of the DDA all users of the facility are to be provided with a means of egress from the premises to a place of safety. People with disabilities should be provided with the same level of protection as other premises users.

Places of refuge, which are fire rated areas such as the areas adjacent the entry landings of fire stairs where people who are unable to negotiate stairs, can wait for assisted evacuation are considered a possible way of making an appropriate provision. To meet the intent of the DDA refuges are recommended to be provided in the stair entry landings for a wheelchair user or a person with ambulant mobility equipment, and an accompanying person, with a recommended unobstructed space of 1300mm X 800mm outside of the egress route (BCA RD 97/01 Table D1.6).

Refuges are potentially proposed to be included at fire stair entry landings throughout the main facility.

Recommendations:

- (i) The provision of refuges in fire stair entry landings is recommended to be included in ongoing design.
- (ii) Development of individual evacuation plans for staff is recommended as part of the facility operational management strategy.
- (iii) To meet AS3745 (2009) Planning for Emergencies in Facilities we recommend in ongoing design that consideration be given to the inclusion of suitable emergency evacuation devices for people to be carried down the stairwell.
- (iv) In ongoing design the provision of both auditory and visual elements are required in emergency alarms to ensure those with vision or hearing impairments can detect a warning, particularly in areas where they are likely to be isolated from others (eg; accessible sanitary facilities and offices).

4. Accessible Student Accommodation

Requirements:

BCA (2011) part D3.1 requires 5 accessible sole-occupancy units for 81- 100 sole occupancy units. Accessible units to include a layout and circulation space to meet the requirements of AS1428.1.

BCA (2011) part D3.1 requires a continuous accessible path of travel

- From a pedestrian entrance required to be accessible to at least one floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level.
- To and within not less than one of each type of room or space for use in common by residents, including a cooking facility, common laundry, games room, individual shop, dining room, lounge area or the like.

Proposed:

Drawings of proposed student accommodation have not been included in this review.

Recommendation:

- (i) An accessible path of travel complying with AS1428.1 (2009) is required from the street to all building entries; all common use student/residential facilities: reception office; recreational multipurpose; community dining room; community living room; community laundry; unisex accessible sanitary facility; garbage disposal room and landscaped spaces.
- (ii) Accessible accommodation is to be distributed equitably and to be representative of the accommodation offered. Unit layouts are to include a mix of both left hand and right hand use facilities.
- (iii) The accessible room is to be indicated to include:
 - circulation space for the entry door, wardrobe, desk, kitchenette and bed to meet the requirements of AS1428.1 (2009) and AS1428.2 clause 24.3 and figure 29.
 - Circulation space for the bed requires minimum 1000mm either side of the bed and 1540mm at the foot of the bed and in front of the wardrobe, kitchenette and desk.
 - Controls for lights and any television, radio, telephone or air-conditioning are to be accessible from the bed.
 - The ensuite bathroom is to be indicated to include a design to meet the circulation space (door, shower, WC pan and basin) requirements of AS1428.1 (2009) clause 15. Equitable provision of left and right hand use layout of WC facilities is to be indicated.

5. Additional Key Access Provisions for the ongoing design

5.1 Landscaping – external paths of travel

Continuous accessible paths of travel are to be provided to meet the BCA Part D3 and to comply with AS1428.1 (2009) as follows:

- A minimum 1000mm unobstructed path width and 2m vertical clearance is required to comply with AS1428.1 (2009) clauses 6.2 and 6.3.
- Passing spaces for wheelchairs is required at 20m intervals where sight lines are obscured (minimum 1800mm width x 2000mm length to comply with AS1428.1 (2009) clause 6.2 and 6.3).
- Pathways are to include circulation space for a wheelchair to turn (90° minimum 1500mm width x 1500mm length; 180° minimum 1540mm width x 2070mm length) is required to comply with AS1428.1 (2009) clause 6.5 and figures 4 and 5.
- Walkway (maximum gradient 1:20 with landings at 15m intervals; gradient 1:33 with landings at 25m intervals) design is to comply with AS1428.1 (2009) clause 10.2. Where the ground abutting the sides does not follow the same grade for 600mm: one of the following is provided: (i) a kerb (see fig. 18); (ii) kerb and handrails (see fig. 19); (iii) a wall not less than 450mm high.
- A ramp exceeding 1900mm in length is to have a maximum gradient of 1:14 to comply with AS1428.1 (2009) clause 10.3(a). The features including kerb/wall and handrail on both sides and tgsi at the top and bottom are to comply with AS1428.1 (2009) figures 13 - 19. Ramps at the intersections are to be set back by a minimum of 400mm so that the handrail does not protrude into the transverse path of travel as per AS1428.1 (2009) figure 17. To meet the intent of the DDA ramps longer than 60m are not recommended.
- Any external stairs proposed to provide an alternative pedestrian link within the site are to meet the requirements of AS1428.1 (2009) clause 11 and figure 26 to include opaque risers, complying dual height handrails on both sides, 50-75mm wide solid slip resistant highlighting strips on the tread at the nosing AS1428.1 (2009) figures 27a & b and tactile ground surface indicators (tgsi) at the top and the bottom landing. Stairs at pathway intersections are to be set back by a minimum of 400mm so that the handrail does not protrude into the transverse path of travel.
- In ongoing landscape design, surfaces are to be constructed and maintained with no lip at joints between abutting surfaces exceeding 3mm or 5mm at bevelled edges to comply with AS1428.1 (2009) clause 7.
- Drainage or tree grates on the path of travel are to have spaces not more than 13mm wide and not longer than 150mm with the elongated opening placed transverse to the dominant path of travel for compliance with AS1428.1 (2009) clause 7.5.

- Landscaping and plant selection should consider maintenance free of vegetation debris and ease of circulation including slip-resistance.
- The selection of any proposed outdoor furniture is to be linked to an accessible path of travel and includes tables that are stable and seats that include a back and armrest and seat height to comply with AS1428.2 clause 27.2 and figure 32. All loose furniture is to be located outside accessible paths of travel to maintain a clear path of travel for people with vision impairment shorelining with a cane along the side the building.

5.2 Internal accessible paths of travel and facilities

To meet the intent of the DDA provision of an accessible path of travel complying with AS1428.1 (2009) is required to the proposed main entries to buildings; to function and meeting rooms; relevant staff offices; the lift and accessible sanitary facilities to comply with AS1428.1 (2009) and the requirements of the BCA: See 6.3 above.

- Clause 6.3: Minimum clear width 1000mm (fire hose reels, drinking fountains and the like are to be set back adjacent to the path of travel)
- Clause 6.2: Minimum unobstructed height of 2000mm or 1980mm at a doorway
- Clause 6.4: Passing space for wheelchairs: Minimum width 1800mm x 2000mm at 20m intervals (see figure 3)
- Clause 6.5: Circulation space for wheelchair turn – see figures 4 & 5

5.3 Doorways

To all proposed main entries to buildings; to reception; accessible common areas and accommodation; lifts and the accessible sanitary facility to comply with AS1428.1 (2009) as follows:

- All doors on required accessible paths of travel are to include clear door openings of 850mm including a single leaf clear door opening at double doors, to meet the requirements of AS1428.1 (2009) clause 13.2. Circulation space at doorways is to meet the requirements of AS1428.1 (2009) clause 13.3 and figures 31 - 34.
- Any ramped threshold is to be provided to comply with AS1428.1 (2009) clause 10.5 and figure 21 and include a maximum rise of 35mm; maximum length of 280mm; maximum gradient of 1:8 and located within 20mm of the door leaf which it serves.
- The force required to activate door closers, glazed or pivot action doors is to meet as close as possible the requirements of AS1428.1 (2009) clause 13.5.2(e).

- All door handles and related hardware shall allow the door to be unlocked and opened with one hand and be such that a hand of a person who cannot grip will not slip from the handle during the operation of the latch as per AS1428.1 (2009) clauses 13.5.1 - 3 and figures 35 – 37.
- Any power operated door controls are to be provided to comply with AS1428.1 (2009) clauses 13.5.3 - 4 and include a minimum 25mm push control located 900-1200 AFFL.
- A luminance contrast of 30% provided between at doorways is required to comply with AS1428.1 (2009) clause 13.1 and will assist in identification by people with low vision.
- All glazing which is unframed and which is capable of being mistaken for a doorway or opening is to be provided with highlighting to meet the requirements of AS1428.1 (2009) clause 6.6. A solid strip 75mm high is to be provided 900-1000mm AFFL with a minimum 30% luminance contrast with the floor surface when viewed from either side.

5.4 Joinery detailing

- An accessible section of each reception counter is to include: a minimum length of 800mm and height 850±20mm AFFL
- The circulation space between counters and desks is to meet the requirements of AS1428.2 to provide 1500mm clear space to facilitate wheelchair circulation.
- At counters for resident food preparation: benches should include a height of 850± 20mm AFFL and access to the sink and tap and GPO (300mm from the front of the bench) to facilitate wheelchair access.

5.5 Wayfinding and facilities to assist people with sensory, cognitive and mobility impairment

- Appropriate identification and directional signage where required must comply with BCA D3.6 and Specification D3.6 to include Braille and tactual information, use of contrast, international symbols and pictograms.
- To meet the requirements of BCA D3.8 hazard warning tactile ground surface indicators (tgsi) will be required at the top and bottom of new stairs and ramps with a gradient of 1:14.
- The provision of easily identifiable paths of travel, particularly to the lifts is recommended. The use of colour contrast and/or texture change in the floor finish will assist people with low vision.

- A luminance contrast of 30% provided at doorways is required to comply with AS1428.1 92009) clause 13.1 and will assist in identification by people with low vision.
- All glazing which is unframed and which is capable of being mistaken for a doorway or opening is to be provided with highlighting to meet the requirements of AS1428.1 (2009) clause 6.6. A solid strip 75mm high is to be provided 900-1000mm AFFL with a minimum 30% luminance contrast with the floor surface when viewed from either side.
- Visual warning systems should be provided on emergency evacuation alarms in areas where individuals may be isolated from other building users, for example staff offices and sanitary facilities.

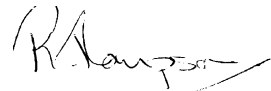
6 Conclusion

Having reviewed the listed drawings, it is our opinion that with the inclusion of the **recommendations** listed in the report, the access provisions for people with physical and sensory disabilities have the potential to comply with the performance requirements of BCA (2011) sections D3, E3.6 and F2.4; AS1428.1 (2009), AS1428.2, AS2890.6 and the City of Sydney DCP Access and mobility requirements for accessibility and equity.

The provision of access for people with a disability in the proposed new facility potentially provides continuous accessible paths of travel, clear wayfinding guidance and the equitable provision of accessible facilities including accessible sanitary facilities and accessible parking to provide inclusive design to meet the anticipated requirements of staff, students and members of the public.

Consequently, in our opinion the proposed drawings, in conjunction with developed operational management strategies and ongoing inclusion of the **recommendations**, should meet the objectives of the Disability Discrimination Act through its intention to provide non-discriminatory access and the equitable and dignified use of all appropriate areas of the facility. This will be achieved through the ongoing design which includes continuous accessible paths of travel and equitable provision of accessible facilities to facilitate inclusive access in accordance with the relevant Standards and Codes of Practice.

I also certify that I am an appropriately qualified and competent person practising in the relevant area of work. I have recognised relevant experience in the area of work being certified and my company is holding appropriate current insurance policies.



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