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Ref: AN 11015 MI 201100302\_2

8<sup>th</sup> March 2011

University of Technology Sydney  
Level 6, 235 Jones Street  
BROADWAY NSW 2007

**Attention:** Berlin Ng

Dear Berlin,

**Re:** Preliminary Report on Accessibility  
**Project:** UTS Book Vault & Storage Building  
**Address:** University of Technology, Sydney

Philip Chun Accessibility has undertaken a preliminary review of the documentation provided with respect to access to and throughout the proposed building work for the project. This report outlines the main issues relevant to the proposed building work with reference to the Building Code of Australia (BCA), Disability (Access to Premises - Buildings) Amendment Standards 2010 (No. 1), Disability Discrimination Act 1992 (Cth) (DDA), and relevant Australian Standards as applicable to this project.

## 1.0 INTRODUCTION

The proposed project is the UTS Book Vault & Storage Building located at the University of Technology, Sydney.

The project consists of a basement extension to the existing CB02 building to accommodate the new Automated Storage and Retrieval System (ASRS) for the campus Library.

The following documentation prepared by Hassell (Project No. AX002858) was reviewed as part of our assessment:

Document No	Title	Revision
A010	Existing – Site Location Plan	B
A022	Existing – Plan – Level 01 (RL 2.700)	B
A023	Existing – Plan – Level 1.5 (RL 5.750)	C
A024	Existing – Plan – Level 02 (RL 8.500)	C
A025	Existing – Plan – Level 03 (RL 14.00)	C
A026	Existing – Plan – Level 04 (RL 17.960)	B
A040	Existing – Section 01 – North	C
A041	Existing – Section 02 – East – Alumni Green Ramp	D
A042	Existing - Section 03 & 04 – East – Loading & Parking Ramps	C
A043	Existing – Section 05 – North – Loading & Parking Ramps	C

### SERVICES

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Document No	Title	Revision
A123	Ramp Modification – Plan – Level 01.5 (RL 5.750)	B
A124	Ramp Modification – Plan – Level 02 (RL 8.500)	C
A125	Ramp Modification – Plan – Level 03 (RL 14.00)	B
A126	Early Works Plan – Level 04	A
A142	Ramp Modification – Section 03 & 04 – East – Loading & Parking Ramps	B
A143	Ramp Modification – Section 05 – North – Loading & Parking Ramps	B
A201	ASRS – Site Plan	A
A220	ASRS – ASRS – Plan RL 5.000 ASRS Working Level	F
A222	GA Plan – Level RL 2.700	F
A223	ASRS – Plan – RL 5.750	F
A224	ASRS – Plan – Level 02 (RL 8.500)	F
A225	ASRS – Plan – Level 03 (RL 14.00)	F
A226	ASRS – Plan – Level 04 (RL 17.960)	D
A260	ASRS – Section 01 – North / South	F
A261	ASRS – Section 02 – East / West	F
A262	ASRS – Section 03 – North / South	F
A360	ASRS – Room Plan 01 – Picking Area	F

In addition, the following document was reviewed:

- a) UTS ASRS Project Return Brief (Hassell, 22 December 2010).

Further reviews of the following areas of the development are required to ensure accessibility by the public and staff, excluding maintenance and storage facilities, enabling safe, equitable and independent travel in accordance with the objectives of the DDA.

## 2.0 Disability Discrimination Act 1992 (Cth) (DDA)

The DDA states it is unlawful to discriminate on the basis of disability, protecting persons with disability and their associates. Section 23 of the DDA relates to access to premises and facilities which the public may enter or use, and states it is unlawful to:

- a) Refuse access to, or the use of, any premises, or the facilities within them.
- b) Impose terms or conditions specific to persons with disability and their associates on the access and use of any premises or facilities;
- c) Exclude access based on the provision of an appropriate means of access;
- d) Request persons with disability or their associates to leave premises or cease use of facilities.

The DDA also addresses discrimination in other areas, including:

- a) In employment (Sections 15 to 21);
- b) Education (Section 22);
- c) Provision of goods, services and facilities (Section 24);
- d) Administration of Commonwealth laws and programs (Section 29);
- e) Requests for information (Section 30).

In contrast to building regulations, the DDA is not prescriptive and at this stage there are no specific DDA standards which can be adhered to, in order to ensure premises owners and facility providers meet the spirit and intent of the Act and eliminate their risk of attracting a complaint.

There is a misconception that compliance with the BCA equals compliance with the DDA; however there is a lack of uniformity between these legislative documents. The BCA stipulates minimum provisions for access and are by no means ideal. In order to provide guidance on this issue, the Australian Human Rights Commission, formerly the Human Rights and Equal Opportunity Commission (HREOC) released 'Advisory Notes on Access to Premises'<sup>1</sup> to assist designers, builders, owners, managers, operators, regulators and users in their understanding of the application of Section 23 of the DDA.

There is an intention for the Australian Building Codes Board (ABCB) to make considerable changes to the BCA, to form part of a new National Standard on Access to Premises<sup>2</sup>. It is aimed that this Premises Standard will provide greater consistency between the Acts, clarifying the objectives of the DDA through the modification of the deemed to satisfy provisions of the BCA.

On March 15, 2010 the Disability (Access to Premises – Buildings) Standards 2010 were tabled in Parliament; however further deliberation is required to ensure its implementation will increase accessibility to premises and facilities without imposing undue burdens on the building industry. There has since been an amendment (No. 1) to this Standard.

In the interim, Philip Chun will refer to the Disability (Access to Premises - Buildings) Standards 2010 (No. 1) in addition to Accessibility Standards in draft and current Australian Standards, to ensure best practice principles are applied for this project. A full list of references for this report is available upon request.

### **3.0 ACCESS PROVISION**

Generally, all areas of the development have been assessed in regard to accessibility to facilitate safe, equitable and independent travel.

However, the following areas have been excluded from this report (which are either outside of the project scope or not required to be accessible):

- Existing areas of building CB02 not within the ASRS facility project scope;
- ASRS vault;
- Car parking and loading areas (except at the vehicular ramp which shall be modified as a part of the project);
- External areas (except at the vehicular ramp);
- Service and maintenance areas (including plant room, TSG room and cleaners room);
- Any 'stretch targets' (per UTS ASRS Project Return Brief: Section 3, 20101222).

### **4.0 VEHICULAR RAMP**

Modifications shall be undertaken to the existing vehicular ramp within the building which leads from Thomas Street to the existing loading and parking areas.

It is understood that a head height clearance of not less than 2200mm will be maintained to the vehicular ramp which will meet the requirements of AS 2890.6 (2009) for head height clearances to accessible car parking spaces. It is assumed that existing accessible car parking spaces are located within the basement car park.

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<sup>1</sup> Human Rights and Equal Opportunity Commission (HREOC), 'Advisory Notes of Access to Premises', 1996

<sup>2</sup> Australian Government Attorney-General's Department, 'Disability (Access to Premises – Buildings) Amendment Standards 2010 (No. 1)' (Dated 22<sup>nd</sup> September 2010) – Currently disallowable regulation

- 4.1 Ensure the intercom / card reader at the vehicular ramp is accessible.
  - At the entry to the car park, the access or intercom pedestal should if practicable, be positioned so that the push button is positioned laterally 50mm +/- 25mm behind the face of the adjacent kerb (AS 2890.6:2009 Appendix A4).
- 4.2 At the pedestrian crossing point on Thomas Street, the new kerb ramp (i.e. 'pram ramp') to be designed and constructed in accordance with AS 1428.1 (2009) Clause 10.7.
- 4.3 At the pedestrian crossing point on Thomas Street, warning tactile ground surface indicators to be designed and installed in accordance with AS 1428.4.1 (2009) Clause 2.2.

## 5.0 INTERNAL DOORS

All internal spaces must be provided with accessible entry and all internal doors to be designed with consideration to access provision, including all staff work and storage spaces.

Service, maintenance and plant areas are excluded from requiring access.

- 5.1 Ensure internal doors achieve minimum clear opening widths of not less than 850mm (including to the operable leaf where double leaf doors are proposed) per AS 1428.1 (2009) Clause 13.2. Therefore, a minimum 920mm door leaf may be required.
- 5.2 Confirm the operation of internal doors (i.e. automated, semi-automated or manual). Where a door closer is proposed, maximum door operating forces to be in accordance with the following (AS 1428.1:2009 Clause 13.5.2):
  - 20N to initially open the door.
  - 20N to hold the door open.
  - 20N to swing the door.
- 5.3 Clarify if any security / access controls are proposed. These must be selected and installed to comply with the requirements of AS 1428.1 (2009) Clause 13.5.3, including:
  - To be located not less than 500mm from any corner and at an accessible height between 900-1100mm above finished floor level.
- 5.4 Door handles, locks and snibs to comply with AS 1428.1 (2009) Clause 13.3, including:
  - Lever or D-pull handles to be installed with a clearance of between 35mm and 45mm required between the rear face of the handle and the face of the door.
  - Door snibs and locks which are a lever design with a length of no less than 45mm (measured from the centre of the spindle) are preferred.

## 6.0 INTERNAL PATHS OF TRAVEL

Internally, vertical access is achieved via either lift or stair access.

The width of corridors is sufficient (being typically greater than 2000mm) to enable ease of access by a person utilising a mobility aid or office / delivery trolleys. The circulation space provided to the

front of the lift is sufficient (3000mm) which will facilitate the completion of a 180 degree turn by a wheelchair user.

However, the columns located along the corridor at gridline 4 protrude into the path of travel by approximately 500mm.

- 6.1 Ensure no obstructions to accessible paths of travel (such as columns, essential fixtures, etc.) which should be setback a minimum of 500mm from the path of travel and possess no less than 30% luminance contrast to the path surface and background (AS 1428.2:1992 Clause 6.7; 27.1).
- Where unavoidable, objects protruding into paths of travel must not encroach by more than 100mm (AS 1428.2:200X DRAFT Figure 4.32).

## **7.0 INTERNAL FINISHES**

In order to meet the spirit and intent of the DDA and ensure appropriate finishes are provided to enable dignified movement by persons with vision impairment, please note the following:

- 7.1 Further documentation is required regarding proposed internal finishes, including wall and floor surfaces and proposed joinery.
- Generally wall and floor surfaces must possess appropriate contrast (no less than 30% luminance contrast), or introduction of 150mm high skirting with contrast to each.
  - Doors / door frames to possess no less than 30% luminance contrast with walls and floors.
  - Counters to possess 30% luminance contrast between counter top and counter face; counter top and background surface; and counter face and abutting floor surface.
- 7.2 Appropriate visual indication which meets the compliance criteria of AS 1428.1 (2009) Clause 6.6 must be installed to all frameless or fully glazed doors and sidelights, and any glazing which may be mistaken for a doorway or opening.
- 7.3 Further detail is required regarding the slip resistance ratings of all floor finishes.
- 7.4 Provide details of any carpet, including pile height and loop design.

## **8.0 STAIRS**

One internal stair is proposed. An alternative means of access shall be provided for people with disabilities with the provision of a lift located within proximity to the stairs.

- 8.1 It is highly recommended that the stair be designed and constructed in accordance with AS 1428.1 (2009) Clause 11, including:
- The provision of handrails to both sides of the stairs with appropriate and consistent heights, diameter, detail and profile.
  - Handrails to extend 300mm past the top riser and one 300mm plus one tread width past the bottom riser.

- Stair treads and nosings must not overhang beyond the face of the riser. An angled riser with a maximum set back of 25mm may be provided.
- The installation of visual nosings to stair treads.
- The installation of warning tactile ground surface indicators per AS 1428.4.1 (2009) to be installed.

## **9.0 LIFTS**

One centrally located lift is proposed to serve the facility. The lift lobby at level 2 basement has sufficient space to permit a 180 degree turn by a wheelchair user.

- 9.1 As the lift services an effective height exceeding 12 metres, a minimum internal carriage size of not less than 1400mm X 2000mm is required (Premises Standard 2010 Clause E3.6; BCA E3.2 (b)).
- 9.2 The minimum clear door opening width of the lift to be no less than 900mm (AS 1735.12:1999 Clause 2; Premises Standard 2010 Clause E3.6).
- 9.3 The lift must be provided with enhanced features for people with disabilities to meet the parameters of AS 1735.12 (1999), including however not limited to, a handrail, audible and visual arrival indication and tactile and Braille lift landing and car controls.
- 9.4 At a minimum, compliance with the requirements of BCA Clause E3.6 is to be achieved for the proposed lift.

## **10.0 SANITARY AND SHOWER FACILITIES**

One accessible combined sanitary and shower facility is proposed to the basement level 2.

The overall dimensions of the facility (2400mm X 2860mm) are sufficient to provide circulation space to the sanitary fixtures per AS 1428.1 (2009) Clause 15. However, it appears the proposed location of the shower seat does not allow for sufficient circulation space to be provided to the shower or the toilet pan.

Limited information has been provided regarding the type and exact locations of the sanitary fixtures.

- 10.1 Relocate the shower seat to the side wall opposite the toilet pan (south wall).
  - An unobstructed circulation space of no less than 1600mm X 2350mm is required to the shower recess per AS 1428.1 (2009) Clause 15.5.1.
  - An unobstructed circulation space of no less than 1900mm X 2300mm is required to the toilet pan per AS 1428.1 (2009) Clause 15.2.2.
  - Refer Appendix A, Figure 1 (attached) which indicates the circulation requirements for sanitary fixtures per AS 1428.1 (2009) Clause 15.
- 10.2 Ensure the sanitary fixtures are specified and located per AS 1428.1 (2009).
  - Provide dimensioned plans and elevations confirming appropriate locations of all sanitary fixtures.

- Provide schedule of sanitary fixtures for review.

## **11.0 STAFF ROOM**

It appears a staff room with a kitchenette / tea making facility and lockers is proposed adjacent to the ASRS picking area.

11.1 Ensure that the kitchenette / tea making facility is accessible for people with disabilities. This includes the provision of features such as:

- A bench height of 850-870mm (in lieu of 900mm).
- The specification of a sink with a maximum bowl depth of 150mm.
- The installation of underbench pipework that retains appropriate under bench knee and foot clearance.
- The selection and location of appropriate fixtures and appliances.
- Provide detailed plans and elevations for review when available.

11.2 Ensure accessible lockers are available within the height reach range of 700-1220mm (AS 1428.2:1992).

## **12.0 OFFICE / WORK AREAS**

Staff work areas for the project are located at the ASRS picking station and ASRS operational area. It is understood that the ASRS vault area will accommodate ASRS equipment and requires maintenance access only.

Limited information has been provided at this stage regarding the design and layout of the general workstation area. It is recommended that the general workstations be designed with consideration to access by people with disabilities, including, however not limited to:

- 12.1 Provide and maintain clear paths of travel of not less than 1000mm to and throughout work areas.
- 12.2 Provide height adjustable workstations to work areas. Alternatively, fixed height workstations between a height of 700mm and 720mm may be provided.
- 12.3 Where work surfaces are provided for standing users, give consideration to the height of benches / surfaces to enable access by people with disabilities.
  - This includes consideration to a bench height of 870mm in lieu of 900mm, the provision of appropriate knee and foot clearance to the underside of work surfaces and sufficient circulation space to the front of work surfaces.
- 12.4 All staff workstations / work surfaces should be ergonomically designed in accordance with occupational health and safety workstation requirements and assessed by a suitably qualified ergonomist.
- 12.5 Client to advise of any current employees with disabilities or other special needs, to ensure employee-specific requirements are incorporated into the design.

- 12.6 Develop a client management plan and associated operational procedures relating to individual facilitation of employees with temporary or permanent disabilities. This may form part of the orientation program for the site and return to work policy.

### **13.0 LIGHTING**

Consider the following recommendations in the design of the lighting system for the project.

- 13.1 Ensure consistent lighting levels without pools of lighting or dark areas.
- 13.2 Provide minimum interior lighting levels of maintenance illuminance in accordance with AS 1680.1 (1990) and with consideration to AS 1428.2 (1992) Clause 19.
- 13.3 Task lighting to be provided in areas where high-level tasks will be undertaken.

### **14.0 SIGNAGE**

Limited documentation is available at this stage regarding the proposed way-finding strategy for the development.

When development of the designs progress, a comprehensive review of the proposed way-finding strategy and signage package should be undertaken to ensure predictability and consistency of information which facilitates safe, independent and dignified travel by all.

Tactile and Braille signage to be provided to meet the compliance requirements of the BCA and provisions outlined in AS 1428.1 (2009) including additional signage where deemed appropriate.

- 14.1 Develop a signage package specifically designed for people with disabilities inclusive of Braille and tactile features.
- 14.2 At a minimum facility, signage is required to the accessible sanitary and shower facility.
- 14.3 Signage package to include typical elevation for installation of facility signage for review.

### **15.0 EMERGENCY EVACUATION**

Limited detail has been provided at this stage regarding the proposed evacuation strategy, including the procedure for the evacuation of individuals with temporary and permanent impairments and high level mobility needs.

- 15.1 Clarification is required regarding the proposed procedure for the egress of people with disabilities.

If you have any queries in regard to the above, please do not hesitate to contact the undersigned.

Yours sincerely,

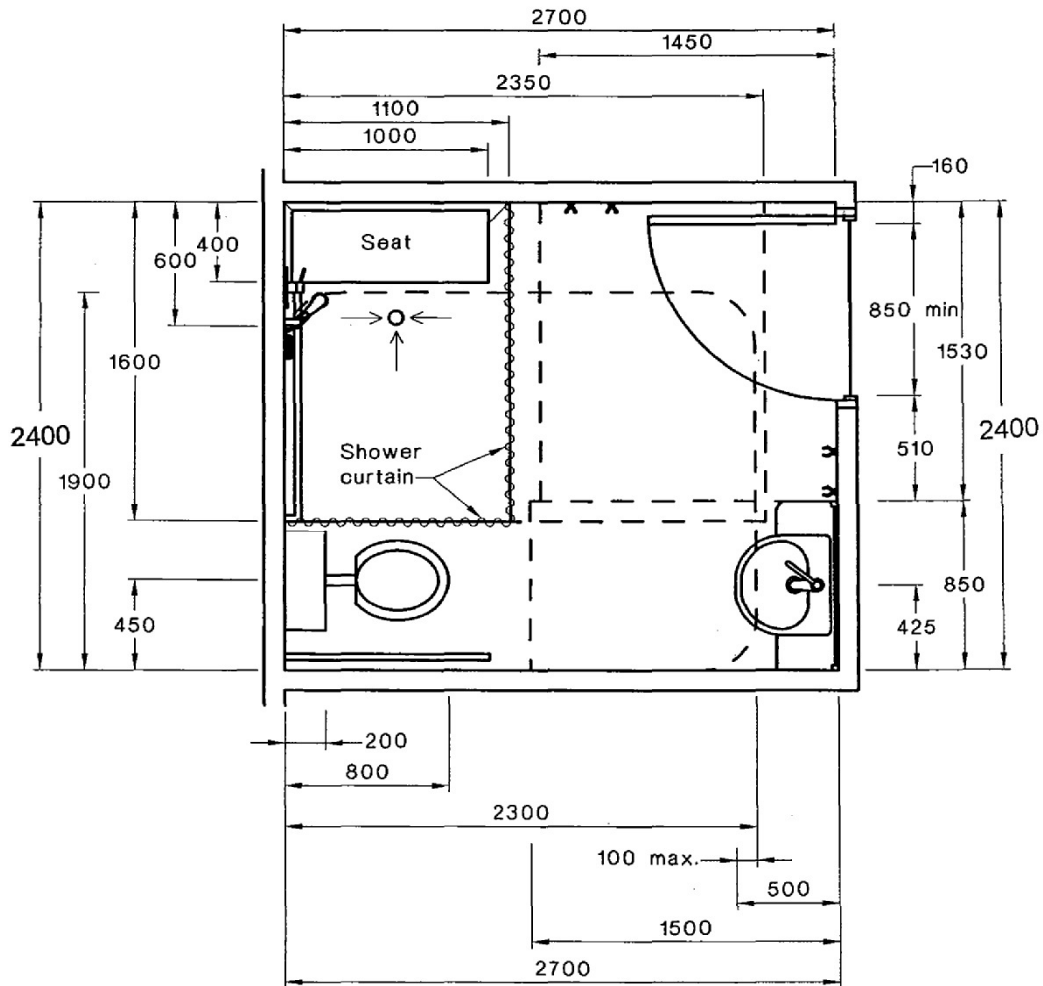


Lynda Wilem  
**PHILIP CHUN ACCESS**





# APPENDIX A



DIMENSIONS IN MILLIMETRES

Figure 1