



25th July 2018

BNM & H ARCHITECTS 17/130 Pacific Hwy, Greenwich NSW 2065 Australia

MACQUARIE UNIVERSITY ARTS PRECINCT PROJECT

ACCESSIBILITY ASSESSMENT REPORT AMENDMENT s4.55

Summary

The report is a detailed access assessment for s4.55 DA Amendment documentation issued for the proposed development of the Macquarie University Arts Precinct Project. Generally, the s4.55 documentation has no impact on accessibility, other than an improvement to the Rooftop Garden's circulation.

The report outlines the access legislative framework, provides general access planning considerations and preliminary access comments for mandatory compliance to assist with the incorporation of reasonable access provisions for people with disability within the Design Development (DD) documentation.

The assessment reports favourably on the inclusive nature of the design, which responds well to the design requirements of the Disability Discrimination Act, the Building Code of Australia, referred Australian Standards and Local Government Plans. The design also considers best practice elements contained in Universal Design Principles, Human Rights Commission Notes and the like – with the assessment going on to examine how the design responds to the general access planning considerations.

General Access Planning Considerations

- The Macquarie University Design Excellence Strategy and Urban Design Guidelines are required by and form part of the Concept Plan approval that is the current statutory planning regime that applies to the Macquarie University site. The Guidelines outline the controls and design measures against which future development on the campus is to be assessed instead of Council's DCP controls.
- The Guidelines, Volume 1, *Part 2.2.8 Accessibility* highlights the importance of providing accessible pedestrian connections across most of the campus so that people with disability can freely move from transport nodes to all buildings, within and

between buildings and across the public domain.

The key initiatives are:

- *New buildings should achieve level access at major entries*
 - *Accessible gradients should be achieved wherever possible throughout the public domain*
 - *Major level changes on significant public paths should be negotiated by lifts or ramps in the same course of travel*
 - *Development should be considerate of the University's Disability Action Plan*
- City of Ryde DCP 2010 Part 9.2 (Cl. 5.31 Infrastructure) reinforces similar aims of ensuring accessibility and connectivity throughout the Council area.
 - By utilising the AS1428.1 Suite of Standards, the overall aim is to provide continuous accessible paths of travel to connect the proposed development to key transport linkages (train station, bus stops, taxi stands, car-parking) to and through public domain areas (open-space plazas, landscape and parks) and between associated accessible buildings, including the adjacent connected buildings.
 - It is noted that generally the site allotment boundary is the line at which mandatory building requirements (BCA and DDA Premises Standards and referenced standards) commence. However, the context of this development and its critical relationship to surrounding 'public domain' and key pedestrian connections will also require consideration of the bigger picture.
 - Macquarie University Disability Action Plan (DAP) 2012 -2017 Part 4 Inclusive Physical Environment states the following over-arching access goals:
 - Goal 4.1: Macquarie University will aspire to become a best practice model of an inclusive built environment, based on universal design principles.*
 - Goal 4.2: Macquarie University will aim to develop a physically 'connected' campus with identifiable improvements in physical accessibility for people with disability to, from and around campus.*
 - The DAP proposes an Accessible Environments Advisory Group (AEAG) be established to assist develop appropriate consultation mechanisms with people w

disability regarding the physical environment, barriers, improvements and physical connectivity within the campus. We understand that this Advisory Group has been in place for a number of years. Liaison between the Advisory Group and the management and design team, as appropriate, is essential to better inform the design.

- MGAC supports the application and consideration of Universal Design (UD) principles into the design to maximize access for all people. We will assist the design team to incorporate UD principles, where possible within the project, while still meeting mandatory compliance requirements.
- A UD approach has numerous benefits for the client as an education provider, for business functions within the building, for individual users and for society in general. An inclusive environment that can be accessed, understood and used by as many people as possible, is proven good business sense, is more sustainable and is socially progressive - in line with the aims of the DAP.
- Universal Design principles consider the needs of a broad range of people including older people, families with children and pushing prams, people from other cultures and language groups, visitors in transit and people with disability. By considering the diversity of users, the design will embed accessibility into and within it, so that benefits can be maximized, without 'adding on' specialized accessible features, which can be costly, visually unappealing and may perpetuate exclusion and potential stigma.
- The seven key Universal Design principles to consider in the on-going design are:
 - 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

Access Legislative Framework

The following legislation, standards and guidelines that apply to this development:

- Federal Disability Discrimination Act (DDA)
- Disability (Access to Premises – Buildings) Standards 2010 (APS);
- Building Code of Australia 2016 (BCA) Parts D3, E3, F2.4
- AS 1428.1:2009 - (General Requirement of Access);
- AS 1428.4.1:2009 - (Tactile Ground Surface Indicators);
- AS 2890.6:2009 - (Parking for People with Disabilities);
- AS 1735.12:1999 - (Lift Facilities for Persons with Disabilities);
- AS 1735.7:1998 – (Lifts, escalators and moving walks: Stairway lifts)
- Macquarie University Concept Plan (06_0016) 2009
- Macquarie University Urban Design Guidelines, including Signage and Wayfinding Guidelines;
- Macquarie University Disability Action Plan 2012 -2017 (lodged with HEREOC);
- Macquarie University Campus Master Plan 2014;
- LEP Ryde Local Environmental Plan (LEP) 2014

Please note that there are also additional advisory standards, not currently referenced by BCA or DDA Premises Standards, as well as other relevant guidelines that should be considered, as relevant, to promote safety, equity and dignity in line with over-arching DDA principles and aspirational objectives. These include:

- City of Ryde DCP 2014 Part 9.2 Access for People with Disabilities (that in some parts references AS1428.2:1992)
- Universal Design Principles
- Human Rights Commission (HEREOC) Advisory Note February 2013 on streetscape, public, outdoor areas, fixtures, fittings and furniture.

- AS1428.2:1992 Enhanced and Additional requirements
- AS1428.4.1 Draft Way-finding Standard
- AS1428.5:2010 Communication for People who are Deaf or Hearing impaired
- AS3745:2010 – Planning for Emergencies in Facilities (to assist with design strategies for provision for escape for people with disability that may require assistance)

Report Referenced Drawings – Landscape

DOCUMENT TITLE	Number
LANDSCAPE WORKS (GSA)	
COVER SHEET	APP-LND-0000
TREE REMOVAL PLAN	APP-LND-0102
GF PERIPHERY FINISHES PLAN	APP-LND-1000
GF PERIPHERY SOFTWARES PLAN	APP-LND-1002
GF COURTYARD FINISHES PLAN	25VWA-LND-1100
GF COURTYARD FURNISHINGS PLAN	25VWA-LND-1102
GF COURTYARD SOFTWARES PLAN	25VWA-LND-1103
GF ATRIUM FINISHES PLAN	25VWB-LND-1200
GF ATRIUM FURNISHINGS PLAN	25VWB-LND-1202
GF ATRIUM SOFTWARES PLAN	25VWB-LND-1203
L1 TERRACE LANDSCAPE PLAN	25VWB-LND-1300
L6 ROOFTOP LANDSCAPE PLAN	25VWB-LND-1400
L6 ROOFTOP EAST SOFTWARES	25VWB-LND-1401
L6 ROOFTOP LANDSCAPE PLAN	25VWB-LND-1410
L6 ROOFTOP WEST SOFTWARES	25VWB-LND-1411
GF COURTYARD SECTIONS	25VWA-LND-3100
GF ATRIUM SECTIONS	25VWB-LND-3200
L6 ROOFTOP SECTIONS	25VWB-LND-3400
LANDSCAPE DETAILS SHEET 1 - TYP DETAILS	APP-LND-4001
LANDSCAPE DETAILS SHEET 2 - BALUSTRADE DETAILS	APP-LND-4002
LANDSCAPE DETAILS SHEET 3 - PAVING DETAILS	APP-LND-4003
LANDSCAPE DETAILS SHEET 4 - FURNISHINGS - SEATING	APP-LND-4005
LANDSCAPE DETAILS SHEET 5 - FURNISHINGS - SEATING	APP-LND-4006
LANDSCAPE DETAILS SHEET 6 - FURNISHINGS - TABLES	APP-LND-4007
LANDSCAPE DETAILS SHEET 4 - FURNISHINGS - TABLE TENNIS	APP-LND-4008
LANDSCAPE DETAILS SHEET 4 - FURNISHINGS - DISPLAY SCREEN	APP-LND-4009
LANDSCAPE MATERIALS & FURNISHINGS SCHEDULE	APP-LND-SCH-9002



Landscape Drawings added for s4.55

25WWB-LND-1400-DA[B]-L6-ROOFTOP-WEST-LANDSCAPE PLAN
25WWB-LND-1401-DA[B]-L6-ROOFTOP-EAST-LANDSCAPE PLAN
25WWB-LND-1420-DA[A]-L6-ROOFTOP-CENTRAL-LANDSCAPE PLAN
25WWB-LND-1430-DA[A]-L6-ROOFTOP-FULL-LANDSCAPE PLAN
25WWB-LND-1440-DA[A]-L6-ROOFTOP-SCHEME COMPARISON
25WWB-LND-3400-DA[B]-L6-ROOFTOP-SECTIONS-WEST
25WWB-LND-3410-DA[A]-L6-ROOFTOP-SECTIONS-EAST
25WWB-LND-3420-DA[A]-L6-ROOFTOP-SECTIONS-CENTRAL

Details have not been provided for links to other buildings required to be accessible, civil and landscaping works at the principal point of entry or carparking showing required dedicated accessible parking.

Report Referenced Drawings - Architectural

1000 - GENERAL ARRANGEMENT PLANS			
A1000	General Arrangement Plan - Ground	D	
A1010	General Arrangement Plan - Level 1	D	
A1020	General Arrangement Plan - Level 2	D	
A1030	General Arrangement Plan - Level 3	D	
A1040	General Arrangement Plan - Level 4	D	
A1050	General Arrangement Plan - Level 5	D	
A1060	General Arrangement Plan - Level 6	D	
A1070	General Arrangement Plan - Level 7	D	
A1080	General Arrangement Plan - Level 8	D	
2000 - ELEVATIONS & SECTIONS			
A2001	External Elevations - North & South	B	
A2002	External Elevations - East & West	B	
A2004	External Elevations - 25WWB & 25WWC Atrium	B	
A2005	External Elevations - 25WWB & 25WWC Atrium	B	
A2101	Building Sections Sheet 1	B	
A2102	Building Sections Sheet 2	B	
A2103	Building Sections Sheet 3	B	
A2104	Building Sections Sheet 4	B	
A2105	Building Sections Sheet 5	B	
A2106	Building Sections Sheet 6	B	
6500 - STAIR			
A6500	Stair & Ramp Legend	C	
A6501	25WWA - Stair A1	C	
A6502	25WWA - Stair A2	C	
A6503	25WWB - Stair B3	C	
A6504	25WWB - Stair B5	C	
A6505	25WWC - Stair C1	C	
A6506	25WWC - Stair C2	C	
A6507	25WWA - Stairs	C	
A6508	25WWA - Ramps	A	
A6509	25WWB - Stairs	C	
A6510	25WWC - Stair C4, 5, 6 & Ramp C1 & 2	C	
A6511	25WWB - Stair B4 (1 of 3)	B	
A6512	25WWB - Stair B4 (2 of 3)	B	
A6513	25WWB - Stair B4 (3 of 3)	B	
A6514	25WWC - Stair C3 (1 of 2)	B	
A6515	25WWC - Stair C3 (2 of 2)	B	
A6530	Balustrade and Handrail - Overview		
A6531	Balustrade and Handrail - Details		
A6532	Bridge Details Sheet 1		
A0000	Cover Sheet	C	
A0002	Location Plan	B	
A0004	Survey	-	
A0005	Grid Setout	A	
7000 - WET AREA DRAWINGS			
A7000	Wet Areas - 25WWB Level G&2 Male (1 of 2)	C	
A7001	Wet Areas - 25WWB Level G&2 Male (2 of 2)	C	
A7002	Wet Areas - 25WWB Level G&2 Female (1 of 2)	C	
A7003	Wet Areas - 25WWB Level G&2 Female (2 of 2)	C	
A7004	Wet Areas - 25WWB Level G&2 Accessible	C	
A7005	Wet Areas - 25WWC Level G Female (1 of 2)	C	
A7006	Wet Areas - 25WWC Level G Female (2 of 2)	C	
A7007	Wet Areas - 25WWC Level G Male (1 of 2)	C	
A7008	Wet Areas - 25WWC Level G Male (2 of 2)	C	
A7009	Wet Areas - 25WWC Level G Accessible	C	
A7010	Wet Areas - 25WWB Level 1 Male (1 of 2)	B	
A7011	Wet Areas - 25WWB Level 1 Male (2 of 2)	A	
A7012	Wet Areas - 25WWB Level 1 Female (1 of 2)	A	
A7013	Wet Areas - 25WWB Level 1 Female (2 of 2)	A	
A7014	Wet Areas - 25WWC Level 1-3 Male (1 of 2)	B	
A7015	Wet Areas - 25WWC Level 1-3 Male (2 of 2)	A	
A7016	Wet Areas - 25WWC Level 1-3 Female (1 of 2)	B	
A7017	Wet Areas - 25WWC Level 1-3 Female (2 of 2)	A	
A7018	Wet Areas - 25WWB Level 3-7 Male (1 of 2)	B	
A7019	Wet Areas - 25WWB Level 3-7 Male (2 of 2)	A	
A7020	Wet Areas - 25WWB Level 3-7 Female (1 of 2)	B	
A7021	Wet Areas - 25WWB Level 3-7 Female (2 of 2)	A	
A7022	Wet Areas - 25WWA Level G Mothers' Room	A	
A7023	Wet Areas - 25WWA Level G Accessible	A	
A7024	Wet Areas - 25WWB Level 1-3 Accessible	A	
A7025	Wet Areas - 25WWB Level 3-7 Accessible	A	
A7026	Wet Areas - 25WWC Level 1-3 Accessible	A	
A7027	Wet Areas - 25WWB 25WWC Cleaner's Rooms	-	



Architectural Drawings and Documents added for s4.55:

APP_SSDA03 C

APP_SSDA04 B

APP_SSDA05 C

APP_SSDA06 C

APP_SSDA07 C

APP_SSDA08 C

APP_SSDA09 B

APP_SSDA10 B

APP_SSDA11 B

APP_SSDA12 C

APP_SSDA13 C

APP_SSDA14 B

APP_SSDA15 B

APP_SSDA16 B

APP_SSDA25 A

APP_SSDA26 A

MUAPP Section 96 Architectural Design Statement

MUAPP Section 96 Landscape Design Statement FR

BNMA MUAPP Primary & Secondary Access Routes Statement **Attached**

Architectural Drawings referred to in BNMA MUAPP Primary & Secondary Access Routes Statement:

APP_SSDA60_A.pdf

APP_SSDA61_A.pdf

APP_SSDA62_A.pdf



Accessibility Elements

There are 21 Mandatory Accessibility Elements applied to this assessment. *The items shown in italic font do not have an impact on the building sign-off under the DDA Access Code for Buildings or the BCA. These are advisory recommendations in line with the intent and objectives of the DDA to ensure equitable and dignified access for people with disabilities and considered 'best practice'.*

Preliminary accessibility (mandatory) comments explore:

1. Exemptions
2. External Access Linkages
3. Entry Access to Buildings
4. Level of Access within the Building
5. Paths of Travel
6. Central Courtyard and Covered Atrium
7. Emergency Egress
8. Passenger Lifts
9. Sanitary Facilities
10. Seating and Service Counters
11. Accessible Car Parking
12. Lighting
13. Signage
14. Hearing Augmentation
15. Stairways
16. Ramps
17. Kitchens and Dining
18. Luminance Contrast
19. Meeting and Activity Spaces
20. Tactile Ground Surface Indicators (TGSi)

1.0 Exemptions

- 1.1. This provision provides details on buildings or parts of buildings not required to be accessible under the BCA. D3.4 details exemptions to the requirements for access to certain areas within buildings where providing access would be inappropriate because of the nature of the area or the tasks undertaken.
- 1.2. Ground Floor exemptions are Cleaner Rooms, Plant Rooms, Hydrant Sprinkler Pump Room, Fire Control Room, Comms, Loading Bay, Chamber Substation and associated Corridor and Services Areas.
- 1.3. Level 1 exemptions are Plant Rooms and Comms.
- 1.4. Levels 1 to 8 exemptions are Cleaner Rooms and Plant Rooms.

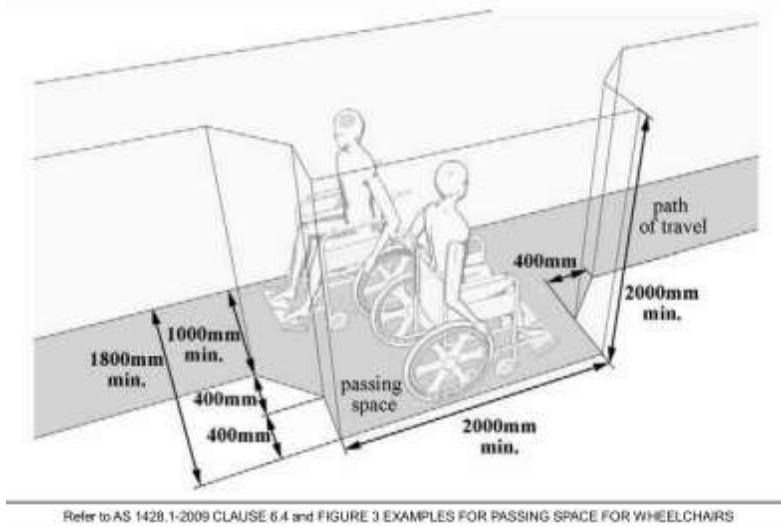
2.0 External Access Linkages

- 2.1. Provide a pedestrian accessible path of travel from the main pedestrian entry points at the site allotment boundary to building entrances, compliant with AS1428.1:2009.

The size and nature of the campus and reference to the ACCESSIBILITY MAP available on the University's web-site suggests that there are accessible pathways from the property boundary to the proposed development.
http://www.mq.edu.au/__data/assets/pdf_file/0004/108148/map_accessibility.pdf
- 2.2. Accessible pedestrian pathways connect from Wally's Walk, Central Avenue, Macquarie Drive and Western Road to the proposed Arts building on the Ground Floor. Details to be provided.
- 2.3. There will be accessible pedestrian paths of travel linking to buildings X5A, X5B W6D, W5A and W5C. Building W5A connects with an accessible pedestrian bridge at Level 1 – over Western Road which itself, is not an accessible path of travel along the eastern side of the Arts Building.
- 2.4. A continuous accessible path of travel to and from any required accessible car parking spaces to the south of Building C. Details to be provided prior to Construction Certification (CC).

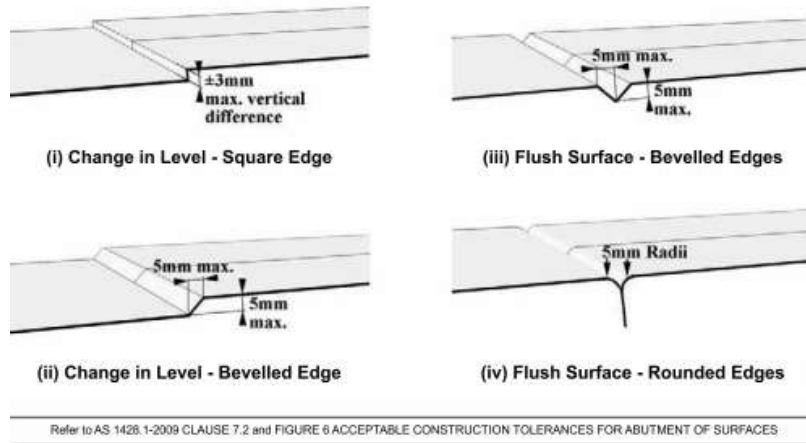
- 2.5. Vehicle drop-off and pick-up is provided at all primary building entrances. Details to be provided.
- 2.6. Accessible pathways will be provided that lead users from the designated accessible parking bays to the building entrances. Details to be provided.
- 2.7. The minimum width of walkways, required to be accessible, will be 1000mm where they are straight and at least 1500 where they are curved and level landings will be located as per AS1428.1 item 10.2 (b).
- 2.8. Wheelchair passing bays (1800 x 2000mm) will be provided at required intervals on walkways required to be accessible.

Example of Passing Space for Two People in Wheelchairs - Path Width 1000mm



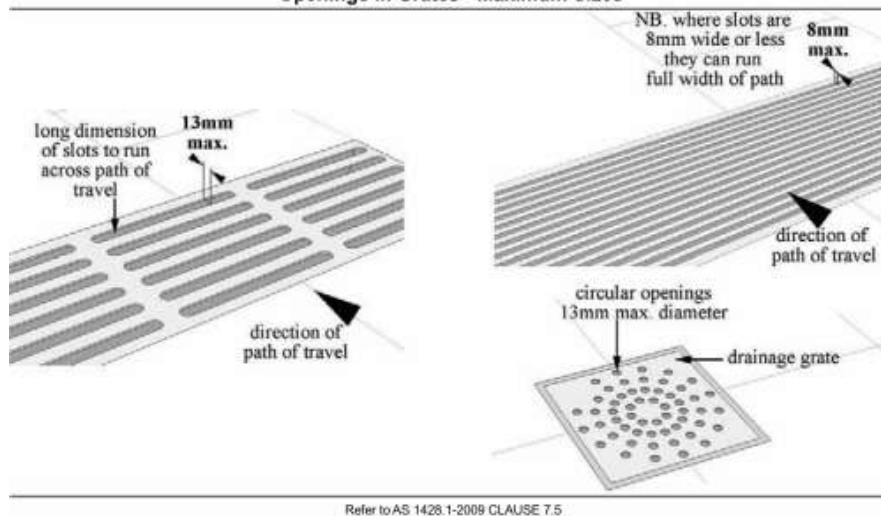
- 2.9. Firm and level abutment of 600mm each side or kerb or wall will protect the edge of the walkway.
- 2.10. Abutment of surfaces will be no more than 3mm if vertical or 5mm if bevelled (rounded).

Maximum Tolerances for Abutment of Surfaces



- 2.11. Raked joint pavers will meet the requirements of Australian Standards.
- 2.12. Drainage grates on accessible paths of travel will have openings of no more than 13mm wide x 150mm long, with the greater dimension transverse to the main direction of travel - to assist wheelchair and cane users.

Openings in Grates - Maximum Sizes

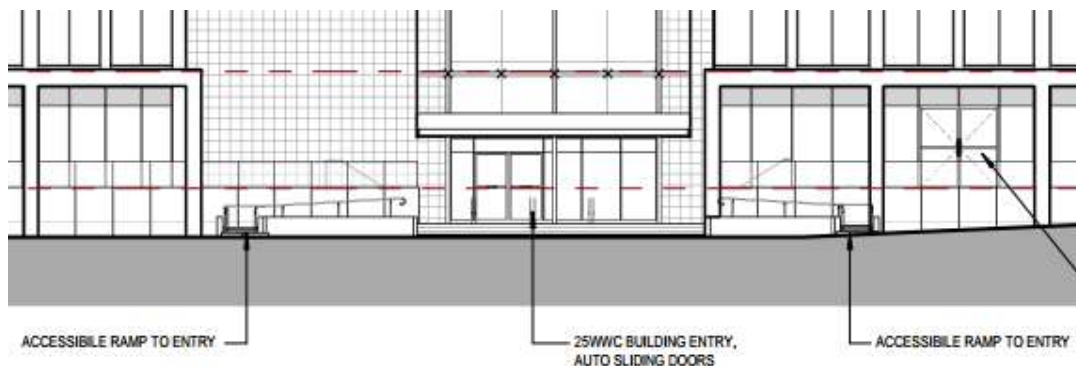


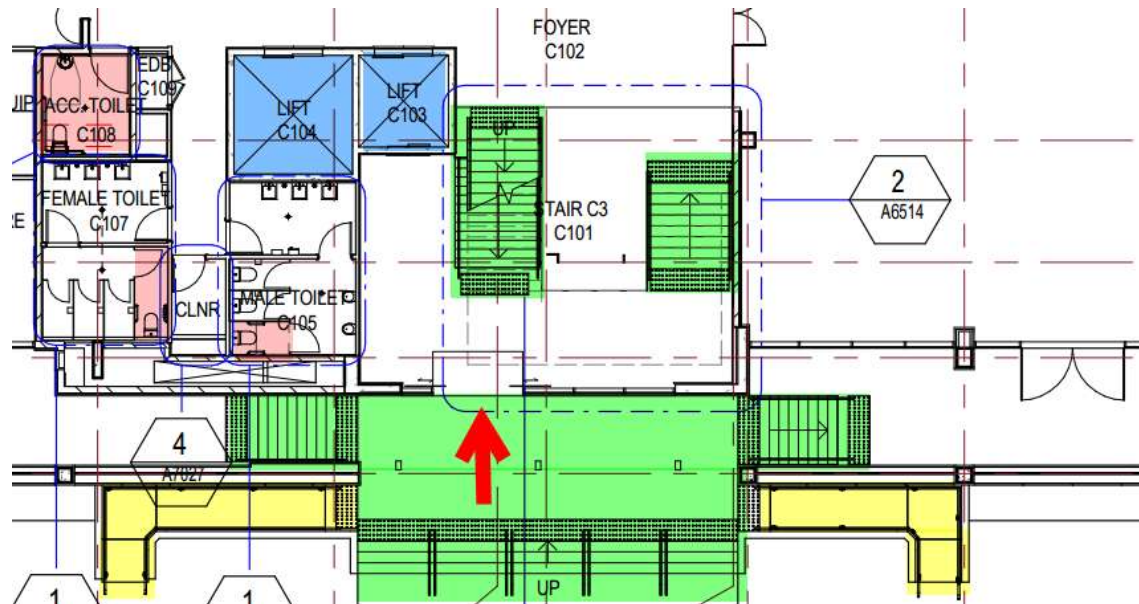
- 2.13. *Pathways free from plant species that develop overhanging foliage, and/or leaves or that drop seed pods, berries, leaf and bark litter are recommended.*

- 2.14. *Landscape designs, materials and plants that contribute to pedestrian safety against slips and trips will be provided.*
- 2.15. *Plantings that provide orientation or direction cues for people with vision impairment e.g. distinctive scents, sounds, appearance or texture will be provided.*
- 2.16. *Constructed or introduced planter boxes are appropriately located clear of any pathway.*
- 2.17. *Any dense plantings should be maintained to provide a clear line of sight.*

3.0 **Entry Access to Buildings**

- 3.1. Access is required through at least 50% of entrances, including the principal pedestrian entrance/s to the Building. Note it is preferred that all entrances are accessible. The proposal indicates that accessibility through at least 50% of entrances is achievable. If incorrectly detailed these may restrict accessibility and present trip hazards.
- 3.2. The principal point of entry to the complex is at the southern face of Block C on Level 2. The external environment rises up to the entry level and main Foyer with an external stairway and 2 x external accessible ramps. From the main entrance landing, two additional stairways rise eastwards and westwards, respectively, to connect to corridors leading to Seminar Rooms to the west and Function/Temporary Exhibition Space to the east.





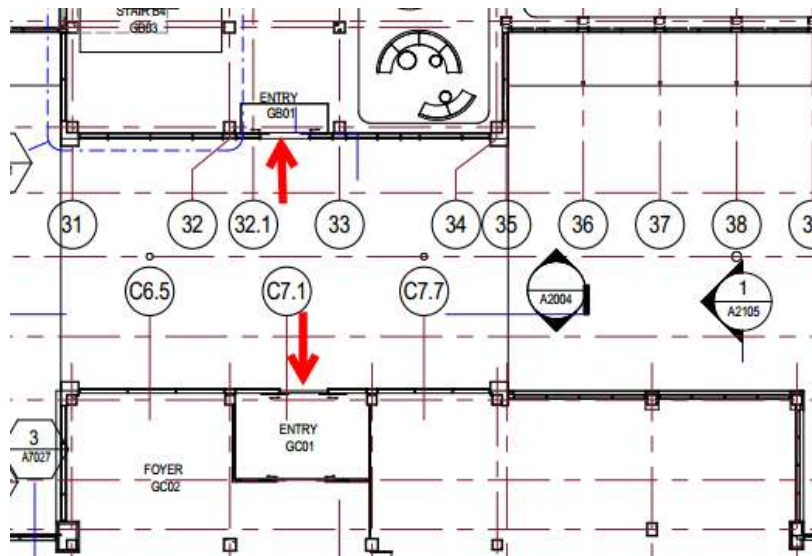
The building is entered through a double-leaf automated sliding doorway to a landing/lobby where 2 x internal stairways lead up to the Level 2 Foyer and down to the Ground Floor Foyer. A dedicated accessible passenger lift is located beside these internal stairways. The stairways and ramps will have all the features and dimensions as required by AS1428.1 and the passenger lift will be in accordance with AS1735.12. The issued drawings do not indicate RLs – detail to be provided.

- 3.3. There are 2 x entrances facing north (Wallys Walk) that satisfy BCA D3 and AS1428.1.

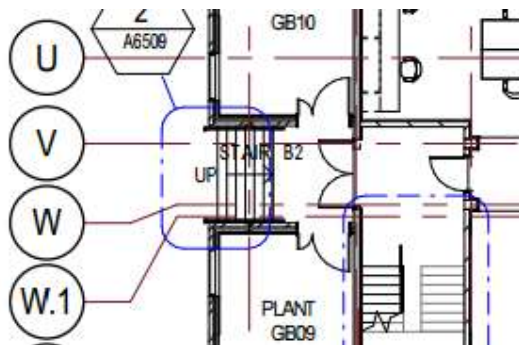
The western entrance, between gridlines 02 and 18, has a rising walkway at 1:20 gradient (TGSIs not required) leading to a level landing that has a single automated sliding entry door on gridline H. Inside the doorway, the landing continues to a stairway with a mechanical platform lift.

The eastern entrance has a 1:21 gradient ramp and no doorway – leading to a row of seminar rooms, all with individual secure accessible doorways.

- 3.4. There are 2 x compliant entrances, facing each other, leading into buildings B and C, between gridlines 31 and 35. They have level landings and automated double sliding glass doors. Details to be provided prior to CC.



- 3.5. On the western end of Block B, there is a stairway connecting to 2 x plant rooms and into the accessible corridor. This doorway is not required to be accessible as this is an emergency egress only to the west from Building 25WWB.



- 3.6. The issued artist impression indicates the bridge link to/from building W5A, connecting at Level 1 over the open servicing area on Western Road. It appears as though there is a building entrance where the bridge meets Building A. Details to be provided prior to CC.

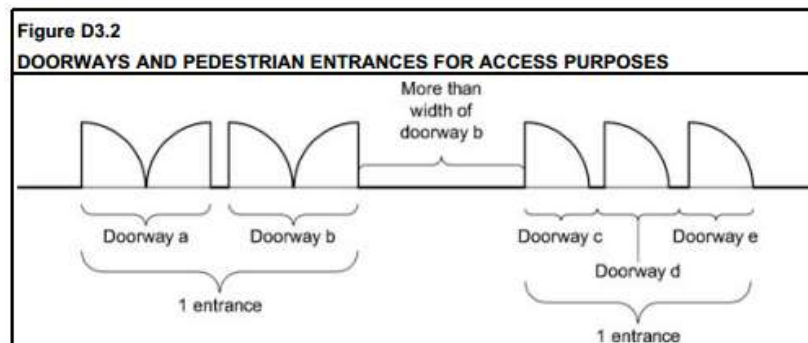


- 3.7. A non-accessible entry (if provided) cannot be located more than 50m distance from an accessible entry – unless exempted by D3.4 of the BCA).
- 3.8. Wheelchair access is required to and through any external entrances to/from any outdoor terrace areas compliant with AS1428.1.
- 3.9. All accessible doors to have 850mm minimum clear width opening and suitable door circulation areas, compliant with AS1428.1. Manual doors require lightweight door forces to be operable by people with disabilities (20N maximum).

The accessibility requirements are considered readily achievable and will be further developed at detailed design stage. Review is required of the many instances of double leaf and multi-leaf door types, at the majority of entrances, where the active leaf is required to offer the necessary clear minimum opening width. Consideration must also be given to the influence of wind pressure on door operating forces, it may be necessary to include auto-opening or powered opening options. Note: Macquarie University Property Design Guidelines state that where required, entrance doors should be powered auto-opening bi-parting sliding doors.

- 3.10. Where a pedestrian entrance required to be accessible has multiple doorways and the pedestrian entrance consists of not more than 3 doorways, not less than 1 of those doorways must be accessible and, if a pedestrian entrance consists of more than 3 doorways, not less than 50% of those doorways must be accessible. This does not apply on the assumption that all principal entry doors are sliding and automated.

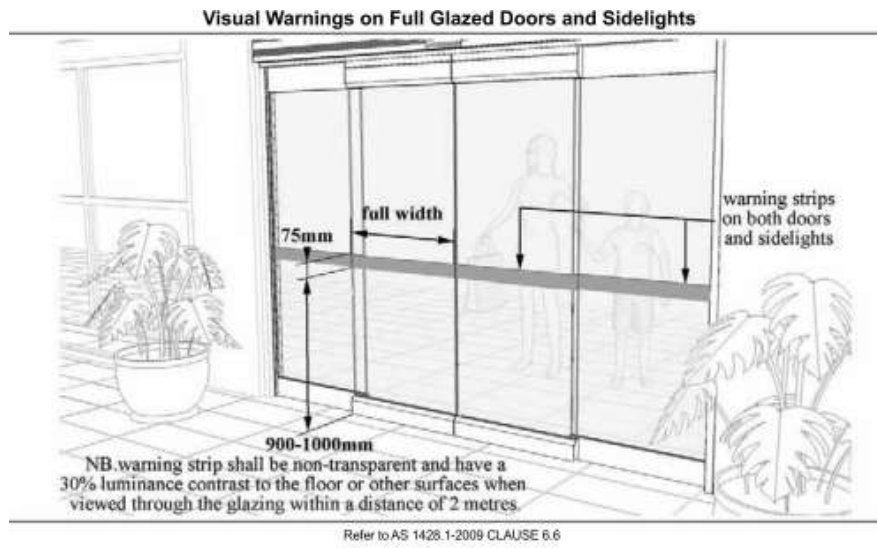
- 3.11. All entry doors will comply with the requirements of BCA D3.2.
 An accessible pedestrian entrance with multiple doorways is considered to be one pedestrian entrance where all doorways serve the same part or parts of the building and the distance between each doorway is not more than the width of the widest doorway at that pedestrian entrance (see Figure D3.2).
 A doorway is considered to be the clear, unobstructed opening created by the opening of one or more door leaves (see Figure D3.2).
 Where a doorway on an accessway has multiple leaves, (except an automatic opening door) one of those leaves must have a clear opening width of not less than 850 mm in accordance with AS 1428.1.



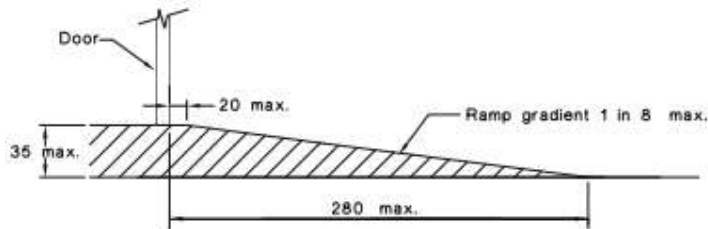
- 3.12. Appropriate signage will be provided at any non-accessible pedestrian entrance door, that directs users to an accessible entrance door.
- 3.13. All security controls (cards/buttons/intercom) will be located at an appropriate height, accessible and easy to operate.
- 3.14. Handles on the inside and outside of all doors will be operable with one hand (e.g. D or D lever handle).
- 3.15. Door controls will allow an appropriate hand clearance between the handle and the back plate.
- 3.16. Handles on the inside and outside of all doors, where grasped or turned, will be located at a height between 900 and 1100mm.
- 3.17. Handles on the inside and outside of all doors where pushed, will be located at a

height between 900 and 1200mm.

- 3.18. Controls on the inside and outside of all doors that need only be touched, will be located at a height between 900 and 1250mm and not less than 500mm from an internal corner.
- 3.19. Any outward opening door, which is not self-closing, will have an appropriate handrail or pull bar on the inside of the door, ensuring clearances and height of installation appropriate.
- 3.20. At any power operated door, push button controls will be a min. of 25mm diameter and sit proud of the surface, activating before the button becomes level with the surrounding surface.
- 3.21. Controls at power operated doors will be no closer than 500mm from an internal corner and between 1000 and 2000mm from any hinged swing door leaf (or door of a surface mounted sliding door).
- 3.22. *An appropriate luminance contrast between the door handles and the adjacent surface will be selected.*
- 3.23. *Effective motion and presence sensor controls will be installed for the automatic doors.*
- 3.24. Frameless or fully glazed door/sidelights will each have a solid, non-transparent contrasting line (min. 30% luminance), not less than 75mm wide, with the lower edge located at a height between 900 and 1000mm.



- 3.25. Entrance doors and/or frames will have a min. luminance contrast of 30% to the adjacent surface ensuring the contrast is a min. 50mm wide. This contrast is required internally and externally.
- 3.26. Doors that are easy to open initially, will not have a heavy closer or spring with the force pressure greater than 20N.
- 3.27. All doorways on an accessible path of travel will have a clear opening of at least 850mm.
- 3.28. Appropriate door thresholds will be deployed with no step, mat or inappropriate weather strip.
- 3.29. Where there is a level difference of floor at a door threshold, an appropriate threshold or step ramp will be included at the door. (This does not apply to internal doors)



- 3.30. The threshold ramp sides will be tapered or splayed by at least 45°.
- 3.31. At the entrance door, if carpet is laid, there will be an appropriate leading edge.
- 3.32. Abutment of surfaces at a recessed mat will be no more than 3mm if vertical or 5mm if bevelled (rounded).
- 3.33. Wheelchair circulation space will be provided inside and outside the entrance doorways.
- 3.34. A minimum of 1450mm between the doors or swing (where door encroaches into space) will be provided.
- 3.35. *Any alarm control pad will be positioned at a height between 900 and 1100mm and be accessible.*
- 3.36. *Install a doorbell/call mechanism at the main public entry door to a height between 900 and 1100mm and ensure that it is accessible.*
- 3.37. *Provide appropriate lighting to the principal pedestrian entrance.*

4.0 **Level of Access Within the Building**

This includes all corridors throughout the 'new' building.

- 4.1. Access is to be provided according to BCA and DDA Access Code Part D3 including Table D3.1 for range of building classifications (all classifications need to be confirmed by BCA consultant).

Under Table D3.1:

- To and within all areas normally used by the occupants (including public, visitors, staff, students etc.) in compliance with AS1428.1:2009. Note: this excludes areas exempted under Part D3.4 e.g. loading docks, plant/equipment rooms.

Advisory recommendation under Ryde Access DCP:

- As above, however compliant with AS1428.1:2009 and AS1428.2:1992 (for some but not all elements). Where the DCP requirement differs from AS1428.1:2009, the higher level of access will be considered - such as for paths of travel under the DCP having 1200mm minimum width pathways and corridors instead of 1000mm minimum width, as required by AS1428.1:2009.

- 4.2. Door openings, circulation and other details are shown in AS1428.1 Clause 13.
- 4.3. All doors on accessible paths of travel will have a clear width opening of at least 850mm, as is required. (Entry doors, where they are double doors and less than 850mm clear at the operable leaf, will be automated.)
- 4.4. All hinged doors on an accessible path of travel will have a latch-side clearance of at least 510mm on the latch side of the door where it opens away from user and have a latch-side clearance of at least 530mm on the latch side of the door where it opens towards the user.
- 4.5. All doors will have sufficient circulation space inside and outside the threshold.
- 4.6. More than 1450mm length will be provided between successive door swings in airlocks/vestibules on accessible paths of travel has been provided.
- 4.7. At least 30% luminance contrast will be provided between all doorways and adjacent surface/s. The contrasting area such as the wall, architrave etc. will be at least 50mm wide to effectively assist people with vision impairment. NB. Frameless glazed doorways will not meet this requirement.
- 4.8. Ensure that all fully glazed doors and surrounding glazing (including glazed walls with no transom or similar), are clearly marked with at least 75mm wide, solid, non-transparent, contrasting line across their full width. The lower edge of line must be between 900mm and 1000mm above the finished floor level and have 30% luminance contrast when viewed against the floor or background surface within 2000m of the glazing. NB. Opaque strips to be used.

- 4.9. All doors on a continuous accessible path of travel will have lever action handles on hinged doors with returns or similar, to assist people with dexterity impairment. The handle to be placed between 900 and 1100mm above the finished floor level, compliant with AS1428.1.
- 4.10. The use of any intercom and/or door release is to be placed between 900 and 1250mm above the finished floor on the latch side of doorway and no less than 500mm from any internal corner or obstruction, compliant with AS1428.1.
- 4.11. The control buttons for power operated doors will be raised, at least 25mm diameter, installed in accessible location i.e. between 1000 and 2000mm from a hinged door leaf in open position, between 900 and 1250mm above the finished floor level and at least 500mm from an internal corner, compliant with AS1428.1.

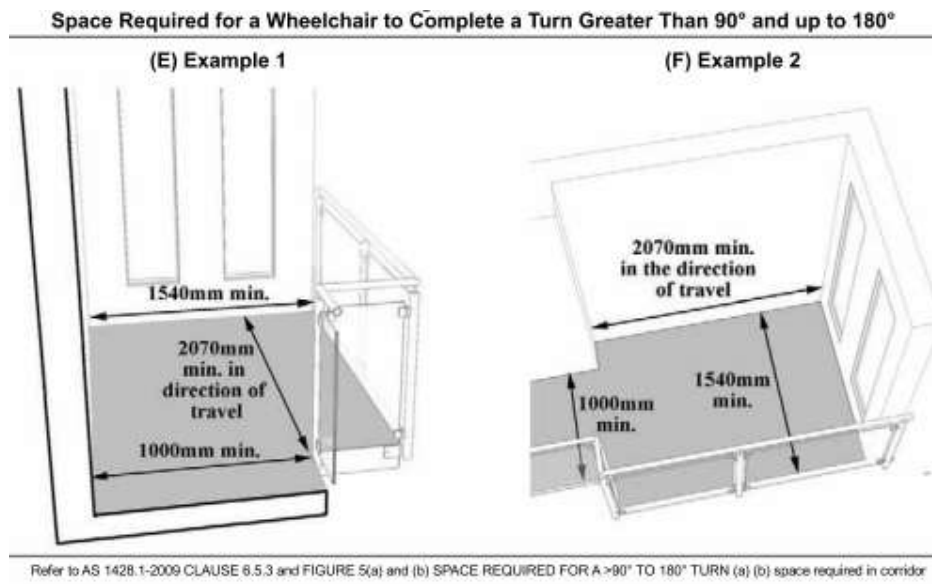
5.0 Paths of Travel

5.1. Endorsement:

MGAC endorses the Architectural and Landscaping Statements including the BNMH MUAPP Primary & Secondary Access Routes Statement as satisfying SSD 8388 - Condition 18 and the functionality for people with a disability being provided with safety, equity and dignity as required by the Disability Discrimination Act 1992 (DDA).

- 5.2. All stairs and ramps to be designed to comply with AS1428.1 and AS1428.4.1. This requires suitable setback from top and base landings for handrails on both sides with required handrail extensions that do not protrude into paths of travel. Stairways are shown in a number of locations, including those nominated as 'Vertical Link' stairs, as well as fire-isolated stairs intended only for emergency. Emergency-only fire-isolated stairways need only comply with Clause D.17 of the BCA. The vertical link stairs and ramps will require full detailing with AS1428.1 features, including handrail extensions and appropriate setback from a transverse path of travel. Where stairs are free-standing/exposed underneath, the design will need to consider appropriate means to impede access in areas where 2m or less vertical clearance.
- 5.3. There are stairways that have a stairway lift to accommodate people with mobility assistance devices. The stairway lifts will be the type that folds down a platform that allows a wheelchair and person to be carried up or down.

- 5.4. An accessible path of travel e.g. ramp or lift needs to be 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.
- 5.5. Turning spaces (at least 1540mm W x 2070mm L) are required within 2m of every corridor end and at 20m maximum intervals along all access-ways. This is needed for wheelchairs to make a 180° turn, compliant with AS1428.1:2009. This has been clearly demonstrated in the proposal.



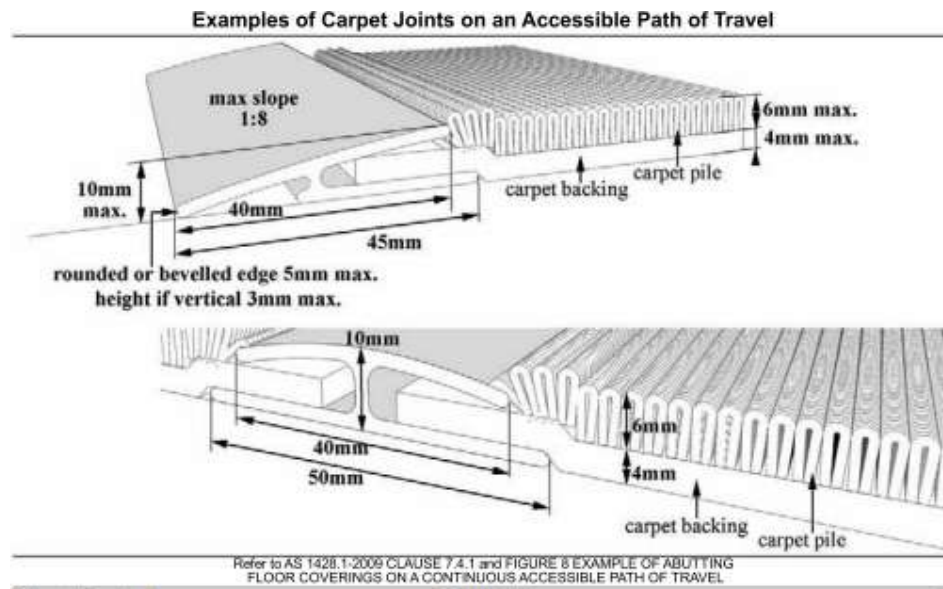
- 5.6. All continuous accessible paths of travel exceed the required width of at least 1000mm, compliant with AS1428.1, and will be maintained to remain clear of temporary obstructions such as pot plants, furniture and/or bins.
- 5.7. A wheelchair passing bay of at least 1800 wide x 2000mm long is provided on all affected levels outside passenger lifts and other locations as required.
- 5.8. All common-use doors (i.e. not excluded under Part D3.4) to have 850mm minimum clear width opening (each active door leaf) and suitable door circulation area, compliant with AS1428.1:2009.
- 5.9. Any overhead hazards in areas with less than 2000mm vertical clearance, such as

angled wall/columns or exposed underside of any stairs/escalators and similar, will have access impeded by suitable physical barrier or have handrail and kerb rail or warning TGSIs installed, compliant with AS1428.4.1 figure. 2.6.

- 5.10. Slip resistance of flooring systems will be used within areas required to be accessible (including ramps, stairs and landings on required egress routes covered by BCA Table D2.14) and traversable by a wheelchair or walking frame, tested in accordance with wet pendulum test method of AS4586:2013/HB198 Table 3B. This is needed to satisfy AS1428.1 Clause 7.1. Test certificates are required at Occupation Certification Stage.

**NB. All wet pendulum testing issued after 1 May 2014 must use 2013 test method. Test results issued prior to 1 May 2014 using 2004 method (HB197 Table 3) are still valid under BCA and for compliance purposes the slip ratings V, W, X (under 2004 method) can be considered equivalent to P5, P4, P3 (under 2013 method).*

- 5.11. Where carpet is provided, the pile height will be no more than 11mm with no more than 4mm backing surface, compliant with the DDA Premises Standard.



- 5.12. Abutment of surfaces will be no more than 3mm if vertical or 5mm if bevelled (rounded).
- 5.13. Raked joint pavers will meet the requirements of Australian Standards.

- 5.14. *Appropriate luminance contrast (intensity of light reflected) of not less than 30% from the background or surrounding surfaces, to objects such as seats, tables, drinking fountains, bins etc.*
- 5.15. Full length of the accessible pathways has a min. overhead clearance of 2000mm.
- 5.16. Pathway/s will have a firm, slip resistant surface that is traversable by a person using a wheelchair in wet and dry conditions.
- 5.17. *Edges of pathways will ensure an appropriate contrast to their backgrounds.*
- 5.18. *Consider seating at varying heights between 450 and 520mm with armrests between 220 and 300mm above the seat, and ensure there is a back to support users, at a min. of every 60m between required accessible elements (min. setback 500mm).*
- 5.19. *Provide appropriate lighting on pathways for night-time use.*
- 5.20. Tactile ground surface indicators, to Australian Standards will be installed at defined pedestrian crossing points on the pathway.
- 5.21. Handles and locks will be installed inside and outside of an entrance gate that can be operated by one hand and are located at a height between 900 and 1100mm.
- 5.22. *An accessible doorbell or intercom system at any childproof gate en-route to the principal pedestrian entrance, at a height between 900 and 1100mm, ensuring it can be heard from inside the premises, is recommended.*
- 5.23. Circulation spaces, level landings and/or threshold/step ramps will be provided at entrance gates.
- 5.24. *Colour contrasts to the entrance gate are recommended to assist recognition by a person with vision impairment.*

6.0 Central Courtyard and Covered Atrium

- 6.1. These areas are expected to be used both informally and formally for lectures, presentations, entertainment and the like. Wheelchair seating spaces consistent with BCA and DDA Premises Standard Table D3.9 should be provided wherever seating is provided. A suitable design response is necessary in the detailing of features such as handrails and fall protection, which is considered readily achievable at detailed design stage.
- 6.2. The Ground Floor Courtyard is required to be accessible and is designed with stairways, 1:20 walkways and furnished terraces. Stairways will have all fittings and features as required by AS1428.1. 1:20 walkways will have a minimum clear width of at least 2200mm.

7.0 Emergency Egress

- 7.1. DP6 within the Performance Requirements of the BCA reads:
So that occupants can safely evacuate the building, paths of travel to exits must have dimensions appropriate to the number, mobility and other characteristics of occupants and the function or use of the building.
- 7.2. Ensure that all ramps, stair treads/nosings and stair landings on required egress paths are slip resistant in accordance with BCA Table D2.14 (tested to AS4586:2013/HB198 Table 3A).
- 7.3. There is currently no mandatory requirement within the 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.
- 7.4. Macquarie University design guidelines include a requirement for consideration of provision for escape. The design team in consultation with the project user group are to develop an approach for the managing the process of evacuation of all potential building occupants. AS3745:2010 will assist.
- 7.5. BCA Clause D3.3(a) requires fire isolated stairs to comply only with Clause 11.1(f) and (g) of AS 1428.1, whereas for a non-fire isolated stair compliance is required to all of Clause 11.

- 7.6. It is understood that all fire-isolated stairways are used for emergency only, but if not, all stairways used for circulation as common stairways, will require compliance with Clause 11 of AS1428.1 and include step nosing strips to be across full width of the stair, between 50 and 75mm wide, in a continuous coloured solid strip with 30% luminance contrast to the background surface. Step nosing strips will be located on the edge of treads (15mm at most and set back if applied) and not to extend onto risers more than 10mm, if exposed.
- 7.7. All doors will have “Exit” signs (under BCA clause 4.5) and will also include accessible identification signs to identify each door – to assist people with vision impairment. The signage will include appropriate raised tactile pictogram, raised text (in Sentence case) and Braille.
- The sign is to state “Exit” and “Level” followed by either:
- the floor level number (where a sign is located) or
 - a floor level descriptor (where a sign is located) or
 - a combination of both of the above.
- The signage is to be located on the wall, adjacent to latch side of door between 1200 and 1600mm above the finished floor level.
- 7.8. At least 30% luminance contrast will be provided between egress doorways and adjacent surface/s. The contrasting area, such as the wall and/or architrave, must be at least 50mm wide to effectively assist people with vision impairment.
- 7.9. The use of any intercom and/or door release is to be placed between 900 and 1250mm above the finished floor on the latch side of doorway and no less than 500mm from any internal corner or obstruction, compliant with AS1428.1.
- 7.10. The control buttons for power operated doors will be raised, at least 25mm diameter, installed in accessible location i.e. between 1000 and 2000mm from a hinged door leaf in open position, between 900 and 1250mm above the finished floor level and at least 500mm from an internal corner, compliant with AS1428.1.
- 7.11. *An accessible (appropriate door handle, opening force, door width) emergency exit in addition to the main entry.*
- 7.12. *Clear, visible signage on emergency exits.*
- 7.13. *A continuous accessible path of travel from the building to any nominated assembly area (firm path, no steps, stairs, well lit).*

- 7.14. *Audible emergency alarms in the building.*
- 7.15. *Visible emergency alarms in the building.*
- 7.16. *Places of refuge for people with mobility difficulties on levels above the main entrance level.*
- 7.17. *Audible alarms at any security checkpoint.*
- 7.18. *Visible alarms at any security checkpoint.*
- 7.19. *Fire hoses and extinguishers located at 500-1200mm high.*
- 7.20. *The emergency management plan is located at an accessible height in a public area in an accessible format (e.g. large print, tactile, Braille).*

8.0 **Passenger Lifts**

- 8.1. The proposal includes three separate sets of passenger lifts. One bank of three is located near the centre of the floor of the northern wing and connects with all levels of the building. Another is a bank of two in the southern wing where one is very large and sized for operational reasons and large exhibition movement. A third, single lift is located at the north-east of the site and serves Ground Level to Level 2.

The two main lift banks are conveniently and strategically located serving the whole project and integrated with the development's main sanitary facilities and grand circulation stairways, while the single lift at the north-east corner serves three levels and conveniently located where the bridge from Building W5C connects.

The lifts will be sized according to Table E3.6 in the BCA by the BCA consultant.

The areas in front of the passenger lifts have sufficient circulation spaces to allow 360° turn, for two wheelchairs to pass each other and will allow a person with or without a mobility aid (wheelchair or mobility scooter) the ability to enter and exit the passenger lift in a safe, equitable and dignified manner, compliant with AS1428.1:2009.

- 8.2. All lift car components (grabrail, call/control buttons, lighting, arrival indicators) including the stairway lifts will comply with the appropriate parts of AS1735.
- The schematic design drawings show accessibility considered readily achievable and will be further developed at detailed design stage.
- 8.3. The passenger lifts will be an approved type in accordance with DDA Access Code Table E3.6, be compliant with AS1735.12:1999 and will require full certification by supplier prior to occupation certification.
- 8.4. The passenger lifts will have an internal dimension of at least 1100 wide by 1400mm deep, but will be sized according to operational/functional requirements.
- Considering the function and type of building, provide a circulation space of at least 1700mm x 1900mm, enables a person using a wheelchair to turn around in the lift.*
- 8.5. The centre-line of standard lift call buttons in the lift lobbies will be located at a height of 900 to 1200mm and at least 500mm from an internal corner - to be accessible for people using wheelchairs, compliant with AS1735.12.
- 8.6. The passenger lifts will include an internal lift control panel with the centre line of control buttons located at a height no less than 700mm and no greater than 1250mm above the finished lift floor. The components of the buttons shall have Braille, raised tactile symbols and numbers, visual and auditory indicators, compliant with AS1735.12.
- 8.7. The passenger lifts will include an internal handrail installed at a height of between 850 and 950mm. The handrail ends shall be no more than 500mm away from any operating device or button, compliant with AS1735.12.
- 8.8. The lifts will include emergency hands-free communication including a button to alert a call centre of a problem and a signal light to confirm that a call has been received.
- 8.9. The lighting in the lift car must be at least 100 lux, compliant with AS1735.12.
- 8.10. All visible information to provide at least 30% luminance contrast to the background surface.
- 8.11. Lift doors will have a min. clear opening width of 900mm.
- 8.12. The internal lift floor surface will be level with the external floor surface to create an unobstructed entry into the lift.

- 8.13. Appropriate door operating sensors (passenger protection system) will be installed.
- 8.14. Doors will remain open for 6 x seconds when responding to a landing button.
- 8.15. Doors will remain open for 8 seconds when responding to a landing button where three or more lifts are interconnected in their operation.
- 8.16. Visible and audible notification on each lift landing will be included to indicate the lift arrival and direction of travel where there are three or more lifts in the bank of lifts.
- 8.17. Surfaces that reduce glare and reflection on adjacent parallel surfaces will be located within 300mm of the control buttons.
- 8.18. Car operating panels, seats or handrails will not obstruct or reduce the width of the door openings.
- 8.19. Handrails will have a circular diameter of between 30 and 50mm for a min. of 270°.
- 8.20. Exposed edges of the handrails will have a radius of at least 5mm.
- 8.21. Clearances above the handrail (including clearances to the control panel) will be less than 5mm or not less than 100mm.
- 8.22. Handrails will be installed at 50mm from the car wall.
- 8.23. Any gap that is less than 50mm between the wall and handrail (i.e. where handrail is returned to the wall) will be filled in.
- 8.24. *Consider colour contrasting handrails to the walls.*
- 8.25. Each landing will have one or more control buttons to call the lift.
- 8.26. If a fixed seat is installed in a lift, it must be positioned outside of the min. car size and hinged seats are not acceptable.

- 8.27. The centre of the landing control buttons, key switches and card readers will be located at a height between 900 and 1200mm above the finished landing floor.
- 8.28. Landing control buttons will be adjacent to the lift entrances and not closer than 500mm from any internal corner or fixed obstruction.
- 8.29. Tactile symbols and Braille equivalent will be provided where up and down buttons are provided on a landing, and will not be located vertically within 200mm of each other.
- 8.30. The telephone key pad will be located at a height between 900 and 1100mm from the finished floor.
- 8.31. A tactile dot will be included in the centre of the number 5, if a key pad is provided.
- 8.32. Two lift control panels (one to the left and one to the right of a person entering a lift) will be installed within the lift.
- 8.33. A communication button will be positioned at the right-hand end of the lowest row of buttons.
- 8.34. An emergency hands-free communication system will be included in each accessible lift, including a button that alerts a call centre of a problem and a light to signal that the call has been received.
- 8.35. The centre of the face of the control buttons within the lift car will be located at a height of between 700 and 1250mm.
- 8.36. Control buttons in the lift will be positioned within the appropriate zones / distance from the doors / corners.
- 8.37. Control buttons will be provided that are easy to use (2N – 5N) and are of the appropriate size and design.
- 8.38. *Use non-reflective materials on the internal walls of the lifts.*
- 8.39. Emergency procedures will be clearly identified in the event of a lift malfunction.

- 8.40. Appropriate audible information will be included to identify when the lift stops. (where the lift travels more than 2 floors.)
- 8.41. Appropriate audible and visual indication will be included at each lift landing to indicate the arrival of the lift. (where the lift travels more than 2 floors.)
- 8.42. Appropriate lift position indicator will be fitted within the lift.
- 8.43. Appropriate lighting will be installed within the lift.
- 8.44. Appropriate lighting of the lift controls will be installed.
- 8.45. **Stairway Lifts**
- 8.46. An appropriate lift for passengers according to AS 1735.7.
- 8.47. The building has 3 x locations where stairway lifts are shown.
- 8.48. A min. of 1000mm pathway available when the lift is stored in the folded position.
- 8.49. An appropriate ramp to the platform type carriage.
- 8.50. A min. floor area of 685mm x 1000mm.
- 8.51. Appropriate rate capacity and load of the lift.
- 8.52. Weatherproof where lift is exposed to the weather.
- 8.53. A slip resistant standing surface and approach ramp at any platform type carriage.
- 8.54. An appropriate head clearance along the lifts path of travel (1700mm from the footrest – chair lift, 1850mm for chair type lift with standing option).
- 8.55. Appropriate foot / back / arm rests.

- 8.56. An appropriate seat.
- 8.57. Retractable rails and one or more armrests.
- 8.58. An appropriate obstruction shut off.
- 8.59. Appropriate operation and carriage out of sight landing controls.
- 8.60. A min. 75mm clearance from any handgrip or handrail of the lift and any fixed parts of the stairway / building.
- 8.61. An appropriate clearance at the end of travel.
- 8.62. An appropriate head clearance above the platform a min. of 1850mm at the edge of the lift / 2000mm in the centre of the lift.
- 8.63. Any wheelchair is prevented from moving off the platform when in use.
- 8.64. Appropriate lighting provided to the lift.
- 8.65. Appropriate controls for operation of the lift.
- 8.66. Controls can be isolated by a key operated switch.

9.0 Sanitary Facilities

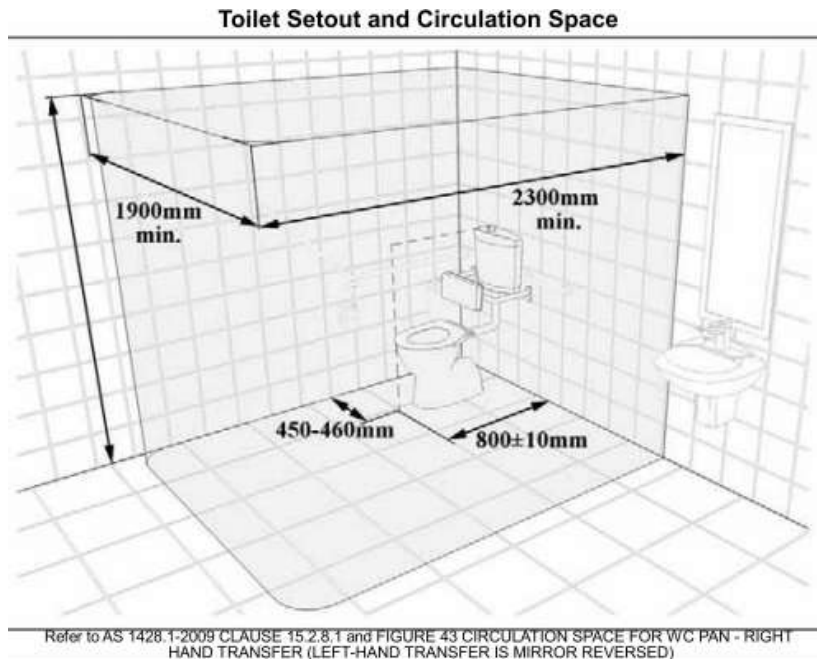
- 9.1. There are sanitary banks provided on all levels of the building. At all banks of toilets there is a unisex accessible toilet (UAT) with sufficient spacial requirements. Details are yet to include some items such as toilet paper holder, soap dispenser, coat hooks, GPOs and the like.
- 9.2. At each bank of toilets, under the BCA and DDA Premises Standards, a sanitary compartment/cubicle suitable for the use by a person with ambulant disability is required and provided - designed in accordance with AS1428.1, and separate for male and female.

These details are considered achievable and will be further developed at detailed design stage.

9.3. Toilets

All fittings and fixtures will comply with Australian Standards.

Unisex accessible toilets (USAT) has a pan circulation space of 1900mm x 2300mm x 2000mm high. Ensure all fixtures and fittings meet the requirements of AS1429.1:2009.



9.4. Unisex accessible toilets that are of the opposite hand transference will be provided as close as possible to a balanced/even degree. Adjustment to be made.

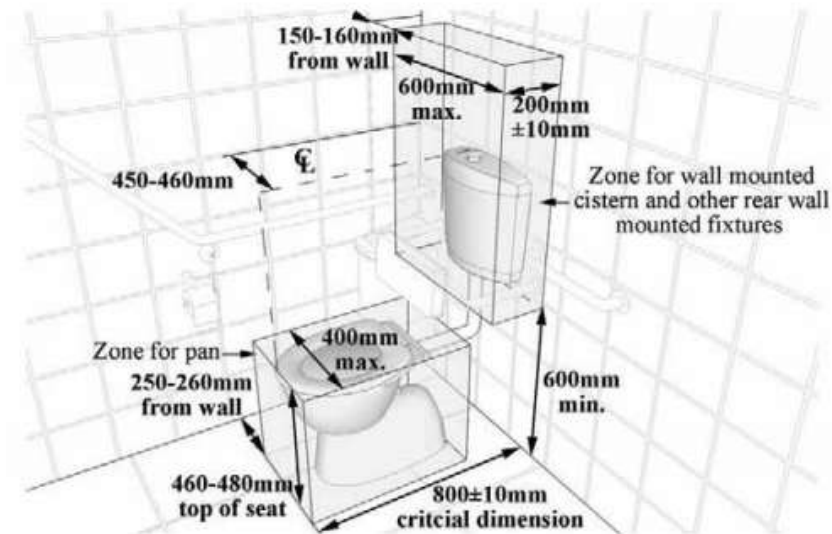
9.5. Unisex accessible toilets will have signage that incorporates raised tactile components, the international symbol of access and separate male and female symbols and at a height between 1200 and 1600mm high on the latch side of the doorway.

9.6. Signage identifying that the facility is suitable for left or right-hand use will be included.

- 9.7. Signage will be included that directs users to an accessible toilet (where provided in different locations).
- 9.8. Accessible signage will utilise Sentence Case.
- 9.9. *Include an emergency alarm in the cubicle for users requiring assistance.*
- 9.10. Accessible cubicle doors will have a min. clear opening width of 850mm with appropriate circulation space inside and outside the door.
- 9.11. Cubicles will have an 'occupied' (in use) indicator and bolt or catch which is openable from outside in an emergency and with a snib handle of at least 45mm from the centre of the spindle.
- 9.12. Cubicles will have easy to open doors (not heavy or hard to push or slide).
- 9.13. Hinge mechanisms will be installed on any outward opening door that holds the door in a closed position without the use of a latch.
- 9.14. Handles and locks on the designated accessible toilet doors will be operable with one hand e.g. D or D lever handles.
- 9.15. Door controls will be selected that allow an appropriate hand clearance between the handle and the back plate.
- 9.16. All door controls that need to be grasped or turned will be at a height of between 900 and 1100mm.
- 9.17. All door controls that need to be pushed will be at a height of between 900 and 1200mm.
- 9.18. All door controls that need to be touched will be at a height of between 900 and 1250mm.
- 9.19. All door handles on sliding doors will be not less than 60mm from any door jamb and are installed at a height of between 900 and 1100mm.

- 9.20. *Door controls that are non-reflective and provide a min. luminance contrast (30%) to the background.*
- 9.21. Door / doorframe will have a min. luminance contrast of 30% to the adjacent surface.
- 9.22. *Appropriate lighting inside the toilet.*
- 9.23. 1500mm space in front of the pan will be provided (1400mm basin overlap permitted if it is located in front of the pan).
- 9.24. A space of between 1240 and 1250mm will be provided at one side of the pan.
- 9.25. A full, round, secured toilet seat at an appropriate height will be installed at every toilet (load rated to 150kg).
- 9.26. Toilet seats will have a luminance contrast of at least 30% with the background of the pan, wall or floor.
- 9.27. Toilet pan seats will be installed at a height between 460 and 480mm above the finished floor level.
- 9.28. Toilet pans will be installed forward of the rear wall by between 790 and 810mm.
- 9.29. The centreline of the pan will be between 450 and 460mm from the side wall (next to the pan and incorporating grab rails).

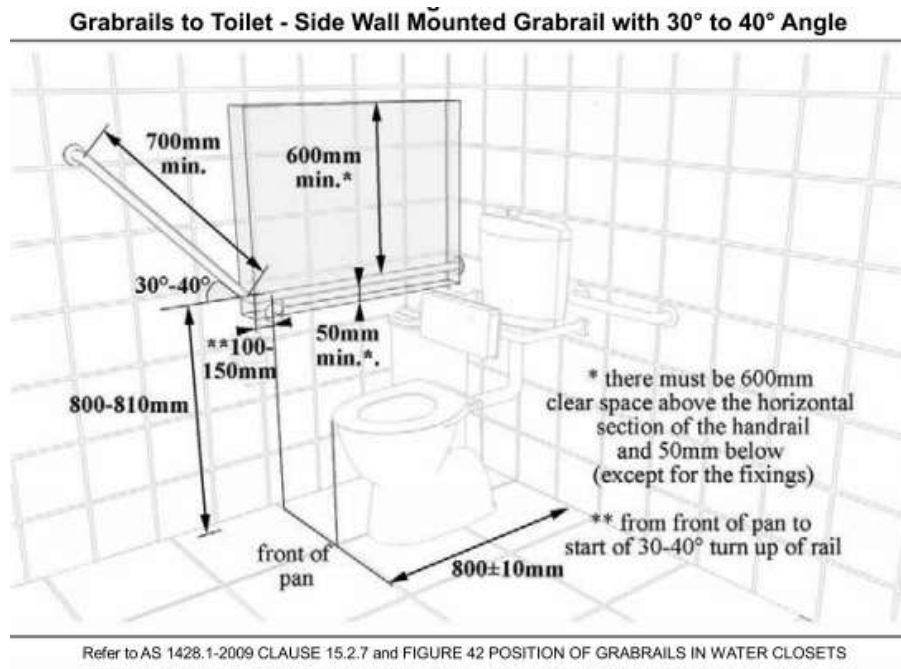
Zone for Toilet Pan and Rear Mounted Fixtures and Obstructions



Refer to AS 1428.1-2009 CLAUSE 15.2.2 and FIGURE 38 WATER CLOSET PAN CLEARANCES, SEAT HEIGHT AND SEAT WIDTH and FIGURE 39 WATER CLOSET INSTALLATION

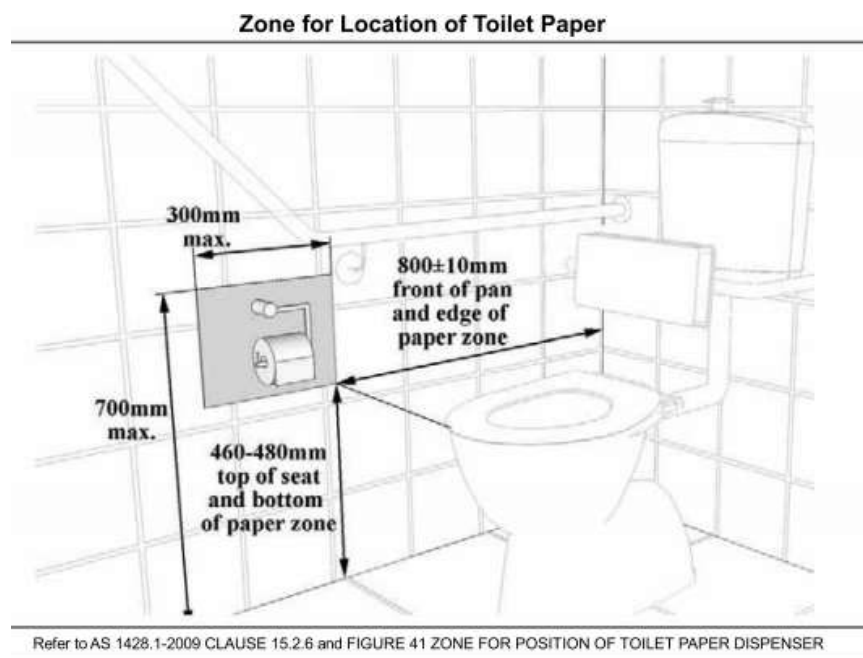
- 9.30. Toilet pans will be no wider than 400mm.
- 9.31. A backrest will be installed at the accessible toilet capable of withstanding a force in any direction of 1100N.
- 9.32. The lower edge of the backrest to the top of the pan will be between 120 and 150mm.
- 9.33. The backrest will have a vertical height of between 150 and 200mm and a width of between 350 and 400mm.
- 9.34. The front edge (centre) of the backrest will be positioned to achieve an angle of between 95 and 100° from the seat hinge.
- 9.35. A grab rail will be included at the back and side of the pan.
- 9.36. A grab rail will be included that provides the appropriately angled extension and clearances from the pan. Grab rails for mental health accessible en-suite (x1) will

have an infill back to the wall for anti-ligature requirements.



- 9.37. The outside edge of any back-wall grab rail will be at least 450mm from the side of the pan.
- 9.38. Grab rails will be fixed and constructed to withstand a force of 1100N applied in any position / direction.
- 9.39. Horizontal grab rails will have an appropriate clearance above and below.
- 9.40. Grab rails will have the appropriate clearance from the adjoining wall or any other obstruction.
- 9.41. Grab rails will not have exposed edges and corners and/or a radius not less than 5mm.
- 9.42. The grab rail on the rear wall will have a min. length of 300mm and be installed within 50mm of the cistern, together with an appropriate grab rail on the sidewall at a height between 800 and 810mm, where a surface mounted cistern is used.

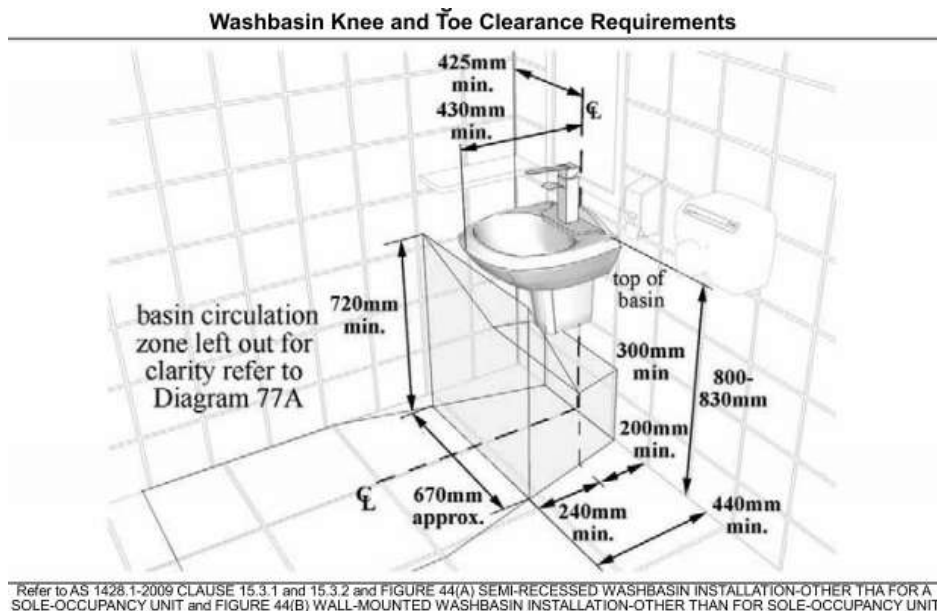
- 9.43. The bottom edge of the cistern will be at least 600mm above the floor level.
- 9.44. Toilet paper holders will be installed at a height of 700mm max. and forward of the pan a max. of 300mm (outside edge).



- 9.45. Easy operation flushing controls will be located between 600 and 1100mm above the finished floor and be an appropriate distance from the centre line of the pan.
- 9.46. The flushing control will be located on the centre line of the toilet.
- 9.47. If a side wall flushing control is selected, it will be located within the appropriate zone of reach.
- 9.48. The wash basin will be located so that it is not closer than 1400mm to the toilet pan if located in front of the toilet pan.
- 9.49. A semi-recessed washbasin will have a top edge between 800 and 840mm above

the finished floor.

- 9.50. A wall mounted basin will have the top edge between 800 and 830mm from the floor.



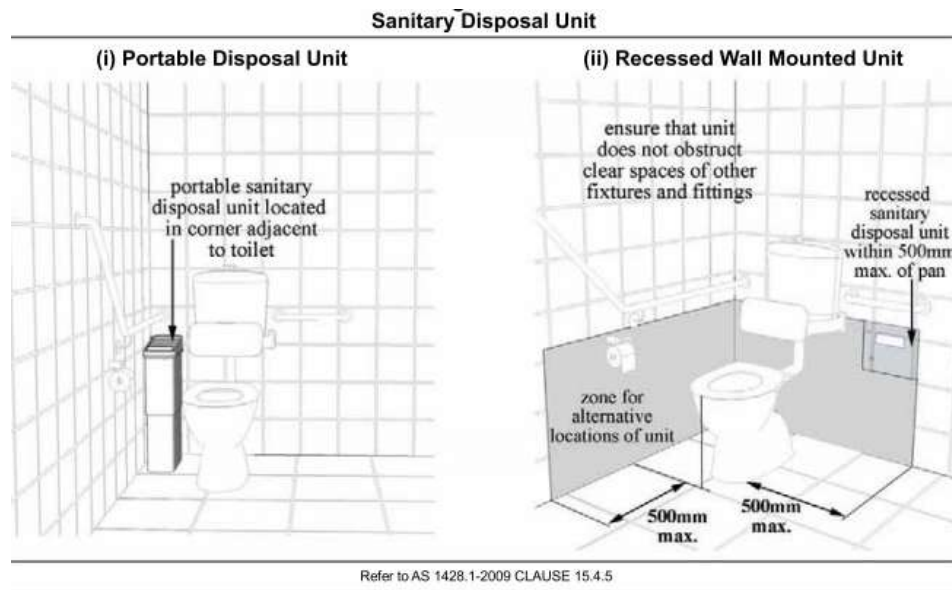
- 9.51. A semi-recessed basin bench (vanity) will be provided at a height between 800 and 830mm.
- 9.52. The centre line of the washbasin will be located at least 425mm from any wall.
- 9.53. A wash basin will be at least 450mm wide.
- 9.54. Circulation space for the washbasin will be at least 850mm wide and 1500mm long.
- 9.55. The position of the taps, bowl and drain outlet will all be appropriate.
- 9.56. Basin will allow the required foot, knee and leg space underneath.
- 9.57. Any exposed piping will be insulated or located so as to not present a hazard to a

user.

- 9.58. Water to the basin will be through a mixing spout.
- 9.59. The hot tap will be positioned to the user's left or above the cold tap.
- 9.60. Lever tap handles or sensor controls will be installed.
- 9.61. There will be at least 50mm clearance between each tap and any adjacent surfaces.
- 9.62. *Taps are identified with text and colour hot and cold indicators.*
- 9.63. A clothes-hanging device will be installed at a height between 1200 and 1350mm.
- 9.64. *A mirror is provided that is a min. of 350mm wide and is set at a height that extends from 900 to 1850mm above the finished floor level.*
- 9.65. *A second mirror is installed at a height that extends from 600 to 1850mm above the finished floor level.*
- 9.66. *Hand dryer / towel dispenser will be at between 900 and 1100mm above floor level and be within reach of a user at the washbasin.*
Blade hand dryers and paper towel dispensers will be provided in all accessible toilets. (not top-feed driers)
- 9.67. Soap dispensers will be provided at wash basins at a height between 900 and 1100mm and within reach of the user at the washbasin - and locate the soap dispenser no closer than 500mm to an internal corner.
- 9.68. A vanity top shelf will be installed at a height between 800 and 830mm above the floor with an appropriate width and depth.
- 9.69. Alternative to 9.68, a separate shelf within the circulation space will be installed at a height between 900 and 1000mm with an appropriate width and length.
- 9.70. Portable sanitary disposable units will be provided in the rear corner between the

pan and the wall.

- 9.71. Recessed sanitary disposal unit will be located within 500mm of the pan.

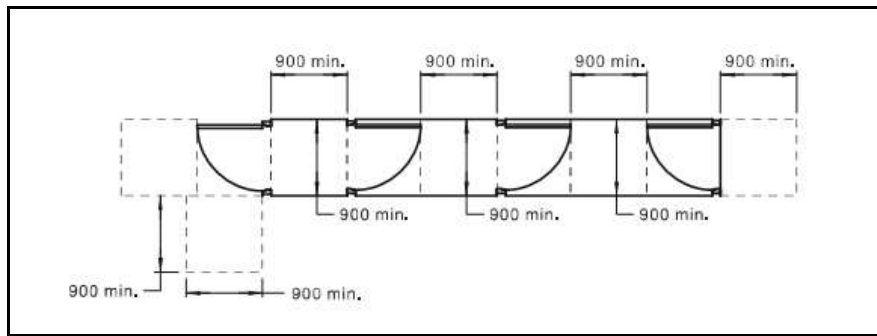


- 9.72. A wall cabinet at least 900mm above the floor will be provided with a top shelf no more than 1250mm above the finished floor.
- 9.73. Rocker action / toggle switches a min. of 30mm x 30mm will be installed throughout.
- 9.74. Where push pad switches are used, they will have a diameter of at least 25mm.
- 9.75. All switches and power points near the washbasin will be at a height of between 900 and 1100mm and close to any shelf or worktop (not less than 500mm from any internal corner).
- 9.76. Change tables, if installed, will be installed to a max. top height of 820mm, with the leg clearance a min. of 720mm.

9.77. **Ambulant Cubicles**

Ambulant toilet cubicles are provided in every bank of toilets for Male and Female users, in addition to a unisex accessible toilet. These facilities are for people with a disability and are able to walk.

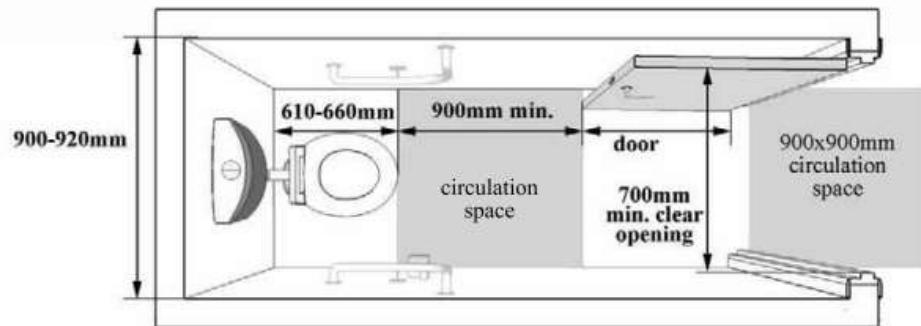
- 9.78. An internal circulation area of at least 900 by 900mm will be provided between successive door swings in airlocks/vestibules on the path of travel leading to ambulant toilets compliant with AS1428.1:2009, Figure 34 below.



- 9.79. Provide at least a 900 x 900mm circulation area outside the ambulant cubicles compliant with AS1428.1:2009, figure 53B.
- 9.80. The cubicle is to be between 900 and 920mm clear width with the WC pan centred - being a 450 to 460mm set-out. Caution for dimensioning: finished cubicles narrower or wider cannot be certified as compliant at occupation certification.
- 9.81. Ambulant cubicles will have 900 x 900mm clear area in front of (standard projection from wall) the WC pan and clear of the door swing.
- 9.82. Ambulant cubicles will have at least 700mm clear width cubicle door, with 900 x 900mm clear circulation area outside the door.

- 9.83. The height to the top of the pan seat will be between 460 and 480mm above the finished floor level, when installed.

Sanitary Compartments for People with Ambulant Disabilities - Doorway Option 1



Refer to AS 1428.1-2009 CLAUSE 16.3 and FIGURE 53(B) SANITARY COMPARTMENT FOR PEOPLE WITH AMBULANT DISABILITIES - DOORWAY OPTIONS (a)

- 9.84. Ambulant cubicle doors will have an 'in-use' indicator and bolt/catch that is able to be opened from outside in an emergency. If a snib-catch used, the handle will be at least 45mm long from the spindle centre.
- 9.85. Grab rails will be provided on both sides of the ambulant cubicle at 800 to 810mm high above the finished floor level - measured to the top of the grabrail.
- 9.86. Grab rails will be fixed to withstand a force of 1100N when applied in any direction.
- 9.87. Grab rails will have the appropriate clearance from the adjoining wall or any other obstruction.
- 9.88. Horizontal grab rails will have an appropriate clearance above and below.
- 9.89. Grab rails will not have exposed edges and corners, but a radius not less than 5mm.

- 9.90. The toilet roll holder will be placed no higher than 700mm high from the FFL and no more than 300mm from the front of the WC pan on the adjacent wall and no closer than 50mm to grab rails. The toilet roll holder type is to have an exposed toilet roll for ease of use.
- 9.91. A clothes hook is to be installed between 1350 and 1500mm above the finished floor level on the back of door.
- 9.92. Signage will be installed at an airlock servicing the ambulant toilet area, identifying the facilities within and also at the cubicle.
- 9.93. **Change/shower facilities**
No showers are provided in the development.

10.0 Seating and Service Counters

- 10.1. Where table heights are fixed, such as café seating, consider providing a range of table heights with appropriate foot (290mm) and knee (650mm) clearance to accommodate wheelchair users.
- The tables should be at least 800mm in width, preferably within the following height ranges according to AS1428.2 advisory/best practice:
- (i) Where only one table height is provided, the table top will be between 830 and 870mm above FFL with 800-840mm under-bench clearance.
 - (ii) Where two table heights provided, the other table top will be between 730 and 770mm above FFL with 710-750mm under-bench clearance.
- 10.2. Service counters within retail premises are likely to comprise of rigid fixed elements. Consideration should be given to locating all or, at least, a portion of the service counter suitable for the use of a person using a wheelchair, to enable interaction with staff. The setout of the service counter would be similar to the above dimensions advised for table heights and further guidance on clearances, reach ranges with diagrams can be found in AS1428.2.
- 10.3. Unobstructed direct access will be provided from the entry doorway to the customer service/counter area.

- 10.4. *Reception counters and nurses' stations to provide a wheelchair accessible section at a height between 830 and 870mm with a leg clearance height between 800 and 840mm underneath for a min. length of 900mm.*
- 10.5. A hearing augmentation system to any screened reception and or waiting area that is fitted with an in-built amplification system, will be provided.
- 10.6. The floor surface will be slip resistant in both wet and dry conditions.
- 10.7. If carpet is selected or specified, it will have low-level pile and be attached securely to the floor surface.
- 10.8. Exposed edges of carpet will have a trim to the entire length of any exposed carpet edge.
- 10.9. *Seating at varying heights of between 450 and 520mm high with armrests at a height between 220 and 300mm above the seat and ensure there is a back to support users.*
- 10.10. *Appropriate and even lighting to the customer service area.*
- 10.11. *Display and information signs with common reach ranges (230 and 1350mm) that are accessible for a person using a wheelchair.*
- 10.12. *Accessible height security alarm pads.*
- 10.13. *Effective contrasts between vertical and horizontal surfaces/objects.*
- 10.14. *Clear, concise language on all signage, forms, directions, maps and the like.*
- 10.15. *Effective uniform lighting to area.*

11.0 **Accessible Car Parking**

- 11.1. No drawings have been issued that show accessible pedestrian paths of travel between the development and the adjoining car park.

The minimum requirements for accessible car parking as contained in the BCA and DDA Access to Premises Standards requires parking to be designed in full accordance with AS2890.6 with different rates of parking based on building classification.

- 11.2. Note also advisory recommendations under Ryde Access DCP which requires parking for people with disabilities at a rate of 3%. Macquarie University will have its own site-specific parking restrictions and arrangements.
- 11.3. Designated accessible parking bays will have a min. overhead clearance of 2500mm as per AS2890.6.
- 11.4. At the entry to the Lower Ground parking, a min. overhead clearance of 2200mm at the car park entry will be provided.
- 11.5. *Clearly visible appropriate elevated signs, with the blue international symbol of access, to the designated accessible parking bay, to Australian Standards are recommended.*
- 11.6. All designated accessible parking bays will have the international symbol of access, to Australian Standards, with the international symbol of access appropriately located and marked on the ground surface, ensuring the selection of slip resistant paint.
- 11.7. All dedicated spaces will have yellow slip resistant lines (unbroken 80-100mm wide on all sides – except any side delineated by a kerb, barrier, wall).
- 11.8. Walkways within, or partly within the shared areas will be marked with slip resistant lines (unbroken, longitudinal on both sides – except where delineated by a kerb, barrier or wall).
- 11.9. Appropriate bollards will be installed centrally within the shared area alongside the dedicated accessible parking bays.
- 11.10. All accessible parking will be on a firm and level ground surface with a cross-fall/gradient not more than 1 in 40 in any direction (or 1:33 if bitumen/outside) and free of loose material.

- 11.11. Kerb ramps will be provided for parking areas to elevate at kerbs, if required – as per AS1428.1.
- 11.12. An appropriate slip resistant surface will be applied to kerb ramps at designated accessible parking areas, ensuring they are traversable by a person using a wheelchair.
- 11.13. Kerb ramps, at designated accessible parking areas will be a max. length of 1520mm, sloped slides and a slope / gradient where the ratio is not greater than 1 in 8.
- 11.14. Kerb ramps at designated accessible parking bays will be at least 1000mm wide.
- 11.15. Kerb ramps at designated accessible parking areas will have appropriate landings that consider direction of travel - such as a 1200mm landing at the bottom and at the top, where the direction of travel does not change, otherwise at least 1500mm.
- 11.16. Kerb ramps at the designated accessible parking area will be flush with the road and pathway (a max. difference of 5mm with a rounded edge or bevelled).
- 11.17. *It is recommended that appropriate tactile ground surface indicators to Australian Standards be installed, prior to kerb ramps at designated accessible parking area.*
- 11.18. *Appropriate lighting, to Australian Standards, to the car park area is recommended.*
- 11.19. *Signage that directs people with disabilities to the designated accessible parking bays from the car park entry should be considered.*

12.0 **Lighting**

- 12.1. Lighting will be specified and documented by the lighting/electrical consultant, in conjunction with the operator's requirements provided.
- 12.2. In general, the maintenance illumination levels should be 150 lux for paths of travel, corridors and stairs. Ensure all lighting levels comply with AS1680.

13.0 Signage

- 13.1. Signage to comply with BCA and DDA Access to Premises Standards part D3.6, which also reference AS1428.1. Note also the Macquarie University Signage and Wayfinding Guideline, particularly Part Two: Access, and the emphasis on “best practice” principles for accessible wayfinding.
- 13.2. Appropriate signage, to BCA and Australian Standards, will be installed at points where directional decisions are made.
- 13.3. *Appropriate signage inside the principal pedestrian entrance giving general and directional information about facilities and services, including information about access for people with disabilities.*
- 13.4. Appropriate signage will be installed at any non-accessible pedestrian entrance door, that directs users to an accessible entrance door.
- 13.5. Any existing symbol of access will comply with the international standard in style, colour and layout.
- 13.6. Appropriate signage will include the international symbol of deafness indicating the area where hearing augmentation is operational and the area covered and which type of hearing augmentation system is in place.
- 13.7. Appropriate signage will indicate where hearing augmentation receivers can be obtained.
- 13.8. Appropriate signage will be installed at a height between 1200 and 1600mm.
- 13.9. Lighting to signage (where required) will ensure luminance contrast requirements are met at all times.
- 13.10. Appropriate signage will be selected and installed at any inaccessible toilet, directing users to an accessible toilet.
- 13.11. Appropriate signage will indicate if the facility is suitable for left or right-hand use.

- 13.12. All accessible signage utilises Sentence Case.
- 13.13. Appropriate ambulant toilet signage will be selected and installed at any airlock serving the area.
- 13.14. Appropriate ambulant toilet signage will be installed at the facility.

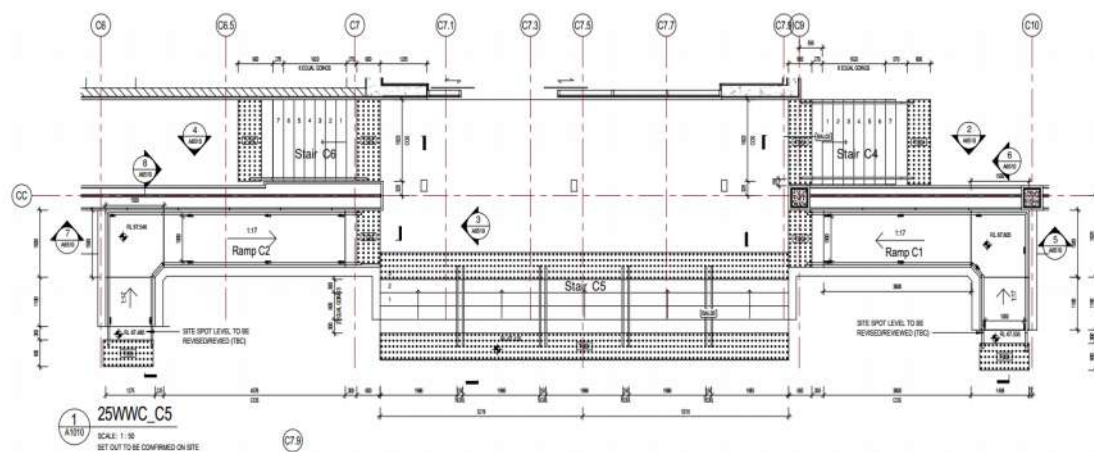
14.0 **Hearing Augmentation**

- 14.1. Provide hearing augmentation where an inbuilt amplification system, other than the one used for emergency warning is installed, in accordance with DDA Premises Standards Part D3.7. These are likely to occur in rooms for teaching, learning labs, seminar, functions and the like. It is the preference for Macquarie University to install Infra-Red Hearing Augmentation Systems, as outlined in the Property Design Guidelines. If infra-red or FM systems are used, then a suitable number of receivers will also be required in line with Part D3.7 (2) (b) in relation to the number of persons to be accommodated in the room or space. Macquarie University may have its own loan/management system arrangements with respect to hearing augmentation receivers for potential users and this will need to be articulated to the design team and considered for this development.
- 14.2. Where a sound amplification system is installed, such as the main reception, there will be a hearing augmentation system that covers 80% of the total enclosed space if an induction loop is inbuilt, or 95% if a receiver system is in use.
- 14.3. Hearing augmentation will be provided at enclosed reception or waiting areas.
- 14.4. Hearing augmentation will be provided in meeting rooms and other common areas where a television is installed.
- 14.5. Signage will include the international symbol of deafness indicating the area where hearing augmentation is operational and the area covered, which type of hearing augmentation system is in place and where hearing augmentation receivers can be obtained.

- 14.6. *Seating with backs and armrests that provide good lines of sight for lip-reading.*
- 14.7. *Acoustic design elements to reduce noise e.g. rubber tips on furniture legs, soft furnishings, low pile carpet, double glazing, quiet equipment etc.*
- 14.8. *Visible alarms throughout the building.*
- 14.9. *Visible emergency alarms throughout the building.*
- 14.10. *Effective lighting for lip-reading and sign language interpreters.*
- 14.11. *Absorbent materials/finishes can assist in reducing reverberation to improve general acoustics and the use of hearing augmentation systems. Examples include acoustic tiles, furniture, carpet, curtains, bulletin/felt boards etc. to minimise hard surfaces that reflect sound.*
- 14.12. *Provide appropriate, even lighting with minimal glare, particularly at reception/information counters to assist people with hearing impairment lip-read/communicate with staff – such as suitable luminaire direction and/or use of diffuser, screening to windows/glazing (tinting, blinds, louvres).*
- 14.13. *Provide hearing loops at all service counters/areas (with or without screening), 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.*
- 14.14. *When hearing loops are provided within a room, provide relevant signage (to identify the type of system, how to use or where to seek assistance or receivers), compliant with AS1428.5. This signage to be located in the first third of the room, when facing the speaker.*
- 14.15. *All public payphones (if installed) to have an adjustable volume control to increase level of sound to at least 20dB above the normal sound.*
- 14.16. *Accessible public payphones to have TTY capabilities and be signed with international symbol for deafness, compliant with AS1428.1 and .5.*
- 14.17. *Consideration to provide computer-aided real-time captioning (CART) systems, and/or access to captioning on television sets/video display as required in addition to hearing loops systems at public meeting areas to enable deaf participants to effectively communicate.*

15.0 Stairways

- 15.1. In all cases, in areas required to be accessible, alternative to the stairs will be provided between various levels in the building by ramp or lift.
- 15.2. For DDA stairways, there are 3 x types of stairways being:
- open/common stairs on an accessible path of travel according to BCA D3,
 - fire-isolated stairways according to BCA D2 and
 - exempt stairs in or leading only to areas exempt under BCA D3.4.
- 15.3. Open/common D3 stairs requiring handrails with extensions on both sides, TGSIs top and bottom, nosings, luminance contrast of at least 30% and slip resistance are A1, A2, A3, A8, B1, B2, B4, B8, C3, C4, C5 and C6.
- 15.4. Fire-isolated D2 stairs requiring handrails on one side only are B3, B5, C1 and C2. Stairways that require adjustment to achieve consistent handrail height are B3 and B5. This is achieved, as per AS1428.1, by off-setting treads or extending the handrail at the landing by 1 x tread width. (this requires a wider landing) These stairs must be secured for emergency use only – if used by staff or others to communicate between floors, they will be upgraded to 2 x handrails and other features.
- 15.5. At the principal point of entry there is an external stairway connecting the external pedestrian pathway(s) and pick-up and drop-off area to the entry landing and to the automated entry door. This stairway requires handrails, with extensions, on both sides of the stair. The detail shows 4 x double handrails which is more than required.

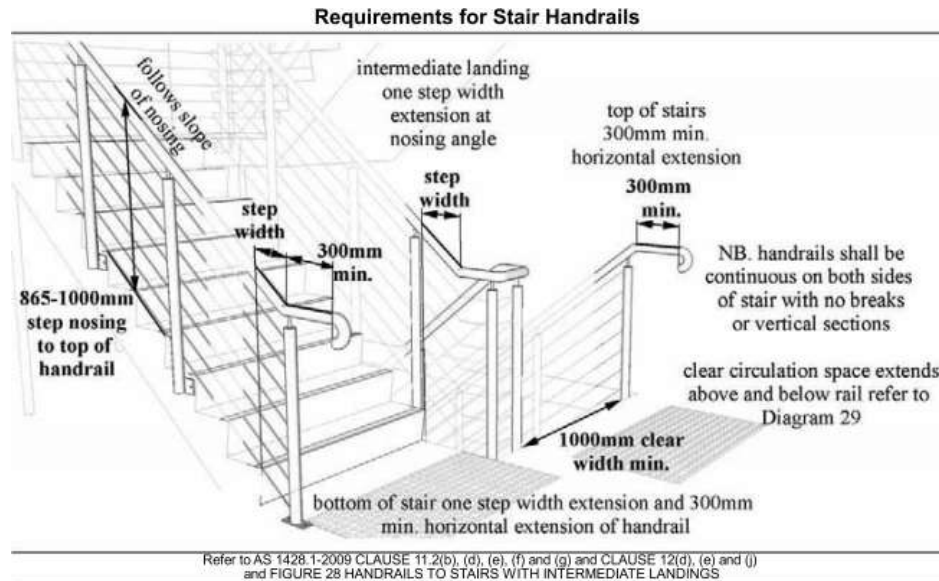


From the main entrance landing, two additional stairways rise eastwards and

westwards, respectively, to connect to corridors leading to Seminar Rooms to the west and Function/Temporary Exhibition Space to the east. The doorway access lift to compliment these stairways will function to prevent access with mobility issues to those areas – possibly 24 hours.

- 15.6. Appropriate tactile ground surface indicators will be installed at the top and bottom of all stairways to improve safety, particularly for persons with vision impairment.
- 15.7. Appropriate TGSIs at any non-enclosed landing will be included.
- 15.8. TGSIs will have a width of 600 to 800mm where the distance of the landing is 3000mm or more to the nearest nosing.
- 15.9. Slip resistant surfaces will be applied on all stairs, to Australian Standards.
- 15.10. Step risers will be enclosed and of opaque construction, to improve safety for all users.
- 15.11. Slip resistant strips of 50 to 75mm wide including appropriate luminance contrast, on the front edges of all stairs (nosings). The nosing must not extend more than 10mm down the riser.
- 15.12. Stair nosings will not project beyond the face of the riser.
- 15.13. Nosings will have an appropriate profile.
- 15.14. Appropriate lighting, to Australian Standards, will be provided to the stairways for night time use.
- 15.15. Domed buttons of 4 to 5mm high x 10 to 12mm diameter will be included at 150mm from the end of each handrail, if there is not a continuous handrail on stair flights and around landings.
- 15.16. On both sides of the stairs, handrails will be installed that have an appropriate diameter, at a consistent height, ensuring they extend past the ends of the ramp with ends returned to a side post / wall or downwards and are fixed or constructed to provide no obstruction to the passage of the hand along the entire rail.

- 15.17. Handrails are continuous throughout the stair flight (e.g. landings).

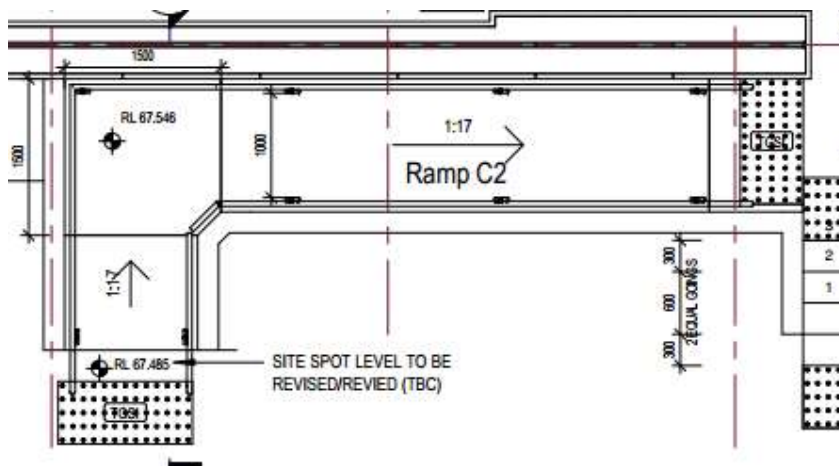


- 15.18. Handrails will extend at least one tread width plus 300mm past the edge of the bottom step, and a min. of 300mm past the top step.
- 15.19. Handrails will have a min. clearance of 50mm from an adjacent wall and a min. clearance of 600mm above.
- 15.20. Handrails will be constructed and fixed to provide no obstruction to the passage of the hand along the entire handrail.
- 15.21. Handrails will be provided at a consistent height of between 865 and 1000mm above the stair nosing.
- 15.22. Handrails will have a circular diameter of 30 to 50mm for a min. of 270°.
- 15.23. Handrails will have no vertical section and follow the angle of the nosing.
- 15.24. Handrails will not have exposed edges and corners (radius not less than 5mm).

- 15.25. Handrails of a non-reflective material with a colour contrast to the background will be installed.
- 15.26. A min. clearance of 1000mm between handrails on the stairs will be provided.
- 15.27. Handrails will be securely fixed, with ends returned to a side post / wall or downwards through 180°.
- 15.28. Handrails (and balustrades) will sit outside the required circulation spaces.

16.0 Ramps

- 16.1. 2 x accessible pedestrian ramps are shown at the principal point of entry at Building C. These ramps show gradients below the maximum of 1:14, TGSIs top and bottom, handrails with extensions on both sides and a minimum width between handrails of 1000mm. The landings will be adjusted/increased to achieve 1500 x 1500mm clear of handrails and other intrusions.



- 16.2. Landing of at least 1200mm long where it follows the direction of travel and at least 1500mm where the direction of travel changes.
- 16.3. Ensure ramps that are adjacent to a corridor/walkway are recessed 400mm to

ensure handrail extensions and TGSIs can be provided without protruding into the transverse pedestrian path of travel, compliant with AS1428.1.

- 16.4. Provide a suitable height wall (450mm min. height) or kerbing along open ramp sides, compliant with AS1428.1 fig 19:
- Kerbing to be between 65-75mm height above FFL; or.
At least 150mm height above FFL. The top of kerbing must not be within 75-150mm range above FFL to minimise risk of wheelchair footplate entrapment. If kerbing extends within 75-150mm range between it must be continuous with no gap greater than 20mm.
- 16.5. The kerb to be suitably located in relation to handrail (and vertical supports if provided) ie. Internal face of kerb in line with internal face of handrail or up to 100mm max. off-set inside the ramp, compliant with AS1428.1 Fig 19.
- 16.6. Provide warning tactile ground surface indicators (TGSIs) at top and bottom of ramps in accordance with AS1428.4.1.
- 16.7. In Block A, there are 2 x areas marked and detailed as ramps, but are only 1:20 and 1:21 respectively. According to BCA and AS1428.1. In DDA terms, these are not ramps, but walkways – they do not have to have handrails and must not have hazard TGSIs.

17.0 **Kitchens and Dining**

- 17.1. The kitchens and tea stations are self-use facilities and will be provided with accessible features allowing as many users as possible to operate independently.
- 17.2. *The food / drink counter will provide a wheelchair accessible section at a height between 830 and 870mm for a min. length of 900mm.*
- 17.3. *The food/drink counter to provide a wheelchair accessible section with a leg clearance height between 800 and 840mm underneath for a min. length of 900mm.*
- 17.4. *The sink/basin to provide wheelchair access at a height between 770 and 800mm.*
- 17.5. *Sink/basin to provide leg clearance height between 640 and 650mm underneath.*

- 17.6. A continuous accessible internal path of travel and circulation will be provided to any canteen/servery window.
- 17.7. *Any canteen/servery window to provide a wheelchair accessible section at a height between 830 and 870mm with a leg clearance height between 800 and 840mm underneath, for a min. length of 900mm.*
- 17.8. A continuous accessible external path of travel and circulation will be provided to any external canteen/servery window.
- 17.9. *Operative components of any vending machine located at a height between 500-1200mm.*
- 17.10. *Seating at varying heights of between 450 and 520mm high with armrests at a height between 220 and 300mm above the seat and ensure there is a back to support users.*
- 17.11. *Tea and coffee making facilities where the highest operable components are located at a height between 900 and 1100mm.*
- 17.12. Kitchen areas will provide appropriate wheelchair circulation space.

18.0 **Luminance Contrast**

To assist people with vision impairment, the following features are advised:

- 18.1. *Bollards (contrasting strip to the top).*
- 18.2. *Counter Tops (contrast between top and supporting surface).*
- 18.3. *Cupboard and door handles.*
- 18.4. Doorways/frames/trims.
- 18.5. *Emergency alarm buttons.*

- 18.6. *Equipment controls (fans, air conditioners, heaters etc.)*
- 18.7. *Exposed vertical building supports (posts, columns etc.)*
- 18.8. *Flushing controls on toilets.*
- 18.9. *Furniture and floors.*
- 18.10. Glass doors (solid, non-transparent contrasting strip across full width of glass and slide partitions).
- 18.11. *Grab and hand rails.*
- 18.12. *Kerb ramps.*
- 18.13. *Lift Buttons.*
- 18.14. *Light Switches.*
- 18.15. *Lips and edges.*
- 18.16. *Non- reflective surfaces.*
- 18.17. *Overhanging features.*
- 18.18. *Path edges and pathways.*
- 18.19. *Poles.*
- 18.20. *Power points.*
- 18.21. *Ramp edges.*
- 18.22. Ramps (TGSIs at top and bottom).



- 18.23. *Seating.*
- 18.24. *Shower doors and curtains.*
- 18.25. *Signs.*
- 18.26. *Stairs (TGSIs at top and bottom).*
- 18.27. *Stair nosings.*
- 18.28. *Taps.*
- 18.29. *Toilet roll holders.*
- 18.30. *Toilet seats and cisterns.*
- 18.31. *Traffic calming devices.*
- 18.32. *Vehicle/pedestrian conflicts.*
- 18.33. *Vertical and horizontal connections e.g. floor and wall.*
- 18.34. *Window frames.*
- 18.35. *Window coverings.*
- 18.36. *All elements of non-reflective material.*
- 18.37. *All elements glare free.*

19.0 Meeting and Activity Spaces

- 19.1. *Sufficient level circulation space for a person using a wheelchair to sit at a meeting*

table in various locations.

- 19.2. *Seating at varying heights of between 450 – 520mm high with armrests at a height between 220 – 300mm above the seat and ensure there is a back to support users.*
- 19.3. *Where an inbuilt amplification system, including TVs fixed to walls, are installed in meeting and activity spaces, hearing augmentation will be provided.*
- 19.4. *A level, slip resistant floor surface will be provided in all meeting and activity spaces.*
- 19.5. *Adequate circulation space between all furniture and fittings will be ensured.*
- 19.6. *Effective lighting in the area.*
- 19.7. *Clear, concise signage, incorporating Braille and tactile components that identifies all elements e.g. toilet, emergency exits.*
- 19.8. *Location of reception desks/service counters are designed with clear direct lines of sight to key access pathways such as an entry, lift lobby and the like.*
- 19.9. *Provide reception desks/service counters with a section lowered to a height no greater than 870mm above FFL. Ensure the counter has appropriate foot (290mm) and knee (650mm) clearance. The counter shall be at least 800mm in width.*
- 19.10. *Ensure office furniture is moveable/portable to allow for any future work place adjustments. The furniture will therefore be better able to create the required/ appropriate circulation spaces for a person with a disability.*
- 19.11. *Consideration is given for a proportion of workstations to be provided as adjustable with same dimension and finish as others to assist in reconfiguration for future work-place adjustment.*
- 19.12. *Provide at least 30% luminance contrast between horizontal and vertical work surfaces to assist people with vision impairment.*
- 19.13. *Provide a range of seating types within waiting areas, including some chairs with back and armrests, to assist people with ambulant disabilities and the elderly.*

20.0 **Tactile Ground Surface Indicators (TGSIs)**

TGSIs will be located and installed according to AS1428.1 and AS1428.4.1.

- 20.1. Tactile ground surface indicators will be installed at defined pedestrian access points on the pathway to the principal pedestrian entrance.
- 20.2. *Appropriate directional tactile ground surface indicators on the pathway where the kerb ramp is at a mid-block section or not on a direct path of travel.*
- 20.3. Tactile ground surface indicators will be installed at defined vehicle drop off points where a level transition is in place.
- 20.4. *Appropriate tactile ground surface indicators will be installed at changes in direction on the pathway to the principal pedestrian entrance.*
- 20.5. *Hazard warning tactile ground surface indicators at changes in direction of directional indicators on the pathway to the principal pedestrian entrance.*
- 20.6. *Appropriate tactile ground surface indicators at the kerb ramp on the continuous accessible path of travel.*
- 20.7. Tactile ground surface indicators (hazard) will be installed at the top and bottom of all ramps unless they are shallower than 1 in 19 gradient, or a step ramp or a threshold ramp.
- 20.8. Appropriate tactile ground surface indicators will be installed at the top and bottom of all open/common stairs to improve safety, particularly for persons with vision impairment.
- 20.9. Appropriate TGSIs will be installed at any non-enclosed landing.
- 20.10. TGSIs will be at least between 600 and 800mm where the distance of the landing is 3000mm or more to the nearest nosing.
- 20.11. Warning indicators will be installed at right angles to the path of travel on pathway.
- 20.12. Warning indicators will be installed along edges of hazardous areas.
- 20.13. *Direction indicators to elements e.g. bus stops, kerb ramps, street furniture, toilets, train platforms, road crossings etc.*

- 20.14. TGSIs will be used with consistent application throughout the subject area.
- 20.15. TGSIs will have appropriate contrasts to background surfaces.
- 20.16. TGSIs will be well maintained.
- 20.17. TGSIs will be installed without creating any tripping hazard.
- 20.18. *TGSIs will be provided primarily to promote pedestrian safety.*

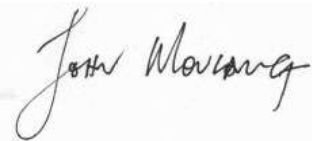
- **Conclusion**

The report concludes that the documentation provided for this developing design shows a mature and comprehensive response to the extensive range of mandatory and best practice provision for people with a disability.

Based on the issued drawings, meetings, email communications and telephone conversations since April 2017, the project has evolved to meet the objectives to provide equitable and dignified access, as described in the Disability Discrimination Act and eliminate, as far as possible, discrimination against persons with a disability.

The next stage of accessibility auditing will advise and ensure the implementation and construction according to the items within each element as laid out in this report.

I declare that I am qualified and capable of assessing and reporting accessibility compliance and recommendations to satisfy the intent of discrimination legislation.



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Document Tracking			
Date	Version	Author	Notes
17.10.2017	DD 85% Draft	John Moulang	
06.12.2017	DD 85% FINAL	John Moulang	
18.07.2018	S96 Added	John Moulang	
25.07.2018	FINAL_v2	John Moulang	S96 to s4.55 and remove attachments

SSD 8388 – Condition B18
Architectural Statement – Primary Access Routes
26 June 2018

1.0 CONDITION B18 REQUIREMENT

Condition of Consent No B18 requires equitable and inclusive access to all 'Primary' circulation routes throughout the development and specifically notes that stairs with platform lifts are not acceptable on the 'Primary' Access route.

2.0 COMPLIANCE WITH CONDITION B18

2.1 Drawing References

Refer to Drawings Numbers SSSDA 60, 61 & 62 attached which clearly show the 'Primary' and 'Secondary' access routes created by our design for the Arts Precinct Project and therefore assessed in the Accessibility Report prepared by MGAC for this project.

2.2 Identification of Primary & Secondary Routes

Condition B.18 of the Development Consent issued for the MUAPP requires that stair chairlifts are not used in 'Primary' circulation routes and are limited to 'Secondary' circulation routes.

The condition was varied from an earlier draft condition that required the removal of all stair chairlifts following the submission of drawings SSSDA 60, 61 & 62 to the Department of Planning by MQP – to clarify which routes were the 'Primary' circulation routes and which routes were reasonably considered to be 'Secondary' circulation routes.

The revised condition requires the Certifying Authority - BMG - to approve that the stair chairlifts are not in the 'Primary' routes.

BNMH have therefore prepared the following advice and the associated drawings to clarify for BMG the location of the 'Primary' circulation routes and copied same to MGAC.

2.2 Justification for the Nominated 'Primary' & 'Secondary' Routes

The basis of the nomination of the 'Primary' circulation route is simple - the Primary access to the new complex is from the following locations:

- From Wally's Walk to the north diagonally - the most direct route and the architectural focus of the circulation system - across the new stepped and ramped courtyard which is the major student access route. This route is highlighted by both the architecture and landscaping – while it is not covered

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Architectural Statement – Primary Access Routes

26 June 2018

the access from Wally Walk itself is not covered as Wally's Walk is an open pedestrian street

- From the southern carpark to the south via 25WWC entry foyer which is a significant public access route from carparking facilities
- Across the Atrium between buildings 25WWB & 25WWA from either the west or east which is a part of the general east/west campus wide circulation system

These 'Primary' circulation routes are all highlighted by architectural canopies at the entry points and are serviced by automatically operating sliding door sets consistent with their identification as the primary access points in each case.

The 'Secondary' routes are clearly defined as they are serviced by manual swing doors only, are not highlighted in architectural terms and only these 'Secondary' routes contain stair platform lifts.

We note that, while the 'secondary' route on the Ground Floor has longer undercover access due to the GF Colonnade, there is undercover secondary access available without a chair stair lift to the 25WWB tower via the 25WWA lift and around the Level 2 colonnade for bad weather events – there is consequently no logic in suggesting that the primary access to 25WWB must be covered beyond the strongly expressed & architecturally generous entry canopy provided to the 'Primary' diagonal courtyard access as you have to walk along Wally's Walk uncovered to get there in the first instance

Ray Hudson

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