THE UNIVERSITY OF NEWCASTLE AUSTRALIA

Access design guideline

Contents

Part A

Introduction and principles

Access Design Guideline

INTRODUCTION AND PRINCIPLES

A1 PURPOSE

This document provides an institution-specific Access Design Guideline for physical infrastructure at the University of Newcastle. The aim of this Guideline is to provide a standard suite of access requirements that can be used to guide improvements with the University, and to provide all University staff with a clear understanding on legislative and institutional-specific requirements which should be applied to access of physical infrastructure.

Space types which are addressed in this Guideline include:

- Teaching and Learning Space (including Library and IT Space)
- Office Space
- Research Space
- External Space
- Residential Accommodation Space.

The following are excluded from the Guideline:

- Retail and commercial spaces, included areas leased by the University to external parties, are excluded as a specific space-type within the Guideline. Principals from Teaching and Learning Space (including Library and IT Space) and External Space may be guide the design of access to these spaces.
- Non-physical infrastructure is excluded from the Guideline, including requirements for digital infrastructure.

Guideline is intended for use by University of Newcastle staff and consultants engaged and managed by the University.

The Guideline is to be used when:

- Defining and developing proposals for suitable access in new buildings and new outdoor spaces.
- Defining and developing proposals for suitable access in projects which add, remove or modify existing buildings and existing external spaces.
- Defining and developing proposals for improving access in existing buildings and existing external buildings which are subject to ad hoc adjustments and modifications.
- Reviewing access to existing internal and external spaces.

A2 DEVELOPMENT OF ACCESS DESIGN GUIDELINES

The development of the Access Design Guideline was identified as a key action of the University's Disability Action Plan 2015-2020. The Guideline was commissioned by Infrastructure and Facilities Services (IFS) in January 2016 and developed by Access Solutions NSW Pty Ltd with IFS.

Development of the Guideline was based around:

- Review and analysis of access guidelines and access standards from other Australian universities.
- Review and analysis of legislative requirements current at the time of development, including Disability Discrimination Act, Disability (Access to Premises - Buildings) Standard, National Construction Code and Australian Standards referenced in the above documents.
- Review and analysis of current practices in the field of access, including emerging improved practices. This also includes review of applicable non-mandatory Australian Standards, including those Standards which are used in the tertiary education sector but which are not necessarily mandatory under legislation.
- Consulting with a number of University units with an operational interest in access to physical infrastructure, including Student Central Student Care and Equity (disability support), Human Resources Services and Student Central Student and Academic Support (timetabling).
- Field testing of draft elements of the Guidelines, to assess suitability of requirements against current University estate conditions.

A3 UNIVERSAL DESIGN PRINCIPLES

Seven Universal Access Design Principals were developed at the *Center for Universal Design* at North Carolina State University in 1997. The principals have been used nationally and internationally to guide the design of products, communication and environments, and have been adopted in the development of this Guideline. The seven principles of Universal Design (UD) have been adopted as key aspirations that should be used to guide future development. In doing so they form the basis of a useful set of criteria against which proposals can be assessed.

1. Equitable use: the design is useful and marketable to people with diverse abilities.
2. Flexibility in use: the design accommodates a wide range of individual preferences and abilities.
3. Simple and intuitive use: use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
4. Perceptible information: the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
5. Tolerance for error: the design minimises hazards and the adverse consequences of accidental or unintended actions.
6. Low physical effort: the design can be used efficiently and comfortably and with a minimum of fatigue.
7. Size and space for approach and use: appropriate size and space is provided for approach, reach, manipulation, and use regardless of user’s body size, posture, or mobility.

The UD framework encourages diversity through the proactive design of an inclusive environment.

Figure 1: Universal Design Principles
(Credit: Center for Universal Design)

A4 LEGISLATIVE REQUIREMENTS AND TECHNICAL STANDARDS

Disability discrimination act

The University is committed to providing accessible physical infrastructure for its students, staff and visitors. This commitment forms part of the University's responsibilities under the Commonwealth Disability Discrimination Act 1992.

Section 23 of the Disability Discrimination Act places a general requirement on the University to provide equitable and discrimination-free access to premises. "Premises" are defined (in section 4 of the Disability Discrimination Act) to include "a structure, building, aircraft, vehicle or vessel; and (b) a place whether enclosed or built on or not". Section 23 applies to both existing and new premises.

Section 22 of the Disability Discrimination Act applies a further requirement on the University to provide equitable access to education. In terms of access to physical infrastructure, Section 22 requires the University to ensure there is no unlawful discrimination which would deny or limit a student's access to education, or to the benefits provided the University.

The Premises Standard

The Disability (Access to Premises - Buildings) Standard (2010) (*The Premises Standard*) is made under the Commonwealth Disability Discrimination Act 1992, and includes an Access Code of technical building standards. The Premises Standard generally applies to and within all areas normally used by occupants.

Building design standards

In addition to the overarching requirement to comply with the Disability Discrimination Act, a number of building design standards and other technical requirements apply in providing access to physical infrastructure. Building design standards referred to in this Guideline include:

- National Construction Code 2016, Volume 1 Class to Class 9 Buildings (The Building Code of Australia)

- Australian Standard AS 1428.1 (2009) ‘Design for access and mobility, General requirements for access’, New building work’
- Australian Standard AS1428.4.1 ‘Design for access and mobility, ‘Means to Assist the Orientation of People with Vision Impairments – Tactile Ground Surface Indicators’
- Australian Standard AS1428.2 (1992) ‘Design for access and mobility, Enhanced and Additional Requirements-buildings and facilities’
- Australian Standard AS1428.5 ‘Design for access and mobility Part 5: Communication for people who are deaf or hearing impaired’
- Disability Standards for Accessible Public Transport (2002)
- Australian Standard AS4299 (1995) ‘Adaptable housing’

Note that the above list of standards and requirements is not exhaustive and does not replace the requirement to comply with all applicable legislation.

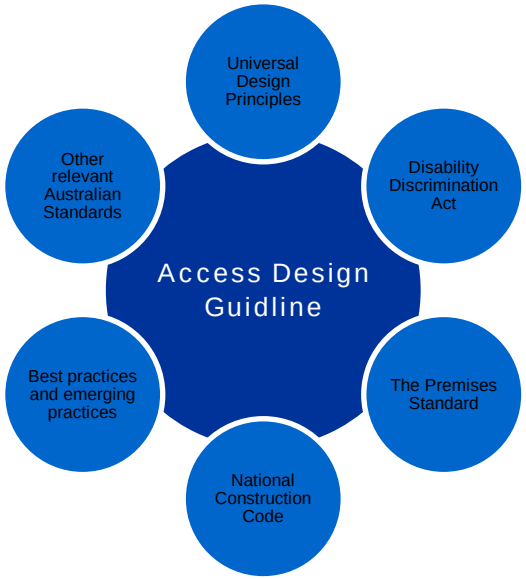

Figure 2: Legislative and technical requirements informing the Access Design Guideline

Technical requirements in the Guideline

Statutory building design standards such as the National Construction Code (Building Code of Australia) and Australian Standards for access and mobility (specifically AS1428.1) provide minimum building development standards only and compliance with these minimum requirements does not necessarily mean compliance with the Disability Discrimination Act. Additionally, best practice requirements captured in parts of AS1428.2 and in other documents may not be mandatory under development legislation but reflects good practice which provides the discrimination-free environment expected by the Disability Discrimination Act.

The technical requirements provided in the Guideline navigate the overlapping and sometimes inconsistent requirements of legislation. The Checklist Tools provided in Part B of the Guideline include an institution-specific approach to guiding access. The Checklist Tools address the key legislative requirements while referencing UD principles and opportunities that enhance equitable access.

Disclaimer

A range of access legislation exits. The guidelines seek to streamline access requirements for physical infrastructure at the University by using a Checklist Tools process for projects. The Checklist Tools are not exhaustive and by their nature cannot cover every eventuality or scenario in every project. Nothing in the Guidelines should be interpreted in a way that would be inconsistent with statutory and legislative requirements and responsibilities.

This Guideline does not replace the requirement for staff and consultants to refer to legislation, standards and statutory requirements.

A5 AFFECTED PARTS AND ACCESSIBILITY

When planning and designing changes to a building, it is necessary to consider the *affected part* of the building and implications for access.

Disability (Access to Premises-Buildings) Standards 2010 2.1 (5) defines a *new part* of a building as any extension to or modification of the building that requires building approval. The main entrance to a building where new work is occurring and the path of travel from the entrance to the new part is referred to as the *affected part* of the building.

The affected part of a building is limited to the area between (and including) the principal pedestrian entrance and the new work. It does not extend from the property boundary car parking spaces, toilet facilities or other rooms adjacent to the pathway between the entrance and the area of the new work, unless they are part of the path of travel to a new part.

The affected part requirement of the Disability (Access to Premises-Buildings) Standards 2010 only applies to buildings, not to external spaces.

The Premises Standards provides for a number of affected parts concessions, including lessee concessions, existing toilet facilities concessions and existing lift concessions. For further information on affected part concessions, refer to the *Guideline on The Application of The Premises Standards* published by the Australian Human Rights Commission.

For the purposes of this Guideline, the principles of affected part are applied to areas of physical infrastructure work. The Premises Standard's definition of affected part is used to determine areas of physical infrastructure which are subject to this Guideline.

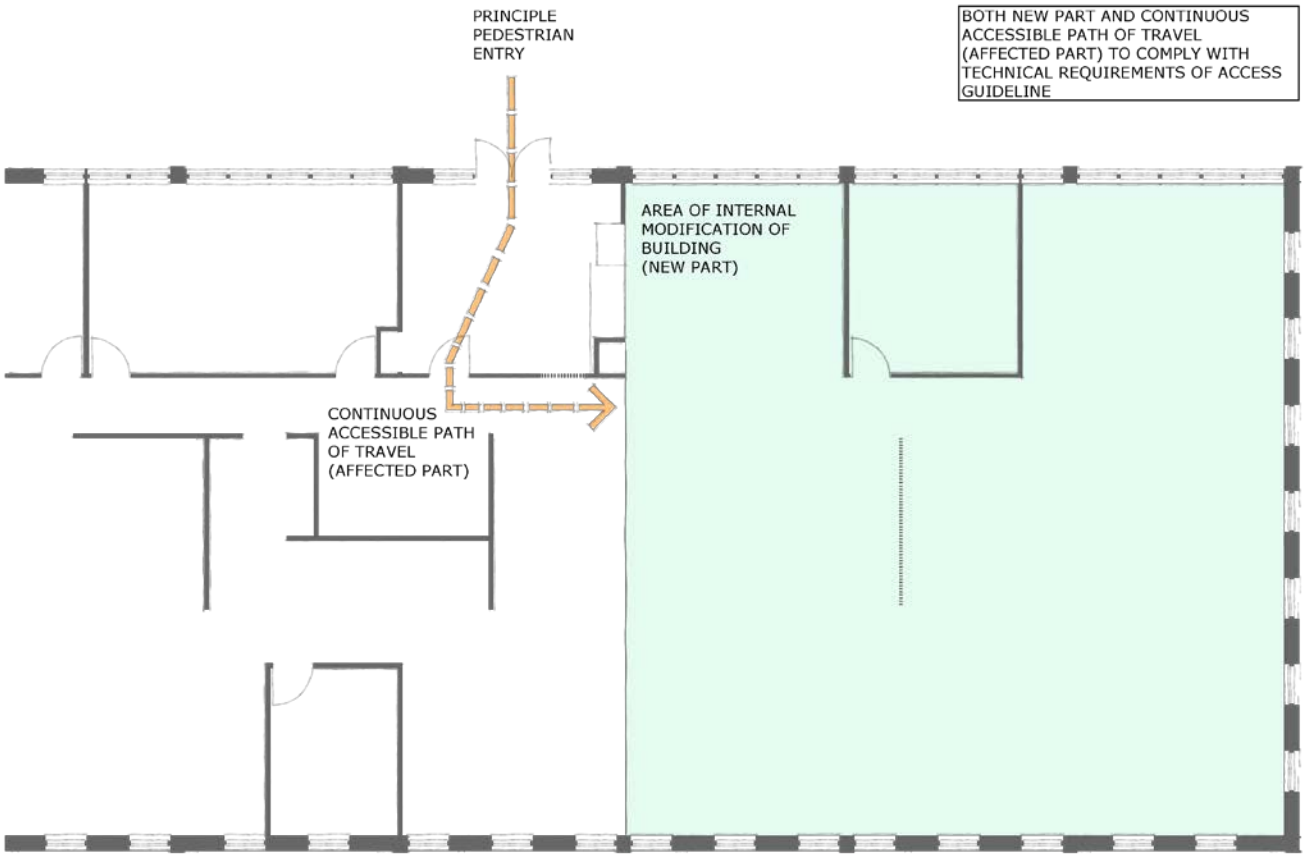

Figure 3: Example of affected part for internal modification of a building.

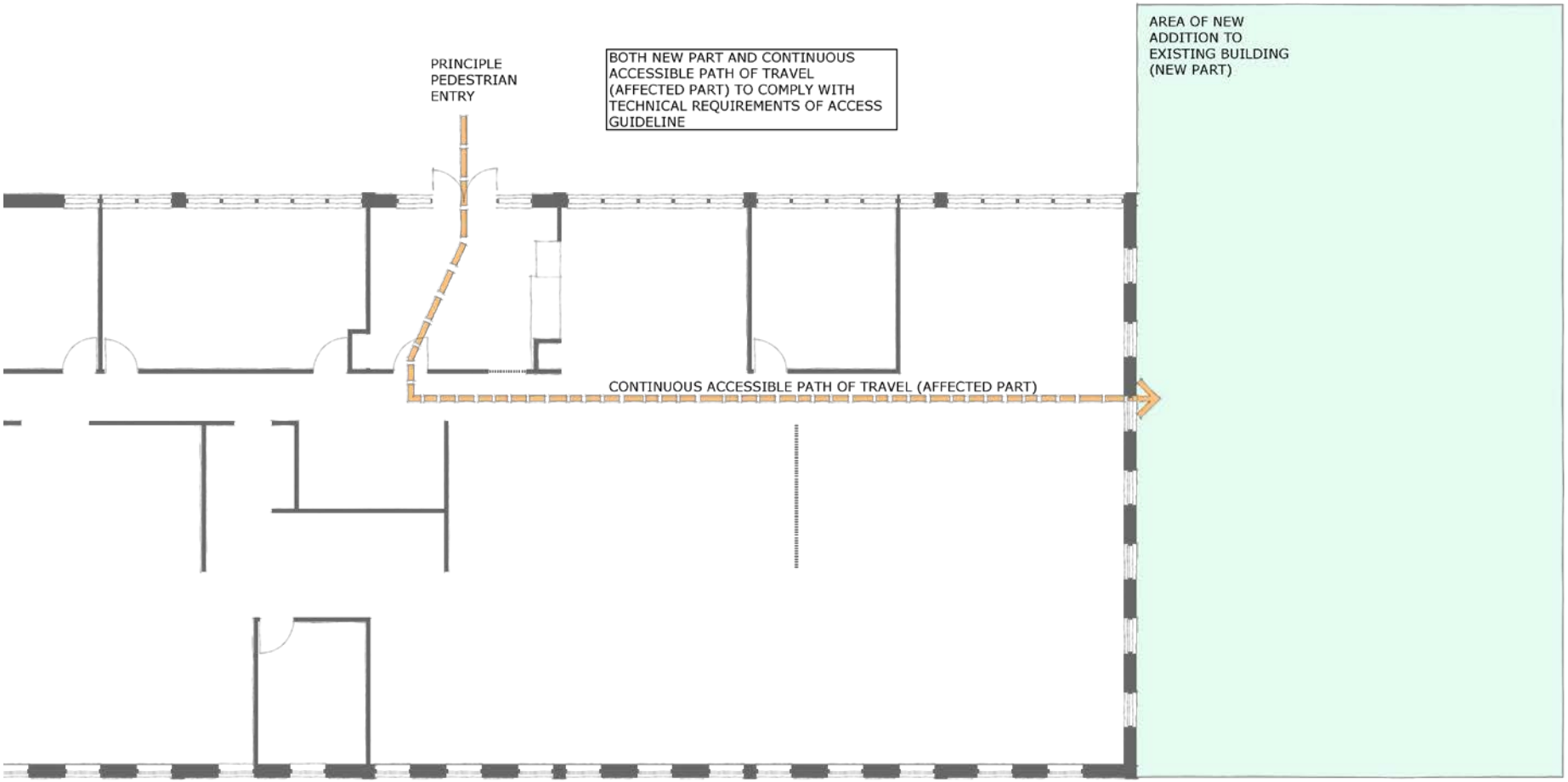

Figure 4: Example of affected part for addition/extension of a building.

A6 CHECKLIST TOOLS – INSTRUCTIONS FOR USE

The Checklist Tools which are included in the Guidelines provides intuition-specific requirements for significant University space types, including:

- Teaching and Learning Space (including Library and IT Space)
- Office Space
- Research Space
- Residential Accommodation Space
- External Space

The Checklist Tools are intended to provide baseline requirements for addressing accessibility of physical infrastructure. They serve as guidance for planning purposes, and a project record of project requirements being achieved.

Note that more than one Checklist Tool may apply to a single project or area of work. Inclusion of checklist tool is on the basis of spaces types being investigated or included in a project.

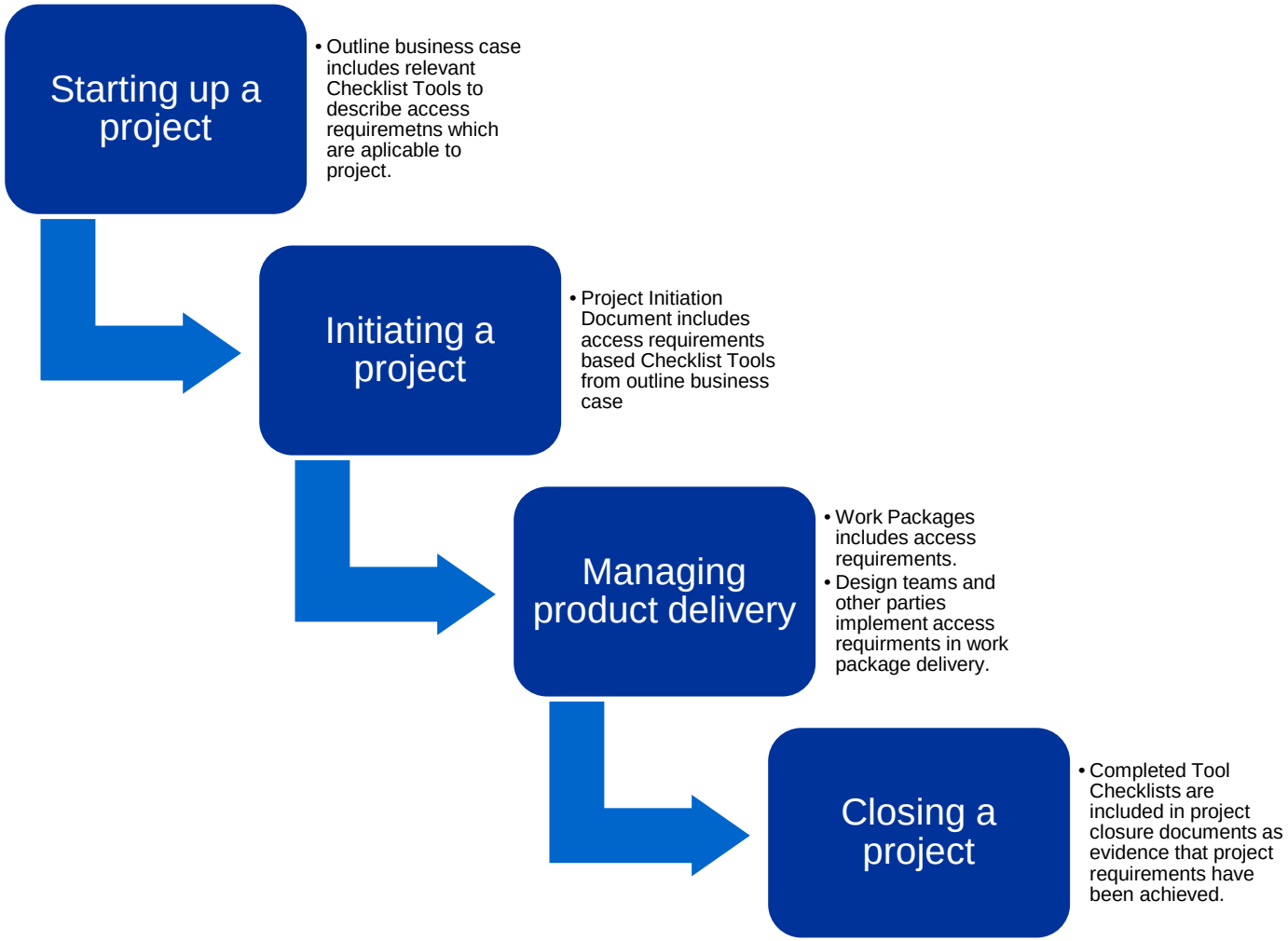

Figure 5: Tool Checklist use in PRINCE2 project stages.

A7 FURTHER READING AND INFORMATION

The following sources have been identified as providing useful additional information on access to physical infrastructure in the Australian tertiary education sector. They should be read in conjunction with the requirements of this Guideline.

- 'The principles of universal design version 2.0.' Written and published by the Center for Universal Design, North Caroline State University, Raleigh North Carolina, 1997. Available at
- https://www.ncsu.edu/ncsu/design/cud/pubs_p/docs/poster.pdf
- 'Guideline on the application of the Premises Standards'. Written and published by Australian Human Rights Commission, 2013. Available at https://www.humanrights.gov.au/sites/default/files/document/page/PremisesStandardsGuidelineV2.pdf
- 'The good, the bad and the ugly – design and construction for access.' Written and published by Australian Human Rights Commission, 2008. Available at https://www.humanrights.gov.au/disability_rights/buildings/good/GBU_Complete.htm
- *Accessible scientific laboratory design.* Written by Jaye Johnson in association with University of Western Australia Student Services and published by Post-Secondary Education Disability Network, Perth, 2000.

Part B

Checklist tools

Access Design Guidelines

B1 LEARNING AND TEACHING SPACE, LIBRARY AND IT SPACE

APPLICATION

This checklist tool is to be read in conjunction with the Access Design Guidelines' Introduction and Principles section. Note that the area of work or project may include more than one space type.

DEFINITIONS

Minor works	Works involving no reconfiguration of space or building. Minor works include refreshment of internal wall and floor finishes, furniture replacement, and general planned and reactive facilities maintenance. Minor works may provide opportunities for improving accessibility.
Major works	Works involving reconfiguration of space, and all new building works. Major works include refurbishment projects which add, remove or modify the building. This applies to the area of the project, or area of work, and includes the accessible path from the building entrance.
Required	Application of the guideline element is mandatory.
Recommended	Application of the guideline element should be addressed as part of project or work scope. Where a recommended action cannot be achieved or implemented, the non-compliance is to be risk managed and documented.
Consider	Application of the guideline element is appropriate where project or work scope budget, scope and constraints allow. Many "consider" actions offer the opportunity for quick wins in improving access.

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Building entrance	Entry door has clear width of at least 850 mm	AS1428.1 7.2 'Clear opening of doorways"	Recommended	Required		
	Door circulation spaces to AS1428.1	AS 1428.1 (2009), figure 31.	Consider – furniture placement can improve existing door circulation spaces.	Required		
	Automatic opening doors		Consider	Recommended		
	50% of building entrances to be accessible	BCA D3.2 Access to Buildings (b) 1	Not applicable	Required		
Internal doorways	Doors have clear width of at least 850 mm	AS1428.1 7.2 'Clear opening of doorways"	Not applicable	Required		
	Level access (+/- 3 mm) at doorways	AS 1428.1 (2009), section 7	Required	Required		
	Contrasting visual indicator on glazed doors and sidelights	AS 1428.1 (2009), 6.6 Visual indicators on glazing	Required	Required		
	Door circulation spaces to AS1428.1 figure 31	AS 1428.1 (2009), figure 31.	Not applicable	Required		
Switches and GPO	Sensor light controls used to automatically operate lighting in occupied spaces		Recommended	Recommended		
	Light switches, where used, located between 900 and 1100 mm above floor and at least 500 mm away from corners	AS 1428.1 (2009), 14 Switches and GPO power points	Recommended	Required		
	Light switches, where used, align with door levers and located on latch side of door	AS 1428.1 (2009), 14 Switches and GPO power points	Recommended	Required		
	Power outlets located between 600 mm	AS 1428.1 (2009), 14 Switches and	Recommended	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	and 1100 mm above floor and 500 mm away from corners.	GPO power points				
	Control points for teaching AV systems located between 900 and 1100 mm above floor and at least 500 mm away from corners	AS 1428.1 (2009), 14 'Switches and GPO' (power points)	Recommend	Required		
Safety equipment and systems	Any safety equipment provided should be accessible for people with disabilities		Recommended	Recommended		
Floor surfaces	Floor finishes are to be slip resistant to BCA Table D2.14 'Slip Resistance Classification'	BCA Table D2.14 'Slip Resistance Classification'	Required	Required		
	Floor finishes are to be firm and suitable for use with wheelchairs	AS1428.1 12 'Surface on a continuous accessible path of travel'. BCA D3.3	Required	Required		
	Exposed edges of floor finishes are to be suitably trimmed and level with adjacent finishes	AS1428.1 12 'Surface on a continuous accessible path of travel'.	Required	Required		
	Tactile ground surface indicators used sparingly to avoid trip hazards. Use only in the absence of other environmental cues.	AS1428.4.1 Appendix A	Recommended	Recommended		
Circulation space	Circulation spaces around doors to comply with AS1428.1	AS1428.1 figure 31 and 32	Not applicable	Required		
	Wheelchair turning space within a room requires 2250mm x 2250 mm diameter	AS1428.2 6.3, 'Circulation space for 360° turn'	Recommended	Required		
	For paths of travel less than 1800 mm wide, a passing area of 1800 x 2000 mm is required every 20 m where there is no direct line of sight.	BCA D3.3 'Parts of a building to be accessible (c)	Not applicable	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Lifts	New lifts: Lift cars have an internal floor space of 1400 x 1600 mm	BCA table E3.6	Not applicable	Required		
	Lobby areas in front of lift doors have circulation space 1450 mm		Not applicable	Required		
	Handrails in lift cars to comply with AS1735.12 section 5.3 'Handrails'	AS1735.12 'Lifts, escalators and moving walkways', 5.3 'Handrails'	Existing lifts - Consider retrofit	New lifts – required		
Stairs	Stairs are set back 400mm from any transverse path of travel to avoid handrails and TGSI causing a mobility hazard	AS1428.1 11.1 'Stair construction'.	Consider	Required		
	Stairs to BCA requirements (width, handrail extensions and configuration, opaque risers, contrasting nosing strip)	AS1428.1 11.1 'Stair construction'.	Consider	Required		
	Braille and tactile signage with the word 'exit' and the floor level are required on all fire stair exits	BCA D3.6 Signage	Recommended	Required		
Ramps	Ramps are set back at least 400mm from any transverse path of travel to avoid handrails and TGSI causing a mobility hazard	AS1428.1 10.3 'Ramps' (g)	Recommended	Required		
	Ramps to BCA requirements (for width, handrail extent, configuration, landings)	AS1428.1 10.3 'Ramps'	Consider	Required		
	Ramps are designed to allow a reasonable construction tolerance so they do not exceed 1:14 maximum gradient when built		Not applicable	Recommended		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	A landing at least 1500mm x 1500mm is required at any change of direction of a ramp, up to 90 degrees. A landing at least 1200mm long and 1000mm wide at any change of gradient.					
Landings	Landings at least 1200mm long and 1000mm wide and no more than 9m apart are required on a 1:14 gradient ramp and no more than 15m apart on a 1:20 gradient ramp. Intervals between these gradients should be calculated using interpolation.	AS1428.1 10.8 'Landings'	Not applicable	Required		
Pathways	A landing at least 1200mm long and 1000mm wide and no more than 15m apart on a 1:21 gradient path and no more than 25m apart on a 1:33 gradient path is required. Intervals between these gradients should be calculated using interpolation.	AS1428.1 10.8 'Landings'	Not applicable	Required		
Handrails	Handrails on both sides of stairs and ramps are required to be continuous including on enclosed landings, to extend at least 300mm past the top and bottom and, on stairs, extend one tread width plus 300mm past the bottom riser	AS1428.1 (2009) '12 Handrails'	Recommended	Required		
Ergonomic furniture	Loose furniture that can be relocated and repositioned to suit user requirements, including locking wheels		Required	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	where appropriate					
	Areas of fixed seating includes space for wheel chairs	BCA 3.9 'Wheelchair seating spaces in assembly buildings'	Consider	Required		
	Teaching lecterns include electric height adjustment with height range from 660 mm to 1200 mm, and allow leg room for a wheelchair under.		Recommended	Recommended		
Décor	Colour schemes and finishes to comply with luminance contrast requirements of minimum 30%.		Recommended	Required		
	Lighting – provide consistent lighting levels that avoid hot spots and dark areas.	AS1428.2 19 'Lighting'	Recommended	Required		
	Select light fixtures and surfaces that minimise glare.	AS1680.2.3	Recommended	Required		
Signage	Comply with UON Signage Guidelines	UON Signage Guidelines	Required	Required		
Sanitary Facilities	One unisex accessible toilet at not less than 50% of toilet blocks where there are male and female toilets.	AS1428.1 (2009) table F2.4 'Accessible Unisex Sanitary Compartments'	Not applicable	Required		

Access Design Guidelines

B2 OFFICE SPACE

APPLICATION

This checklist tool is to be read in conjunction with the Access Design Guidelines' Introduction and Principles section. Note that the area of work or project may include more than one space type.

DEFINITIONS

Minor works	Works involving no reconfiguration of space or building. Minor works include refreshment of internal wall and floor finishes, furniture replacement, and general planned and reactive facilities maintenance. Minor works may provide opportunities for improving accessibility.
Major works	Works involving reconfiguration of space, and all new building works. Major works include refurbishment projects which add, remove or modify the building. This applies to the area of the project, or area of work, and includes the accessible path from building entrance.
Required	Application of the guideline element is mandatory.
Recommended	Application of the guideline element should be addressed as part of project or work scope. Where a recommended action cannot be achieved or implemented, the non-compliance is to be risk managed and documented.
Consider	Application of the guideline element is appropriate where project or work scope budget, scope and constraints allow. Many "consider" actions offer the opportunity for quick wins in improving access.

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Building entrance	Entry door has clear opening of at least 850 mm	AS1428.1 7.2 'Clear opening of doorways"	Recommended	Required		
	Automatic opening doors	AS1428.1 13.3.4 'Power operated doors'	Consider	Recommended		
	50% of building entrances are to be accessible	BCA D3.2 Access to Buildings (b) 1	Not applicable	Required		
Internal doorways	Doors have clear opening of at least 850 mm	AS1428.1 7.2 'Clear opening of doorways"	Not applicable	Required		
	Level access (+/- 3 mm) at doorways	AS 1428.1 (2009), section 7	Required	Required		
	Contrasting visual indicator on glazed doors and sidelights	AS 1428.1 (2009), 6.6 'Visual indicators on glazing'	Required	Required		
	Circulation spaces around doorways	AS 1428.1 (2009), figure 31.	Not applicable	Required		
Switches and GPO	Sensor light controls used to automatically operate lighting in occupied spaces		Recommended	Recommended		
	Light switches, where used, located between 900 and 1100 mm above floor and 500 mm away from corners	AS 1428.1 (2009), 14 Switches and GPO power points)	Recommended	Required		
	Light switches, where used, align with door levers and located on latch side of door	AS 1428.1 (2009), 14 Switches and GPO power points)	Recommended	Required		
	Power outlets located 600mm to 1100mm above floor and at least 500mm away from corners.	AS 1428.1 (2009), 14 Switches and GPO power points	Recommended	Required		
Safety equipment and systems	Any safety equipment provided should be accessible for people with disabilities		Recommended	Recommended		
	Fire alarm systems include auditory	AS 1428.1 (2009), 6 'Requirements for	Recommended	Recommended		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	and visual alarms	warning and alerting systems'				
Floor surfaces	Floor finishes are to be slip resistant	BCA Table D2.14 'Slip Resistance Classification'	Required	Required		
	Floor finishes are to be firm and suitable for use with wheelchairs	AS1428.1 12 'Surface on a continuous accessible path of travel'. BCA D3.3	Required	Required		
	Exposed edges of floor finishes are to be suitably trimmed and level with adjacent finishes	AS1428.1 12 'Surface on a continuous accessible path of travel'.	Required	Required		
	Tactile ground surface indicators used sparingly to avoid trip hazards. Use only in the absence of other environmental cues.	AS1428.4.1 Appendix A	Recommended	Recommended		
Circulation space	Provide circulation spaces around doorways	AS1428.1 figure 31 and 32	Not applicable	Required		
	Wheelchair turning space within a room requires 2250mm x 2250mm diameter	AS1428.2 6.3, 'Circulation space for 360° turn'	Recommended	Required		
	For paths of travel less than 1800 mm wide, a passing area of 1800 x 2000 mm is required every 20 m where there is no direct line of sight.	BCA D3.3 'Parts of a building to be accessible (c)	Not applicable	Required		
Lifts	New lifts: Lift cars have an internal floor space of 1400 mm x 1600 mm	BCA table E3.6	Not applicable	Required		
	Lift lobby areas have circulation space at least 1450mm in front of doors		Not applicable	Required		
	Provide compliant handrails in lift cars	AS1735.12 'Lifts, escalators and moving walkways' 12, 5.3 'Handrails'	Existing lifts - Consider retrofit	New lifts – required		
Stairs	Stairs are set back at least 400mm from any transverse path of travel to avoid handrails and TGSI causing a	AS1428.1 11.1 'Stair construction'.	Consider	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	mobility hazard					
	Stairs to BCA requirements (width, handrail extension and configuration, opaque risers, contrasting nosing strip etc)	AS1428.1 11.1 'Stair construction'.	Consider	Required		
	Braille and tactile signage with the word 'exit' and the floor level are required on all fire stair exits	BCA D3.6 Signage	Recommended	Required		
Ramps	Ramps are set back 400mm from any transverse path of travel to avoid handrails and TGSI causing a mobility hazard	AS1428.1 10.3 'Ramps' (g)	Recommended	Required		
	Ramps to BCA requirements (for width, handrail extension and configuration, landings etc)	AS1428.1 10.3 'Ramps'	Consider	Required		
	Ramps design to allow construction tolerance so not to exceed 1:14 gradient when built		Not applicable	Recommended		
	A landing at least 1500mm x 1500mm at change of direction of a ramp or at least 1200mm long and 1000mm wide at a change of gradient.	AS1428.1 10.8 'Landings'	Not applicable	Required		
Ergonomic furniture	Electric sit-stand desks with height range 660 mm to 1200 mm		Recommended	Recommended		
	Loose furniture which can be relocated to suit user requirements, including locking wheels where appropriate		Recommended	Recommended		
	In areas with fixed seating include space for wheel chair users	BCA 3.9 'Wheelchair seating spaces in assembly buildings'	Consider	Recommended		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Décor	Colour schemes and finishes to comply with luminance contrast requirements		Required	Required		
	Lighting – provide consistent lighting levels that avoid hot spots and dark areas.	AS1428.2 19 'Lighting'	Recommended	Required		
	Select light fixtures and surfaces that minimise glare	AS1680.2.3	Recommended	Required		
Signage	Comply with UON Signage Guidelines	UON Signage Guidelines	Required	Required		
Sanitary Facilities	One unisex accessible toilet at not less than 50% of toilet blocks where there are male and female toilets.	AS1428.1 (2009) table F2.4 'Accessible Unisex Sanitary Compartments'	Not applicable	Required		

Access Design Guidelines

B3 RESEARCH SPACE

APPLICATION

This checklist tool is to be read in conjunction with the Access Design Guidelines' Introduction and Principles section. Note that the area of work or project may include more than one space type.

Research Space includes wet and dry laboratories, simulation spaces, specialist teaching spaces and other spaces with specialised equipment, environmental and facilities requirements. A definitive standard checklist is not possible for all research spaces and it is suggested that this document be used as a starting point. Consultation with an accredited access consultant is encouraged. Technical Officers and Managers within Schools and Units of the University should also be consulted.

Useful resources for further understanding equitable access in University research spaces include:

- Accessible Scientific Laboratory Design, written by Jaye Johnson, Disability Consultant for the University of Western Australia, 2000.
- AS/NZS 2243.1:2005 Safety in Laboratories. Part 1: Planning and operational aspects

DEFINITIONS

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Major works Works involving reconfiguration of space, and all new building works. Major works include refurbishment projects which add, remove or modify the building. This applies to the area of the project, or area of work, and includes the accessible path from building entrance.

Required Application of the guideline element is mandatory.

Recommended Application of the guideline element should be addressed as part of project or work scope. Where a recommended action cannot be achieved or implemented, the non-compliance is to be risk managed and documented.

Consider Application of the guideline element is appropriate where project or work scope budget, scope and constraints allow. Many “consider” actions offer the opportunity for quick wins in improving access.

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Building entrance	Entry door has clear width of at least 850 mm	AS1428.1 7.2 ‘Clear opening of doorways”	Recommended	Required		
	Door circulation spaces to AS1428.1	AS 1428.1 (2009), figure 31.	Consider	Required		
	Automatic opening doors		Consider	Recommended		
	50% of building entrances to be accessible	BCA D3.2 Access to Buildings (b) 1	Not applicable	Required		
Internal doorways	Doors have clear width of at least 850 mm	AS1428.1 7.2 ‘Clear opening of doorways”	Recommended Also assists in movement of lab equipment	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	Level access (+/- 3 mm) at doorways	AS 1428.1 (2009), section 7	Required Also assists in movement of lab equipment	Required		
	Contrasting visual indicator on glazed doors and sidelights	AS 1428.1 (2009), 6.6 Visual indicators on glazing	Required	Required		
	Door circulation spaces to AS1428.1 figure 31	AS 1428.1 (2009), figure 31.	Recommended Also assists in movement of lab equipment	Required		
Switches and GPO	Sensor light controls used to automatically operate lighting in occupied spaces		Recommended	Recommended		
	Light switches, where used, located between 900 and 1100 mm above floor and at least 500 mm away from corners	AS 1428.1 (2009), 14 Switches and GPO power points	Recommended	Required		
	Light switches, where used, align with door levers and located on latch side of door	AS 1428.1 (2009), 14 Switches and GPO power points	Recommended	Required		
	Power outlets located 600 mm and 1100 above floor and 500 away from corners.	AS 1428.1 (2009), 14 Switches and GPO power points	Recommended	Required		
Safety equipment and systems	Any safety equipment provided should be accessible for people with disabilities		Required	Recommended		
	Fire alarm systems include auditory alarms and visual alarms	AS 1428.1 (2009), 6 'Requirements for warning and alerting systems'	Recommended	Required		
	Safety – shut down and isolation controls are accessible		Required	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	Eyewash and safety showers are accessible	AS1428.1 (2009), 15 'Sanitary Facilities'	Required	Required		
Workbenches and equipment	Provide at least one accessible, height adjustable workbench for every 40 workbenches in laboratory spaces. This is to include under bench space for wheelchairs.	AS1428.2 Section 24 'Furniture & Fitments'	Recommended	Required		
	Access to workbench controls for water gas, power. Must also adhere to the placement and separation of services that are governed by regulation, usually above the bench top and away from possible hazards.	AS1428.2, 23 'Controls'	Required	Required		
	Fume hood and biological safety cabinets have leg room, large valve handles and on/off switches at the front		Required	Required		
	Sinks designed so that at least one of each per laboratory space is accessible to people with disabilities.		Required	Required		
Floor surfaces	Floor finishes are to be slip resistant to BCA Table D2.14 'Slip Resistance Classification'	BCA Table D2.14 'Slip Resistance Classification'	Required	Required		
	Floor finishes are to be firm and suitable for use with wheelchairs	AS1428.1 12 'Surface on a continuous accessible path of travel'. BCA D3.3	Required Assists in movement of lab equipment	Required		
	Exposed edges of floor finishes are to be suitably trimmed and level with adjacent finishes	AS1428.1 12 'Surface on a continuous accessible path of travel'.	Required Assists in movement of lab equipment	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	Tactile ground surface indicators used sparingly to avoid trip hazards. Use only in the absence of other environmental cues.	AS1428.4.1 Appendix A	Recommended	Recommended		
Circulation space	Circulation spaces around doorways to comply with AS1428.1	AS1428.1 figure 31 and 32	Consider Assists in movement of lab equipment	Required		
	Wheelchair turning space within a room requires 2250mm x 2250mm diameter	AS1428.2 6.3, 'Circulation space for 360 degree turn'	Recommended	Required		
	For paths of travel less than 1800mm wide, a passing area of 1800mm x 2000 mm is required at least every 20m where there is no direct line of sight.	BCA D3.3 'Parts of a building to be accessible (c)	Not applicable	Required		
Lifts	New lifts: Lift cars have an internal floor space of 1400mm x 1600 mm	BCA table E3.6	Consider Assists in movement of lab equipment	Required		
	Lobby areas in front of lift doors have circulation space at least 1450mm long		Consider	Required		
	Handrails in lift cars comply with AS1735.12 section 5.3 'Handrails'	AS1735.12 'Lifts, escalators and moving walkways', 5.3 'Handrails'	Existing lifts - Consider retrofit	New lifts – Required		
Stairs	Internal stairs are set back at least 400mm from any transverse path of travel to avoid handrails causing a mobility hazard	AS1428.1 11.1 'Stair construction'.	Consider	Required		
	Stairs to BCA requirements (width, handrail extention and configuration, opaque risers, contrasting nosing strip)	AS1428.1 11.1 'Stair construction'.	Consider	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	Braille and tactile signage with the word ‘exit’ and the floor level are required on all fire stair exits	BCA D3.6 Signage	Recommended	Required		

Access Design Guidelines

B4 EXTERNAL SPACES

APPLICATION

This checklist tool is to be read in conjunction with the Access Design Guidelines' Introduction and Principles section. Note that the area of work or project may include more than one space type.

DEFINITIONS

Minor works	Work which do not require Development Consent and/or Construction Certificates. Minor works include refreshment of external finishes, furniture replacement, and general planned and reactive facilities maintenance. Minor works may provide opportunities for improving accessibility.
Major works	Works requiring Development Consent and/or Construction Certificates.
Required	Application of the guideline element is mandatory.
Recommended	Application of the guideline element should be addressed as part of project or work scope. Where a recommended action cannot be achieved or implemented, the non-compliance is to be risk managed and documented.
Consider	Application of the guideline element is appropriate where project or work scope budget, scope and constraints allow. Many "consider" actions offer the opportunity for quick wins in improving access.

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Campus entry points and access from the boundary	Both the BCA and Access Code require an accessible path of travel to buildings from the main points of pedestrian entry at the boundary	Access Code clause D3.2	Consider	Required		
Accessible parking	Provide accessible parking bays at least 2400mm wide with adjacent shared space at least 2400mm wide	AS2890.6 (2009).	Consider for retrofit, maintaining number of accessible spaces	Required		
Signage	Signs, using international symbols, indicating the location of accessible parking should be provided from the entrances to the car park and at places where a decision about direction must be made	AS2890.6 Appendix A	Consider	Required		
	An accessible parking space should be designated with signage using international symbols	AS1428.1 sect 14.	Recommended	Required		
Continuous accessible path of travel	A continuous accessible path of travel shall not include a step, stairway, turn style, revolving door, escalator, moving walk or other impediment."	AS1428.1, 6 'Continuous accessible path of travel' 6.1 'General',	Not applicable	Required		
Temporary interruption of paths of travel	Where a potential obstacle is introduced an alternative accessible path of travel must be provided during and after works.		Required	Required		
Landings	On a walkway with a 1:20 gradient landings are required every 15m and with a 1:33 gradient every 25m. Where there is a handrail and kerb or kerb rail these distances can be increased by 30%.	AS14281 10.2 (b)	Not applicable	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	Where there is a change of direction on a walkway or ramp, landings are required to be at least 1500mm x 1500mm. The inner corner of the landing should be truncated for at least 500mm in both directions.	AS1428.1 10.8 'Landings' AS1428.1 10.3 'Ramps' fig 25 (b)	Not applicable	Required		
	On a walkway or ramp where there is no change of direction landings 1000mm x 1200mm are required.	AS1428.1 10.8 'Landings'	Not applicable	Required		
Passing Areas	A passing area at least 1800mm wide and 2000mm long is required every 20m, where there is no direct line of sight, along any two way access path that is less than 1800mm wide. An intersection of paths can suffice	AS1428.2 (1992) 6.5 (b).	Not applicable	Required		
Pedestrian Crossings.	TGSI are required at road crossings, including pedestrian crossings, installed 300mm back from the road on the kerb adjacent to the kerb ramp.	BCA D3.8 'Tactile Indicators'	Recommended	Required		
Requirements for non-slip pavement surfaces	A continuous accessible path of travel, including ramps and stairways, requires a slip resistant surface that can be used by a person in a wheelchair and those with an ambulant or sensory disability.	AS1428.1 (2009) 7. 1 BCA Table D2.14	Recommended	Required		
Stairs	Stairs should be set back 400mm from any transverse path of travel to avoid handrails and TGSI causing a mobility hazard	AS1428.1 11.1 'Stair construction' (a).	Consider	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	At a property boundary stairs and ramps should be set back at least 900mm from any transverse path of travel such as a footpath.	AS1428.1 11.1 'Stair construction' (a).	Consider	Required		
	Stairs to BCA requirements (width, handrail extension and configuration, opaque risers, contrasting nosing strip)	AS1428.1 11.1 'Stair construction'.	Consider	Required		
Ramps	A ramp must have a clear width between handrails of at least 1000mm.	AS1428.1 10.3 'Ramps'	Required	Required		
	The maximum gradient of a ramp over 1900mm long should be 1:14 with no more than 3% variation in gradient.	AS1428.1 10.3 (a)	Required	Required		
	A curved ramp must have a clear width between handrails of at least 1500mm. The length and gradient is measured along the horizontal centre line	AS1428.1 10.4 'Curved Ramps'	Required	Required		
	A threshold ramp at a doorway can have a maximum rise of 35mm, a maximum gradient of 1:8 and a maximum length of 280mm.	AS1428.1 10.5 'Threshold Ramps'	Required	Required		
	A step ramp can have a maximum rise of 190mm, a maximum gradient of 1:10 and a maximum length of 1900mm.	AS1428.1 10.6 'Step Ramps'	Required	Required		
	Where a ramp has a change of direction, the angle of approach will be 90° at the line of transition.	AS1428.1 10.3 'Ramps' (d)	Required	Required		
	Where a ramp is at the property boundary it should be set back at least 900mm to allow for handrail extensions and TGSI.	AS1428.1 10.3 (f)	Required	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	Ramps should have kerbs or kerb rails at least 65mm high with the top in the range 75mm to 150mm above the finished floor and no longitudinal gap greater than 20mm in this range.		Required	Required		
Kerb ramps	Kerb ramps should be aligned in the direction of travel,	AS1428.1 10.7 'Kerb Ramps'	Required	Required		
	Kerb ramps have a maximum rise of 190mm	AS1428.1 10.7.2 'Profile'	Required	Required		
	Kerb ramps have a length not greater than 1520mm	AS1428.1 10.7.2 'Profile'	Required	Required		
	Kerb ramps have a gradient of not more than 1:8.	AS1428.1 10.7.2 'Profile'	Required	Required		
	The sloping sides of a kerb ramp should be splayed at 45°	AS1428.1 10.7.2 'Profile'	Required	Required		
	The path of travel should be at least 1000mm wide.		Required	Required		
Ramp landings.	A landing associated with a ramp is required to be slip-resistant.	AS1428.1 7.1	Required	Required		
	A landing at least 1500mm x 1500mm with a truncated inside corner is required at any change of direction up to 90°	AS1428.1 10.8 'Landings' and Figure 25(b)	Required	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Pathway landings	Landings at least 1200mm long and 1000mm wide and no more than 9m apart are required on a 1:14 gradient ramp and no more than 15m apart on a 1:20 gradient ramp. Intervals between these gradients should be calculated using interpolation. Landings at least 1200mm long and 1000mm wide are required no more than 15m apart on a 1:21 gradient path and no more than 25m apart on a 1:33 gradient path. Intervals between these gradients should be calculated using interpolation.	AS1428.1 10.8 'Landings'	Required	Required		
Ramp handrails.	A ramp with a gradient of between1:14 and 1:20, should have continuous handrails that extend at least 300mm past the top and bottom of the ramp	AS1428.1 10.3 'Ramps' (h)	Required	Required		
	Where a ramp meets a transverse path of travel the ramp should be set back at least 400mm to allow for handrail extensions	AS1428.1 10.3 'Ramps'	Required	Required		
Tactile Ground Surface Indicators (TGSIs)	TGSI should be slip resistant.	AS1428.4 clause 2.3(c).	Required	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	TGSI are only required in the absence of sufficient environmental cues and should not be over prescribed as people with mobility impairment may find that TGSI interfere with the use of their mobility aid	` AS1428.4 Appendix A A1 'Wayfinding' and A2 'People with Mobility Impairment'	Required	Required		
	Hazard Tactile Ground Surface Indicators (TGSI's) should be installed at the top and bottom of stairs and 1:14 gradient ramps	AS1428.4 2.4 'Stairways, ramps, escalators and moving walks'.	Required	Required		
	TGSI are not required at enclosed intermediate landings on stairs or ramps where handrails are continuous.	AS1428.4 2.4 'Stairways, ramps, escalators and moving walks'.	Required	Required		
	TGSI should be used where there is a hazard that is not indicated in another way. For example an overhead obstacle might be blocked off with another barrier rather than using TGSI.	AS1428.4 2.6 'Warning of Hazards within the circulation space or adjacent to a continuous accessible path of travel	Required	Required		
	TGSI are used to warn of a roadway where there is no kerb	AS1428.4 2.5 'pedestrians and Vehicles at the same grade'	Required	Required		
Signs & Symbols	Design and use of signage should be based on a simple and consistent system applied in the physical environment and in navigation systems		Recommended	Recommended		
	The international symbol for disability access should be used to identify accessible paths and which facilities and entrances are accessible.	AS1428.1 (2009) clause 8.2	Required	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	Signs should comply with the requirements of AS1428.1 (2009) 8 'Signage'.	AS1428.1 (2009) 8 'Signage'.	Required	Required		
Provision of luminance contrast	Street furniture and other potential obstacles near the path of travel, should contrast at least 30% with their background.	AS1428.2 (1992) 27 'Street Furniture'	Required	Required		
Ergonomic and inclusive street furniture	Objects must not protrude into the path of travel and seats should be at least 500mm from pathway.	AS1428.2 (1992) 27 'Street Furniture'	Required	Required		
	Seats should generally be 450mm high however a variety of heights will cater for a greater range of users.	AS1428.2 (1992) 27 'Street Furniture'	Recommended	Recommended		
	Drinking fountains should be accessible	1428.2 (1992) 27.3 'Drinking fountains and water coolers'.	Recommended	Recommended		
	Vending machine controls should be between 500mm and 1200mm above the floor.	AS1428.2 (1992) 29 'Vending Machine'	Recommended	Recommended		
	Controls should be identifiable by touch as well as sight and should have a tactile surface.	AS1428.2 (1992) 29 'Vending Machine'	Recommended	Recommended		
	A space at least 2250mm x 2250mm should be available in front of any vending machine	AS1428.2 (1992) 29 'Vending Machine'	Recommended	Recommended		
Wheelchair seating spaces	Wheelchair seating spaces should be provided wherever there is fixed seating.	AS1428.2 (1992) 27 'Street Furniture'	Required	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Bus stops (public bus service and campus shuttle bus service)	Seating is required where the walking distance between transport services exceeds 60m	AS1428.2 (1992) Note to Clause 7, Continuous accessible path of travel.	Recommended	Required		
	A resting point must be provided with seats	AS1428.2 (1992) Clause 27.1(a), Street Furniture.	Recommended	Required		
	Ground finishes at boarding points are to be slip resistant to BCA Table D2.14 'Slip Resistance Classification'	BCA Table D2.14 'Slip Resistance Classification'	Required	Required		
	Ground finishes are to be firm and suitable for boarding	Disability Standards for Accessible Public Transport Part 8 'Boarding'	Required	Required		
Building entrance	Entry door has clear opening of at least 850 mm	AS1428.1 7.2 'Clear opening of doorways"	Recommended	Required		
	Automatic opening doors	AS1428.1 13.3.4 'Power operated doors'	Not applicable	Recommended		
	50% of building entrances are to be accessible	BCA D3.2 Access to Buildings (b) 1	Not applicable	Required		

Access Design Guidelines

B5 RESIDENTIAL ACCOMMODATION SPACE

APPLICATION

This checklist tool is to be read in conjunction with the Access Design Guidelines' Introduction and Principles section. Note that the area of work or project may include more than one space type.

DEFINITIONS

Minor works	Works involving no reconfiguration of space or building. Minor works include refreshment of internal wall and floor finishes, furniture replacement, and general planned and reactive facilities maintenance. Minor works may provide opportunities for improving accessibility.
Major works	Works involving reconfiguration of space, and all new building works. Major works include refurbishment projects which add, remove or modify the building. This applies to the area of the project, or area of work, and includes the accessible path from building entrance.
Required	Application of the guideline element is mandatory.
Recommended	Application of the guideline element should be addressed as part of project or work scope. Where a recommended action cannot be achieved or implemented, the non-compliance is to be risk managed and documented.
Consider	Application of the guideline element is appropriate where project or work scope budget, scope and constraints allow. Many "consider" actions offer the opportunity for quick wins in improving access.

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Ratio of accessible units	The proportion of accessible units to total. < 10 = 1 > 10 =1/20 >100 = 5 + 1/25 >200 = 9 + 1/30 > 500 =19 + 1/50	BCA table D3.1 'Requirements for access for people with a disability'.	Not applicable	Required		
Building entrance	Entry door has clear width of at least 850 mm	AS1428.1 7.2 'Clear opening of doorways"	Consider	Required		
	Automatic opening doors		Consider	Recommended		
	At least 50% of building entrances to be accessible	BCA D3.2 Access to Buildings (b) 1	Not applicable	Required		
Internal doorways	Doors have clear width of at least 850mm	AS1428.1 7.2 'Clear opening of doorways"	Consider	Required		
	Level access (+/- 3mm) at doorways	AS 1428.1 (2009), section 7	Required	Required		
	Contrasting visual indicator on glazed doors and sidelights	AS 1428.1 (2009), 6.6 Visual indicators on glazing	Required	Required		
	Door circulation spaces to AS1428.1 figure 31	AS 1428.1 (2009), figure 31.	Consider	Required		
Switches and GPO	Sensor light controls used to automatically operate lighting in common spaces where appropriate		Recommended	Required		
	Light switches located between 900 and 1100 mm above floor and at least	AS 1428.1 (2009), 14 Switches and GPO power points)	Consider	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	500 mm away from corners					
	Light switches, where used, align with door levers and located on latch side of door	AS 1428.1 (2009), 14 Switches and GPO power points)	Consider	Required		
	Power outlets located 600 mm and 1100 above floor and 500 away from corners.	AS 1428.1 (2009), 14 Switches and GPO power points)	Consider	Required		
Safety equipment and systems	Any safety equipment which is provided should be accessible for people with disabilities		Recommended	Recommended		
	Fire alarm systems include auditory alarms and visual alarms	AS 1428.1 (2009), 6 'Requirements for warning and alerting systems'	Recommended	Recommended		
Floor surfaces	Floor finishes are to be slip resistant to BCA Table D2.14 'Slip Resistance Classification'	BCA Table D2.14 'Slip Resistance Classification'	Required	Required		
	Floor finishes are to be firm and suitable for use with wheelchairs	AS1428.1 12 'Surface on a continuous accessible path of travel'. BCA D3.3	Required	Required		
	Exposed edges of floor finishes are to be suitably trimmed and level with adjacent finishes (+/- 2.5 mm)	AS1428.1 12 'Surface on a continuous accessible path of travel'.	Required	Required		
	Tactile ground surface indicators used sparingly to avoid trip hazards. Use only in the absence of other environmental cues.	AS1428.4.1 Appendix A	Recommended	Recommended		
Circulation space	Circulation spaces around doors to comply with AS1428.1	AS1428.1 figure 31 and 32	Not applicable	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	Wheelchair turning space within a room requires 2250mm x 2250 mm diameter	AS1428.2 6.3, 'Circulation space for 360° turn'	Recommended	Required		
	For paths of travel less than 1800 mm wide, a passing area of 1800 x 2000 mm is required every 20 m where there is no direct line of sight.	BCA D3.3 'Parts of a building to be accessible (c)	Not applicable	Required		
Lifts	Lift cars have an internal floor space of 1400 x 1600 mm	BCA table E3.6	Not applicable	Required		
	Lobby areas in front of lift doors have circulation space 1450 mm		Not applicable	Required		
	Handrails in lift cars to comply with AS1735.12 section 5.3 'Handrails'	AS1735.12 'Lifts, escalators and moving walkways' 5.3 'Handrails'	Existing lifts - Consider retrofit	New lifts – required		
Stairs	Stairs are set back at least 400mm from any transverse path of travel to avoid handrails protruding	AS1428.1 11.1 'Stair construction'.	Consider	Required		
	Stairs to BCA requirements (width, handrail extention and configuration, opaque risers, contrasting nosing strip etc)	AS1428.1 11.1 'Stair construction'.	Recommended	Required		
	Braille and tactile signage with the word 'exit' and the floor level are required on all fire stair exits	BCA D3.6 Signage	Recommended	Required		
Ramps	Ramps are set back at least 400mm from any transverse path of travel to avoid handrails protruding	AS1428.1 10.3 'Ramps' (g)	Recommended	Required		
	Ramps to BCA requirements (for width, handrail extension and configuration, landings etc)	AS1428.1 10.3 'Ramps'	Consider	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	Ramps are designed to allow a reasonable construction tolerance so they do not exceed 1:14 maximum gradient when built		Not applicable	Recommended		
Landings	On a ramp a landing at least 1500mm x 1500mm is required at any change of direction up to 90 degrees. A landing at least 1200mm long and 1000mm wide is required at any change of gradient. Landings at least 1200mm long and 1000mm wide and no more than 9m apart are required on a 1:14 gradient ramp and no more than 15m apart on a 1:20 gradient ramp. Intervals between these gradients should be calculated using interpolation. A landing is required at least 1200mm long and 1000mm wide and no more than 15m apart on a 1:21 gradient path and no more than 25m apart on a 1:33 gradient path. Intervals between these gradients should be calculated using interpolation.		Not applicable	Required		
Handrails	Handrails on both sides of stairs, continuous including on landings, extend at least 300mm past the top of	AS1428.1 (2009) '12 Handrails'	Recommended	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
	the stairs and one tread width plus 300mm past the bottom riser					
Tactile Ground Surface Indicators	Tactile ground surface indicators used sparingly to avoid trip hazards. Use only in the absence of other environmental cues.	AS1428.4.1 Appendix A	Consider	Recommended		
Ergonomic furniture	Loose furniture which can be relocated and repositioned to suit user requirements, including locking castor wheels where appropriate		Recommended	Recommended		
	For areas of fixed seating include space for wheel chairs	BCA 3.9 'Wheelchair seating spaces in assembly buildings'	Consider	Recommended		
	Legroom for a wheelchair user with clearance of 830mm (+ or – 20mm). Height of the surface 850mm (+ or – 20mm) above the floor	AS1428.2.	Consider	Recommended		
Kitchens	Accessible kitchens in common areas	AS4299 (1995) 'Adaptable Housing'	Recommended	Recommend		
Décor	Colour schemes and finishes are to comply with minimum 30% luminance contrast requirements		Recommended	Required		
	Lighting – provide consistent lighting levels that avoid hot spots and dark areas.	AS1428.2 19 'Lighting'	Recommended	Required		
	Select light fixtures and surfaces that minimise glare	AS1680.2.3	Recommended	Required		
Signage	Comply with UON Signage Guidelines	UON Signage Guidelines	Required	Required		

Access element	Summary of guideline requirement	Further information	Minor Works	Major works	Required in project Y / N	Achieved in project Y / N / NA
Accessible Rooms	A space at least 2250mm in diameter for a wheelchair user to make a 360 degree turn.	BCA table D3.1 AS1428.1 (2009).	Not applicable	Required		
	Accessible parking - the number of spaces calculated by multiplying the number of car parking spaces by the percentage of accessible rooms to the total number of rooms.	BCA table D3.5 'Car parking spaces for people with a disability'	Not applicable	Required		
	Update of currently accessible rooms		Recommended	Not applicable		