



Access Report

**Maitland Gaol Redevelopment
BOUTIQUE
ACCOMMODATION**
6-10 John Street
EAST MAITLAND NSW

For: Maitland City Council
Ref: PAA_23218



Document Control

This report has been prepared based on the documentation available and time allocated to conduct the review. All reasonable attempts have been made to identify key compliance matters.

Revision Summary:

prepared by: Lindsay Perry	Draft Revision 1 Revision 2	Issued for review Issued for DA Re-issued for DA	27 June 2023 30 July 2023 3 August 2023
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Clarifications:

This report is limited to items within drawings listed in this report only.

Construction is to be in accordance with the recommendations made in this access report to ensure compliance.

Any dimensions quoted throughout this report and within Australian Standards are CLEAR dimensions, not structural. This needs to be considered during construction to account for wall linings and the like.

Definitions:

The following terminology has been used throughout this report:

Compliant | compliance with current accessibility legislation has been achieved
Compliant Configuration | circulation and spatial planning requirements are compliant
Capable of compliance | compliance is achievable through detailed design
Not Yet Compliant | circulation and spatial planning requirements have not yet been met
To be addressed during detailed design | details not available or applicable at DA stage
To be confirmed | inadequate information is provided to determine compliance



Executive Summary

Development application documentation for the Maitland Gaol Redevelopment Boutique Accommodation located at John Street East Maitland, has been reviewed against current accessibility legislation.

The following table summarises our findings.

Item No.	Description	Compliance Status
The Disability (Access to Premises) Standards		
5.1	Access Code	Refer BCA commentary
5.2	New Work & The Affected Part	Compliant
Access and Approach		
6.1	Allotment Boundary to Entrance	Existing condition
6.2	Accessible Carparking to Entrance	Existing condition
6.3	Accessible Carparking	Existing condition
6.4	Existing Ramp	Existing condition
6.5	Existing Entrance	Existing condition
Interior		
7.1	Extent of Access Generally	Compliant performance based
7.2	Circulation Areas	Fit-for-purpose (existing)
7.3	Doorways	Compliant Configuration
7.4	Exempt Areas	None specified
7.5	Floor Finishes	To be addressed during detailed design
7.6	Carpet	To be addressed during detailed design
7.7	Controls	To be addressed during detailed design
7.8	Visual Indication to Glazing	To be addressed during detailed design
7.9	Tactile Indicators	To be addressed during detailed design
7.10	Signage	To be addressed during detailed design
7.11	Existing Stairs	To be addressed during detailed design
7.12	Slip Resistance (Ramps & Stairs)	To be addressed during detailed design
Accessible Rooms		
8.1	Doorways	Capable of compliance
8.2	Bathrooms	To be addressed during detailed design
8.3	Circulation Areas	Compliant
8.4	Floor Finishes	To be addressed during detailed design
8.5	Carpet	To be addressed during detailed design
8.6	Controls	To be addressed during detailed design
8.7	Kitchenette	Best practice recommendation

We consider that the drawings presented for assessment, for the purposes of a development application, generally comply with current statutory requirements.



Accessibility requirements are included in Appendix 1 of this report to guide the detailed design. Best Practice options are provided within Appendix 2 and we encourage their implementation into the design.

The recommendations throughout this report reflect the professional opinion and interpretation of Lindsay Perry Access Pty Ltd. This may differ from that of other consultants.

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1 Project Background

Maitland Gaol is the longest continuously operating correctional institution in New South Wales. The facility closed in 1998 and was converted to a tourism facility in 2000 under the management of Maitland City Council. In January 2022 the NSW State and Federal Governments announced a funding grant for the redevelopment of the Gaol to deliver a substantial part of its 2020 Development Plan including capital investment in a new activity hub with enhance access and connectivity, innovative interpretation, along with the provision of event infrastructure and boutique accommodation. The Maitland Gaol Redevelopment will be staged across three separate Development Applications.

This access report relates to Development Application 2 for the refurbishment of the 'Lieutenant Governor and Governor's residences' (Buildings 2 and 3) to provide:

- Boutique accommodation consisting of several guest rooms.

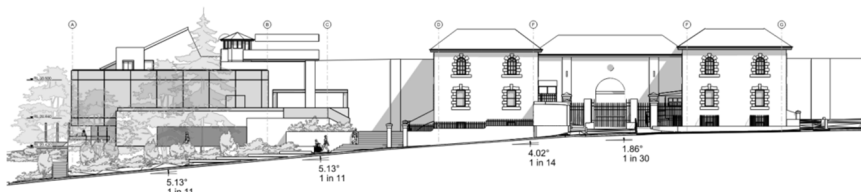


Figure 1 | Proposed Development

2 Reviewed Documentation

Documentation prepared by Maitland City Council Infrastructure & Works has been reviewed as follows:

dwg no.	drawing name	revision
DA-002	Site / Roof Plan	C
DA-003	Access & Egress	C
DA-004	Wall Openings	A
DA-005	Gradings of Heritage Significance	A
DA-010	DA Staging Plan	
DA-011	Construction Staging Plan	
DA-101	Plans – Basement	Mv2
DA-102	Plans – Ground Floor	O
DA-103	Plans – First Floor / Loft	J
DA-121	Demolition Plans – Basement	F
DA-122	Demolition Plans – Ground Floor	F
DA-123	Demolition Plans – First Floor / Loft	F
DA-201	Elevations	J
DA-301	Sections	K
DA-501	Perspectives	D
DA-502	Perspectives	D
DA-503	Perspectives – Precedence Images	C
DA-504	Perspectives – Precedence Images	E
DA-601	Detail Plans	D
DA-602	Wall Details	E
MD-100	Survey	A

3 Council Requirements for Accessibility

Maitland City Council DCP (2011) Part 3 Design Guidelines contains requirements for accessibility. The overall principles are as follows:

- a) To ensure all new developments are constructed to accommodate the needs of those people who may use the services that the proposed land use may provide.
- b) To ensure people with a disability enjoy the same level of access, both in gaining entry to and moving within, those buildings which meet a high public demand.
- c) To ensure those land uses which provide a service which is likely to attract a larger proportion of people with a disability, adequately provide for the needs of these people.
- c) That the provisions of continuous access path of travel to and within a building is the primary principle.
- d) The secondary principle is the provision of car parking and other amenities.
- e) To ensure that all existing commercial buildings in Maitland are upgraded

4 Legislation

Access assessment has been made against Access Legislation including:

- The Commonwealth Disability Discrimination Act 1992 (DDA)
- Disability (Access to Premises (Buildings)) Standards 2010
- Access Code for Buildings 2010
- The National Construction Code Building Code of Australia Volume 1 2022 (BCA)
 - Part D3 D15 Landings (Slip Resistance)
 - Part D3 D22 Handrails
 - Part D4 – Access for People with Disabilities
 - Section F2D5 – Accessible Sanitary Facilities
- Australian Standard AS1428.1 (2009) Amendment 1 & 2, – Design for Access and Mobility
- Australian Standard AS1428.2(1992) – Design for Access and Mobility: Enhanced and additional requirements – Buildings and facilities
- Australian Standard AS1428.4.1 (2009) Amendment 1 – Design for Access and Mobility: Means to assist the orientation of people with vision impairment – Tactile ground surface indicators
- Australian Standard AS2890.6 (2009) – Parking Facilities – Off street carparking For People with Disabilities.

A summary of the requirements of relevant legislation follows.

The Disability Discrimination Act 1992

The DDA requires independent, equitable, dignified access to all parts of the building for all building users regardless of disability. The DDA makes it unlawful to discriminate against a person on the grounds of disability.

The Disability (Access to Premises) Standards

Any application for a building approval for a new building or upgrade of an existing building triggers the application of the Premises Standards.

The Premises Standards include an **Access Code** written in the same style as the Building Code of Australia. It has a number of Performance Requirements that are expressed in broad terms and references a number of technical Deemed-to-Satisfy Provisions.

The National Construction Code / Building Code of Australia (Volume 1)

The Building Code of Australia (BCA) is contained within the National Construction Code (NCC) and provides the minimum necessary requirements for safety, health, amenity and sustainability in the design and construction of new buildings (and new building work in existing buildings) throughout Australia. The BCA is a performance-based code

The BCA for Class 3 buildings requires access for people with disabilities as follows:

- From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level.
- To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like.
- For a total of twelve (12) rooms, access must be provided to and within **two (2)** sole occupancy units
- Where a ramp complying with AS 1428.1 or a passenger lift is installed—
 - a) to the entrance doorway of each sole-occupancy unit; and
 - b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.

AS1428 – Design for Access and Mobility

The AS1428 Suite provides design requirements for accessibility generally, covering all types of disabilities. AS1428.1 and AS1428.4.1 are referenced by the NCC / BCA.

- Australian Standard AS1428.1 (2009) Amendment 1 & 2, – Design for Access and Mobility contains access requirements that are mandatory for the provision of access for persons with a disability
- Australian Standard AS1428.2(1992) – Design for Access and Mobility: Enhanced and additional requirements – Buildings and facilities provides enhanced and best practice requirements that will minimize DDA risk
- Australian Standard AS1428.4.1 (2009) Amendment 1 – Design for Access and Mobility: Means to assist the orientation of people with vision impairment – Tactile ground surface indicators

AS2890.6 – Off-street Carparking for People with Disabilities

AS2890.6 (2009) applies to the carparking areas generally.

5 The Disability (Access to Premises) Standards

Any application for a building approval for a new building or upgrade of an existing building triggers the application of the Premises Standards. The Premises Standards include an Access Code written in the same style as the Building Code of Australia. Additionally, it offers a number of concessions for existing buildings as outlined below.

5.1 Access Code

The Premises Standards include an Access Code written in the same style as the Building Code of Australia.

Compliance Summary:

Refer to BCA requirements throughout subsequent sections of this report. While the introduction of NCC 2022 causes clause numbers to differ between documents, the intent of each code remains similar.

5.2 New Work and The Affected Part

The Disability (Access to Premises – Buildings) Standards apply to **...a new part, and any affected part, of a building**, to the extent that the part of the building is...a Class 3, 5, 6, 7, 8, 9 or 10 building (Clause 2.1).

New part is defined as follows (Clause 2.1 (4)):

- An extension to the building or a modified part of the building.

An **affected part** is defined as follows (Clause 2.1 (5)):

- The principal pedestrian entrance of an existing building that contains a new part; and
- Any part of an existing building, that contains a new part, that is necessary to provide a continuous accessible path of travel from the entrance to the new part.

Compliance Summary:

Compliant

Commentary:

Due to the extent of refurbishment works, the affected part forms part of the new building works generally.

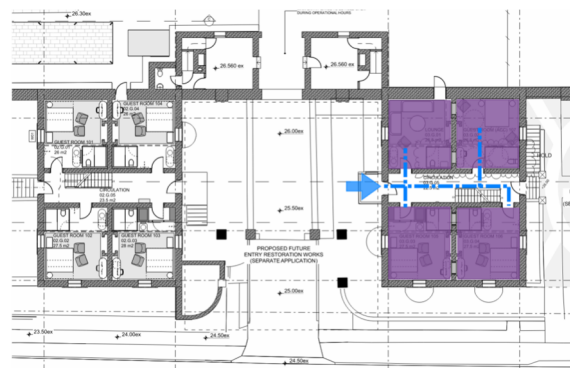


Figure 2 | New Work & The Affected Part

6 BCA | Access and Approach + External Areas Generally

The approach to the building needs to be addressed when considering access for persons with a disability. The BCA has three requirements for the approach to the building for persons with a disability.

An accessible path of travel is required to the building entrance from the allotment boundary at the main points of pedestrian entry, from accessible carparking areas and from any adjacent and associated accessible building.

In this instance, the approach to the building has been considered as follows:

- from the allotment boundary at the pedestrian entrance along John Street to the building entrance.
- from the accessible carparking area to the building entrance.

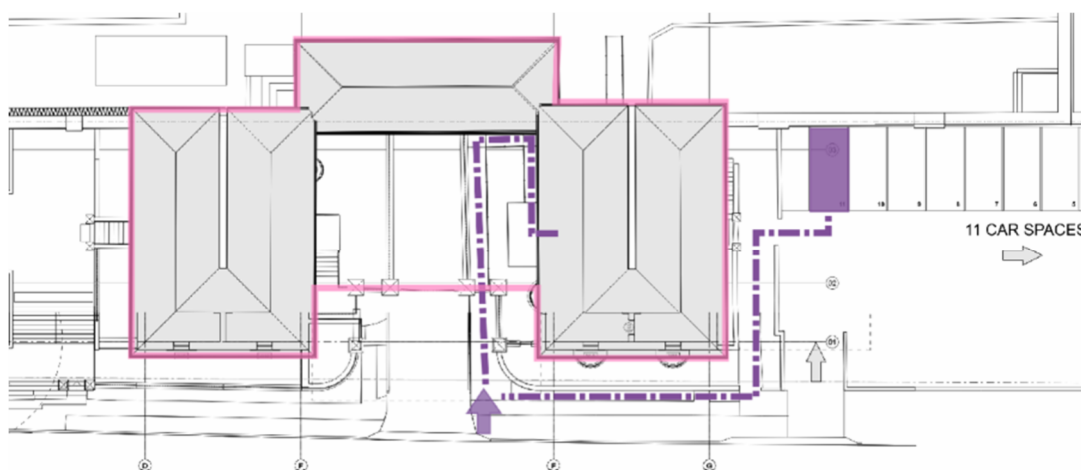


Figure 2 | Site Plan (in part)

6.1 Approach from Allotment Boundary

The BCA requires that a continuous accessible path of travel be provided from the allotment boundary at the main points of pedestrian entry to the main entrance.

Compliance Summary:

Existing condition

Commentary:

An accessible path of travel is provided to the building entrance from the allotment boundary along John Street. The existing ramp will be maintained.

6.2 Approach from Accessible Carparking

The BCA requires that a continuous accessible path of travel be provided from the accessible carparking areas to the main entrance.

Compliance Summary:

Existing condition

Commentary:

The existing carparking adjacent to the proposed Boutique Accommodation, that includes two (2) accessible carparking spaces is to be retained. The existing path of travel to the building entrance facilitates wheelchair access.

6.3 Accessible Carparking

There is a requirement for the provision of accessible carparking within this development. The number of accessible spaces within a Class 3 building is to be calculated by multiplying the total number of carparking spaces by the percentage of accessible sole-occupancy units to the total number of sole-occupancy units.

Compliance Summary:

Existing condition

Commentary:

The existing carparking adjacent to the proposed Boutique Accommodation is to be retained. There are two (2) accessible spaces in this location. The existing condition is appropriate to the new use as boutique accommodation.



6.4 Existing Ramp

There is an existing ramp that facilitates access from the street footpath along John Street to the building entrance.

Compliance Summary:

Existing condition

Commentary:

The existing ramp is considered fit-for-purpose. No changes are proposed as a part of the development.

The ramp has an average gradient of 1:12 (compliant at time of construction), and average width of 1100mm. A handrail is provided to the inner side of the ramp.



Under the Premises Standards, there is no requirement to update the existing ramp. The Guidelines in the Application of the Premises Standards Version 2, February 2013 (Clause A.7) states:

The Premises Standards introduce a new concept referred to as the 'affected part' of an existing building. The requirement for upgrading of the 'affected part' of buildings recognises that there is little value in improving access in new parts of existing buildings if people with disability cannot get to those new parts.

Affected part means the path of travel between (and including) the principal pedestrian entrance of an existing building to the 'new part' or modified part of the building. This path of travel must provide a continuous accessible path of travel (see 'Accessway' as defined in A1.1 of the Access Code) from the principal pedestrian entrance to the new part or modified part of the building.

*The definition of 'affected part' of a building is limited to the area between (and including) the principal pedestrian entrance and the new work **but does not extend from the entrance to the allotment boundary or any required carparking spaces.***

6.5 Existing Entrance

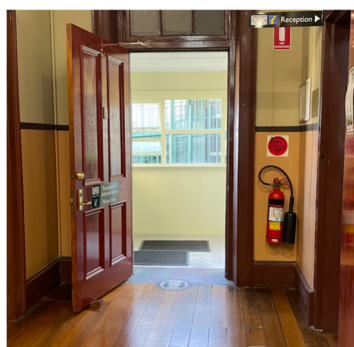
The existing entrance facilitates access for people with a disability. The clear opening width of the doorway is 930mm and the doorway has a level threshold.

Compliance Summary:

Existing condition

Commentary:

Automatic sliding doors are provided for entrance to the building. The use of this type of door is encouraged as it maximizes access for persons with a disability to the tenancy.



7 BCA | Interior

The Boutique Accommodation will be located within the 'Lieutenant Governor and Governor's Residences' (Buildings 2 and 3). An accessible room and common lounge is proposed at the ground floor (entrance) level of Building 3 (Guest Room 107).

7.1 Extent of Access Generally – BCA

For a development of this nature, access for people with disabilities is required to and within all areas normally used by the occupants.

Compliance Summary:

Compliant | performance-based approach

Commentary:

Within the Boutique Accommodation, access for people with disabilities is required to the door of individual sole occupancy units at the entrance level. An accessible path of travel is also required to the residential communal areas.

BCA requires the provision of two (2) accessible rooms based on a total of twelve (12) sole occupancy units.

One (1) accessible room is proposed which is considered adequate within the context of the existing building and heritage constraints. A performance solution may be required as part of the construction certificate to address this deemed-to-satisfy departure.

7.2 Circulation Areas

BCA (Clause D4D4) requires the provision of turning spaces and passing areas to corridors to enable wheelchair circulation throughout a building.

Turning spaces 1540mm wide by 2070mm long are required within 2m of the end of corridors to enable a wheelchair to turn through 90° and passing areas 1800mm wide by 2000mm long are required every 20m along a corridor unless there is a clear line of sight.

Within corridor areas, 1500x1500mm is required to facilitate a 90° turn by a wheelchair. This must be accommodated within accessible areas.

Compliance Summary:

Fit-for-purpose

Commentary:

The existing condition offers adequate circulation areas within the corridor areas.

7.3 Doorways Generally

AS1428.1 has requirements for doorways within the accessible path of travel to enable independent access for people using a wheelchair.

Compliance Summary:

Compliant configuration

Commentary:

Doorways within the accessible path of travel generally achieve the required circulation areas.

7.4 Exempt Areas

BCA Clause D4D5 does not require access for people with disabilities to areas that would be inappropriate due to the particular use of the area or would pose a health and safety risk. This includes the path of travel to these areas.

Compliance Summary:

None specified

Commentary:

Within this development, plant and service areas are considered to be exempt from requiring access for people with disabilities.

7.5 Floor Finishes

All floor finishes are to be flush to provide an accessible path of travel throughout the different areas of the building. Maximum allowable construction tolerance is 3mm (5mm for beveled edges) as part of the accessible path of travel.

Compliance Summary:

To be addressed during detailed design stages

7.6 Carpet

BCA requires a maximum carpet pile height of 11mm and carpet backing thickness not exceeding 4 mm.

Compliance Summary:

To be addressed during detailed design stage.

7.7 Controls

Controls such as light switches, GPOs, alarm keypads, card swipes, etc are to be located within the accessible height range of 900-1100mm above the floor level and not within 500mm of an internal corner to comply with AS1428.1(2009), Clause 14.

Compliance Summary:

To be addressed during detailed design stage.

7.8 Visual Indication to Glazing

Provide decals to all full height glazing that can be mistaken for a doorway to assist persons with a vision impairment. Decals to be solid and have a minimum 30% luminance contrast to the background colour and be not less than 75mm high located within the height range of 900-1100mm above the finished floor level.

Compliance Summary:

To be addressed during detailed design stage.

7.9 Tactile Indicators

For a building that is required to be accessible, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching a stairway (other than a fire isolated stair); an escalator; a moving walkway; a ramp (other than a fire isolated ramp, step ramp, kerb ramp or swimming pool ramp); and in the absence of a suitable barrier, an overhead obstruction less than 2m above the floor level or an accessway, meeting a vehicular way if there is no kerb or kerb ramp (BCA D4D9).

Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background color (45% for discrete tactile indicators and 60% for discrete two-tone tactile indicators).

Compliance Summary:

To be addressed during detailed design stage.

7.10 Signage

Signage to identify sanitary facilities, hearing augmentation and required exits are to be provided in accordance with BCA Clause D4D7. This includes provision of the International Symbol for Access or International Symbol for Deafness as appropriate. Signage to comply with AS1428.1 (2009), Clause 8.

Compliance Summary:

To be addressed during detailed design stage.

7.11 Existing Stairs

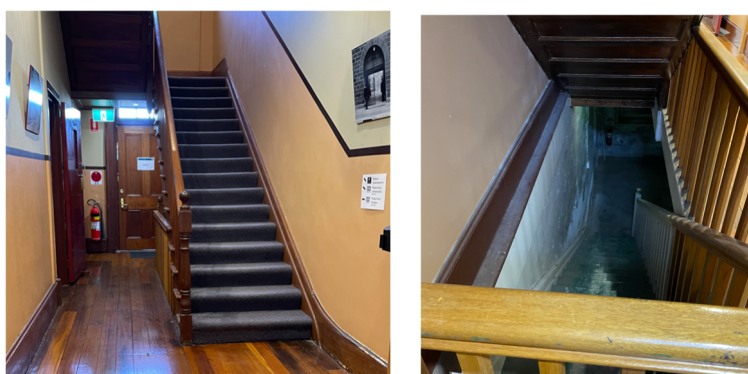
AS1428.1 has access requirements for all stairs other than fire isolated egress stairs and is applicable in this instance.

Compliance Summary:

To be addressed during detailed design

Commentary:

There are existing stairs within each building that provide access between levels. Accessibility features are not currently provided.



We recommend that the existing stairs be upgraded as far as possible within the heritage constraints to improve user safety. As a minimum, we recommend the provision of contrasting non-slip nosing strips to treads.

7.12 Slip Resistance (Stairs and Ramps)

The BCA defines the following slip resistance requirements for stairs and ramps:

Application	Surface Conditions	
	Dry	Wet
Ramp steeper than 1:14	P4 or R11	P5 or R12
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11
Tread or Landing surface	P3 or R10	P4 or R11
Nosing or landing edge strip	P3	P4

Compliance Summary:

To be addressed during detailed design stage.

8 BCA | Accessible Sole Occupancy Units

An accessible guest room is proposed at the ground floor level of the Governor's Residences' (Building 3). The following access requirements apply to the accessible room.

8.1 Doorways

Doorways within the accessible rooms (including the entrance door) should comply with the requirements of AS1428.1 as a part of the accessible path of travel.

Compliance Summary:

Capable of compliance

Commentary:

The required circulation areas are achieved at doorways – entrance door from corridor and the bathroom door.

The entrance door is an existing condition and provides a clear opening width of 810mm. This is considered fit-for-purpose given heritage constraints and will cater to the A80 wheelchair footprint.

8.2 Bathroom

Bathroom within the accessible rooms should comply with the requirements of AS1428.1.

Compliance Summary:

To be addressed during detailed design

Commentary:

The current bathroom layout does not reflect the requirements of AS1428.1 (2009). We understand the design is under review.

8.3 Circulation Areas

It is best practice to provide circulation areas within the accessible apartments for wheelchair access. A minimum 1540mm wide circulation at the foot of the bed (for compliance with AS1428.2, Clause 6.1) is recommended.

Compliance Summary:

Compliant

Commentary:

Required circulation areas are shown dashed on the floor plans.



8.4 Floor Finishes

All floor finishes are to be flush to provide an accessible path of travel throughout the different areas of the building. Maximum allowable construction tolerance is 3mm (5mm for beveled edges) as part of the accessible path of travel.

Compliance Summary:

To be addressed during details design stage

8.5 Carpet

BCA states that clause 7.4.1(a) of AS 1428.1 does not apply and is replaced with 'the pile height or pile thickness shall not exceed 11 mm and the carpet backing thickness shall not exceed 4 mm.

Compliance Summary:

To be addressed during details design stage

8.6 Controls

Controls such as light switches, GPOs, alarm keypads, card swipes, intercoms, etc are to be located within the accessible height range of 900-1100mm above the floor level to comply with AS1428.1(2009), Clause 14.

Compliance Summary:

To be addressed during details design stage

8.7 Kitchenette – Best Practice Recommendation

Requirements for kitchens are provided with AS1428.2, Appendix A. Recommendations for the dimensioning, layout and arrangement of kitchens are offered to maximize usability for persons with a disability. They are not mandatory / statutory requirements. Refer to Appendix 2 for details



9 Conclusion

This report demonstrates that the fundamental aims of accessibility legislation are achievable within the proposed development. Spatial planning and general arrangements of facilities will offer inclusion for all building users.

Disability is often defined as any limitation, restriction or impairment which restricts everyday activities and has lasted or is likely to last for at least 6 months. Disabilities can be very varied. They can be physical, cognitive, intellectual, mental, sensory, or developmental. They can be present at birth or can occur during a person's lifetime. They can also be permanent or temporary. In Australia, almost one in five people – 4.3 million – have a disability with one in three having severe or profound core activity limitation.

Equity and dignity are important aspects in the provision of access to buildings for all users. With respect to people with a disability, equity and dignity are sometimes overlooked in the construction of new buildings or refurbishment works. The design approach needs to maintain a high level of equity for people with disabilities and meet the performance requirements of the BCA. The performance requirements adopt two main concepts in the provision of access for people with a disability being **to the degree necessary** and **safe movement**. Both of these concepts need to be achieved within the context of equitable and dignified access.

In this respect, a wide range of disabilities needs consideration and a compromise reached between requirements of different disability groups. Measures need to be implemented to ensure inclusion of all users, not a particular disability group in isolation.

We consider that the drawings presented for assessment, for the purposes of a development application, demonstrate that compliance with current statutory requirements affecting accessibility is achievable subject to detailed design at the construction certificate stage (refer to Appendix 1 for requirements).



Appendix 1 | Accessibility Requirements



The following accessibility requirements are to be incorporated into the detailed design to ensure compliance of the built form.

Accessways Generally

The accessible path of travel refers to a pathway which is grade restricted and provides wheelchair access as per the requirements of AS1428 as follows:

- a. The minimum unobstructed width of all pathways is to be 1000mm (AS1428.1, Clause 6.3). A width of 1200mm is preferred for compliance with AS1428.2.
- b. All pathways are to be constructed with no lip or step at joints between abutting surfaces (a construction tolerance of 3mm is allowable, or 5mm for bevelling edges).
- c. The maximum allowable crossfall of pathways is to be 1:40.
- d. The ground abutting the sides of the pathways should follow the grade of the pathway and extend horizontally for 600mm. We note that this is not required where there is a kerb or handrail provided to the side of the pathway.
- e. Pathways to have passing bays complying with AS1428.1 at maximum 20m intervals where a direct line of site is not available. They are required within 2m of the end of the pathway where it is not possible to continue travelling along the pathway. A passing space shall have a minimum width of 1800 for a minimum length of 2000mm. Refer to AS1428.1, Clause 6.4.
- f. Grated drains within the accessible path of travel are to have circular openings no greater than 13mm in diameter and slotted openings not greater than 13mm wide – elongated openings must traverse the direction of travel.

Walkways

AS 1428.1 has access requirements for walkways as follows:

- a. The minimum unobstructed width of walkways is to be 1000mm (AS1428.1, Clause 6.3). A width of 1200mm is preferred for compliance with AS1428.2.
- b. Walkways are to be constructed with no lip or step at joints between abutting surfaces (a construction tolerance of 3mm is allowable, 5mm for bevelled edges -refer to Figure 6 of AS1428.1).
- c. The maximum allowable crossfall of a walkway is to be 1:40.
- d. Surface of the walkway to be slip-resistant.



- e. The ground abutting the sides of the walkway should follow the grade of the pathway and extend horizontally for 600mm. This is not required where there is a kerb or handrail provided (refer to AS1428.1 Clause 10.2).
- f. Maximum allowable gradient of the walkway is 1:20 and maximum length between landings to be 15m (for 1:20 gradient). Landings to be a minimum 1200mm in length (where there is no change in direction). For changes in direction of 180°, landings to be 1540mm in length – refer to AS1428.1(2009), Clause 10.8.

Accessible Ramps – External

AS 1428.1 has access requirements for accessible ramps as follows:

- a. Ramp to comply with AS1428.1, Clause 10.3. Maximum allowable gradient of the ramp is 1:14, minimum clear width to be 1000mm (1500mm for curved ramps) and maximum length between landings to be 9m (for 1:14 gradient). Increased circulation areas are required at landings to facilitate wheelchair maneuverability.
- b. Accessible ramp is to have a maximum rise of 3.6m (BCA Clause D4D12)
- c. The ramp is required to be set back a minimum 900mm from the property boundary (AS1428.1, Clause 10.3 (f)). This allows tactile indicators and handrail extensions to occur within the boundary and not protrude into the footpath area.
- d. Provide handrails, with extensions, to both sides of the ramp to comply with AS1428.1, Clause 12. Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails are required on both sides of the ramp to cater for left and right handed disabilities.
- e. Where ramp is not enclosed, provide kerb rails in accordance with AS1428.1. The height of kerb rails is to be less than 65mm or greater than 150mm above the finished surface level. This is to ensure that the foot plate of a wheelchair cannot become lodged on the kerb rail.
- f. Provide tactile indicators at the top and bottom of the ramps to comply with BCA Clause D4D9 and AS1428.4. Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

Tactile indicators at the top and bottom of the ramps to be 600-800mm deep across the width of the ramp and set back 300mm from the edge of the ramp (refer AS1428.4, Figure A1).

Stairs – External

AS 1428.1 has access requirements for all public access stairs as follows:

- a. Stairs to comply with AS1428.1(2009), Clause 11.2.
- b. Stairs to have closed or opaque risers. Open risers cause confusion for persons with a vision impairment and may trigger conditions such as epilepsy due to light penetrating through the open riser.
- c. Provide handrails, with extensions, to both sides of the stair (AS1428.1 (2009), Clause 11.2 & 12). Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis.

Handrails are required on both sides of the stair to cater for left and right-handed disabilities. A central handrail is also an acceptable solution where adequate width is available. In this instance, the use of a double handrail is encouraged so that two users can travel in opposite directions and maintain their grip on the handrail.

- d. Stair nosings to have minimum 30% luminance contrast strip 50-75mm wide to the top of the stair tread to assist persons with a vision impairment. The strip can be set back 15mm from the edge of the riser.
- e. Stair nosings shall not project beyond the face of the riser.
- f. Provide tactile indicators at the top and bottom of the stair to comply with BCA Clause D4D9 and AS1428.4.

Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

Tactile indicators at the top and bottom of the stair to be 600-800mm deep across the width of the stair set back 300mm from the edge of the stair.

Accessible Carparking

Access requirements for the accessible carparking are as follows and should be addressed during preparation of the construction certificate documentation.

- a. Accessible carparking to be a minimum of 2400mm wide with a shared area to one side of the space 2400mm wide. Circulation space can be shared between adjacent accessible carparks. For a single space, a total width of 4800mm is required.
- b. Provide a bollard to the shared circulation space as illustrated in AS2890.6, Figure 2.2.



- c. The maximum allowable crossfall of accessible carparking area to be 1:40. This crossfall applies both parallel and perpendicular to the angle of parking.
- d. For covered carparking, the clear height of the accessible carparking space to be 2500mm as illustrated in AS2890.6, Figure 2.7.
- e. Designated accessible carparking is to be identified using the International Symbol for Access (ISA) between 800 and 1000mm high placed as a pavement marking in the centre of the space between 500-600mm from its entry point. The perimeter of the space is to be identified by an unbroken yellow & slip resistant line 80-100mm wide (except where there is a kerb or wall)
- f. Shared space to be identified using yellow slip-resistant & unbroken stripes 150 to 200mm wide with spaces 200 to 300mm between stripes. Stripes to be at an angle of 45° to the side of the space.

Accessible Entrances

Access requirements for entrances are as follows.

- a. Entrance to comply with AS1428.1(2009), Clause 13 as part of the accessible path of travel.
- b. Doors are to have a minimum clear opening width of 850mm to comply AS1428.1(2009), Clause 13.2 as part of the accessible path of travel.
- c. Door threshold to be level to provide seamless entry as part of the accessible path of travel. Maximum allowable construction tolerance is 3mm for compliance with AS1428.1(2009), 5mm where beveled edges are provided between surfaces – refer to Figure 6.
- d. Door to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5)
- e. For glass doors, provide decals to assist persons with a vision impairment. Decals to be solid and have a minimum 30% luminance contrast to the background colour and be not less than 75mm high located within the height range of 900-1100mm above the finished floor level. Decals are to be solid. AS1428.1, Clause 6.6.
- f. Where double door sets are provided, one door leaf is to be capable of being held in the closed position to provide door opening widths and circulation to comply with AS 1428.1.
- g. For a best practice approach to access, and to assist people with a vision impairment locate the entrance, consider providing features with a minimum 30% luminance contrast to the background surface such as an entry mat or awning.



Circulation Areas Generally

BCA requires the provision of turning spaces and passing areas to corridors to enable wheelchair circulation throughout a building.

Turning spaces 1540mm wide by 2070mm long are required within 2m of the end of corridors to enable a wheelchair to turn through 90° and passing areas 1800mm wide by 2000mm long are required every 20m along a corridor unless there is a clear line of sight.

Within corridor areas, 1500x1500mm is required to facilitate a 90° turn by a wheelchair. This must be accommodated within accessible areas.

Doorways

Access requirements for doorways within the accessible path of travel are as follows:

- a. Doorways within the accessible path of travel to have a minimum clear opening width of 850mm (AS1428.1(2009), Clause 13.2). We recommend the use of a 920 leaf door as a minimum to achieve adequate clear width.

For double doors, the operable leaf must achieve this clear opening width to facilitate single leaf operation.

- b. All doorways within the accessible path of travel to have complying circulation areas as illustrated in AS1428.1(2009), Figure 31. Circulation areas to have a maximum crossfall of 1:40.
- c. Doors between indoor and outdoor spaces to have a level threshold for seamless transition.
- d. Doorways to have minimum 30% luminance contrast as described in AS1428.1(2009), Clause 13.1.
- e. Doors to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5). Note that within a childcare centre, this is applicable to the unisex accessible sanitary facilities only.
- f. Door handles and related hardware shall be able to be unlocked and opened with one hand per AS1428.1 (2009), Clause 13.5.1. The handles shall enable a person who cannot grip to operate the door without their hand slipping from the handle. We recommend the use of lever handles.
- g. For manual controls to automatic doorways, buttons to be located no closer than 500mm from an internal corner and between 1000mm and 2000mm from the hinged door leaf or surface mounted sliding door in the open position. Height of controls to be 900-1100mm affl.



- h. Doorways to external areas to achieve a level threshold as part of the accessible path of travel. Maximum allowable construction tolerance is 3mm for compliance with AS1428.1(2009), 5mm where beveled edges are provided between surfaces.
- i. Doorways to have operational forces per AS1428.1 (2009), Clause 13.5.2. A maximum allowable force of 20N is required to operate the door.

Hearing Augmentation

For buildings that are required to be accessible, the BCA (Clause D4D8) requires hearing augmentation systems within auditoriums, meeting rooms and the like **where an inbuilt amplification system, other than the one used for emergency warning is installed.** An induction loop to at least 80% of the floor area is required.

The hearing augmentation system is to be identified using the International Symbol for Deafness.

Hearing Augmentation at Service Counters

For buildings that are required to be accessible, the BCA (Clause D4D8) requires hearing augmentation systems at service counters where the user is screened from the service provider. We note that this may not be relevant to this project.

With the implementation of “sneeze screens” as a COVID-19 mitigation measure, the provision of hearing augmentation at service counters has become a critical accessibility issue for people with hearing impairments.

The hearing augmentation system is to be identified using the International Symbol for Deafness.

Floor Finishes

All floor finishes are to be flush to provide an accessible path of travel throughout the different areas of the building. Maximum allowable construction tolerance is 3mm (5mm for bevelled edges) as part of the accessible path of travel. Refer to AS1428.1(2009), Clause 7.2 for further details.

Carpet

BCA requires that the pile height or pile thickness does not exceed 11 mm and the carpet backing thickness shall not exceed 4 mm.

Controls

Controls such as light switches, GPOs, alarm keypads, card swipes, etc are to be located within the accessible height range of 900-1100mm above the floor level and not within 500mm of an internal corner to comply with AS1428.1(2009), Clause 14.

We recommend that video intercoms be installed at 1200mm affl - this is within the range of common view per AS1428.2 (1992).

Visual Indication to Glazing

Provide decals to all full height glazing that can be mistaken for a doorway to assist persons with a vision impairment. Decals to be solid and have a minimum 30% luminance contrast to the background colour and be not less than 75mm high located within the height range of 900-1100mm above the finished floor level. Decals are to be solid. AS1428.1, Clause 6.6.

Tactile Indicators

For a building that is required to be accessible, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching a stairway (other than a fire isolated stair); an escalator; a moving walkway; a ramp (other than a fire isolated ramp, step ramp, kerb ramp or swimming pool ramp); and in the absence of a suitable barrier, an overhead obstruction less than 2m above the floor level or an accessway, meeting a vehicular way if there is no kerb or kerb ramp (BCA D4D9).

Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background color (45% for discrete tactile indicators and 60% for discrete two-tone tactile indicators).

Signage

Access requirements for signage are as follows. Note that this does not include general wayfinding signage.

- a. Braille and tactile signage formats as outlined within BCA Specification 15 that incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 must be provided to identify the following:
 - a sanitary facility, except a sanitary facility associated with a bedroom in a Class 1b building or a sole-occupancy unit in a Class 3 or Class 9c building
 - a space with a hearing augmentation system
 - each door required by E5D5 to be provided with an exit sign and state level
 - an accessible unisex sanitary facility and identify if the facility is suitable for left or right handed use
 - an ambulant accessible sanitary facility 1 and be located on the door of the facility
 - where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access to direct a person to the location of the nearest accessible pedestrian entrance
 - where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary

- b. Braille and tactile components of the sign to be located not less than 1200mm and not higher than 1600mm affl.

- c. Signage to be located at the latch side of the doorway with the leading edge of the sign 50-300mm from the architrave. Where this is not possible, the sign can be located on the door.

Sample signs are as follows. These are examples only – ensure selected signage complies with BCA Specification 15 including provision of Braille locator for multiple lines of text and characters.



Unisex Accessible Sanitary Compartment

Access requirements for the accessible toilet facilities are as follows. For compliance with AS1428.1(2009), the minimum room dimensions of the accessible toilet are to be 1900x2300mm plus additional area for the handbasin. These are **CLEAR** dimensions. Provision for wall linings needs to be considered.

- a. Accessible toilet facilities to be unisex facilities for compliance with the BCA.
- b. Unisex accessible facilities to comply with AS1428.1(2009), Clause 15 including set-out of fittings and fixtures, circulation areas and doorways.
- c. Where more than one unisex accessible toilet is provided within the building, they should be in a mirrored configuration to allow for both left and right handed use.

WC Pan:

- a. Crucial dimensions for the toilet are 450mm from centreline of pan to side wall, 800mm from front of pan to rear wall and a seat height of 470mm.
- b. A minimum clear dimension of 1400mm is required from the toilet pan to any other fixture (see figure 43).
- c. Grabrails to be provided at the side and rear of the toilet in compliance with AS1428.1 at a height of 800mm.
- d. Toilet seat shall be of the full round type, be securely fixed in position when in use and have fixings that create lateral stability. They should be load rated to 150kg, have a minimum 30% luminance contrast to the



background colour (eg pan, wall or floor) and remain in the upright position when fully raised.

- e. Provide a backrest to accessible toilets to comply with AS1428.1, Clause 15.2.4.

Basin:

- f. For the basin, a minimum dimension of 425mm is required from the centreline of the basin to the side wall and height of basin to be between 800 and 830mm.
- g. Taps to have lever handles, sensor plates or similar controls. For lever taps, a minimum 50mm clearance to be provided to adjacent surfaces.

Door:

- h. Doorways to have a minimum clear opening width of 850mm to comply AS1428.1(2009), Clause 13.2 as part of the accessible path of travel. Adequate circulation area at the latch side of the doorway is required to allow independent access to the facility – for details refer to AS1428.1, Figure 31.
- i. Door hardware to be located within the accessible height range of 900-1100mm above the finished floor level. The use of lever handles is encouraged to assist persons with a manual disability such as arthritis.

Controls:

- j. Controls such as light switches within the accessible toilet facilities to be in the accessible height range of 900-1100mm above the finished floor level to comply with AS1428.1(2009), Clause 14. Controls should be located not less than 500mm to a corner.

Unisex Accessible Shower

Access requirements for the accessible shower facilities are as follows. These are **CLEAR** dimensions. Provision for wall linings needs to be considered.

- a. Accessible showers are to comply with AS 1428.1, Clause 15.5 and include accessible features such as grabrails, adjustable height shower rose and fixtures within an accessible height range.
- b. Floor waste to be positioned 550mm and 580mm from enclosing shower walls as illustrated in AS1428.1 (2009), Figure 47a.
- c. The minimum dimension of an accessible shower to be 1160 x 1000mm. A folding seat, at a height of 470mm is to be provided. All taps to be located within the height range of 900-1100mm above the finished floor level.
- d. Circulation space in front of the shower is to be provided as illustrated in AS1428.1, Figure 47.

Ambulant Toilet Cubicles

Requirements for the ambulant toilets are as follows.

- a. Options for the configuration of the ambulant cubicles are illustrated in AS1428.1, Figure 53.
- b. Provide an ambulant cubicle within each bank of male and female toilets in compliance with AS1428.1, Clause 16.
- c. Minimum width of ambulant cubicles to be 900-920mm.
- d. Minimum distance between the front of the WC pan and cubicle door / wall is 900mm,
- e. Seat height to be 460-480mm.
- f. Provide grabrails to ambulant cubicles to comply with AS1428.1, Clause 17 and Figure 53A.
- g. Provide toilet paper holder within the accessible reach zone (within 300mm of the front of the pan at a height less than 700mm).
- h. Doors to have a minimum opening width of 700mm and comply with AS1428.1, Figure 53B.
- i. Provide signage to the ambulant cubicles to comply with AS1428.1, Clause 16.4.

Passenger Lifts

The following access requirements apply to the lifts. These requirements are for disabled access only and do not include requirements for stretchers.

- a. Lift is to comply with AS1735.12 and be fully automatic
- b. Minimum internal dimensions of the lift car to be 1400mm wide x 1600mm deep a lift that travels over 12m or,
Minimum internal dimensions of the lift car to be 1100mm wide x 1400mm deep for a lift that travels less than 12m.
- c. Clear opening of the lift door to be minimum 900mm.
- d. Provide a handrail complying with the provisions for a mandatory handrail in AS1735.12.
- e. All lift control buttons are to be in the accessible height range of 900-1100mm affl and have a minimum 30% luminance contrast to the background colour. This includes buttons within the lift car and at each public lift lobby. All buttons are to be provided with information in Braille and tactile formats.



- f. Auditory / voice cues are to be provided within the lift car to assist persons with a vision impairment.
- g. Series of door opening devices that will detect a 75mm diameter rod across the door opening between 50 mm and 1550mm above the floor level.
- h. Emergency hands-free communication, including a button that alerts a call centre of a problem, a light to signal that the call has been received by the call centre and a light indicating assistance is being dispatched.

Stairs – Internal

Access requirements for public access stairs are as follows and should be addressed during construction to ensure compliance.

- a. Stair construction to comply with AS1428.1, Clause 11.1.
- b. Stairs to have closed or opaque risers. Open risers cause confusion for persons with a vision impairment and may trigger conditions such as epilepsy due to light penetrating through the open risers.
- c. Where the stair intersects with an internal corridor, the stair shall be set back in accordance with AS2418.1 Figure 26C/D to allow adequate space for handrail extensions and tactile indicators.
- d. Provide handrails, with extensions, to both sides of the stair (AS1428.1, Clause 11.2). Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails should be continuous around the landings where possible.

Handrails are required on both sides of the stair to cater for left and right-handed disabilities. A central handrail is also an acceptable solution where adequate width is available.

- e. Stair nosings to have minimum 30% luminance contrast strip 50-75mm wide to the top of the stair tread to assist persons with a vision impairment. The strip can be set back 15mm from the edge of the riser.
- f. Stair nosings shall not project beyond the face of the riser.
- g. Provide tactile indicators at the top and bottom of the stair to comply with BCA Clause D4D9 and AS1428.4.1.

Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour. For discrete tactile indicators, 45% luminance contrast is required (60% where two-tone indicators are used).

Accessible Ramps – Internal

AS 1428.1 has access requirements for accessible ramps as follows:



- a. Ramp to comply with AS1428.1, Clause 10.3. Maximum allowable gradient of the ramp is 1:14, minimum clear width to be 1000mm and maximum length between landings to be 9m (for 1:14 gradient). Increased circulation areas are required at landings to facilitate wheelchair maneuverability.
- b. Accessible ramp is to have a maximum rise of 3.6m (BCA Clause D3D12).
- c. Where the intersection is at an internal corridor, the ramp shall be setback by a minimum 400mm so that the handrail complying with Clause 12 does not protrude into the transverse path of travel (AS1428.1, Clause 10.3 (g)).
- d. Provide handrails, with extensions, to both sides of the ramp to comply with AS1428.1, Clause 12. Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails are required on both sides of the ramp to cater for left and right handed disabilities.
- e. Where ramp is not enclosed, provide kerb rails in accordance with AS1428.1. The height of kerb rails is to be less than 65mm or greater than 150mm above the finished surface level. This is to ensure that the foot plate of a wheelchair cannot become lodged on the kerb rail.
- f. Provide tactile indicators at the top and bottom of the ramps to comply with BCA Clause D4D9 and AS1428.4. Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

Tactile indicators at the top and bottom of the ramps to be 600-800mm deep across the width of the ramp and set back 300mm from the edge of the ramp (refer AS1428.4, Figure A1).

Slip Resistance

The BCA defines the following slip resistance requirements for stairs and ramps:

Application	Surface Conditions	
	Dry	Wet
Ramp steeper than 1:14	P4 or R11	P5 or R12
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11
Tread or Landing surface	P3 or R10	P4 or R11
Nosing or landing edge strip	P3	P4



Appendix 2 | Best Practice Options for Consideration



We recommend a best practice approach to accessibility that goes beyond minimum standards and embraces the intent of the DDA. The following measures will promote inclusion and participation for all users.

Accessways

We recommend that the accessible path of travel be a minimum 1200mm wide to comply with AS1428.2. Wider pathways will allow easy access for more people who have a permanent disability, people with a temporary disability, people pushing prams and elderly people using walking frames and the like. This is in keeping with the principles of Universal Design.

For or a wheelchair and a pram to pass 1500mm is required and for two wheelchairs to pass requires 1800mm.

Automatic Entrance Doors

The provision of automatic sliding doorways maximizes access for people with a disability. Further, delivery drivers, people carrying parcels and the elderly also benefit from the provision of automatic doors.

Automatic doors provide safe, convenient access for everyone, regardless of age or ability in keeping with universal design principles. They also offer COVID-19 mitigation measures, reducing the transfer of germs and bacteria.

Accessible Service Counters

The provision of an accessible section of counter will benefit people using wheelchairs and people of short stature.

AS1428.2 contains access requirements for service counters and recommends the height of the counter be between 750mm (± 20) and 850mm (± 20) above the finished floor level and have foot and knee clearance under the counter. The minimum width of an accessible counter and clearance below is recommended as 900mm.

Luminance Contrast

Luminance contrast assists people with a vision impairment to navigate the built environment. Mandatory items that require luminance contrast are tactile indicators, accessible toilet seats and doorways as outlined in other sections of this report. The following can also be provided as a best practice measure to ensure ease of use:

- Minimum 30% luminance contrast between floors and walls or between walls and skirting boards;
- Minimum 30% luminance contrast between the ground surface and obstructions such as columns, bollards and street furniture;
- To assist people with a vision impairment, locate the building entrance, consider providing features with a minimum 30% luminance contrast to the background surface such as an entry mat or awning.
- Minimum 30% luminance contrast between the floor and the entrance mat (this allows people with vision impairment to locate the entrance);
- Minimum 30% luminance contrast between walls and handrails.

Visual Indication to Glazing (additional measures)

To ensure full height glazing that can be mistaken for a doorway is highlighted, we recommend the provision of a “double decal” as per international precedent. This involves the provision of two (2) decal strips that have a minimum 30% luminance contrast to each other. As such, the background colour does not need to be relied upon.

Workstations and Desks

Consideration should be given to the provision of accessible height workstations. Adjustable height workstations and desks promote an inclusive environment for all users and enable sit-to-stand opportunities, promoting an active workplace.

Seating

A proportion of accessible seating should be provided that offers provides back and arm rests.

A seat height of 450mm is optimal; with arms that extend a further 260mm +/- 40mm in height. · Armrests should not extend beyond the perimeter of the base or legs of the seat to ensure stability of the chair when rising with use of only one armrest.

Seats located adjacent to accessways should be set back at least 600mm to allow leg room without obstructing the adjacent path of travel.

Furniture and Joinery Hardware

The use of D-type pull handles to furniture and joinery that provide a minimum 35mm clearance between the rear face of the handle and the face of the drawer is generally recommended to promote accessibility and inclusion.

Wayfinding – Signage

Signs and symbols should be provided to inform all users. A signage system which informs all users is encouraged. The use of pictograms and directional cues is recommended as is the use of luminance contrast to ensure the message is clear and legible.

Wayfinding – Landmarks and Tactile Indicators

To assist people with vision impairment navigate their environment, the use of directional tactile indicators can be implemented, noting that their use should be minimised. The design of directional tactile indicators is site / building specific.

Additionally, landmarks such as entry features, statues, sculpture, fountains, or other unique features can be used as a means of way-finding throughout a building. This especially assists people with intellectual disabilities.

Terminology (Best-practice recommendation)

The use of positive terminology such as “accessible” should be used when referring to accessible facilities such as toilets and carparking. This term is preferable to “disabled” which is commonly used. This principle is to be adopted through the design and documentation of a project and on signage throughout the completed building.

Accessible Adult Change Facility

While not required within most developments, the provision of an accessible adult change facility promotes inclusion for all users. An Accessible Adult Change Facility is a toilet and change facility that caters for users with high support needs and their carers where they require additional space, assistance and specialised equipment to allow them to use toilets safely and comfortably. Accessible adult change facilities are based on 'Changing Places' that are based on a model developed in the UK.

Emergency Call Button in Sanitary Compartments

If provided, emergency call button should be located at 600+/- 20mm above the finished floor level in front of the toilet roll holder to enable ease of access for someone who has fallen off the pan. People do fall off the pan, in particular those with no or limited upper trunk control.

Places of Comparative Safety

Consider providing a refuge area within fire isolated stairs by incorporating a 800mm x 1300mm area at stair landings of every accessible floor. A 1000mm unobstructed egress width to the area should be provided.

We recommend that signage displaying the International Symbol of Access (ISA) be provided to identify any places of comparative safety provided. Signage should state that the area is safe in the event of an emergency. Evacuation procedures for the building should address the provision of places of comparative safety for people with limited mobility.

We also recommend that as a part of the emergency evacuation plan for the building, egress for persons requiring assistance be addressed. The provision of places of comparative safety within fire isolated passages would be advantageous to persons with a disability. This consists of a waiting area large enough to accommodate a wheelchair where persons can wait for assistance from emergency services. The waiting area should be identified with appropriate signage that incorporates the International Symbol for Access.

Lighting and Glare

Minimum interior lighting levels should generally consider AS1428.2 (1992) Clause 19. Consistent lighting levels should be provided throughout, without pools of light or dark areas. AS1428.2 (1992) recommends the following minimum illumination levels:

- Entrances 150lx
- Passages and walkways 150lx
- Stairs 150lx
- Toilets and Locker rooms 200lx
- Counter tops 250lx
- General displays 200-300lx

Glare and excessively reflective surfaces should be avoided. This includes glare from windows.

