lindsay perry access

Access Report

Lochinvar Shopping Village

Cnr Springfield Drive &
Robert Road
LOCHINVAR NSW

For: GWH
Ref: LP_22366

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	8 November 2022 1 December 2022

Contact Details:

Lindsay Perry Access Pty Ltd
PO Box 453
NEW LAMBTON NSW 2305

lindsay@lpaccess.com.au
0418 909 180

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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 Lochinvar Shopping Village located at cnr Springfield Avenue and Robert Road Lochinvar, 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	Not applicable
Access and Approach		
6.1	Allotment Boundary to Entrance	Compliant
6.2	Accessible Carparking to Entrance	Compliant
6.3	Link between Associated Buildings	Compliant
6.4	Accessible Carparking	Compliant configuration
6.5	Kerb Ramps	Compliant configuration
6.6	Pedestrian Crossings	Compliant configuration
6.7	Accessible Entrance	Compliant configuration
Interior		
7.1	Extent of Access Generally	Compliant
7.2	Circulation Areas	Compliant
7.3	Doorways	Compliant configuration
7.4	Doorways to Airlocks	Compliant
7.5	Doorways to Ambulant Toilets	Compliant
7.6	Exempt Areas	None specified
7.7	Floor Finishes	To be addressed during detailed design
7.8	Carpet	To be addressed during detailed design
7.9	Controls	To be addressed during detailed design
7.10	Visual Indication to Glazing	To be addressed during detailed design
7.11	Tactile Indicators	To be addressed during detailed design
7.12	Slip Resistance (Ramps & Stairs)	To be addressed during detailed design
Sanitary Facilities		
8.1	Distribution	Compliant
8.2	Accessible Toilets	Capable of compliance
8.3	Ambulant Toilet Cubicles	Capable of compliance

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.

LINDSAY PERRY
Access Consultant (ACAA Accreditation No. 136)
Certificate IV in Access Consulting
Internationally Certified Access Consultant ICAC BE-02-106-18
Registered Architect NSW 7021
Livable Housing Assessor 20047 | NDIS SDA Assessor SDA00049

1 Project Background

The project is a new shopping village that proposed a supermarket, tavern, commercial tenancy, specialty retail and ancillary facilities including centre management and amenities. On-grade carparking is provided within the site. The design is for the base-building works only with the exception of the Tavern where a floor plan arrangement has been provided for review.

The development will be constructed in three (3) stages – Supermarket and Retail Tenancies; Commercial Tenancies; and Tavern.

2 Reviewed Documentation

Documentation prepared by GWH has been reviewed as follows:

dwg no.	drawing name	date
A003	Overall Site Plan	30-11-22
A202	Ground Floor Plan Stage 2	30-11-22
A204	Ground Floor Plan Stage 3	30-11-22
A15	Tavern Proposal	

Documentation prepared by BGE Engineering has been reviewed as follows:

dwg no.	drawing name	revision
CI-0000	Cover Page	A
CI-0200	Site Stormwater Plan	B
CI-0340	Drainage Details	A
CI-0355	OSD Plan	B
CI-0700	Erosion & Sediment Control	A
CI-0710	Erosion & Sediment Control	A

3 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 2019, Amendment 1 (BCA)
  - Section D2.14 / D2.15 / D2.17 – landings, thresholds and slip resistance
  - Section D3 – Access for People with Disabilities
  - Section F2.4 – 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.

For a retail development BCA requires access for people with disabilities to and within all areas normally used by the occupants.

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.

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

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

4 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.

4.1 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.

4.2 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 work 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:

Not applicable

Commentary:

The new work and affected part provisions are not applicable to new developments.

5 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 Springfield Drive & Robert Road to the building entrances
- from the accessible carparking area to the building entrances
- between associated accessible buildings within the site

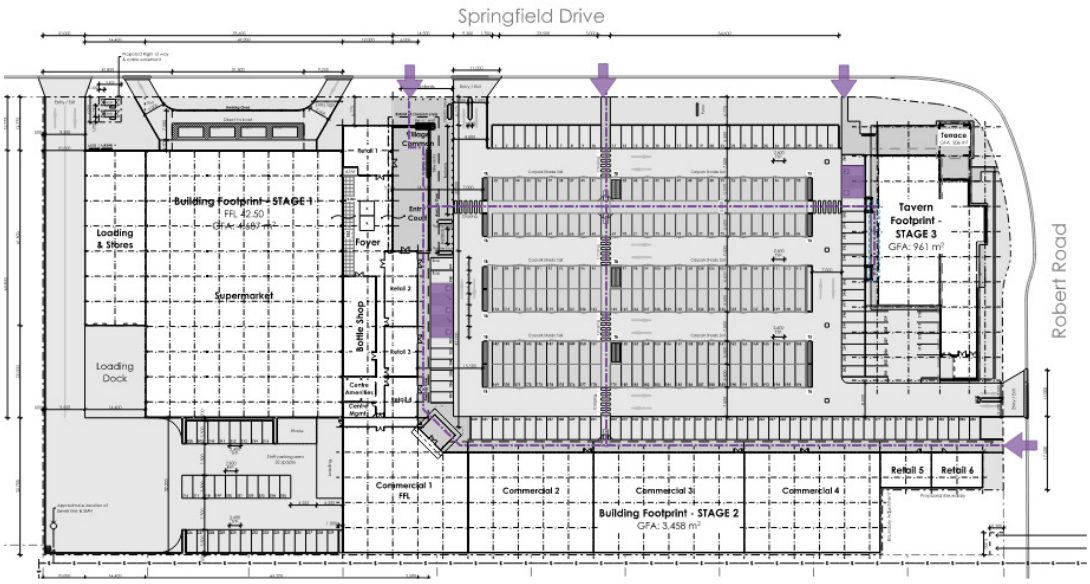

Figure 2 | Overall Site Plan

5.1 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:

Compliant

Commentary:

An accessible path of travel is provided to the building entrance from the allotment boundary along Springfield Drive & Robert Road. Level access is achievable.

5.2 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:

Compliant

Commentary:

An accessible path of travel is provided from accessible carparking spaces to the building entrances. Level access is achievable.

5.3 Approach between Associated Buildings

The BCA requires that a continuous accessible path of travel be provided between associated accessible buildings.

Compliance Summary:

Compliant

Commentary:

Formed pedestrian areas provide access throughout the site and to each building entrance. Level access is achievable.

5.4 Accessible Carparking

There is a requirement for the provision of accessible carparking within this development. For a commercial use, the BCA requires one (1) accessible space for every one-hundred (100) carparking spaces or part thereof. For the retail use, the BCA requires one (1) accessible space for every fifty (50) carparking spaces or part thereof.

Compliance Summary:

Compliant configuration

Commentary:

On-grade carparking provides a total of three-hundred and thirteen (313) carparking spaces that includes thirty-two (32) staff carparks and five (5) accessible car parking spaces.

The ratio of accessible car parking spaces is considered commensurate with the proposed use commercial / retail use.

The overall configuration of the accessible carparking achieves compliance with current legislation including dimensions of the spaces and associated shared areas, chevron markings and provision of a bollard.

5.5 Kerb Ramps

Where kerb ramps are provided to pedestrian areas within the accessible path of travel, the configuration of kerb ramps is to be in accordance with AS1428.1

Compliance Summary:

Compliant configuration

Commentary:

Kerb ramps provide access throughout the car parking area. The overall configuration is in keeping with current accessibility requirements.

5.6 Pedestrian Crossings

There are marked pedestrian crossings throughout the site to facilitate safe pedestrian access through the carparking areas.

Compliance Summary:

Capable of compliance

Commentary:

Kerb ramps, aligned across the roadway, are provided at some pedestrian crossings. Where they are not provided, tactile indicator will be required and should be addressed as part of the detailed design.

5.7 Accessible Entrances

In a building required to be accessible, an accessway must be provided through the principal pedestrian entrance, and not less than 50% of all pedestrian entrances including the principal pedestrian entrance.

In a building with a total floor area more than 500 sqm a pedestrian entrance which is not accessible must not be located more than 50m from an accessible pedestrian entrance.

Compliance Summary:

Compliant configuration

Commentary:

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

Double hinged doorways are provided to other tenancies. Adequate circulation areas are provided and a level threshold is achievable in each location.

6 BCA | Interior

The interior areas subject to accessibility requirements include the retail common areas and centre amenities as this development application is primarily for the base build works.

We have also reviewed the proposed floor plan arrangement for the Tavern as a part of this report and specific commentary in included.

6.1 Extent of Access Generally – BCA

For a retail development (including the Tavern), access for people with disabilities is required to and within all areas normally used by the occupants.

Compliance Summary:

Compliant

6.2 Circulation Areas

BCA (Clause D3.3) 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:

Compliant

6.3 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.

Within the Tavern., we assume sliding doorways are automatically operated doors.

6.4 Doorways within Vestibules and Air-locks

AS1428 has requirements for circulation areas between doorways within vestibules / airlocks to enable independent access for people using a wheelchair. Clause 13.4 requires a minimum dimension of 1450mm between doors. Where a doorway encroaches into the space, 1450mm plus the door leaf width is required.

Compliance Summary:

Compliant

6.5 Doorways within Vestibules and Air-locks to Ambulant Toilet Cubicles

AS1428 has requirements for circulation areas between doorways within vestibules / airlocks as part of the path of travel to ambulant toilet cubicles to enable independent access for people using a mobility aid. Figure 34(b) requires a minimum dimension of 900mm between doors. Where a doorway encroaches into the space, 900mm plus the door leaf width is required.

Compliance Summary:

Centre Amenities | Compliant
Tavern Amenities | Compliant

6.6 Hearing Augmentation

For buildings that are required to be accessible, the BCA (Clause D3.7) 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**. The following systems can be used:

- An induction loop to at least 80% of the floor area;
- A system requiring the use of receivers (infrared or the like) to not less than 95%.

Compliance Summary:

To be addressed during detailed design.

6.7 Exempt Areas

BCA Clause D3.4 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, the following areas are considered to be exempt from requiring access for people with disabilities: plant and service areas, cleaners rooms and the like.

6.8 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

6.9 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.

6.10 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.

6.11 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.

6.12 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 D3.8).

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.

6.13 Signage

Signage to identify sanitary facilities, hearing augmentation and required exits are to be provided in accordance with BCA Clause D3.6. 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.

6.14 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.

7 BCA | Sanitary Facilities

The BCA / Access Code for Buildings (Clause F2.4) require the provision of sanitary facilities catering for people with disabilities.

7.1 Distribution of Accessible Sanitary Facilities

Accessible sanitary facilities are required as follows – these are general requirements and not project specific.

- A unisex accessible toilet at each level that provides sanitary facilities. Where more than one bank of toilets is provided at any level, at least 50% of those banks will have an accessible toilet facility.
- At each bank of toilets where there is one or more toilets in addition to a unisex accessible sanitary compartment at the bank of toilets, a sanitary compartment suitable for a person with an ambulant disability must be provided for use by males and females.
- A unisex accessible shower is required where showers are required by F2.3.
- A unisex accessible adult change facility must be provided in some public buildings (not required within this development).

Compliance Summary:

Compliant

Commentary:

Accessible sanitary facilities are provided as follows:

Centre Amenities:

- Unisex accessible sanitary compartment
- Male ambulant toilet
- Female ambulant toilet

Tavern Amenities:

- 2 off unisex accessible sanitary compartments
- 2 off male ambulant toilets
- 2 off female ambulant toilets

7.2 Unisex Accessible Sanitary Compartment

Unisex accessible sanitary compartments are provided within this development.

Compliance Summary:

Capable of compliance

Commentary:

A unisex accessible sanitary facility is provided in the Centre Amenities and within the Tavern.
Overall room dimensions and the set-out of fixtures is conducive to compliance with current accessibility legislation.

7.3 Cubicles for People with an Ambulant Disability

Ambulant toilets are required within this development.

Compliance Summary:

Capable of compliance

Commentary:

Ambulant toilets are provided within the male and female toilets both in the Centre Amenities and within the Tavern.

Overall room dimensions and the set-out of fixtures is conducive to compliance with current accessibility legislation.

8 Conclusion

This report demonstrates that the fundamental aims of accessibility legislation are achievable within the Lochinvar Shopping Village located at cnr Springfield Avenue and Robert Road Lochinvar. 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 that 13mm in diameter and slotted openings not greater than 13mm wide – elongated openings must traverse the direction of travel.

Kerb Ramps

AS 1428.1 has access requirements for kerb ramps as follows:

a. Kerb ramps to comply with AS1428.1 (2009) Amendment 1, Clause 10.7

b. Maximum gradient of the kerb ramps to be 1:8 and maximum length to be 1520mm (providing a maximum height of 190mm).

c. Kerb ramps to have a non-slip surface as required by AS1428.

d. A tooled joint should be provided between parts of the kerb ramp to assist persons with a vision impairment with orientation.

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 800and 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 stipes 150 to 200mm wide with spaces 200 to 300mm between stripes. Stipes to be at an angle of 45° to the side of the space.

Pedestrian Crossings

Where kerb ramps are to be provided at the roadway to provide an accessible path of travel for persons with a disability, kerb ramps are to comply with AS1428.1 and have a maximum gradient
of 1:8.

Where the pedestrian crossing is at the same level as the roadway, provide tactile indicators to both sides of the roadway to alert persons with a vision impairment of the hazard. Tactile indicators to be 600-800mm deep across the width pedestrian crossing. Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

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 (Clause D3.3) 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.

Doorways within Vestibules and Airlocks

AS1428 has requirements for circulation areas between doorways within vestibules / airlocks to enable independent access for people using a wheelchair. Clause 13.4 requires a minimum dimension of 1450mm between doors. Where a doorway encroaches into the space, 1450mm plus the door leaf width is required.

Doorways within Vestibules and Airlocks to Ambulant Toilets

AS1428 has requirements for circulation areas between doorways within vestibules / airlocks as part of the path of travel to ambulant toilet cubicles to enable independent access for people using a mobility aid. Figure 34(b) requires a minimum dimension of 900mm between doors. Where a doorway encroaches into the space, 900mm plus the door leaf width is required.

Hearing Augmentation

For buildings that are required to be accessible, the BCA (Clause D3.7) 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.

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.

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 D3.8).

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 D3.6 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 E4.5 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 D3.6 including provision of Braille locator for multiple lines of text and characters.

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

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.

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.

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.

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.

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.

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.