



Access Report

**Proposed Industrial  
Development**  
32 Orlando Road  
CROMER NSW

For: Dizzy Pty Ltd  
Ref: LP\_22328



## 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:

<b>prepared by:</b> Lindsay Perry	Draft Revision 1	16 September 2022 23 November 2022

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## Copyright:

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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 stage** | details not available at DA stage

**To be confirmed** | inadequate information is provided to determine compliance



## Executive Summary

Development application documentation for the Proposed Industrial Development located at 32 Orlando Road Cromer, has been reviewed against current accessibility legislation.

The following table summarises our findings.

Item No.	Description	Compliance Status
<b>The Disability (Access to Premises) Standards</b>		
5.1	Access Code	Refer BCA commentary
5.2	New Work & The Affected Part	Not applicable   new building
<b>Access and Approach</b>		
6.1	Allotment Boundary to Entrance	Compliant
6.2	Accessible Carparking to Entrance	Compliant
6.3	Accessible Carparking	Compliant Configuration
6.4	Accessible Entrances	Compliant Configuration
<b>Interior</b>		
7.1	Extent of Access Generally	Compliant
7.2	Access to Mezzanines	Compliant
7.3	Circulation Areas	Compliant
7.4	Doorways	Compliant Configuration
7.5	Unisex Accessible Toilet	Capable of compliance
7.6	Passenger Lift	Capable of compliance
7.7	Stairs	Capable of compliance
7.8	Slip Resistance (Ramps & Stairs)	To be addressed during detailed design
7.9	Exempt Areas	None specified
7.10	Floor Finishes	To be addressed during detailed design
7.11	Carpet	To be addressed during detailed design
7.12	Controls	To be addressed during detailed design
7.13	Visual Indication to Glazing	Not applicable
7.14	Tactile Indicators	To be addressed during detailed design
7.15	Signage	To be addressed during detailed design

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**

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## 1 Project Background

The project is a new industrial development containing four (4) units over two (2) levels with additional mezzanine areas. Car parking is proposed at the front of the site and at the basement level.



Figure 1 | Proposed Development

## 2 Reviewed Documentation

Documentation prepared by ADG Architects has been reviewed as follows:

dwg no.	drawing name	revision
A000	Cover Page	D
A001	Site Analysis + Proposed Site Plan	E
A100	Lower Ground + Ground Level Plans	G
A102	Mezzanine Level + Roof Level Floor Plan	F
A200	Elevations	F
A300	Sections	F
A400	Cut + Fill, Height Plane Diagrams	C
A401	Waste Management	A
A500	Shadow Diagrams	C
A600	Perspectives	D

## 3 Council Requirements

Northern Beaches Council requires the following to be submitted as part of the development application.

Access Reports, prepared by accredited access professionals, must be submitted to demonstrate compliance with relevant access standards for applications involving Class 2-9 buildings, and are to address access provisions of the BCA, Disability (Access to Premises - Buildings) Standards 2010 and relevant Australian Standards. Access reports are to (where appropriate):



- demonstrate equitable access to the main entrance of the building and within all areas of the building required to be accessible to the occupants of the building and the general public,
- demonstrate parking spaces, and access thereto, consistent with the relevant provisions of AS2890.6 or AS4299 (as applicable),
- demonstrate adaptable housing units (including plans in pre and post adaptable stage) in accordance with AS4299.
- demonstrate consistency with the relevant minimum requirements of the Livable Housing Design Guidelines.

Lindsay Perry is an accredited access professional, being an accredited within Australia (ACAA No. 136) and at the international level (GAATES No. BE-02-106-18).

This access report demonstrates compliance with current, applicable accessibility legislation.

## 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 2019, Amendment 1 (BCA)
  - Section D2.14 / D2.15 / D2.17 – landings, thresholds and slip resistance
  - Section D3 – Access for People with Disabilities
  - Section E3.6 – Passenger Lifts
  - 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.
- Australian Standard AS1735.12 – Lifts, escalators and moving walks: Lifts for persons with a disability

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.



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### **The Disability (Access to Premises) Standards**

The Disability (Access to Premises - buildings) Standards 2010 (the Premises Standards) commenced on 1 May 2011. Any application for a building approval for a new building or upgrade of an existing building on or after that date 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.

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### **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 and compliance can be met through satisfying the deemed-to-satisfy provisions or by meeting the prescribed performance requirements.

The BCA for Class 8 buildings requires access for people with disabilities to and within areas normally used by the occupants.

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### **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 and is referred by the BCA
- 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

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

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

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### **AS1735– Lifts, escalators and moving walks**

AS1735.12 (1992) contains requirements for passenger lifts for persons with a disability.



## 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.

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#### **Compliance Summary:**

Refer to BCA requirements throughout subsequent sections of this report.

### 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 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.

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#### **Compliance Summary:**

Not applicable

#### **Commentary:**

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







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### 6.3 Accessible Carparking

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There is a requirement for the provision of accessible carparking within this development. The BCA requires the provision of one (1) accessible carparking space for every one hundred (100) carparking spaces or part thereof within a Class 8 building

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#### Compliance Summary:

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Compliant configuration

#### Commentary:

Carparking is provided both the basement and ground floor level – one (1) accessible space is provided at each level.

The overall configuration of the accessible carparking achieves compliance with current legislation including chevron markings and provision of a bollard.

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### 6.4 Accessible Entrance

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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.

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#### Compliance Summary:

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Compliant configuration

#### Commentary:

Single hinged door doors are provided for entry to Unit 1, Unit 2 and Unit 4. Roller doors provide access to the other unit. The hinged doorways achieve the required circulation areas. A level threshold hold is achievable at the doorways.



## 7 BCA | Interior

The development comprises four (4) individual industrial units with shared amenities. Unit 1 and Unit 2 contain a small mezzanine.

### 7.1 Extent of Access Generally – BCA

For an industrial development, access for people with disabilities is required to and within all areas normally used by the occupants.

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**Compliance Summary:**

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Compliant

### 7.2 Access to Mezzanine / Upper Level

A mezzanine is provided within Unit 2 and Unit 4. Access to this area is via stairs.

BCA Clause D3.3(f)(ii) states (for class 8) that a ramp or lift need not be provided to serve a storey or level of not more than 200sqm, if the building is not more than three storeys. In this instance, the mezzanine area is less than 200sqm.

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**Compliance Summary:**

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Compliant

### 7.3 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.

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**Compliance Summary:**

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Compliant

### 7.4 Doorways Generally

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

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**Compliance Summary:**

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Compliant configuration

**Commentary:**

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



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### **7.5 Unisex Accessible Sanitary Compartment**

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A unisex accessible sanitary compartment is provided at the lower ground floor level of the building for use in common.

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**Compliance Summary:**

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Capable of compliance

**Commentary:**

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

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### **7.6 Passenger Lift**

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Where passenger lifts are provided within a building to facilitate access between levels, they must meet the minimum requirements of the NCC / BCA with regard to the internal lift car size, which is dependent upon the total vertical distance that the lift travels.

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**Compliance Summary:**

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Capable of compliance

**Commentary:**

A lift is provided for access between levels.

The overall size of the lift shaft is capable of accommodating a lift car of adequate dimensions for compliance with BCA.

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### **7.7 Stairs**

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AS1428.1 has access requirements for all public access stairs and is applicable in this instance.

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**Compliance Summary:**

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Capable of compliance

**Commentary:**

Stairs are provided as a part of the access between levels of the development (external to the building) and within Unit 1 and Unit 2 for access to the mezzanine level.

The overall configuration of the stairs achieves compliance with current legislation

Ensure provision of handrails with extensions to both sides, tactile indicators and contrasting non-slip nosings to treads.



## 7.8 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.

## 7.9 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

## 7.10 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. Refer to AS1428.1(2009), Clause 7.2 for further details.

### Compliance Summary:

To be addressed during detailed design stages

## 7.11 Carpet

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

### Compliance Summary:

Not applicable

## 7.12 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.



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### 7.13 Visual Indication to Glazing

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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 per AS1428.1, Clause 6.6.

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#### Compliance Summary:

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Not applicable

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### 7.14 Tactile Indicators

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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).

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#### Compliance Summary:

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To be addressed during detailed design stage.

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### 7.15 Signage

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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.

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#### Compliance Summary:

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To be addressed during detailed design stage.



## 8 Conclusion

This report demonstrates that the fundamental aims of accessibility legislation are achievable within the Proposed Industrial Development located at 32 Orlando Road Cromer. 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.

### **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

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### **Circulation Areas Generally**

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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.

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### **Doorways**

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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.

#### **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.

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**Passenger Lift**

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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 as required by the BCA, Clause E3.6.
- b. Minimum internal dimensions of the lift car to be 1100mm wide x 1400mm deep BCA, Clause E3.6 – 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

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 D3.8 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).

## 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



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### **Floor Finishes**

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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.

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### **Carpet**

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

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### **Controls**

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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.

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### **Visual Indication to Glazing**

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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.

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### **Tactile Indicators**

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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).

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### **Signage**

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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.





## 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.

### **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.

### **Kitchenette**

While not a statutory requirement, the provision of wheelchair accessible benches promotes inclusion. The following recommendations for the dimensioning, layout and arrangement of kitchens are offered to maximize usability for persons with a disability. Some key principles are as follows:

- The height of benches should be between 700-850mm affl noting that no height will suit all users. We recommend a height of 850mm.
- Clearance in front of the bench of 1540mm is encouraged to facilitate a 180° turn by a wheelchair



- Acceptable hardware for cupboards includes touch latches and D shaped pull handles.
- A shallow sink should be provided. Optimum bowl depth is 150mm with clearances under as per requirements for handbasins.

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#### **Furniture and Joinery Hardware**

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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.

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#### **Wayfinding – Signage**

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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.

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#### **Terminology (Best-practice recommendation)**

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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.

