



Access Report

**New Residential Development**  
6-8 Grant Street  
Maitland NSW 2320

For: Brown Commercial Buildings  
Ref: PAA\_23527



## 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:			
Lee-May Whong	Draft	Issued for review	14 March 2024
	Revision 1	Issued for DA	18 March 2024

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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 proposed residential development located at 6-8 Grant Street, Maitland NSW 2320, 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
<b>Access and Approach</b>		
6.1	Allotment Boundary to Entrance	Compliant configuration
6.2	Accessible Carparking to Entrance	Not applicable
6.3	Accessways (Pathways Generally)	Compliant configuration
6.4	Accessible Carparking	Not applicable
6.5	Accessible Entrance	Compliant configuration
<b>Interior</b>		
7.1	Extent of Access Generally	Compliant
7.2	Circulation Areas	Compliant configuration
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
<b>Vertical Circulation</b>		
8.1	Lifts	Compliant configuration
8.2	Fire Isolated Egress Stairs	Compliant configuration
8.3	Slip Resistance (Ramps & Stairs)	To be addressed during detailed design
<b>Adaptable Housing</b>		
<b>Pre Adaption Requirements</b>		
9.1	Accessible Entrance	Compliant configuration
9.2	Visitable Toilet	Compliant configuration
9.3	Accessible Path of Travel	Compliant configuration
<b>Post Adaption Requirements</b>		
9.4	Car Accommodations	Compliant configuration
9.5	Letterbox	Compliant configuration
9.6	Doorways	Compliant configuration
9.7	Internal Corridors	Compliant configuration
9.8	Bathroom	Compliant configuration
9.9	Kitchen	Compliant configuration
9.10	Bedroom	Compliant configuration
9.11	Living Area	Compliant configuration
9.12	Laundry	Compliant configuration



9.13	Floors Generally	To be addressed during detailed design
9.14	Ancillary Items	To be addressed during detailed design
<b>SEPP 65 Universal Housing Requirements   Livable Housing Silver level</b>		
10.1	Dwelling Access	Compliant
10.2	Dwelling Entrance	Compliant configuration
10.3	Internal Corridors and Doors	Compliant configuration
10.4	Toilet	Compliant configuration
10.5	Shower	Compliant configuration
10.6	Reinforcement of Bathroom Walls	To be addressed during detailed design
10.7	Internal Stairways	Not applicable

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.

**LEE-MAY WHONG**

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## 1 Project Background

The proposed is a new multi-storey development with an overall total of 15 units located at 6-8 Grant Street, Maitland. The building is designed over four (4) levels with car parking at the ground floor incorporating accessible car parking spaces allocated for the adaptable units. Three (3) adaptable units incorporating SEPP 65 Livable Silver elements are provided one on each of the floor.



Figure 1 | Proposed Development

## 2 Reviewed Documentation

Documentation prepared by Architects Becerra has been reviewed as follows:

dwg no.	drawing name	revision
A101	Site Plan / Roof Plan	A
A102	Ground Floor Plan	A
A103	Level 1 Floor Plan	A
A104	Level 2 Floor Plan	A
A105	Level 3 Floor Plan	A
A201	North & South Elevations	A
A202	East & West Elevations	A
A203	Materials & Finishes	A
A300	Sections 1 & 2	A
A400	Window Schedule	A
A820	Shadow Diagrams	A
A821	Views from the Sun	A
A822	Site Analysis Plan	A
A823	Massing Model	A
A113	Natural Cross Ventilation	A
A114	Winter Solstice Solar Access	A
A810	Area Calculations	A

### 3 Council DCP Requirements for Accessibility

Maitland City Council DCP (2011) Part C8 Residential Design, Clause 12 contains requirements for accessibility and adaptable housing. The requirements are as follows:

#### 12. Accessible and Adaptable Housing

Objectives:

- To provide adaptable housing that helps sustain community and family networks by allowing people to stay in their houses over the whole of their life.
- To ensure that new development is accessible and useable by people with disabilities.
- To provide an adequate supply of housing stock that is designed and constructed to be accessible or capable of being easily adapted for use by those in the community with a disability or mobility impairment.

Adaptable dwellings are to be provided in accordance with the following:

- Between 0 and 9 inclusive – Nil.
- Between 10 and 15 – 1 dwelling.
- Between 16 and 24 – 2 dwellings.
- Between 25 and 39 – 3 dwellings.
- 40 or more – 10% of total dwellings.

**Commentary:**

The requirements of adaptable housing have been addressed in the design. Refer adaptable housing section of the report.

### 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 E3D7 / ED38 – Lifts
- 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.
- Australian Standard AS4299 – Adaptable Housing
- State Environmental Planning Policy 65 – Residential Design Quality of Residential Apartment Development (SEPP65) – Apartment Design Guide – July 2015
- The Livable Housing Design Guidelines – Edition 4

A summary of the requirements of relevant legislation follows.

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### **The Disability Discrimination Act 1992**

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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**

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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.

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

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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 2 buildings, access for people with disabilities is required:

- 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, lunchroom, lounge room, or the like.
- 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.

For a Class 7a building BCA requires access for people with disabilities to and within any level containing an accessible carparking space.

## 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.

While the introduction of NCC 2022 causes clause numbers to differ between documents, the intent of each code remains similar.

### 5.2 New Part and Affected Part (Existing Buildings)

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.

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#### Compliance Summary:

Not applicable

#### Commentary:

New work and affected part provisions (Part 2.1(4 & 5)) are applicable to modification works only, not new developments.



## 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 Grant Street to the building entrance.
- from the accessible carparking area to the building entrance (not applicable).
- between associated accessible buildings within the site (not applicable).

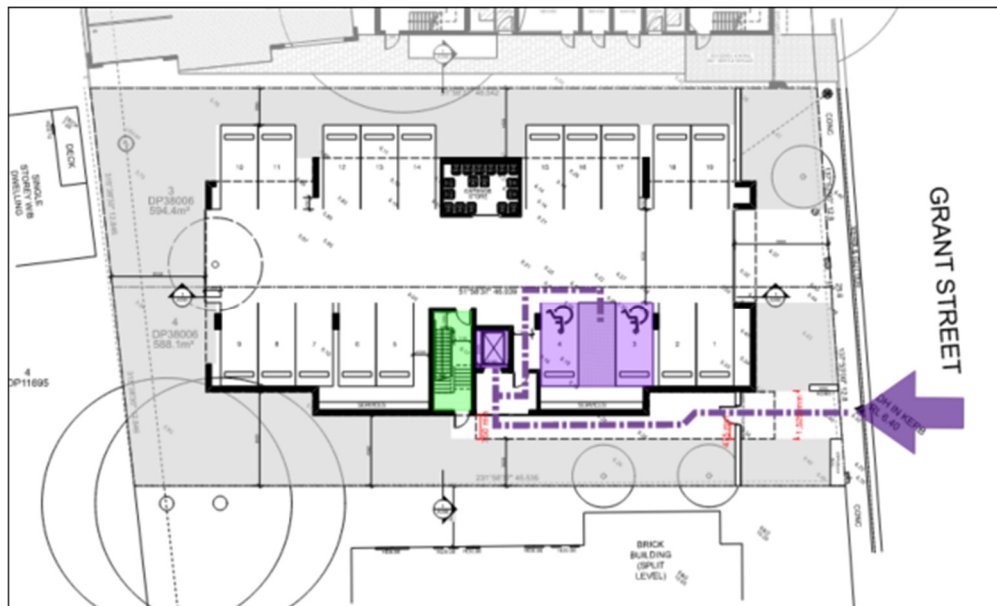


Figure 2 | Overall Site Plan

### 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.

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**Compliance Summary:**

Compliant configuration

**Commentary:**

An accessible path of travel is provided to the building entrance from the allotment boundary along Grant Street via a formed footpath. Site levels indicate that on-grade access is achievable.

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## 6.2 Approach from Accessible Carparking

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

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### Compliance Summary:

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Not applicable.

No accessible parking requirement for Class 2 BCA.

### Commentary:

The two accessible carparking spaces provided are allocated for the adaptable apartments.

An accessible path of travel is provided to the building entrance via a formed footpath. Site levels indicate that on-grade access is achievable.

Refer Adaptable housing section of the report for commentary also.

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## 6.3 Accessways (Pedestrian Areas Generally)

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

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### Compliance Summary:

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Compliant configuration

### Commentary:

Footpaths that form the approach to the building are a dimensioned at a minimum 1500mm wide. Site levels indicate a level surface is achievable.

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## 6.4 Accessible Carparking

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For the residential component of the development (Class 2), there are no BCA requirements for the provision of accessible carparking within the development.

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### Compliance Summary:

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Not applicable.

No accessible parking requirement for Class 2 BCA.

### Commentary:

The two accessible carparking spaces provided are allocated for the adaptable apartments. They are located in close proximity to the building entrance.

The overall configuration of the accessible carparking spaces achieves compliance with current legislation.

Refer Adaptable housing section of the report for commentary also.



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## 6.5 Accessible Entrance

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 entrance.

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### Compliance Summary:

Compliant configuration

### Commentary:

Single hinged doorways provide entry to the building and offer compliant circulation areas. The selected door enables a clear opening width of 850mm. A level threshold hold is achievable at the doorway.

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## 7 BCA | Interior

The building is designed over four (4) levels and accommodates fifteen (15) units with five (5) residential units to each of the three levels: unit 3 on level 1, unit 8 on level 2 and unit 13 on level 3 are nominated as the adaptable and livable silver units.

The interior areas subject to accessibility requirements include the residential common areas being the entry foyer and corridors. The following do not apply to the interior of the individual units.

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### 7.1 Extent of Access Generally – BCA

Within a residential development (Class 2), access for people with disabilities is required 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.

Where a ramp or a passenger lift is installed, access is required to the entrance doorway of each sole-occupancy unit within the building.

Access is also required to and within not less than 1 of each type of room or space for use in common by the residents.

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### Compliance Summary:

Compliant

### Commentary:

Access has been considered to and within all areas used by the occupants.

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### 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 180° 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 configuration

**Commentary:**

Compliant circulation space has been provided throughout the building. End of corridor turns on each of the three levels has been provided within 2m of all corridors ends.

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**7.3 Doorways Generally**

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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.

Doorways to external areas are required to have a level threshold to facilitate wheelchair access.

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**7.4 Exempt Areas**

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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.

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**Compliance Summary:**

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None specified

**Commentary:**

Generally, the following areas can be exempt from requiring access for people with disabilities: plant and services type areas.

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**7.5 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 beveled edges) as part of the accessible path of travel. Refer to AS1428.1(2009), Clause 7.2 for further details.

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**Compliance Summary:**

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To be addressed during detailed design stages

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**7.6 Carpet**

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

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**Compliance Summary:**

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To be addressed during detailed design stage.

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**7.7 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.

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

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**Compliance Summary:**

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To be addressed during detailed design stage.

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**7.8 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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To be addressed during detailed design stage.

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**7.9 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 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).

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**Compliance Summary:**

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To be addressed during detailed design stage.

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## 7.10 Signage

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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.

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### **Compliance Summary:**

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To be addressed during detailed design stage.

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## 8 BCA | Vertical Circulation

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A passenger lift provides the main means of access between levels of the building. One (1) passenger lift is provided within the development. Stairs within the building are fire isolated egress stairs.

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### 8.1 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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Compliant configuration

### **Commentary:**

One (1) 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.

Adequate circulation areas are provided at lift landings.

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### 8.2 Fire Isolated Egress Stairs

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Designated fire egress stairs are not considered public access stairs and therefore are not subject to the requirements of AS1428.1 with the exception of contrasting nosing strips and handrail requirements. These are required per AS1428.1.

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### **Compliance Summary:**

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Compliant configuration

### **Commentary:**

A set of fire isolated egress stair is provided within the development to enable egress in the event of a fire.

The provision of offset treads to maintain a constant height along the length of the handrail per AS1428.1 (2009), Clause 12 has been considered.

### 8.3 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.

## 9 Adaptable Housing (Council Requirement)

Council DCP requires the provision of one (1) adaptable apartment, based on the provision of a total of fifteen (15) apartments. We note three (3) adaptable apartments has been provided for this development.

An adaptable housing unit is defined by AS4299 as follows:

*A housing unit which is designed and constructed to meet the performance requirements stated in the standard. It is designed in such a way that it can be modified easily in the future to become accessible to both occupants and visitors with disabilities of progressive frailties.*

There are six (6) performance requirements being: visitability; avoidance of level changes; manoeuvrability; ease of adaption; ease of reach; and future laundry facilities.

Both the pre-adaption state and post-adaption state need to be considered. In the pre-adapted state, an adaptable unit is required to be “visitable” and these requirements are applicable at the time of construction. Other elements are to be provided on adaption of the unit. Documentation needs to demonstrate that compliance in the post-adapted state is achievable.

At **time of construction**, the following are required:

- An accessible entrance per AS1428.1 (2009).
- A visitable toilet at the entry level per AS4299
- An accessible path of travel from the entrance to the visitable toilet and living areas within the meaning of AS1428.1 (2009)

At **time of adaption**, the following are required:

- Compliance with AS4299 Appendix A – essential criteria. This includes kitchen layouts, laundry layouts, carparking, etc

The following requirements for adaptable apartments are based on AS4299,



Section 4 – Design of the Housing Unit, essential criterion as listed in Appendix 1, AS4299 Schedule of Features for Adaptable Housing. Compliance with the following features will achieve a Class C adaptable housing unit.

**Commentary:**

Adaptable apartments are nominated on current documentation as:

- Unit 3 on level 1.
- Unit 8 on level 2.
- Unit 13 on level 3.

## Pre-Adaption Requirements:

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### 9.1 Accessible Entrance

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Entrances to adaptable housing units are to comply with AS4299 Clauses 4.3.1 and 4.3.2. AS4299 which require that the entry doors comply with AS1428.2 **at time of construction**. The minimum clear opening width of the doorway is to be 850mm and allow for wheelchair maneuverability (provide minimum 1550mm long area in front of the doorway). Entrances to the adaptable housing units to be weatherproofed.

Door hardware is to comply with AS1428. In this regard, entry door hardware is to be in the accessible height range of 900-1100mm above finished floor level. The use of lever handles is encouraged to assist persons with a manual disability such as arthritis.

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**Compliance Summary:**

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Compliant configuration

**Commentary:**

The entry doorway to the adaptable unit offers areas conducive to an accessible entrance.

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### 9.2 Visitable Toilet

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Each adaptable housing unit is required to have a toilet on the entry floor that is a visitable toilet within the meaning of AS4299 **at time of construction**. The toilet is to be installed in compliance with AS1428 (correct set-out distance from fixed walls) and have the capacity to accommodate a grabrail that complies with Figure 4.5 of AS4299. The visitable toilet door is required to have a clear opening width of 820mm. Slip resistant floors are also required.

A visitable toilet is defined as a toilet which has a space of minimum 1250x900mm in front of the toilet clear of door swings.

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**Compliance Summary:**

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Compliant configuration

**Commentary:**

Bathroom offers an accessible arrangement which can accommodate visibility requirements.



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### 9.3 Accessible Path of Travel from Entry to Visitable Toilet & Living Area

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The performance requirements of AS4299 require the provision of an accessible path of travel, within the meaning of AS1428.1 (2009), from the entrance to the visitable toilet and a living area. Door circulation and corridor widths need to be designed to reflect this requirement.

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**Compliance Summary:**

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Compliant configuration

**Commentary:**

Access is provided between the entry doorway and the living areas and to the visitable toilet.

## Post Adaption Requirements:

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### 9.4 Private Car Accommodations

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Private carparking spaces for adaptable housing units shall be large enough to enable a person with a wheelchair to get in and out of both the car and the parking space. A width of 3.8m is necessary to enable the driver to alight, open the passenger door and assist a person with a disability into a wheelchair.

Carparking spaces for the adaptable units to have a minimum floor plan dimension of 3.8m x 6.0 (AS4299, Clause 3.7.2). A clear vertical clearance of 2.5m is desirable.

The introduction of AS2890.6 in 2009 offers an approach to the provision of accessible carparking that can be easily accommodated in a standard carparking layout. It offers an accessible space 2400mm wide with a circulation area 2400mm wide adjacent to the space (4800mm for a single space). The circulation area can be "shared" between two accessible spaces (7200mm for two spaces). This offers carparking spaces in excess of the minimum requirement of AS4299 (3800mm).

The abovementioned configuration has been adopted in the provision of carparking for the adaptable unit. With regard to the strata plan, the shared space could become a part of the common title to ensure it remains a circulation area.

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**Compliance Summary:**

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To be confirmed

**Commentary:**

Carparking for the adaptable unit has been provided at the ground floor level with other residential parking. The configuration is in keeping with AS2890.6.

Note: one adaptable unit is required by the DCP and adaptable carparking has been provided for the required adaptable unit.

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## 9.5 Letterboxes

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Letterboxes to adaptable housing units should be located on a hard standing area connected by an accessible path of travel to the adaptable housing unit.

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### Compliance Summary:

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Compliant configuration

### Commentary:

Letterboxes are provided at the entrance along Grants Street, satisfying AS4299 requirements. An accessible path of travel is provided from the letterboxes to the entrance of the adaptable units.

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## 9.6 Doorways

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Doorways throughout adaptable housing units are required to have a clear opening width of 820mm. At time of construction, an accessible path of travel within the meaning of AS1428.1 is required from the entrance to the visitable toilet and living area. Other door circulation areas are to comply with AS1428.1 on adaption of the unit.

All door hardware is to be operable with one hand and in the height range of 900-1100mm above the floor level. The use of lever handles is encouraged to assist persons with a manual disability such as arthritis.

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### Compliance Summary:

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Compliant configuration

### Commentary:

Doorways are generally provided with adequate circulation areas.

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## 9.7 Internal Corridors

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There is a requirement for all corridors to be minimum 1000mm.

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### Compliance Summary:

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Compliant configuration

### Commentary:

Corridors within the adaptable units are a minimum of 1560mm wide.

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## 9.8 Bathroom

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Bathrooms within an adaptable housing unit are to comply with AS1428 after adaption. Issues to be considered include slip resistant floor, shower minimum 1100x1160mm with future provision for accessible features including handheld shower and grabrails, shower waterproofing to AS3740, recessed soap holder, washbasin with knee clearance, adequate circulation areas, automatic control of hot water, double GPO next to the mirror and the provision of capstan or lever taps. Refer to AS4299, Clause 4.4.4.

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**Compliance Summary:**

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Compliant configuration

**Commentary:**

Bathroom offers an accessible arrangement.

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**9.9 Kitchen**

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Essential requirements for kitchens within an adaptable housing unit allow for future adaption and include items such as sinks, taps, cooktops, location of oven, cupboard handles, general power outlets, dimensions of the space and location of refrigerator.

Kitchens are required to have a clear space between benches of 1550mm. An area of bench top 800mm wide is required that can be adjusted through the height range of 750 – 850mm above floor level. Alternatively, a section of this dimension needs to be easily replaceable to achieve this requirement.

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**Compliance Summary:**

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Compliant configuration

**Commentary:**

Kitchen offers circulation areas as described above.

---

**9.10 Bedroom**

---

At least one bedroom within an adaptable housing unit is required to have adequate space for a wardrobe and a queen size bed with minimum 1540mm wide circulation at the foot of the bed and 1000mm at the side of the bed (1200mm preferred) for compliance with AS1428.2, Clause 6.1.

---

**Compliance Summary:**

---

Compliant configuration

**Commentary:**

Bedroom 1 offers compliant circulation areas.

---

**9.11 Living Area**

---

Living areas within an adaptable housing unit are required to have circulation areas that allow a wheelchair to maneuver within the space at time of construction. In this regard, an area with 2250mm diameter is required, clear of furniture. AS4299, Clause 4.7 outlines this requirement. A telephone outlet adjacent to a general power outlet is also a requirement for living areas.

---

**Compliance Summary:**

---

Compliant configuration

**Commentary:**

The living area within the adaptable unit is an open-plan area which meets the circulation requirements of AS4299.

---

### 9.12 Laundry

---

Requirements for laundry areas within adaptable housing units include the provision for an automatic washing machine / clothes dryer with clear space in front of the appliances. An area of 1550mm diameter will achieve this requirement. Laundries are to have slip resistant floors and door circulation areas in compliance with AS1428.1.

---

**Compliance Summary:**

---

Compliant configuration

**Commentary:**

Laundry offers compliance being in a cupboard configuration.

---

### 9.13 Floors Generally

---

AS4299 requires that all floor surfaces including bathrooms, laundry and external paved surfaces be slip resistant to comply with AS3661.1.

Non-essential items include that after modification, carpets should have short pile and consideration should be given to the fire hazard indices. Floors should be easily cleanable and bold patterns should be avoided to eliminate confusion for persons with vision impairment.

---

**Compliance Summary:**

---

To be addressed during detailed design

---

### 9.14 Ancillary Items

---

Ancillary items are not considered essential items. Switches such as light switches must be located within the accessible height range of 900-1100mm above the floor level.

Power outlets should be located at a height not less than 600mm affl – a height of 1000mm is preferred. They should be located not less than 500mm from internal corners.

---

**Compliance Summary:**

---

To be addressed during detailed design

---

## 10 Universal Housing Requirements (SEPP 65)

---

The NSW Government promotes better apartment design across NSW through the State Environmental Planning Policy No. 65 – Design Quality of Residential Apartments Development.

Section Q4 Universal Design provides three (3) objectives as follows.

**Objective 4Q-1**

*Universal design features are included in apartment design to promote flexible housing for all community members.*



Design guidance: Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features.

#### **Objective 4Q-2**

*A variety of apartments with adaptable designs are provided.*

Design guidance: Adaptable housing should be provided in accordance with the relevant council policy.

#### **Objective 4Q-3**

*Apartment layouts are flexible and accommodate a range of lifestyle needs.*

Design guidance.

Apartment design incorporates flexible design solutions which may include:

- rooms with multiple functions
- dual master bedroom apartments with separate bathrooms
- larger apartments with various living space options
- open plan 'loft' style apartments with only a fixed kitchen, laundry and bathroom

Within this development, a total of three (3) apartments are provided that are capable of achieving silver level livable housing requirements per the Livable Housing Design Guidelines – Fourth Edition as follows:

- Unit 3 on level 1.
- Unit 8 on level 2.
- Unit 13 on level 3.

These apartments are incorporated within the adaptable apartments.

Livable housing requirements are summarised below:

---

#### **10.1 Dwelling Access**

---

There is a safe, continuous, step-free pathway from the street entrance and/or parking area to a dwelling entrance that is level.

---

##### **Compliance Summary:**

---

Compliant

##### **Commentary:**

Accessible pathway has been provided from the street entrance to the livable units.

---

#### **10.2 Dwelling Entrance**

---

There is at least one level (step-free) entrance into the dwelling to enable home occupants to easily enter and exit the dwelling.

---

##### **Compliance Summary:**

---

Compliant configuration



**Commentary:**

Entrances offer shelter and the required landing area. Door sizes and threshold details to be addressed during detailed design.

---

### 10.3 Internal Corridors and Doors

---

Internal doors and corridors facilitate comfortable and unimpeded movement between spaces.

---

**Compliance Summary:**

---

Compliant configuration

**Commentary:**

Corridors offer adequate clear width. Door sizes and threshold details to be addressed during detailed design.

---

### 10.4 Toilet

---

The ground (or entry) level has a toilet to support easy access for home occupants and visitors.

---

**Compliance Summary:**

---

Compliant configuration

**Commentary:**

Toilet is located in the corner and of accessible configuration.

---

### 10.5 Shower

---

The bathroom and shower are designed for easy and independent access for all home occupants.

---

**Compliance Summary:**

---

Compliant configuration

**Commentary:**

Shower is located in the corner and of accessible configuration.

---

### 10.6 Reinforcement of Bathroom & Toilet Walls

---

The bathroom and toilet walls are built to enable grabrails to be safely and economically installed.

---

**Compliance Summary:**

---

To be addressed during detailed design stages.

---

### 10.7 Internal Stairways

---

Where installed, stairways are designed to reduce the likelihood of injury and also enable future adaptation.



---

**Compliance Summary:**

---

Not applicable.

**Commentary:**

None provided.

---

## 11 Conclusion

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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**

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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.

---

### **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.

For parallel parking arrangements, the accessible space is to be a minimum 3200mm wide x 7800mm long. A shared area 1600mm wide is required at the same level of the parking space.

- 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.

---

## 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.

---

## 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.

---

### **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.

---

### **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.

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.

---

### **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 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**

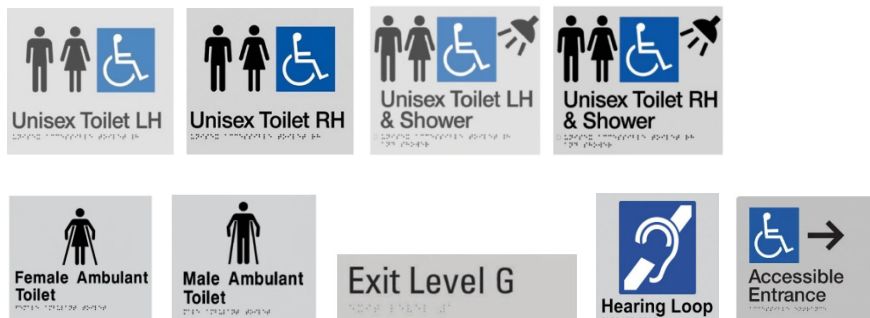
---

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.



## 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.

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### Fire Isolated Egress Stairs

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Designated fire egress stairs are not considered public access stairs and therefore are not subject to the requirements of AS1428.1 with the exception of contrasting nosing strips and handrail requirements. These are required per AS1428.1.

- a. 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.
- b. Stair nosings shall not project beyond the face of the riser.
- c. Handrails in a required exit serving an area required to be accessible, are to be designed and constructed to comply with AS 1428.1, Clause 12

Note: handrails within fire-isolated stars are required to one side only and do not require the provision of handrail extensions. They must have a diameter between 30-50mm; be between 865-1000mm high above the nosing; ne a consistent height along the length of the stair – no vertical sections; have a clearance to eh wall not less than 50mm; have no obstruction along the length of its passage; and have an end that turns through 180, turns to the ground, or returns fully to an end post.

We recommend the use of the staggered stair to maintain a constant height along the length of the handrail per AS1428.,1 (2009), Clause 12.

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### Slip Resistance

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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

---

## Adaptable Units

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An adaptable housing unit is defined by AS4299 as follows:

*A housing unit which is designed and constructed to meet the performance requirements stated in the standard. It is designed in such a way that it can be modified easily in the future to become accessible to both occupants and visitors with disabilities of progressive frailties.*

There are requirements for both the pre-adaption state and post-adaption states. In the pre-adapted state, an adaptable unit is required to be “visitable” and these requirements are applicable at the time of construction. Other elements are to be provided on adaption of the unit.

At **time of construction**, the following are required:

- An accessible entrance per AS1428.1 (2009).
- A visitable toilet at the entry level per AS4299
- An accessible path of travel from the entrance to the visitable toilet within the meaning of AS1428.1 (2009)
- An accessible path of travel from the entrance to the living area within the meaning of AS1428.1 (2009)

At **time of adaption**, the following are required:

- Compliance with AS4299 Appendix A – essential criteria. This includes kitchen layouts, laundry layouts, carparking, etc

The following requirements for adaptable apartments are based on AS4299, Section 4 – Design of the Housing Unit, essential criterion as listed in Appendix 1, AS4299 Schedule of Features for Adaptable Housing. Compliance with the following features will achieve a Class C adaptable housing unit.

### **Private Car Accommodations**

Private carparking spaces for adaptable housing units shall be large enough to enable a person with a wheelchair to get in and out of both the car and the parking space. A width of 3.8m is necessary to enable the driver to alight, open the passenger door and assist a person with a disability into a wheelchair. A clear vertical clearance of 2.5m is desirable.

The introduction of AS2890.6 in 2009 offers an approach to the provision of accessible carparking that can be easily accommodated in a standard carparking layout. It offers an accessible space 2400mm wide with a circulation area 2400mm wide adjacent to the space (4800mm for a single space). The circulation area can be “shared” between two accessible spaces (7200mm for two spaces). This offers carparking spaces in excess of the minimum requirement of AS4299 (3800mm).

### **Letterboxes**

Letterboxes to adaptable housing units should be located on a hard standing area connected by an accessible path of travel to the adaptable housing unit. Letterboxes to adaptable apartments should be provided within the accessible height range of 900-1100mm affl.

### Accessible Entrance

Entrances to adaptable housing units are to comply with AS4299 Clauses 4.3.1 and 4.3.2. AS4299 which require that the entry doors comply with AS1428.2 **at time of construction**. The minimum clear opening width of the doorway is to be 850mm and allow for wheelchair maneuverability (provide minimum 1550mm long area in front of the doorway). Entrances to the adaptable housing units to be weatherproofed.

Door hardware is to comply with AS1428. In this regard, entry door hardware is to be in the accessible height range of 900-1100mm above finished floor level. The use of lever handles is encouraged to assist persons with a manual disability such as arthritis.

### Doorways

Doorways throughout adaptable housing units are required to have a clear opening width of 820mm. **At time of construction, an accessible path of travel within the meaning of AS1428.1 is required from the entrance to the visitable toilet and living area.** Other door circulation areas are to comply with AS1428.1 on adaption of the unit.

All door hardware is to be operable with one hand and in the height range of 900-1100mm above the floor level. The use of lever handles is encouraged to assist persons with a manual disability such as arthritis.

### Internal Corridors

There is a requirement for all corridors to be minimum 1000mm.

### Visitable Toilet

Each adaptable housing unit is required to have a toilet on the entry floor that is a visitable toilet within the meaning of AS4299 **at time of construction**. The toilet is to be installed in compliance with AS1428 (correct set-out distance from fixed walls) and have the capacity to accommodate a grabrail that complies with Figure 4.5 of AS4299. A circulation area 1200mm x 900mm in front of the toilet and clear of door swings and fixtures is required complying with Figure 1.1 of AS4299. Slip resistant floors are also required.

### Bathrooms

Bathrooms within an adaptable housing unit are to comply with AS1428 after adaption. Issues to be considered include slip resistant floor, shower minimum 1100x1160mm with future provision for accessible features including handheld shower and grabrails, shower waterproofing to AS3740, recessed soap holder, washbasin with knee clearance, adequate circulation areas, automatic control of hot water, double GPO next to the mirror and the provision of capstan or lever taps. Refer to AS4299, Clause 4.4.4.

### Kitchens

Essential requirements for kitchens within an adaptable housing unit allow for future adaption and include items such as sinks, taps, cooktops, location of





oven, cupboard handles, general power outlets, dimensions of the space and location of refrigerator.

Kitchens are required to have a clear space between benches of 1550mm. An area of bench top 800mm wide is required that can be adjusted through the height range of 750 – 850mm above floor level. Alternatively, a section of this dimension needs to be easily replaceable to achieve this requirement.

### **Bedrooms**

At least one bedroom within an adaptable housing unit is required to have adequate space for a wardrobe and a queen size bed with minimum 1540mm wide circulation at the foot of the bed (for compliance with AS1428.2, Clause 6.1).

### **Living Area**

Living areas within an adaptable housing unit are required to have circulation areas that allow a wheelchair to maneuver within the space **at time of construction**. In this regard, an area with 2250mm diameter is required, clear of furniture. AS4299, Clause 4.7 outlines this requirement. A telephone outlet adjacent to a general power outlet is also a requirement for living areas.

### **Laundry**

Requirements for laundry areas within adaptable housing units include the provision for an automatic washing machine / clothes dryer with clear space in front of the appliances. An area of 1550mm diameter will achieve this requirement. Laundries are to have slip resistant floors and door circulation areas in compliance with AS1428.1.

### **Floors Generally**

AS4299 requires that all floor surfaces including bathrooms, laundry and external paved surfaces be slip resistant to comply with AS3661.1.

Non-essential items include that after modification, carpets should have short pile and consideration should be given to the fire hazard indices. Floors should be easily cleanable and bold patterns should be avoided to eliminate confusion for persons with vision impairment.

### **Ancillary Items**

Ancillary items are not considered essential items. Switches such as light switches must be located within the accessible height range of 900-1100mm above the floor level.

Power outlets should be located at a height not less than 600mm affl – a height of 1000mm is preferred. They should be located not less than 500mm from internal corners.

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## Livable Housing – SILVER LEVEL

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Livable housing requirements for Silver Level are summarised below:

### Dwelling Access

There is a safe, continuous, step-free pathway from the street entrance and/or parking area to a dwelling entrance that is level.

- Path of travel should be minimum 1000mm wide with no steps; an even, slip resistant surface; crossfall not more than 1:40; and maximum slope of 1:14.
- Where ramps are required, landings at 9m intervals are to be provided and are to be not less than 1200mm in length.
- Where a carparking space is relied upon as the safe and continuous pathway to the dwelling, it should be at least 3200mm wide....
- Step ramps where provided, to have a maximum gradient of 1:10, clear width of 1000mm and maximum length of 1900mm.
- Where ramps adjoin gates or doorways, landings no less than 1200mm in length, exclusive of the door swing, are required.

### Dwelling Entrance

There is at least one level (step-free) entrance into the dwelling to enable home occupants to easily enter and exit the dwelling.

- Entrance doors to have a clear opening with of 820mm and have a level transition (5mm allowable tolerance – where in excess of 5mm, threshold ramp up to 56mm high is allowable).
- Reasonable shelter from the weather is required.
- 1200x1200mm level landing area required on the arrival side of the door.

### Internal Corridors and Doors

Internal doors and corridors facilitate comfortable and unimpeded movement between spaces.

- Doorways on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment purposes to have a clear opening with of 820mm and level transition between surfaces (5mm allowable tolerance).
- Corridors to be 1000mm wide.

### Toilet

The ground (or entry) level has a toilet to support easy access for home occupants and visitors.

- A toilet on the ground / entry floor is required to have a circulation area in front of the toilet pan 900x1200mm.
- Toilet pan is to be provided in a corner of a room.

### Shower

The bathroom and shower are designed for easy and independent access for all home occupants.

- A bathroom is required to have a non-slip hobless shower, located on the corner of the room.



### **Reinforcement of Bathroom & Toilet Walls**

The bathroom and toilet walls are built to enable grabrails to be safely and economically installed.

- Walls to enable safe installation of grabrails to toilet, bath and shower.
- Reinforcement to be in the form of 25mm noggins or plywood sheeting with 12mm thickness.

### **Internal Stairways**

Where installed, stairways are designed to reduce the likelihood of injury and also enable future adaptation.

- Stairs to have a continuous handrail to one side of the stair where the rise is greater than 1m.



## 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.

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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.

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### **Accessways**

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

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### **Automatic Entrance Doors**

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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.

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### **Visual Indication to Glazing (additional measures)**

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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.

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### **Luminance Contrast**

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Luminance contrast assists people with a vision impairment to navigate the built environment. Mandatory items within the BCA and AS1428.1 that require luminance contrast are tactile indicators, accessible toilet seats and doorways. Provision of a minimum 30% luminance contrast between the following elements can also be provided as a best practice measure to ensure ease of use:

- between floors and walls or between walls and skirting boards;
- between the ground surface and obstructions such as columns, bollards and street furniture;
- between the floor and the entrance mat, where provided (this allows people with vision impairment to locate the entrance).
- Between handrails and mounting surface

- Between door and door hardware



- Between bathroom fittings and mounting surface



- Between flooring and furniture
- Between cupboard doors and handles
- Between cupboard doors and floor
- Between cupboard doors and benchtops
- Between benchtop and sink
- Between sink and taps



- Between overhead cupboard doors and exposed edge when cupboard doors are open



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### Fire Egress Doors

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We recommend that fire egress doors achieve a clear opening width of 850mm as per doorways within the accessible path of travel.

This permits the use of the landings within fire isolated egress stairs to be used as a shelter in place option for people with disabilities.

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### Places of Comparative Safety

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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.

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### Lighting and Glare

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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.

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### **Lockers**

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The provision of lockers at a suitable height for people using a wheelchair is recommended. The height range for accessible lockers to be 230mm-1350mm AFFL based on the reach ranges prescribed in AS1428.2 (1992).



