

Disability Access Report

**Nihon University Project**  
Church Street  
NEWCASTLE NSW

For: Azusa Sekkei Co Ltd, c/- DWP  
Ref: LP\_18101



## Executive Summary

Development application documentation for the Nihon University Newcastle Campus Project, located in Church Street Newcastle on the old Newcastle Courthouse site, has been reviewed against the requirements of the Building Code of Australia 2016 and The Disability Discrimination Act 1992 with regard to access for persons with a disability. The requirements of the Disability Standards for Access to Premises (Buildings) and the Access Code for Buildings have also been addressed.

We consider that the drawings presented for assessment, for the purposes of a development application, generally comply with The Building Code of Australia 2016 and the intent of the Disability Discrimination Act 1992, subject to the recommendations made in this report being implemented during the construction process.

The following table summarises compliance status.

Item No.	Description	Compliance Status
<b>Access and Approach</b>		
4.1	Street Boundary to Entrance	Compliant
4.2	Carparking to Entrance	Compliant
4.3	Pathways	Capable of compliance
4.4	Accessible Carparking	Capable of compliance
4.5	Stairs	Capable of compliance
4.6	Entrance	Capable of compliance
<b>Interior</b>		
5.1	Extent of Access Generally	Compliant
5.2	Affected Part	Compliant
5.3	Circulation Areas	Compliant
5.4	Hearing Augmentation	To be addressed during detailed design
5.5	Doorways	To be addressed during detailed design
5.6	Exempt Areas	Compliant
5.7	Floor Finishes	To be addressed during detailed design
5.8	Carpet	To be addressed during detailed design
5.9	Controls	To be addressed during detailed design
5.10	Visual Indication to Glazing	To be addressed during detailed design
5.11	Tactile Indicators	To be addressed during detailed design
5.12	Signage	To be addressed during detailed design
5.13	Thresholds	To be addressed during detailed design
5.14	Slip Resistance	To be addressed during detailed design
<b>Sanitary Facilities</b>		
6.1	Distribution	Compliant
6.2	Accessible Toilets	Capable of compliance
6.3	Accessible Showers	Capable of compliance
6.4	Ambulant Toilet Cubicles	Capable of compliance
<b>Vertical Circulation</b>		
7.1	Lifts	Capable of compliance
7.2	Accessible Ramp	To be addressed during detailed design
7.2	Stairs	Capable of compliance
7.6	Fire Egress Stairs	Capable of compliance



Sole Occupancy Units		
8.1	Accessible sole occupancy units	Capable of compliance

Construction is to be in accordance with the recommendations made in this access report to ensure compliance. Where construction differs from the drawings, further assessment will be required to ascertain compliance.

This report is limited to items within drawings listed in this report only. Future alterations and additions to the building will render the recommendations in this report null and void as we cannot guarantee continued compliance where changes to the building fabric are made. A high level of maintenance is recommended to ensure continued compliance with access legislation.

**All dimensions quoted throughout this report and within Australian Standards are CLEAR dimensions, not structural. This needs to be considered in the preparation of the construction certificate documentation to account for wall linings and the like.**

Best practice options, as noted in the report, are not mandatory but will minimise the risk of a complaint made under the DDA.

The recommendations throughout this report reflect the professional opinion and interpretation of Lindsay Perry. This may differ from that of other consultants. We aim to provide practical, performance-based advice based on project specifics that will maximize access for persons with a disability to the built environment.

Lindsay Perry is a qualified Access Advisor, being an accredited member of The Association of Consultants in Access, Australia – membership number 136. Lindsay Perry carries public liability insurance, professional indemnity insurance and income protection.

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#### Revision Summary

Date	Description	Revision
12 Nov. 2018	draft Disability Access Report	0
27 Nov.	Disability Access Report	1



## 1. Project Background

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This Access Report considers the Nihon University Newcastle Campus Project, located in Church Street Newcastle on the old Newcastle Courthouse site, against the requirements of the Building Code of Australia 2016 (BCA), Disability (Access to Premises) Standards 2010 and The Disability Discrimination Act 1992 (DDA), with regard to access for persons with a disability.

The project sees the refurbishment of the Newcastle Courthouse to provide a university building with teaching facilities and associated student accommodation. The original Courthouse building will remain, flanked on both sides by an educational building to the west and an accommodation building to the east. Connections will be available between the three buildings.

Access for people with disabilities has been considered in the proposed design through the provision accessible features including accessible sanitary facilities; lifts to all levels; accessible accommodation; and accessible carparking. Due to heritage restrictions within the existing Courthouse building, a performance-based approach has been adopted to the provision of accessible features.

Documentation prepared by Azusa Sekkei has been reviewed as follows:

- A-010 1<sup>st</sup> Floor Plan
- A-011 2<sup>nd</sup> Floor Plan
- A-012 3<sup>rd</sup> Floor Plan
- A-013 4<sup>th</sup> Floor Plan
- A-014 Roof Plan
- A-111 4 Students Room Type-1 Detail

It is estimated that one in five people in Australia have a long-term disability (Australian Bureau of Statistics – 2003). This includes physical disability, intellectual disability, and sensory impairments such as vision and hearing. It does not include those with a short-term (temporary) disability or the continuing aging population.

Lindsay Perry Access have adopted a best practice, performance-based approach to access. Assessment is based on project specifics and takes into account various factors such as site topography, heritage and existing site conditions.

## 2. Council Requirements

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The site lies within the Newcastle City Council local government area.

Newcastle City Council Development Control Plan does not appear to have any specific requirements with regard to the provision of access for people with disabilities to this type of development.



### 3. Legislation

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The requirements of BCA 2016 have been adopted in the preparation of this access report.

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 Building Code of Australia 2016 (BCA) Section D3 – Access for People with Disabilities
- The Building Code of Australia 2016 (BCA) Section D2 (in part) – thresholds and slip resistant
- The Building Code of Australia 2016 (BCA) Section E3.6 – Lifts
- Australian Standards AS1428.1(2009) Amendment 1, AS1428.2(1992), AS1428.4(2009) – Design for Access and Mobility
- 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

The accessibility of the proposed development has been considered in regard to the relevant access legislation. A summary of the requirements of relevant legislation follows.

- The **DDA** requires independent, equitable, dignified access to all parts of the building for all building users regardless of disability. The DDA makes it unlawful to discriminate against a person on the grounds of disability. The DDA is a complaint-based law and is administered by the Human Rights and Equal Opportunities Commission
- The **DDA Premises Standards** include an **Access Code** written in the same style as the Building Code of Australia. That is, the Access Code has a number of Performance Requirements that are expressed in broad terms and references to a number of technical Deemed-to-Satisfy Provisions. The Deemed-to-Satisfy provisions refer in many cases to technical details in Australian Standards such as AS1428.1, the primary Australian Standard relating to building access for people with a disability.

**BCA 2016** – Accommodation areas – for Class 3 buildings requires access for people with disabilities as follows:

From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level.

To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool,



common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like.

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 total of one-hundred-and-nine (109) sole occupancy units, access must be provided to and within **six (6)** sole occupancy units.

Not more than 2 required accessible sole-occupancy units may be located adjacent to each other. Where more than 2 accessible sole-occupancy units are required, they must be representative of the range of rooms available.

- The **BCA 2016** for Class 9b Educational buildings requires access for people with disabilities to and within all areas usually used by the occupants.
- **AS1428 – Design for Access and Mobility** requires the inclusion of a continuous accessible path of travel from the street footpaths and carparking areas to the entry and facilities within the building. It also includes requirements for doorways, stairs, toilets, etc.

Part 1 (2009) of this standard contains access requirements that are mandatory for the provision of access for persons with a disability and is referred by the BCA. Amendment 1 of this document was released in 2010.

Part 2 (1992) provides enhanced and best practice requirements. While AS1428.2 is not mandatory, the inclusion of its requirements such as accessible reception counters reduce the risk of a complaint made under the DDA. AS1428.2 is referenced by the Human Rights and Equal Opportunities Commission Advisory Notes for Access to Premises that accompanies the DDA.

Requirements for tactile indicators are included in Part 4.1 (2009) of this standard.

Part 5 (2010) provides requirements for Communication for people who are deaf or hearing impaired but is not referenced by the BCA.

- **AS2890.6** applies to the carparking areas generally.
- **AS1735.12** contains requirements for passenger lifts for persons with a disability.



## 4. Access and Approach

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The approach to the building needs to be considered 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 Church Street to the entrance;
- from the carparking area to the building entrance.

### 4.1 Approach from Street 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:

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Compliant

The accessible entrance to the building is provided at the 1<sup>st</sup> floor level from Church Street to the east of the existing Courthouse Building entrance (located at 2<sup>nd</sup> floor level). On-grade access is available from the street footpath to the entrance lobby.

We note that the existing Courthouse building includes stairs. Being located within 50m of the accessible entrance, compliance with BCA is met with this arrangement.

### 4.2 Approach from Accessible Carparking

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

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#### Compliance Summary:

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Compliant

Accessible carparking is provided at the 1<sup>st</sup> floor level at the western end of the building. Lift access is provided directly from the carparking areas to facilitate access to the building.

### 4.3 Pathways Generally

An accessible path of travel is required from the accessible carparking areas to the main entrance of each building / tenancy and from the allotment boundary to the main entrances. 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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Capable of compliance

**Recommendations:**

For compliance with AS1428.1, the following access requirements apply and should be addressed during preparation of the construction certificate documentation to ensure compliance. We confirm that the pedestrian areas appear to be conducive to the provision of access for persons with a disability.

- 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.

**4.4 Accessible Carparking**

Accessible carparking is provided at the 1<sup>st</sup> floor level at the western end of the building. Two (2) of the twenty (20) spaces are nominated as accessible spaces, arranged around a central shared area per AS2890.6 requirements.

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**Compliance Summary:**

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Capable of compliance

**Recommendations:**

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

- 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. We note that dimensions and configuration offer compliance.
- 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) –ground and vertical signage is required. Signage is to comply with AS1428.1.

#### 4.5 Existing Stairs

Stairs form part of the approach to the existing Courthouse Entrance from the Church Street footpath. We note that this stair is subject to heritage restrictions.

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**Compliance Summary:**

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**Existing Condition**

We note that these are existing stairs and as such, a performance-based approach to accessibility will be adopted due to the heritage value of the existing building fabric. The stair is likely to remain in its current condition.

#### 4.6 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 pedestrian entrance.

The accessible entrance to the building is from Church Street at the 1<sup>st</sup> Floor Level. Double doorways are provided. The existing Courthouse building is not accessible to people with limited mobility however, being located within 50m of the accessible entrance, compliance with BCA is met with this arrangement.

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**Compliance Summary:**

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Capable of compliance

**Recommendations:**

The following access requirements apply to the entrance and should be addressed during preparation of the construction certificate documentation to ensure compliance.

- a. Entrances 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.

## 5 Interior

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The interior of the building has three (3) main areas. The existing Courthouse Building, central to the development, provides administrative areas and the existing courtroom to be utilised as a mock-courtroom for teaching purposes.

The eastern side of the development houses residential accommodation areas for students and teachers – Residential Building.

Teaching / education areas are provided within the western end of the development – Education Building.

### 5.1 Extent of Access Generally – BCA

Accessibility provisions of the BCA have generally been met. Access is provided to and within all areas, noting that a performance-based approach has been adopted for the existing building fabric subject to heritage restrictions.

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#### Compliance Summary:

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Compliant

### 5.2 Affected Part

As the proposed development is the modification of an existing building, only the “new work” and “affected part” is subject to current BCA requirements.

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 principle 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:**

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Compliant

Lifts have been introduced to enable access for people with disabilities to both new and existing areas of the development.

### 5.3 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.

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**Compliance Summary:**

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Compliant

### 5.4 Hearing Augmentation

For buildings that are required to be accessible, the BCA (Clause D3.7) requires hearing augmentation systems within auditoriums, meeting rooms and the like **where an inbuilt amplification system, other than the one used for emergency warning is installed.** An induction loop to at least 80% of the floor area is required.

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**Compliance Summary:**

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To be addressed during detailed design.

**Recommendations:**

The following is recommended to achieve compliance with BCA:

- a. Provide hearing augmentation as required by BCA.
- b. The hearing augmentation system is to be identified using the International Symbol for Deafness.

### 5.5 Doorways Generally

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

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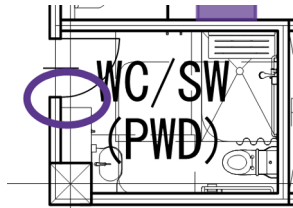
**Compliance Summary:**

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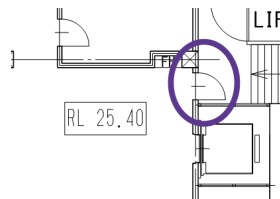
To be addressed during detailed design.

The following **new** doorways have inadequate circulation areas for compliance and we recommend that they be modified as part of the detailed design. Some existing doorways do not achieve compliant circulation areas but will remain in their existing condition as no changes to the building fabric is proposed.

- Doorway to accessible sanitary facility – 1<sup>st</sup> floor level (accommodation)



- Doorway to lounge – 2<sup>nd</sup> floor level (education)



#### Recommendations:

We have been advised that the above-mentioned items will be addressed during detailed design to achieve compliance.

Access requirements for doorways within the accessible path of travel are as follows and should be addressed during preparation of the construction certificate documentation to ensure compliance

- 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.

- 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.
- Doorways to have minimum 30% luminance contrast as described in AS1428.1(2009), Clause 13.1.
- Doors to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5).

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.

- 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.



## 5.6 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.

In this instance, the following areas are considered exempt areas: comms rooms; mechanical rooms; service rooms generally; plant rooms; and the like.

## 5.7 Floor Finishes

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

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### Compliance Summary:

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To be addressed during detailed design stages.

## 5.8 Carpet

AS1428.1 has access requirements for carpet. Where **new** carpet is used as the floor surface, pile height should not exceed 4mm. Exposed edges will be fastened to the floor surface. Carpet trims shall have a vertical face not more than 3mm high.

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### Compliance Summary:

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To be addressed during detailed design stage.

## 5.9 Controls

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

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### Compliance Summary:

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To be addressed during detailed design stage.

## 5.10 Visual Indication to Glazing

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

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### Compliance Summary:

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To be addressed during detailed design stage.



### 5.11 Tactile Indicators

For a building that is required to be accessible, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching a stairway (other than a fire isolated stair); an escalator; a moving walkway; a ramp (other than a fire isolated ramp, step ramp, kerb ramp or swimming pool ramp); and in the absence of a suitable barrier, an overhead obstruction less than 2m above the floor level or an accessway, meeting a vehicular way if there is no kerb or kerb ramp (BCA D3.8).

The use of tactile indicators should be minimized through good design.

Tactile indicators are generally required to be 600-800mm deep across the width of the hazard and set back 300mm from the edge of the hazard (refer AS1428.4.1, Figure A1). 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.

### 5.12 Signage

Signage to identify sanitary facilities, hearing augmentation and required exits are to be provided in accordance with BCA Clause D3.6. This includes provision of the International Symbol for Access or International Symbol for Deafness as appropriate. Signage to comply with AS1428.1 (2009), Clause 8.

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**Compliance Summary:**

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To be addressed during detailed design stage.

**Recommendations:**

Signage to include information in Braille and tactile signage formats as outlined within BCA Specification D3.6.

- a. Braille and tactile components of the sign to be located not less than 1200mm and not higher than 1600mm affl.
- b. Signage identifying rooms with accessible features or facilities nominated in Clause D3.6 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. This is to allow use of the Braille without obstructing pedestrian traffic through the doorway.
- c. For signage identifying an exit, "exit" and the level must be stated on the sign. It must 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.



### 5.13 Thresholds

The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless in a building required to be accessible by Part D3, the doorway opens to a road or open space; and is provided with a threshold ramp or step ramp in accordance with AS 1428.1.

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**Compliance Summary:**

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To be addressed during detailed design stages.

### 5.14 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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**Compliance Summary:**

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To be addressed during detailed design stage.

## 6 Sanitary Facilities

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

### 6.1 Distribution of Accessible Sanitary Facilities

The following is required to satisfy BCA requirements:

- A unisex accessible toilet at each level. Where more than one bank of toilets is provided at any level, at least 50% of those banks will have an accessible toilet facility.
- A unisex accessible shower is required where showers are required by F2.3. In this regard, BCA only requires accessible showers within hospitals, early childhood centres, theatres and sporting venues. Showers are not *required* within commercial, retail or industrial premises. If ***required by Clause F2.3***, where one or more showers are provided, 1 accessible shower for every 10 or part thereof must be provided.

To minimize the risk of a complaint made under the DDA, we recommend that where showers are provided for general use, an accessible shower should be provided.

- At each bank of toilets where there is one or more toilets in addition to an unisex accessible sanitary compartment at the bank of toilets, a sanitary



compartment suitable for a person with an ambulant disability in accordance with AS1428.1 must be provided for use by males and females

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**Compliance Summary:**

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Compliant

At least one (1) unisex accessible sanitary facility is provided at each level of the building. Ambulant cubicles are provided in conjunction with unisex accessible facilities. Accessible showers are provided within accommodation areas.

## 6.2 Unisex Accessible Toilets

There is a total of eight (8) unisex accessible sanitary facilities provided within the building. Both left and right-handed configurations are provided. The overall dimensions and general set-out of fixtures is capable of achieving compliance with current accessibility requirements.

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**Compliance Summary:**

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Capable of compliance

**Recommendations:**

Access requirements for the accessible toilet facilities are as follows and should be addressed during preparation of the construction certificate documentation to ensure compliance. 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.

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. A minimum clear dimension of 1400mm is required from the toilet pan to any other fixture (see figure 43).

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.

Grabrails to be provided at the side and rear of the toilet in compliance with AS1428.1 at a height of 800mm.

- c. Taps to have lever handles, sensor plates or similar controls. For lever taps, a minimum 50mm clearance to be provided to adjacent surfaces.
- 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.
- f. Accessible toilet to be identified using the International Symbol for Access. Pictograms / lettering to have a minimum 30% luminance contrast to the background colour. Signage is to comply with AS1428.1, Clause 8 and include information in tactile and Braille formats (as required by the BCA).
- g. Doorways to have a minimum clear opening width of 850mm to comply AS1428.1(2009), Clause 13.2 as part of the accessible path of travel. Adequate circulation area at the latch side of the doorway is required to allow independent access to the facility – for details refer to AS1428.1, Figure 31.
- h. Door hardware to be located within the accessible height range of 900-1100mm above the finished floor level. The use of lever handles is encouraged to assist persons with a manual disability such as arthritis.
- i. Controls such as light switches within the accessible toilet facilities to be in the accessible height range of 900-1100mm above the finished floor level to comply with AS1428.1(2009), Clause 14. Controls should be located not less than 500mm to a corner.
- j. 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.

### 6.3 Unisex Accessible Shower Facility

Accessible showers are provided at each level in conjunction with the accommodation areas of the development. The overall dimensions and general set-out of fixtures is capable of achieving compliance with current accessibility requirements.

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#### Compliance Summary:

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Capable of compliance

#### Recommendations:

Showers are to comply with AS 1428.1, Clause 15.5 and include accessible features such as grabrails, adjustable height shower rose and fixtures within an accessible height range. Floor waste to be positioned 550mm and 580mm from enclosing shower walls as illustrated in AS1428.1 (2009), Figure 47a.

The minimum dimension of an accessible shower to be 1160 x 1000mm. A folding seat, at a height of 470mm is to be provided. All taps to be located within the height range of 900-1100mm above the finished floor level. Circulation space in front of the shower is to be provided as illustrated in AS1428.1, Figure 47.



## 6.4 Cubicles for People with an Ambulant Disability

Ambulant cubicles are indicated within male and female toilets at each level as per BCA requirements.

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### Compliance Summary:

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Capable of compliance

### Recommendations:

Options for the configuration of the ambulant cubicles are illustrated in AS1428.1, Figure 53.

The following should be addressed during preparation of the construction certificate documentation to ensure compliance.

- a. Provide an ambulant cubicle within each bank of male and female toilets in compliance with AS1428.1, Clause 16.
- b. Minimum width of ambulant cubicles to be 900-920mm.
- c. Provide grabrails to ambulant cubicles to comply with AS1428.1, Clause 17 and Figure 53A.
- d. Doors to have a minimum opening width of 700mm and comply with AS1428.1, Figure 53B.
- e. Provide signage to the ambulant cubicles to comply with AS1428.1, Clause 16.4.

## 7 Vertical Circulation

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Lifts and stairs provide the main access between levels of the building. Two lifts are provided within the development. Fire egress stairs are also provided within the building. A ramp is provided at the 1<sup>st</sup> floor level for access to carparking areas.

### 7.1 Lifts

Three (3) lifts are provided for access between levels. The size of the lifts appear to satisfy the requirements of AS1735.12. The lifts travel approximately 10m maximum.

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### Compliance Summary:

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Capable of compliance

### Recommendations:

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.

## 7.2 Platform Lifts

Two wheelchair platform lifts are provided within the building to provide access between levels. The BCA has limitations for the use of this type of lift – it must not travel more than 12m.

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### Compliance Summary:

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Capable of compliance

### Recommendations:

Confirmation should be sought from the manufacturers to confirm compliance with AS1735.16 prior to installation.

Basic access requirements for Part 16 lifts are as follows (BCA Table E3.6a).

- a. Car size should be a minimum of 1100x1400mm to accommodate a wheelchair.
- b. Clear opening of the lift door to be minimum 900mm.
- c. Provide a handrail complying with the provisions for a mandatory handrail in AS1735.12.
- d. 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.



### 7.3 Accessible Ramp

An accessible ramp is provided as part of the accessible path of travel from the carparking area. It currently does not provide circulation areas at the landings that facilitate compliant wheelchair maneuvering areas required by AS1428.1.

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#### Compliance Summary:

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To be addressed during detailed design.

The mid-landing requires a depth of 1540mm for compliance with AS1428.1.

The top and bottom landings require a floor area of 1500x1500mm to facilitate a 90° wheelchair turn.

#### Recommendations:

We have been advised that the above-mentioned items will be addressed during detailed design to achieve compliance.

Access requirements for the ramps are as follows and should be addressed during preparation of the construction certificate documentation to ensure compliance.

- a. Ramps to comply with AS1428.1, Clause 10.3.
- b. Maximum allowable gradient of the ramp is 1:14, minimum clear width to be 1000mm and maximum length between landings to be 9m (for 1:14 gradient).
- c. Where the ramp intersects with an internal corridor, the ramp shall be set back in accordance with AS1428.1 Figure 16 to allow adequate space for handrail extensions and tactile indicators.
- c. Provide handrails, with extensions, to both sides of the ramp to comply with AS1428.1, Clause 12. Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails are required on both sides of the ramp to cater for left and right handed disabilities.
- d. Where ramp is not enclosed, provide kerb rails in accordance with AS1428.1. The height of kerb rails is to be less than 65mm or greater than 150mm above the finished surface level. This is to ensure that the foot plate of a wheelchair cannot become lodged on the kerb rail.
- e. Provide tactile indicators at the top and bottom of the ramps 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.

Tactile indicators at the top and bottom of the ramps to be 600-800mm deep across the width of the ramp and set back 300mm from the edge of the ramp (refer AS1428.4.1, Figure A1). Tactile indicators are not required at mid-landings where the handrails are continuous.



## 7.4 Stairs

Stairs are provided in various locations for access between levels of the building. 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

### Recommendations:

Access requirements for public access stairs are as follows and should be addressed during preparation of the construction certificate documentation 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 AS1428.1 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).

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



## 7.5 Fire Egress Stairs

Stairs are provided throughout the development to enable egress in the event of a fire.

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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Capable of compliance

### Recommendations:

- 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 (BCA D2.17).

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.

## 8 Accessible Sole Occupancy Units

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Student and teacher accommodation, comprising a one-hundred-and-nine (109) sole occupancy units, are provided within the development. The BCA requires that where 101 to 200 sole occupancy units are provided, access for persons with a disability is to be provided to and within at least six (6) sole occupancy units.

An accessible room for students with a disability is provided at each level of the building – a total of four (4) are indicated on the documentation. Shared bathroom facilities are provided. An additional two (2) rooms will need to be nominated as accessible rooms.

The following access requirements apply to the serviced apartment and should be addressed during preparation of the construction certificate documentation to ensure compliance.

### 8.1 Doorways

Doorways within the accessible room to comply with the requirements of AS1428.1 as a part of the accessible path of travel. Refer to previous sections of this report for details regarding doorways.

### 8.2 Bathroom

Bathroom catering to the accessible room should comply with the requirements of AS1428.1. Refer to previous sections of this report for details regarding accessible sanitary facilities.



### **8.3 Robes**

Robes within the accessible bedrooms to have hanging rods provided at 1350mm affl.

### **8.4 Floor Finishes**

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

### **8.5 Carpet**

AS1428.1 has access requirements for carpet. Where carpet is used as the floor surface, pile height should not exceed 4mm. Exposed edges will be fastened to the floor surface. Carpet trims shall have a vertical face not more than 3mm high.

### **8.6 Controls**

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