lindsay perry access

Access Report

Newcastle Grammar School
Park Campus Stage 1

Parkway Avenue
COOKS HILLS NSW

For: Newcastle Grammar School
Ref: LP_21100

Executive Summary

State Significant Design Submission Documentation for The Newcastle Grammar School Park Campus Stage 1, located at Parkway Avenue Cooks Hill, has been reviewed against current accessibility legislation.

Item No.	Description	Compliance Status
Access and Approach		
5.1	Allotment Boundary to Entrance	Compliant
5.2	Accessible Carparking to Entrance	Compliant
5.3	Link between Associated Buildings	Compliant
5.4	Accessways (Pathways Generally)	Compliant configuration
5.5	Accessible Ramps	Compliant configuration
5.6	Stairs	Compliant configuration
5.7	Walkways	Capable of compliance
5.8	Accessible Entrances	Compliant configuration
Interior		
6.1	Extent of Access Generally	Compliant
6.2	Circulation Areas	Compliant
6.3	Doorways	Compliant configuration
6.4	Hearing augmentation at Service Counters	To be addressed during detailed design
6.5	Hearing Augmentation	To be addressed during detailed design
6.6	Tiered Seating	Compliant configuration
6.7	Exempt Areas	Compliant
6.8	Floor Finishes	To be addressed during detailed design
6.9	Carpet	To be addressed during detailed design
6.10	Controls	To be addressed during detailed design
6.11	Visual Indication to Glazing	To be addressed during detailed design
6.12	Tactile Indicators	To be addressed during detailed design
6.13	Signage	To be addressed during detailed design
6.14	Slip Resistance (Ramps & Stairs)	To be addressed during detailed design
6.15	Thresholds	To be addressed during detailed design
Sanitary Facilities		
7.1	Distribution	Compliant
7.2	Accessible Toilets	Capable of compliance
7.3	Ambulant Toilet Cubicles	Capable of compliance
Vertical Circulation		
8.1	Lifts	Capable of compliance
8.2	Stairs	Capable of compliance

We consider that the drawings presented for assessment, for the purposes of a development application, generally comply with current statutory requirements. The following table summarises compliance status.

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

Revision Summary:

prepared by:		
Lindsay Perry	Draft Revision 1 Revision 2	7 June 2021 27 September 2021 5 October 2021

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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.

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.

1 Project Background

The Newcastle Grammar School Park Campus Stage 1 works sees the demolition of three (3) buildings to accommodate new buildings accommodating learning spaces and new play spaces.

- Block B – that provides administration and staff areas – will also be refurbished as a part of the proposed Stage 1 Works. It will provide a visitor and student reception, administrative areas and the Art / Music / OOSH areas at the ground floor level with teaching areas at the upper level.

- A new building is proposed to the northern corner of the site with access from Union Street. It will provide an undercroft play area, two (2) levels of teaching space and a rooftop play area that includes playing courts.

Figure 1 | Proposed Development

Future works are planned on the site as part of Stages 2 and 3 including a new building on Corlette St, and refurbishment/addition to Block A. These works will be assessed separately at the appropriate time.'

2 Reviewed Documentation

Documentation prepared by SHAC has been reviewed as follows:

dwg no.	drawing name	revision
4293 4.01	Site Plan	I
4293 4.02	Staging Diagram	C
4293 4.03	Site Strategies	B
4293 4.04	Proposed Masterplan	F
4293 4.11	Stage 01 Ground Floor Plan	C
4293 4.12	Stage 01 First Floor Plan	I
4293 4.13	Stage 01 Elevations South & East	C
4293 4.14	Stage 01 Elevations North & West	C
4293 4.15	Block B – Sections 01	B
4293 4.16	Block B – Sections 02	A

dwg no.	drawing name	revision
4293 4.20	Union Street Design Diagrams	C
4293 4.21	Ground Floor Plan	K
4293 4.22	First Floor Plan	K
4293 4.23	Second Floor Plan	K
4293 4.24	Rooftop Play	K
4293 4.27	Elevations West	F
4293 4.28	Elevations Noth & South	D
4293 4.29	Elevations East	G
4293 4.30	Sections 01	D
4293 4.31	Sections 02	D

3 Legislation

Access assessment has been made against Access Legislation including:

- The Commonwealth Disability Discrimination Act 1992 (DDA)
- Disability (Access to Premises (Buildings)) Standards 2010
- Access Code for Buildings 2010
- The National Construction Code Building Code of Australia Volume 1 2019 (BCA)
  - Section D2.14 / D2.15 / D2.17 – landings, thresholds and slip resistance
  - Section D3 – Access for People with Disabilities
  - Section E3.6 – Passenger Lifts
  - Section F2.4 – Accessible Sanitary Facilities
- Australian Standard AS1428.1 (2009) Amendment 1 & 2, – Design for Access and Mobility
- Australian Standard AS1428.2(1992) – Design for Access and Mobility: Enhanced and additional requirements – Buildings and facilities
- Australian Standard AS1428.4.1 (2009) Amendment 1 – Design for Access and Mobility: Means to assist the orientation of people with vision impairment – Tactile ground surface indicators
- Australian Standard AS1735.12 – Lifts, escalators and moving walks: Lifts for persons with a disability

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

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

- 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.

  For Class 9b (School) buildings BCA requires access for people with disabilities to and within all areas usually used by the occupants.

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

- AS2890.6 applies to the carparking areas generally.

- AS1735.12 contains requirements for passenger lifts for persons with a disability.

4 New Work and The Affected Part

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

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

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

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

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

The affected part provisions are applicable to Block B. In this instance, the **new work** is the internal alterations generally. The **affected part** is the path of travel from the accessible entrances to these areas. It is our opinion that, due to the extent of internal works proposed within the building, the affected part provisions of The Disability (Access to Premises) Standards 2010 have been met in this instance.

5 Access and Approach

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 Union Street to the building entrance.
- from the allotment boundary at the pedestrian entrance along Corlette Street to the building entrance.
- between associated buildings with the site.

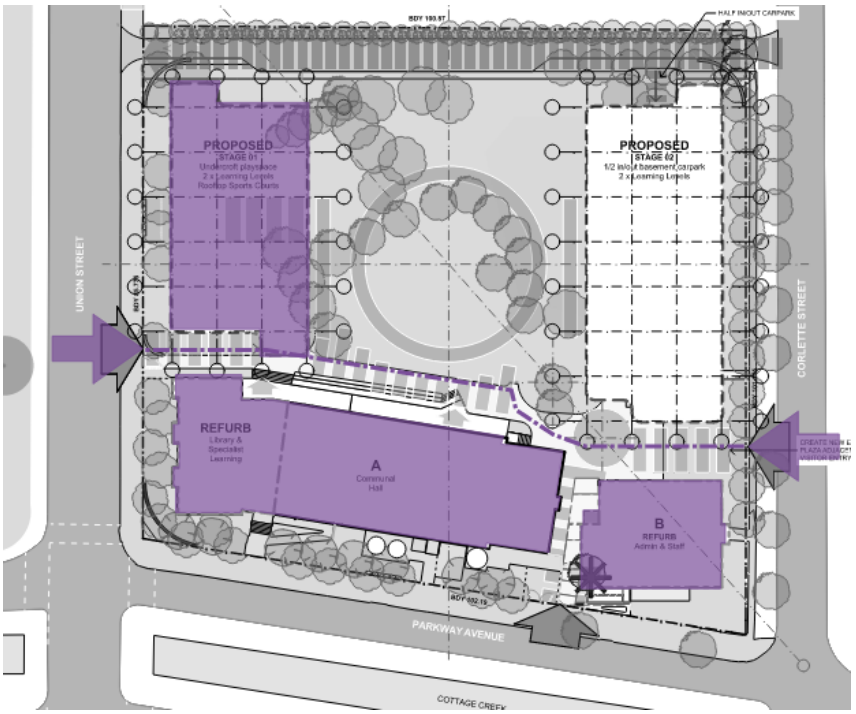

Figure 2 | Overall Site Plan

5.1 Approach from Allotment Boundary

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

Compliance Summary:
Compliant

On-grade access will be available from both Union and Corlette Streets. New entrances will be provided from each street through the provision of a central plaza / circulation area.

5.2 Approach from Accessible Carparking

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

Compliance Summary:

Not applicable
There is no carparking associated with the Stage 1 works.

5.3 Approach between Associated Buildings

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

Compliance Summary:

Compliant
A series of accessible pedestrian links are shown provided to facilitate access between buildings within the site.

5.4 Accessways (Pedestrian Areas Generally)

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

Compliance Summary:

Capable of compliance
Formed pedestrian areas are provided within the campus.

For compliance with AS1428.1, the following access requirements apply.

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.

5.5 Accessible Ramps

Stairs are shown within the central external areas as a link between buildings. We therefore assume that ramps / walkways will also be provided.

Compliance Summary:

Capable of compliance
An accessible ramp offers access to Block B on the southwestern side of the building – overall configuration is in keeping with current accessibility requirements.

Access requirements for the accessible ramp are as follows.

a. Ramp to comply with AS1428.1, Clause 10.3. Maximum allowable gradient of the ramp is 1:14, minimum clear width to be 1000mm and maximum length between landings to be 9m (for 1:14 gradient).

b. Accessible ramp is to have a maximum rise of 3.6m (BCA Clause 3.11).

c. The ramp is required to be set back a minimum 900mm from the property boundary (AS1428.1, Clause 10.3 (f)). This allows tactile indicators and handrail extensions to occur within the boundary and not protrude into the footpath area.

d. Provide handrails, with extensions, to both sides of the ramp to comply with AS1428.1, Clause 12. Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails are required on both sides of the ramp to cater for left and right-handed disabilities.

e. Where ramp is not enclosed, provide kerb rails in accordance with AS1428.1. The height of kerb rails is to be less than 65mm or greater than 150mm above the finished surface level. This is to ensure that the foot plate of a wheelchair cannot become lodged on the kerb rail.

f. Provide tactile indicators at the top and bottom of the ramps to comply with BCA Clause D3.8 and AS1428.4. 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).

g. Tactile indicators at the top and bottom of the ramps are usually required 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).

5.6 Stairs

Stairs are provided as a part of the pedestrian access through the site. AS1428.1 has access requirements for all public access stairs and is applicable in this instance.

Compliance Summary:

Compliant configuration

Access requirements for stairs are as follows.

a. Stairs to comply with AS1428.1(2009), Clause 11.2.

b. Where the stair intersects the property boundary, the stair shall be set back a minimum of 900mm so that handrail extensions and tactile indicators do not protrude into the traverse path of travel.

c. Stairs to have closed or opaque risers. Open risers cause confusion for persons with a vision impairment and may trigger conditions such as epilepsy due to light penetrating through the open riser.

d. Provide handrails, with extensions, to both sides of the stair (AS1428.1 (2009), Clause 11.2 & 12). Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis.

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

f. 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.

g. Stair nosings shall not project beyond the face of the riser.

h. Provide tactile indicators at the top and bottom of the stair to comply with BCA Clause D3.8 and AS1428.4.

i. 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).

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

5.7 Walkways

Stairs are shown within the central external areas as a link between buildings. We therefore assume that ramps / walkways will also be provided.
AS1428.1 defines a walkway as having a gradient of 1:20,

Compliance Summary:

Capable of Compliance

For compliance with AS1428.1, the following access requirements apply to the walkways.

a. The minimum unobstructed width of walkways is to be 1000mm (AS1428.1, Clause 6.3). A width of 1200mm is preferred for compliance with AS1428.2.

b. Walkways are to be constructed with no lip or step at joints between abutting surfaces (a construction tolerance of 3mm is allowable, 5mm for bevelled edges -refer to Figure 6 of AS1428.1).

c. The maximum allowable crossfall of a walkway is to be 1:40.

d. Surface of the walkway to be slip-resistant.

e. The ground abutting the sides of the walkway should follow the grade of the pathway and extend horizontally for 600mm. This is not required where there is a kerb or handrail provided (refer to AS1428.1 Clause 10.2).

f. Maximum allowable gradient of the walkway is 1:20 and maximum length between landings to be 15m (for 1:20 gradient). Landings to be a minimum 1200mm in length (where there is no change in direction). For changes in direction of 180º, landings to be 1540mm in length – refer to AS1428.1(2009), Clause 10.8.

5.8 Accessible Entrances

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

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

Compliance Summary:

Compliant configuration
Double swinging doorways provide entry to Block B.
The lift provides direct access to the teaching levels of the new building – there are no entry doors as such.

The following access requirements apply to the entrance.

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.

   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.

c. Entrance doorways to have complying circulation areas as illustrated in AS1428.1(2009), Figure 31. Circulation areas to have a maximum crossfall of 1:40.

d. Doorways to have minimum 30% luminance contrast as described in AS1428.1(2009), Clause 13.1.

e. 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.

f. Door to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5)

g. 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.

h. 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.

6 Interior

The interior areas of the Stage 1 works are over multiple levels. Within Block B, the ground floor accommodates staff areas with teaching areas above. Within the proposed budling, there are two (2) levels of teaching areas with a central collaborative “Campfire” area with tiered seating.

6.1 Extent of Access Generally – BCA

Access for people with disabilities is required to and within all areas normally used by the occupants.

Compliance Summary:

Compliant
A lift facilitates access through the levels of each building.

6.2 Circulation Areas

BCA (Clause D3.3) requires the provision of turning spaces and passing areas to corridors to enable wheelchair circulation throughout a building.

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

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

Compliance Summary:

Compliant

6.3 Doorways Generally

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

Compliance Summary:

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

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.

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. Doorways to have minimum 30% luminance contrast as described in AS1428.1(2009), Clause 13.1.

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. 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.

f. 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.

g. 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.

6.4 Hearing Augmentation at Service Counters

For buildings that are required to be accessible, the BCA (Clause D3.7) requires hearing augmentation systems at service counters **where the user is screened from the service provider**. We note that this may not be relevant to this project.

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

Compliance Summary:

To be addressed during detailed design.

6.5 Hearing Augmentation

For buildings that are required to be accessible, the BCA (Clause D3.7) requires hearing augmentation systems within auditoriums, meeting rooms and the like **where an inbuilt amplification system, other than the one used for emergency warning is installed**. The following systems can be used:

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

Compliance Summary:

To be addressed during detailed design.

6.6 Tiered Seating Areas (Wheelchair Seating)

A tiered seating area is provided centrally within the proposed building – Campfire. The BCA Table D3.2 states not less than 3 wheelchair spaces for every 150 persons or part thereof (1 single space and a group of 2 spaces).

Wheelchair access is required to an auditorium or similar but not to every platform or tier. We note that the BCA contradicts the DDA in this instance as the DDA advocates unrestricted access to all areas.

AS1428.1, Clause 18.1 requires that wheelchair seating spaces be adjacent to conventional seating and distributed throughout the facility either singly or in pairs and have comparable sight lines to that of conventional seating.

Compliance Summary:

Compliant
There is adequate area provided at the base and top of the tiered seating area to accommodate wheelchair seating areas.

6.7 Exempt Areas

BCA Clause D3.4 does not require access for people with disabilities to areas that would be inappropriate due to the particular use of the area or would pose a health and safety risk. This includes the path of travel to these areas.

6.8 Floor Finishes

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

Compliance Summary:

To be addressed during detailed design stages.

6.9 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.

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

Compliance Summary:

To be addressed during detailed design stage.

6.10 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 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.

Compliance Summary:

To be addressed during detailed design stage.

6.11 Visual Indication to Glazing

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

Compliance Summary:

To be addressed during detailed design stage.

6.12 Tactile Indicators

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

Tactile indicators 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).

Compliance Summary:

To be addressed during detailed design stage.

6.13 Signage

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

Compliance Summary:

To be addressed during detailed design stage.

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

a. Braille and tactile signage formats as outlined within BCA Specification D3.6 that incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 must be provided to identify the following:
   - a sanitary facility, except a sanitary facility associated with a bedroom in a Class 1b building or a sole-occupancy unit in a Class 3 or Class 9c building
   - a space with a hearing augmentation system
   - each door required by E4.5 to be provided with an exit sign and state level
   - an accessible unisex sanitary facility and identify if the facility is suitable for left or right handed use
   - an ambulant accessible sanitary facility 1 and be located on the door of the facility
   - where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access to direct a person to the location of the nearest accessible pedestrian entrance
   - where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary

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

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

   Sample signs are as follows. These are examples only – ensure selected signage complies with BCA Specification D3.6 including provision of Braille locator for multiple lines of text and characters.

6.14 Slip Resistance (Stairs and Ramps)

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

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

Compliance Summary:

To be addressed during detailed design stage.

6.15 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.

Compliance Summary:

To be addressed during detailed design stages.

7 Sanitary Facilities

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

7.1 Distribution of Accessible Sanitary Facilities

For this development, being a school, the following is required:

- A unisex accessible toilet at each level that provides sanitary facilities. Where more than one bank of toilets is provided at any level, at least 50% of those banks will have an accessible toilet facility.

- At each bank of toilets where there is one or more toilets in additional to the 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.

Compliance Summary:

Capable of compliance.
Within Block B, a unisex accessible sanitary compartment is provided at the ground floor level with an accompanying ambulant toilet.

Within the new building, a unisex accessible sanitary compartment is provided at each teaching level. The toilet adjacent to the accessible facility at each level is required to be am ambulant toilet.

7.2 Unisex Accessible Sanitary Compartment

There are three (3) unisex accessible sanitary facilities provided within the proposed building works. Overall room dimensions and the set-out of fixtures is conducive to compliance with current accessibility legislation.

Compliance Summary:

Compliant configuration
Both left and right-handed facilities are provided.

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

a. Accessible toilet facilities to be unisex facilities for compliance with the BCA.

b. Unisex accessible facilities to comply with AS1428.1(2009), Clause 15 including set-out of fittings and fixtures, circulation areas and doorways.

c. Where more than one unisex accessible toilet is provided within the building, they should be in a mirrored configuration to allow for both left and right handed use.

WC Pan:

f. 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.

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

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

i. 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.

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

Basin:

k. 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.

l. Taps to have lever handles, sensor plates or similar controls. For lever taps, a minimum 50mm clearance to be provided to adjacent surfaces.

Door:

m. 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.

n. Door hardware to be located within the accessible height range of 900-1100mm above the finished floor level. The use of lever handles is encouraged to assist persons with a manual disability such as arthritis.

Controls:

o. 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.

7.3 Cubicles for People with an Ambulant Disability

Ambulant cubicles will be required in addition to the unisex accessible sanitary compartments.

Compliance Summary:

Capable of compliance

Requirements for the ambulant toilets are as follows.

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

b. Provide an ambulant cubicle within each bank of male and female toilets in compliance with AS1428.1, Clause 16.

c. Minimum width of ambulant cubicles to be 900-920mm.

d. Minimum distance between the front of the WC pan and cubicle door / wall is 900mm,

e. Seat height to be 460-480mm.

f. Provide grabrails to ambulant cubicles to comply with AS1428.1, Clause 17 and Figure 53A.

g. Provide toilet paper holder within the accessible reach zone (within 300mm of the front of the pan at a height less than 700mm).

h. Doors to have a minimum opening width of 700mm and comply with AS1428.1, Figure 53B.

i. Provide signage to the ambulant cubicles to comply with AS1428.1, Clause 16.4.

8 Vertical Circulation

Lifts provide the main means of access between levels of the buildings. Two lifts are provided within the development – one within the new building and one within Block B. Stairs are provided as a means of access between kevels of the building also.

8.1 Lifts

The overall size of the lift shafts is capable of accommodating lift cars of adequate dimensions for compliance with BCA.

Compliance Summary:

Capable of compliance

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.

8.2 Stairs

Stairs are provided within the buildings for general access between levels. AS1428.1 has access requirements for all stairs other than fire isolated egress stairs and is applicable in this instance.

Compliance Summary:

Compliant configuration

Access requirements for public access stairs are as follows.

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.

9 Best Practice Measures 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.

9.1 Accessways

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

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

9.2 Automatic Entrance Doors

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

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

9.3 Accessible Service Counters

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

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

9.4 Hearing Augmentation at Service Counters

For buildings that are required to be accessible, the BCA (Clause D3.7) requires hearing augmentation systems at service counters **where the user is screened from the service provider**.

With the introduction of sneeze-screens as part of COVID-19 mitigation measures, the provision of hearing augmentation at service counters has become a critical accessibility issue for people with hearing impairment.

9.5 Luminance Contrast

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

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

9.6 Visual Indication to Glazing (additional measures)

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

9.7 Workstations and Desks

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

9.8 Seating

A proportion of accessible seating should be provided that offers provides back and arm rests.
A seat height of 450mm is optimal; with arms that extend a further 260mm +/- 40mm in height. · Armrests should not extend beyond the perimeter of the base or legs of the seat to ensure stability of the chair when rising with use of only one armrest.

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

9.9 Furniture and Joinery Hardware

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

9.10 Wayfinding – Signage

Signs and symbols should be provided to inform all users. A signage system which informs all users is encouraged. The use of pictograms and directional cues is recommended as is the use of luminance contrast to ensure the message is clear and Terminology (Best-practice recommendation)
The use of positive terminology such as "accessible" should be used when referring to accessible facilities such as toilets and carparking. This term is preferable to "disabled" which is commonly used. This principle is to be adopted through the design and documentation of a project and on signage throughout the completed building.

10 Conclusion

This report demonstrates that the fundamental aims of accessibility legislation are achievable within the Newcastle Grammar School Park Campus Stage 1, located at Parkway Avenue Cooks Hill. 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.

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.

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.