

Appendix G12

**Disability Access
Report**

for

New School Charmhaven



lindsay perry access

Disability Access Report

**St Philips Christian College
Charmhaven**
Arizona Road
CHARMHAVEN NSW

For: St Philips Christian Education
Foundation
Ref: LP_21035



Document Control

This report has been prepared based on the documentation available and time allocated to conduct the review. All reasonable attempts have been made to identify key compliance matters.

Revision Summary:

prepared by: Lindsay Perry	Draft Revision 1 Revision 2	26 May 2022 28 June 2022 22 November 2022
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Clarifications:

This report is limited to items within drawings listed in this report only.

Any dimensions quoted throughout this report and within Australian Standards are CLEAR dimensions, not structural.

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.

Definitions:

The following terminology has been used throughout this report:

Capable of compliance | compliance is achievable through detailed design

Compliant | compliance with current accessibility legislation has been achieved

Compliant Configuration | circulation and spatial planning requirements are compliant

Not Yet Compliant | circulation and spatial planning requirements have not yet been met

To be addressed during detailed design stage | details not available at DA stage

To be confirmed | inadequate information is provided to determine compliance



Executive Summary

State Significant Development Application documentation for the St Philips Christian College Charmhaven located at Arizona Road Charmhaven, has been reviewed against current accessibility legislation.

The site provides the opportunity to maximise accessibility and inclusion. The buildings have been designed to accommodate accessibility requirements and the pedestrian network throughout the site will afford access to all areas.

We consider that the drawings presented for assessment, for the purposes of a development application, generally comply with current statutory requirements.

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1. Project Background

The project will see site preparation works (the removal of vegetation, earthworks, provision of services) and the construction of a new non-government K-12 school known as St Philip's Christian College, Charmhaven to educate up to 554 students in Stage 1A-1D and 1,583 students by Stage 4.

The new school will include a one into two lot subdivision to separate the development footprint of the school from the remainder of the site. Works to provide inground services (water, sewer, and electricity), a new intersection on the Pacific Highway, PFAS remediation work, administration buildings, new junior, middle and senior school facilities, sporting facilities, a performing arts centre, chapel, as well as a Dynamic Alternative Learning Environment (DALE).

Other facilities include sporting fields, outdoor courts and indoor courts and facilities.



Figure 1 | Proposed Development

2. Council DCP Requirements for Accessibility

The development site lies within the Central Coast Council local government area. The Central Coast Development Control Plan 2022 is applicable in this instance.

This document has no specific accessibility requirements for projects of this nature.

3. Reviewed Documentation

State Significant Development Application documentation prepared by SHAC has been reviewed in the preparation for this access report as follows.

- Architectural Drawing Portfolio (October 2022-D)

4. Legislation

Access assessment has been made against Access Legislation including:

- The Commonwealth Disability Discrimination Act 1992 (DDA)
- Disability (Access to Premises (Buildings)) Standards 2010
- Access Code for Buildings 2010
- The National Construction Code Building Code of Australia Volume 1, Amendment 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 AS2890.6 (2009) – Parking Facilities – Off street carparking For People with Disabilities.
- Australian Standard AS1735.12 – Lifts, escalators and moving walks: Lifts for persons with a disability

A summary of the requirements of relevant legislation follows.

The Disability Discrimination Act 1992

The DDA requires independent, equitable, dignified access to all parts of the building for all building users regardless of disability. The DDA makes it unlawful to discriminate against a person on the grounds of disability.

The Disability (Access to Premises) Standards

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

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

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

The Building Code of Australia (BCA) is contained within the National Construction Code (NCC) and provides the minimum necessary requirements for safety, health, amenity and sustainability in the design and construction of new buildings (and new building work in existing buildings) throughout Australia. The BCA is a performance-based code and compliance can be met through satisfying the deemed-to-satisfy provisions or by meeting the prescribed performance requirements.

The BCA for Class 9b buildings requires access for people with disabilities to and within all areas usually used by the occupants and to wheelchair seating spaces provided in accordance with D3.9. Access need not be provided to every tier / platform within an auditorium.



AS1428 – Design for Access and Mobility

The AS1428 Suite provides design requirements for accessibility generally, covering all types of disabilities. AS1428.1 and AS1428.4.1 are referenced by the NCC / BCA.

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

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

AS1735– Lifts, escalators and moving walks

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

5 The Disability (Access to Premises) Standards

Any application for a building approval for a new building or upgrade of an existing building triggers the application of the Premises Standards.

The Premises Standards include an Access Code written in the same style as the Building Code of Australia. Additionally, it offers a number of concessions for existing buildings as outlined below.

5.1 Access Code

The Premises Standards include an Access Code written in the same style as the Building Code of Australia.

Compliance Summary:

Refer to BCA requirements throughout subsequent sections of this report.

5.2 New Work and The Affected Part

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

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

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

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

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

Compliance Summary:

Not applicable

Commentary:

The new work and affected part provisions are applicable to modifications works, not new development of this nature.

6. BCA | Access and Approach | External Areas

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 Arizona Road and Pacific Highway to the building entrances
- from the accessible carparking areas to the building entrances
- between associated accessible buildings within the site



Figure 2 | Overall Site Plan

6.1 Approach from Arizona Road

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:

Capable of compliance

Commentary:

The main circulation spine throughout the site extends to the bus bays along Arizona Road, facilitating an accessible path of travel from the allotment boundary at this point to facilities within the school. We assume that this will extend to new footpath areas along Arizona Road generally in the immediate vicinity of the site.



6.2 Approach from Pacific Highway

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:

Capable of compliance

Commentary:

A new roadway is proposed for access into the campus from Pacific Highway. A formed pedestrian footpath is provided in conjunction with this new roadway.

6.3 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:

Capable of compliance

Commentary:

An accessible path of travel is provided from accessible carparking spaces throughout the site to the central circulation spine and in turn the building entrances.

6.4 Approach between Associated Buildings

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

Compliance Summary:

Capable of compliance

Commentary:

The main circulation spine throughout the site, that offers an accessible path of travel following the contours of the land, connects buildings and facilities within the school.

6.5 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

Commentary:

The main circulation spine throughout the site, and associated pathways offer a width of approximately 3m and follow the contours of the site.



6.6 Pedestrian Crossings

There are marked pedestrian crossings on the site. These are generally located in association with carparking areas to enable pedestrian access to the building entrances.

Compliance Summary:

Capable of compliance

Commentary:

Where kerb ramps are to be provided at the roadway to provide an accessible path of travel for, kerb ramps will need to meet AS1428.1 requirements.

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

6.7 Accessible Carparking

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

Compliance Summary:

Compliant configuration

Commentary:

Plans indicate a total of two hundred and fifty-five (255) carparking spaces across the site. Carparking areas are generally provided in groups of twenty (20) spaces and distributed evenly throughout the site.

A total of fourteen (14) accessible spaces are provided within close proximity to the building entrances. Therefore, the number of accessible spaces provides BCA compliance.

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



6.8 Accessible Ramps

Accessible ramps are provided as a part of the accessible path of travel to the building entrances throughout the site.

Compliance Summary:

Capable of compliance

Commentary:

The accessible ramps are generally provided in a switch-back arrangement.

The overall configuration is in keeping with current accessibility legislation with respect to provision of landings and overall length of the ramps.

6.9 Stairs

AS1428.1 has access requirements for all public access stairs.

Compliance Summary:

Capable of compliance

Commentary:

Stairs are provided as a part of the pedestrian access throughout the site generally.

Overall configuration is in keeping with current requirements in terms of the clear width and provision of handrails generally.

6.10 Walkways

AS1428.1 defines a walkway as having a gradient of 1:20, which is provided in this instance. 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

Commentary:

Walkways (nominated gradient 1:20) are provided as a link the Senior School from the Performing Arts Centre and the Middle School. They are provided as a single length.

The overall configuration is in keeping with current accessibility legislation with respect to provision of landings and overall length.



6.11 Tiered Seating Area

A tiered seating area, with stairs, is provided as a part of the Junior School external areas. We note that adequate space is provided at each level for the provision of wheelchair seating.

Compliance Summary:

Capable of compliance

Commentary:

Stairs are provided as a means of access between the tiered seating areas. Ensure the provision of accessible features to the stairs per AS1428.1.

6.12 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. A pedestrian entrance which is not accessible must not be located more than 50m from an accessible pedestrian entrance.

Compliance Summary:

Capable of compliance

Commentary:

Double swinging doorways are generally provided for entry to each building. Adequate circulation areas are achieved.



7. Building Specific Commentary

The following provides an overview of the accessibility status of the new buildings within the Stage 1 works. The intent of the design is to maximise accessibility generally and offer an inclusive environment for all users.

7.1 Building A | Welcome Centre

The Welcome Centre is the public interface of the school and is located within the western end of the site. Provided over two levels, the building adjoins the Meeting Place. The Welcome Centre consists of a central open space at each level with facilities and offices to the perimeter of the building. A central staircase and lift provide access through levels.

Compliance Summary:

Compliant in Principle

Commentary:

The Welcome Centre is considered capable of compliance with current accessibility legislation as follows:

- Access is provided to and within all areas normally used by the occupants.
- Doorways, including the entrances, generally achieve circulation areas that will facilitate independent access for people with disabilities.
- Corridor areas are of a width that enables wheelchair turning areas.
- A lift facilitates access between levels.
- Unisex accessible sanitary compartments are provided at both levels of the building.
- Ambulant toilets are provided in addition to the unisex accessible sanitary compartment at both levels of the building.

7.2 Building B | Chapel

The chapel is provided over a single level and the entrance is from The Meeting Place that forms the public entrance to the school. The chapel provides a stage and associated fixed seating.

Commentary:

The Chapel is generally considered capable of compliance with current accessibility legislation as follows:

- Access is provided to and within all areas normally used by the occupants.
- Entry doorways achieve circulation areas that will facilitate independent access for people with disabilities.
- There are areas available for the provision for wheelchair seating spaces (3 off will be required)



7.3 Building C | Narnia

Building C houses Narnia (early learning centre) and the OOSH. A central corridor forms an axis through the building along which staff and play areas are provided. The OOSH is a self-contained facility at the eastern end of the building.

The early learning centre provides three (3) age-appropriate play areas with adjoining outdoor play areas.

Simple circulation provides direct and defined access to all areas of the building.

Compliance Summary:

Compliant in Principle

Commentary:

Building C is generally considered capable of compliance with current accessibility legislation as follows:

- Access is provided to and within all areas normally used by the occupants.
- Doorways, including the entrances, generally achieve circulation areas that will facilitate independent access for people with disabilities.
- Corridor areas are of a width that enables wheelchair turning areas.
- Staff amenities are provided along the main corridor and includes a unisex accessible sanitary facility.

7.4 Building D | Community Stand

Building D is the Community Stand that overlooks the Village Green. It provides tiered seating with stairs at each end, accessed from the formed pedestrian areas.

Compliance Summary:

Compliant in Principle

Commentary:

Building D is generally considered capable of compliance with current accessibility legislation as follows:

- There is the capacity for wheelchair seating at the base for the community stand.
- Stairs are provided in a mirrored configuration that will enable a left and right-handed handrail arrangement.



7.5 Building G + H | Junior School

Building G + H are located centrally within the site. Provided over two levels, the building has been designed as two Pavilions that will accommodate the Junior and Middle Schools (K – Year 8). The pavilions will provide reception and administrative areas for each sub school, library, general learning areas, Maker Spacers, Food Tech, CAPA and associated areas. A lift provides an accessible path of travel between levels.

An outdoor tiered seating area is also included with the building.

Simple circulation provides direct and defined access to all areas of the pavilions. Sanitary facilities are located centrally within each pavilion along the main corridor area and provide both student and staff facilities.

Compliance Summary:

Compliant in Principle

Commentary:

Pavilions G & H are generally considered capable of compliance with current accessibility legislation as follows:

- Access is provided to and within all areas normally used by the occupants.
- Doorways, including the entrances, generally achieve circulation areas that will facilitate independent access for people with disabilities.
- Corridor areas are of a width that enables wheelchair turning areas.
- A shared lift facilitates access between levels.
- Unisex accessible sanitary compartments are provided at both levels of each pavilion for staff and student use.
- Ambulant toilets are provided in addition to the unisex accessible sanitary compartment at both levels of each pavilion



8. General Accessibility Requirements | External Areas

The following generally accessibility features apply to the exterior areas of the proposed development.

8.1 Accessways Generally

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

- a. The minimum unobstructed width of all pathways is to be 1000mm (AS1428.1, Clause 6.3). A width of 1200mm is preferred for compliance with AS1428.2.
- b. All pathways are to be constructed with no lip or step at joints between abutting surfaces (a construction tolerance of 3mm is allowable, or 5mm for bevelled 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.

8.2 Walkways

AS 1428.1 has access requirements for walkways as follows:

- 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)
- 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 180°, landings to be 1540mm in length – refer to AS1428.1(2009), Clause 10.8.



8.3 Accessible Ramps

AS 1428.1 has access requirements for accessible ramps 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). Increased circulation areas are required at landings to facilitate wheelchair maneuverability.
- 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.

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, Figure A1).

8.4 Stairs

AS 1428.1 has access requirements for all public access stairs as follows:

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

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.

- d. 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.
- e. Stair nosings shall not project beyond the face of the riser.
- f. Provide tactile indicators at the top and bottom of the stair 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.

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.

8.5 Kerb Ramps

AS 1428.1 has access requirements for kerb ramps as follows:

- a. Kerb ramps to comply with AS1428.1 (2009) Amendment 1, Clause 10.7
- b. Maximum gradient of the kerb ramps to be 1:8 and maximum length to be 1520mm (providing a maximum height of 190mm).
- c. Kerb ramps to have a non-slip surface as required by AS1428.
- d. A tooled joint should be provided between parts of the kerb ramp to assist persons with a vision impairment with orientation.

8.6 Accessible Carparking

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

- a. Accessible carparking to be a minimum of 2400mm wide with a shared area to one side of the space 2400mm wide. Circulation space can be shared between adjacent accessible carparks. For a single space, a total width of 4800mm is required.
- b. Provide a bollard to the shared circulation space as illustrated in AS2890.6, Figure 2.2.
- c. The maximum allowable crossfall of accessible carparking area to be 1:40. This crossfall applies both parallel and perpendicular to the angle of parking.
- d. For covered carparking, the clear height of the accessible carparking space to be 2500mm as illustrated in AS2890.6, Figure 2.7.



- e. Designated accessible carparking is to be identified using the International Symbol for Access (ISA) between 800 and 1000mm high placed as a pavement marking in the centre of the space between 500-600mm from its entry point. The perimeter of the space is to be identified by an unbroken yellow & slip resistant line 80-100mm wide (except where there is a kerb or wall)
- f. Shared space to be identified using yellow slip-resistant & unbroken stripes 150 to 200mm wide with spaces 200 to 300mm between stripes. Stripes to be at an angle of 45° to the side of the space.

8.7 Pedestrian Crossings

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

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

8.8 Accessible Entrances

Access requirements for entrances are as follows.

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



9. General Accessibility Features | Internal Areas

The following generally accessibility features apply throughout the proposed development to ensure an inclusive and equitable environment is created for all building occupants. They should be addressed during detailed design stages to ensure compliance of the built form.

9.1 Extent of Access Generally – BCA

Access for people with disabilities is required to and within all areas normally used by the occupants. This is achieved throughout the proposed building works as outline in the preceding section of this report.

9.2 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.

9.3 Doorways Generally

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

9.4 Doorways within Vestibules and Air-locks

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

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

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

9.6 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.

9.7 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; or a system requiring the use of receivers (infrared or the like) to not less than 95%.

9.8 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.

Carpet

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



9.9 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.

9.10 Controls

Controls such as light switches, alarm keypads, card swipes, etc are to be located within the accessible height range of 900-1100mm above the floor level and not within 500mm of an internal corner to comply with AS1428.1(2009), Clause 14.

9.11 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. Decals are to be solid per AS1428.1, Clause 6.6.

9.12 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).

9.13 Slip Resistance (Stairs & 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

9.14 Signage

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

- a. Braille and tactile signage formats as outlined within BCA Specification D3.6 that incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 must be provided to identify the following:
 - a sanitary facility, except a sanitary facility associated with a bedroom in a Class 1b building or a sole-occupancy unit in a Class 3 or Class 9c building
 - a space with a hearing augmentation system
 - each door required by E4.5 to be provided with an exit sign and state level
 - an accessible unisex sanitary facility and identify if the facility is suitable for left or right handed use
 - an ambulant accessible sanitary facility 1 and be located on the door of the facility
 - where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access to direct a person to the location of the nearest accessible pedestrian entrance
 - where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary
- b. Braille and tactile components of the sign to be located not less than 1200mm and not higher than 1600mm affl.
- c. Signage to be located at the latch side of the doorway with the leading edge of the sign 50-300mm from the architrave. Where this is not possible, the sign can be located on the door.

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





9 Accessible Sanitary Facilities Requirements

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

9.1 Distribution of Accessible Sanitary Facilities

The following is required to satisfy BCA requirements, noting that not all are applicable to all developments:

- 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.
- 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
- 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.
- One unisex accessible adult change facility must be provided in certain buildings (not required for this development).

9.2 Unisex Accessible Toilets

Access requirements for the accessible toilet facilities are as follows. 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:

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



- f. Grabrails to be provided at the side and rear of the toilet in compliance with AS1428.1 at a height of 800mm.
- g. 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.
- h. Provide a backrest to accessible toilets to comply with AS1428.1, Clause 15.2.4.

Basin:

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

Door:

- k. 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.
- l. 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:

- m. 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.

9.3 Cubicles for People with an Ambulant Disability

Ambulant cubicles are required in addition to the unisex accessible sanitary compartment. Accessibility 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. Provide grabrails to ambulant cubicles to comply with AS1428.1, Clause 17 and Figure 53A.
- e. Doors to have a minimum opening width of 700mm and comply with AS1428.1, Figure 53B.
- f. Provide signage to the ambulant cubicles to comply with AS1428.1, Clause 16.4.

5.3 Unisex Accessible Shower Facility

An accessible shower is required within this development. Access requirements for accessible showers are as follows.

- a. Accessible 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.
- b. Floor waste to be positioned 550mm and 580mm from enclosing shower walls as illustrated in AS1428.1 (2009), Figure 47a.
- c. 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.
- d. Circulation space in front of the shower is to be provided as illustrated in AS1428.1, Figure 47.

10 Vertical Circulation Accessibility Requirements

The following requirements are applicable to the vertical circulation within throughout the development.

10.1 Lift

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.

10.2 Stairs

AS1428.1 has access requirements for all stairs other than fire isolated egress stairs.

- a. Stair construction to comply with AS1428.1, Clause 11.1.
- b. Stairs to have closed or opaque risers. Open risers cause confusion for persons with a vision impairment and may trigger conditions such as epilepsy due to light penetrating through the open risers.
- c. Where the stair intersects with an internal corridor, the stair shall be set back in accordance with AS2418.1 Figure 26C/D to allow adequate space for handrail extensions and tactile indicators.
- d. Provide handrails, with extensions, to both sides of the stair (AS1428.1, Clause 11.2). Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails should be continuous around the landings where possible.

Handrails are required on both sides of the stair to cater for left and right-handed disabilities. A central handrail is also an acceptable solution where adequate width is available.

- e. Stair nosings to have minimum 30% luminance contrast strip 50-75mm wide to the top of the stair tread to assist persons with a vision impairment. The strip can be set back 15mm from the edge of the riser.
- f. Stair nosings shall not project beyond the face of the riser.
- g. Provide tactile indicators at the top and bottom of the stair to comply with BCA Clause D3.8 and AS1428.4.1.

Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour. For discrete tactile indicators, 45% luminance contrast is required (60% where two-tone indicators are used). 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.



11 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.

11.1 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.

11.2 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.

11.3 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.

11.4 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.

11.5 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.

11.6 Kitchenettes

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

- The height of benches should be between 700-850mm affl noting that no height will suit all users. We recommend a height of 850mm.
- Clearance in front of the bench of 1540mm is encouraged to facilitate a 180° turn by a wheelchair
- Acceptable hardware for cupboards includes touch latches and D shaped pull handles.
- A shallow sink should be provided. Optimum bowl depth is 150mm with clearances under as per requirements for handbasins.

11.7 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.

11.8 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.

11.9 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.



11.10 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 legible.

11.11 Wayfinding – Landmarks and Tactile Indicators

To assist people with vision impairment navigate their environment, the use of directional tactile indicators can be implemented, noting that their use should be minimised. The design of directional tactile indicators is site / building specific.

Additionally, landmarks such as entry features, statues, sculpture, fountains, or other unique features can be used as a means of way-finding throughout a building. This especially assists people with intellectual disabilities.

11.12 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.

11.13 Accessible Adult Change Facility

While not required within most developments, the provision of an accessible adult change facility promotes inclusion for all users. An Accessible Adult Change Facility is a toilet and change facility that caters for users with high support needs and their carers where they require additional space, assistance and specialised equipment to allow them to use toilets safely and comfortably. Accessible adult change facilities are based on ‘Changing Places’ that are based on a model developed in the UK.

11.14 Emergency Call Button in Sanitary Compartments

If provided, emergency call button should be located at 600+/- 20mm above the finished floor level in front of the toilet roll holder to enable ease of access for someone who has fallen off the pan. People do fall off the pan, in particular those with no or limited upper trunk control.



12 Conclusion

This report demonstrates that the fundamental aims of accessibility legislation are achievable within the proposed St Philips Christian College Charmhaven located at Arizona Road Charmhaven. 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 for 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.

