

Access Report

Seniors Community
Lot 3 Lakewood Drive
MERIMBULA NSW

For: Justice Fox
Ref: 22113



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:

<u>prepared by:</u>		
Lindsay Perry	Draft	26 May 2022
	Revision 1	1 June 2022
	Revision 2	2 June 2022

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Clarifications:

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

Construction is to be in accordance with the recommendations made in this access report to ensure compliance.

Any dimensions quoted throughout this report and within Australian Standards are CLEAR dimensions, not structural. This needs to be considered during construction to account for wall linings and the like.

Definitions:

The following terminology has been used throughout this report:

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

Development application documentation for the proposed Seniors Community located at Lot 3 Lakewood Drive Merimbula, has been reviewed against current and applicable accessibility legislation.

The following table summarises our findings.

Item No.	Description	Compliance Status
SEPP Siting Requirements		
4.1	Location & Access to Facilities	Compliant
4.2	Accessibility	Compliant
SEPP Schedule 8		
5.1	Siting Standards	Compliant
5.2	Security	To be addressed in detailed design.
5.3	Letterboxes	Compliant
5.4	Private Car Accommodation	Compliant configuration
5.5	Accessible Entry	Compliant configuration
5.6	Interior	Compliant configuration
5.7	Main Bedroom	Compliant
5.8	Bathroom	Compliant
5.9	Toilet	Compliant
5.10	Surface Finishes	To be addressed in detailed design.
5.11	Door Hardware	To be addressed in detailed design.
5.12	Ancillary Items	To be addressed in detailed design.
5.13	Living and Dining Room	Compliant
5.14	Kitchen	Compliant
5.15	Access to kitchen, main bedroom & bathroom	Not applicable
5.16	Lifts in multi-storey buildings	Capable of compliance.
5.17	Laundry	Compliant
5.18	Storage	Compliant
5.19	Garbage	Compliant
Access + Approach		
6.1	Approach from Allotment Boundary	Compliant
6.2	Approach from Accessible Parking	Compliant
6.3	Link between Associated Buildings	Compliant
6.4	Accessways (pathways) Generally	Capable of compliance
6.5	Accessible Carparking	Compliant configuration
6.6	Stairs	Capable of compliance
6.7	Pedestrian Crossings	Capable of compliance
6.8	Accessible Entrances	Compliant configuration
Interior		
7.1	Extent of Access Generally	Compliant
7.2	Circulation Areas	Compliant
7.3	Doorways Generally	Compliant configuration



7.4	Doorways to Vestibules	Compliant
7.5	Doorways to Ambulant Toilets	Compliant
7.6	Hearing augmentation at Service Counters	To be addressed in detailed design
7.7	Hearing Augmentation	To be addressed in detailed design
7.8	Exempt Areas	Compliant
7.9	Floor Finishes	To be addressed in detailed design
7.10	Carpet	To be addressed in detailed design
7.11	Controls	To be addressed in detailed design
7.12	Visual Indication to Glazing	To be addressed in detailed design
7.13	Tactile Indicators	To be addressed in detailed design
7.14	Signage	To be addressed in detailed design
7.15	Access to Swimming Pool	Compliant
7.16	Slip Resistance(Ramps & Stairs)	To be addressed in detailed design
Sanitary Facilities		
8.1	Distribution	Compliant
8.2	Accessible Toilets	Capable of compliance
8.3	Accessible Showers	Capable of compliance
8.4	Ambulant Toilet Cubicles	Capable of compliance
Vertical Circulation		
9.1	Lifts	Capable of compliance
9.2	Fire Isolated Egress 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. SEPP Housing requirements are included in Appendix 1 of this report and general accessibility requirements within Appendix 2, to guide the detailed design. Best Practice options are provided within Appendix 3 and we encourage their implementation into the design.

The recommendations throughout this report reflect the professional opinion and interpretation of Lindsay Perry Access Pty Ltd. This may differ from that of other consultants.

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1 Project Description

The proposed development is a seniors community over five (5) that includes independent living areas with communal facilities for recreation and relaxation such as a bowling green, pool, games rooms, library and lounge areas, gym, function room and rooftop terrace.

Eighty-nine (89) independent living units are provided within the development over four (4) levels. Carparking is located at the ground floor and basement levels.



Figure 1 | Proposed Development

2 Reviewed Documentation

Documentation prepared by ELK Designs has been reviewed as follows:

dwg no.	drawing name	revision
DA000	Cover Page	P5
DA030	Site Plan	P5
DA040	Perspectives	P2
DA041	Perspectives	P2
DA099	Basement Level	01
DA100	Ground Floor	P4
DA110	First Floor	P4
DA120	Second Floor	P4
DA130	Third Floor	P4
DA140	Roof Top Terrace	P4
DA150	Roof Plan	P3
DA160	Typical Adaptable Room Plan	P2
DA165	Administration, Bowling Club & Pool House	P2
DA166	Roof Top Functions / Mixed Use	P1
DA300	Elevations	P3
DA301	Elevations	P3
DA910	GFA Ground	P1
DA911	GFA First Floor	P1
DA912	GFA Second Floor	P1
DA913	GFA Third Floor	P1
DA914	GFA Fourth Floor	P1



3 Legislation

Access assessment has been made against Access Legislation including:

- State Environmental Planning Policy – Housing 2021 – 26 November 2021
- 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 AS2890.6 (2009) – Parking Facilities – Off street carparking For People with Disabilities.
- Australian Standard AS4299 – Adaptable Housing
- Australian Standard AS1735.12 – Lifts, escalators and moving walks: Lifts for persons with a disability

A summary of the requirements of relevant legislation follows.

SEPP Housing 2021

Housing SEPP) incentivises the supply of affordable and diverse housing in the right places and for every stage of life and ensures that the home building sector is well-placed to assist the economic recovery of NSW following the COVID-19 pandemic.

It consolidates five housing-related policies being:

- State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARHSEPP);
- State Environmental Planning Policy (Housing for Seniors and People with a Disability) 2004 (Seniors SEPP);
- State Environmental Planning Policy No 70 - Affordable Housing (Revised Schemes) (SEPP 70);
- State Environmental Planning Policy No 21 - Caravan Parks; and
- State Environmental Planning Policy No 36 - Manufactured Home Estates.

Chapter 3, Part 5 relates to Housing for Seniors and People with a Disability with Division 3, 5 and 6 provides development standards for the design of seniors housing,



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 2 buildings, access for people with disabilities is required:

- From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level.
- To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like.

Where a ramp complying with AS 1428.1 or a passenger lift is installed—

- a) to the entrance doorway of each sole-occupancy unit; and
- b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.

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



AS1428 – Design for Access and Mobility

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

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

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.

AS4299 Adaptable Housing

AS4299 (1993) provides housing for different community groups with different needs. It involves a move away from special accommodation for persons with a disability, avoiding social dislocation.

4 SEPP Housing – Siting Requirements

The proposed development has been designed to reflect the requirements of the SEPP Housing 2021 for seniors housing. This development contains self-contained dwellings. Therefore, the requirements of SEPP Division 4, clause 93: Location and Access to Facilities and Division 6 clause 104: Accessibility are relevant.

4.1 SEPP Clause 93 Location & Access to Facilities

A SEPP development must offer access to services such as shops, banks, retail services, commercial services, recreational facilities, community facilities and doctors. These facilities are to be located within 400m of the site via a pathway that provides a suitable access pathway.

The SEPP states that a **suitable access pathway** is a path of travel by means of a sealed footpath or other similar and safe means that is suitable for access by means of an electric wheelchair, motorised cart or the like.



Further, the SEPP defines **wheelchair access** as follows (clause 3: interpretation)
wheelchair access, in relation to any 2 points, means a continuous path of travel between those points that can be negotiated by a person using a wheelchair.

The overall aims of the SEPP are to:

- increase the supply and diversity of residences that meet the needs of seniors or people with a disability, and
- make efficient use of existing infrastructure and services, and
- be of good design.

For development outside the Sydney Statistical Division, these services can be located at a distance greater than 400m from the site if there is a transport service available. The transport service is required to take residents to a place that is located at a distance of not more than 400m from the relevant facilities or services and is to be available to and from the proposed development. It must be available both to and from the proposed development during daylight hours at least once each day from Monday to Friday (both days inclusive).

Within the SEPP, a **suitable access pathway** has an average gradient of 1:14. Other allowable gradients include 1:12 for a length of up to 15m, 1:10 for a length of up to 5m and 1:8 for a length of up to 1.5m.

Compliance Summary:

Compliant

Commentary:

We have been advised that a community bus will be provided as a part of the development. Being within a new residential subdivision, the site is not located within 400m of a public transport service. This meets SEPP requirements for development outside the Sydney statistical area.

4.2 SEPP Clause 104– Accessibility

A SEPP development should have obvious and safe pedestrian links from the site that provide access to public transport services or local facilities. A development should provide attractive, yet safe, environments for pedestrian and motorists with convenient access and parking for residents and visitors.

Compliance Summary:

Compliant

Commentary:

The proposed development meets the intent of this Clause – a community bus will be provided for residents in lieu of a public transport system.

Common carparking is provided at the ground floor and basement levels of the development with an accessible path of travel to residential units and other facilities.

5 SEPP – Schedule 8 / Schedule 3 Standards Concerning Accessibility & Usability for Hostels and Independent Living Units

SEPP Housing Schedule 8 – Transfer of Provisions, clause 1 states the following:

1. Omit the heading to Schedule 3.
Insert instead—

Schedule 3 Standards concerning accessibility and usability for hostels and independent living units

2. Omit “5%” from clause 5(b), Schedule 3. Insert instead “10%”.
3. Omit “20 spaces” from clause 5(b), Schedule 3. Insert instead “10 spaces”.
4. Omit “AS 2890” wherever occurring. Insert instead “AS 2890.6”.
5. Transfer State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004, Schedule 3 to this Policy as Schedule 4.

There are eighty-nine (89) independent living units on the site. They are provided as a two-bedroom arrangement and are of similar design.

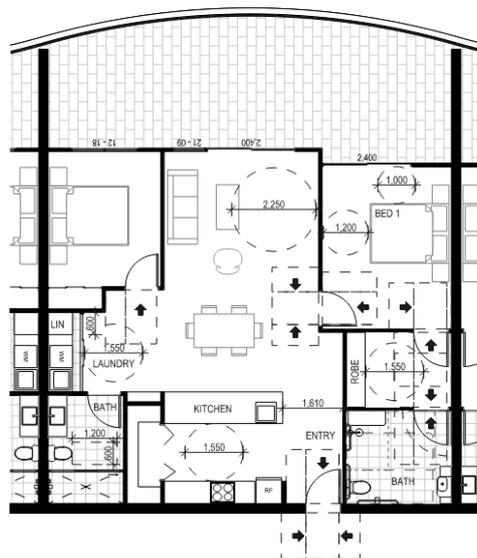


Figure 2 | Typical Independent Living Unit Arrangement

5.1 Schedule 4, Clause 2 – Siting Standards

This Clause contains 3 parts regarding siting standards as follows.

(1) Wheelchair Access

Where the whole of the site has a gradient of less than 1:10, 100% of the dwellings must have wheelchair access by a continuous path of travel within the meaning of AS1428 to an adjoining public road.



- (2) If the whole of the site does not have a gradient of less than 1:10:
- a) the percentage of dwellings that must have wheelchair access must equal the proportion of the site that has a gradient of less than 1:10, or 50%, whichever is the greater, and
 - b) the wheelchair access provided must be by a continuous accessible path of travel (within the meaning of AS 1428.1) to an adjoining public road or an internal road or a driveway that is accessible to all residents.

(3) Common Areas

Access must be provided in accordance with AS 1428.1 so that a person using a wheelchair can use common areas and common facilities associated with the development.

The applicable siting standards for this development are (1) and (3). The site has an overall gradient less than 1: 10 and community facilities are provided.

Note: an independent living unit, or part of an independent living unit, that is located above the ground floor in a multi-storey building does not have to comply with the requirements of the above provisions if the development application is made by, or by a person jointly with, a social housing provider (clause 85 (2)).

Compliance Summary:

Compliant

Commentary:

All of the residential units on the site are accessible to people with disabilities. An accessible path of travel is provided for access to the street footpath along Lakewood Drive and from the carparking areas.

5.2 Clause 3 – Security

Pathway lighting is to be designed and located to avoid glare for pedestrians and adjacent dwellings. Lighting to be minimum 20 lux at ground level.

Compliance Summary:

To be addressed during detailed design.

5.3 Clause 4 – Letterboxes

Letterboxes are required to be lockable, in a central location and be accessible to persons using a wheelchair via an accessible path of travel.

Compliance Summary:

Compliant

Commentary:

Letterboxes are provided at the main entry foyer in an accessible location. Letterboxes should be provided within the accessible height range of 600-1100mm above ground level to assist persons using a wheelchair / scooter.



5.4 Clause 5 – Private Car Accommodation

If car parking (not being for employees) is provided,

- Carparking spaces must comply with the requirements for parking for persons with a disability set out in AS2890.6 and,
- 10% of the total number of car parking spaces (or at least one space if there are fewer than 10 spaces) must be designed to enable the width of the spaces to be increased to 3.8m and,
- Any garage must have a power operated door.

Compliance Summary:

Compliant configuration

Commentary:

There are two (2) carparking areas proposed within the development. Residential carparking is provided at the basement and ground floor levels of the main building and is subject to the above-mentioned requirements. An open-air staff and visitor carpark is also provided to the north of the building.

The residential carparking is provided in an arrangement that reflects AS2890.6. There are also a portion of carparking spaces that are 3800mm wide, that represents 10% of the total residential car parking. This arrangement achieves SEPP requirements.

5.5 Clause 6 – Accessible Entry

Every entrance to each residence, whether it be the front entry or not, must comply with Clauses 4.3.1 and 4.3.2 of AS4299. Clauses 4.3.1 and 4.3.2 of AS4299 require the entry door to comply with AS1428.2 – the minimum clear opening width of the doorway is to be 850mm and allow for wheelchair maneuverability (provide minimum 1550mm long area in front of the doorway).

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

Compliance Summary:

Compliant configuration

Commentary:

Adequate circulation areas provided at building entrances and at the entrance to individual units. A door leaf size of 920mm should be used as a minimum which will achieve the required clear width of 850mm.

The requirement for door hardware should be implemented during detailed design.



5.6 Clause 7 – Interior

Widths of internal corridors 1000mm and circulation at internal doorways must comply with AS1428.1.

Compliance Summary:

Compliant configuration

Commentary:

The required doorway circulation areas are shown dashed on the floor plans achieves compliance with AS1428.1 as per SEPP requirements.

All corridors within the dwellings meet the required width of 1000mm minimum.

5.7 Clause 8 – Main Bedroom

At least one bedroom is required to have adequate space for a wardrobe and a queen size bed with minimum 1200mm wide circulation at the foot of the bed, 1000mm between the bed and wall / wardrobe or any other obstruction. There are also requirements for locations of GPOs and telephone outlets and illumination levels.

Compliance Summary:

Compliant

Commentary:

The main bedroom within each dwelling offers adequate circulation area. Additional requirements listed above to be implemented during detailed design.

5.8 Clause 9 – Bathroom

At least one bathroom must be located on the entry level and have an area that complies with AS1428, slip resistant floor, shower minimum 1100x1160mm with future provision for accessible features, washbasin capable of adaption to comply with AS4299 and a wall cabinet with illumination levels as described.

Compliance Summary:

Compliant

Commentary:

The ensuite (main bathroom) to Bedroom 1 within each of the units is conducive to the requirements of an accessible bathroom, meeting the requirements of the SEPP.

Additional requirements listed above to be implemented during detailed design.

We note that the SEPP allows for future adaption of bathroom areas that reflect the individual needs of the residents.



5.9 Clause 10 – Toilet

A self-contained residence is required to have a toilet on the ground (or main) floor that complies with the requirements for sanitary facilities of AS4299. That is, a visitable toilet with 1250mm length and 90mm wide in front of toilet pan, clear of door swings and fixtures.

Compliance Summary:

Compliant

Commentary:

The toilet within the ensuite of each unit meets the requirements of AS4299.

5.10 Clause 11 – Surface Finishes

Balconies and external paved areas must have slip resistant surfaces

Compliance Summary:

To be addressed during detailed design.

5.11 Clause 12 – Door Hardware

Door handles and hardware for all doors must be provided in accordance with AS4299.

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

Compliance Summary:

To be addressed during detailed design.

5.12 Clause 13 – Ancillary Items

Switches such as light switches must be located within the accessible height range of 900-1100mm above the floor level as required by AS4299.

Compliance Summary:

To be addressed during detailed design.

5.13 Clause 15 – Living and Dining Room

Living areas within each residence are required to have circulation areas in accordance with AS4299, Clause 4.7. In this regard, an area with 2250mm diameter is required, clear of furniture.

A telephone outlet adjacent to a general power outlet and illumination level of 300 lux is also a requirement for living areas.

Compliance Summary:

Compliant



Commentary:

The open plan arrangement of living / dining areas within each of the units provides sufficient area to satisfy SEPP requirements for circulation spaces within living and dining rooms.

The requirement for telephone outlet, general purpose outlet and lux levels should be implemented during detailed design.

5.14 Clause 16 – Kitchen

A kitchen in a self-contained dwelling must have:

- Circulation space in accordance with AS4299, Clause 4.5.2 (1550mm between opposing benches)
- A width at door approaches complying with Clause 7 of this schedule
- Fittings and fittings in accordance with the relevant sub clauses of AS4299, Clause 4.5.

Compliance Summary:

Compliant

Commentary:

Kitchens within each unit have adequate width to accommodate 1550 mm clear between opposing benches.

Additional requirements for kitchens as listed above, should be implemented during detailed design.

5.15 Clause 17 – Access to kitchen, main bedroom, bathroom and toilet

In multi-storey residences, the kitchen, main bedroom, bathroom and toilet must be located on the entry level.

Compliance Summary:

Not applicable

5.16 Clause 18 – Lifts in multi-storey developments

In a multi storey building containing self-contained dwellings, lift access must be provided to dwellings above the ground level by way of a lift complying with Clause E3.6 of the BCA.

Compliance Summary:

Capable of compliance

Commentary:

There are two lift cores (accommodating four (4) lifts) provided within the main building and an additional two (2) lifts within the secondary building. Each lift offers compliance with regard to the overall size of the lift shaft.

The requirement for lifts should be implemented during detailed design.



5.17 Clause 19 – Laundry

A self-contained dwelling must have a laundry that has:

- A width at door approaches that complies with Clause 7 of this schedule.
- Provision for the installation of an automatic washing machine and a clothes dryer.
- A clear space in front of appliances of at least 1300mm
- Slip resistant floor
- An accessible path of travel to any clothesline.

Compliance Summary:

Compliant

Commentary:

Laundries are provided with adequate circulation areas being in a cupboard configuration.

Requirements such as floor finish and access to clothes lines to be implemented during preparation of the construction certificate documentation to ensure compliance.

5.18 Clause 20 – Storage

A self-contained dwelling must be provided with a linen cupboard in accordance with AS4299, Clause 4, 1, 1, 5. It should be at least 600mm wide that have adjustable shelving.

Compliance Summary:

Compliant

Commentary:

A linen cupboard, 600mm wide, is provided within the laundry of each unit. The requirement for adjustable shelving should be addressed during detailed design.

5.19 Clause 21 – Garbage

A garbage storage area must be provided in an accessible location.

Compliance Summary:

Compliant

Commentary:

A waste room is provided in an accessible location at each level of the building.

6 BCA | Access and Approach + External Areas Generally

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 Lakewood Drive to the building entrances
- from the accessible carparking to the building entrances
- between associated accessible buildings within the site

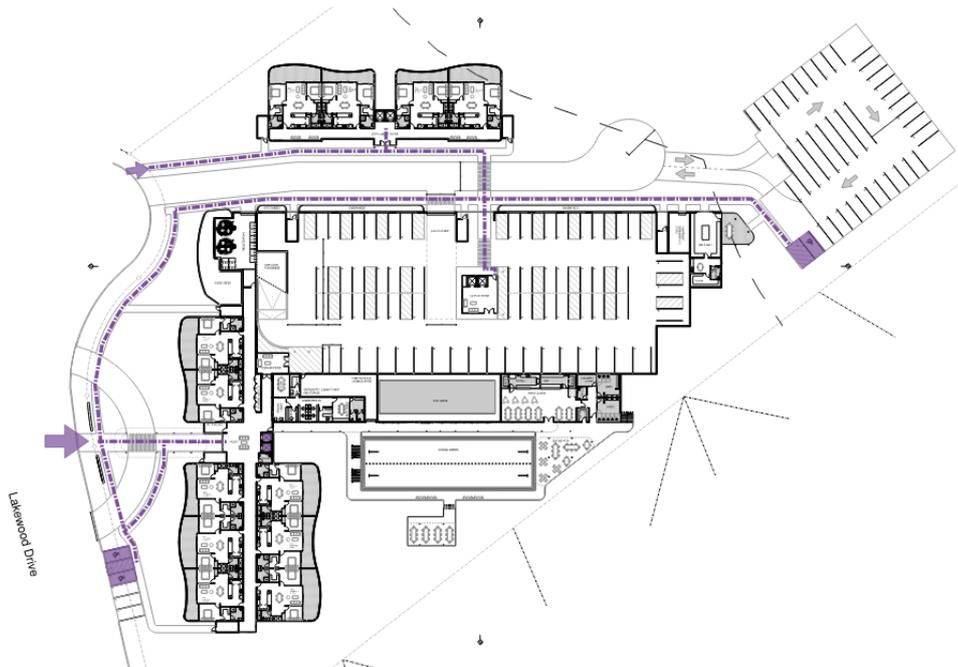


Figure 2 | Overall Site Plan (in part)

6.1 Approach from Allotment Boundary

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

Compliance Summary:

Compliant

Commentary:

An accessible path of travel is provided to the building entrances from the allotment boundary along Lakewood Drive via formed pathways that are level.



6.2 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:

Compliant

Commentary:

An accessible path of travel is provided from accessible carparking areas via formed pathways that are level.

6.3 Approach between Associated Buildings

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

Compliance Summary:

Compliant

Commentary:

An accessible path of travel is provided between the two buildings on the site via formed pathways that are level.

6.4 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

Commentary:

Pathways are generally a minimum 1500mm wide with a level surface.

6.5 Accessible Carparking

There is a requirement for the provision of accessible carparking within this development. For the Class 9b use (community facilities), the BCA requires one (1) accessible carparking space for every one hundred (100) carparking spaces or part thereof.

Compliance Summary:

Compliant configuration

Commentary:

Carparking is provided at the front of the site along Lakewood Drive. An open-air visitor and staff carparking areas is also provided at the rear of the main building. A total of fifty (50) carparking spaces are provided within these two areas including three (3) accessible carparking spaces. 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.

6.6 Stairs

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

Compliance Summary:

Capable of compliance

Commentary:

Stairs are provided external to the building for access between levels of the bowling club. The spatial arrangement of the stair will enable the required accessibility features for compliance with AS1428.1 (2009).

6.7 Pedestrian Crossings

There are marked pedestrian crossings within the site to enable safe pedestrian amenity.

Compliance Summary:

Capable of compliance

Commentary:

The pedestrian crossings appear to be level with the roadway in each location. The provision of tactile indicators will need to be addressed in subsequent design stages

6.8 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

Commentary:

An automatic sliding door is provided for entrance to the main building. The use of this type of door is encouraged as it maximizes access for persons with a disability to the tenancy.

Double hinged doors are provided for access to the secondary building and achieve compliant circulation spaces.



7 BCA | Interior

There are two buildings provided within the development – the main building accommodates residential units and the community facilities. The secondary building accommodates residential units only. The interior areas subject to accessibility requirements include all the common / community facilities and the residential common areas being the entry foyers. Lift lobbies and corridors. The following do not apply to individual units.

7.1 Extent of Access Generally – BCA

Within a residential development, access for people with disabilities is required from a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level. Where a ramp or a passenger lift is installed, access is required to the entrance doorway of each sole-occupancy unit within the building. Access is also required to and within not less than 1 of each type of room or space for use in common by the residents.

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

Compliance Summary:

Compliant

7.2 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

7.3 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

Commentary:

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



7.4 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.

Compliance Summary:

Compliant

7.5 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.

Compliance Summary:

Compliant

7.6 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.

Compliance Summary:

To be addressed during detailed design.

7.7 Hearing Augmentation Generally

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.



7.8 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.

Compliance Summary:

None specified

Commentary:

Back-of-house areas associated within the community facilities are generally considered exempt areas. This includes cleaners' rooms, commercial kitchen areas, bar and storerooms.

7.9 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 beveled edges) as part of the accessible path of travel.

Compliance Summary:

To be addressed during detailed design stages

7.10 Carpet

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

Compliance Summary:

To be addressed during detailed design stage.

7.11 Controls

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

Compliance Summary:

To be addressed during detailed design stage.

7.12 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.

Compliance Summary:

To be addressed during detailed design stage.

7.13 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 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.

7.14 Signage

Signage to identify sanitary facilities, hearing augmentation and required exits are to be provided in accordance with BCA Clause D3.6 * Specification D3.6. This includes provision of the International Symbol for Access or International Symbol for Deafness as appropriate.

Compliance Summary:

To be addressed during detailed design stage.

7.15 Access to Swimming Pool

The BCA requires access for persons with a disability to swimming pools with a total perimeter greater than 40m that are associated with as Class 1b, 2, 3, 5, 6, 7, 8, or 9 building that this required to be accessible (Table D3.1). For pools required to be accessible by this clause, not less than one accessible entry / exit must be provided by means of a fixed or moveable ramp and an aquatic wheelchair; or a zero depth entry at a maximum gradient of 1:14; or a platform swimming pool lift; or a swing style swimming pool lift.

Compliance Summary:

Compliant

Commentary:

A chair lift (hoist) is nominated for access to the pool.

7.16 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.



8 BCA | Sanitary Facilities

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

8.1 Distribution of Accessible Sanitary Facilities

Accessible sanitary facilities are required as follows – these are general requirements and not project specific.

- 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 addition to a 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.
- A unisex accessible adult change facility must be provided in some public buildings (not required within this development).
- Within a Class 2 building, where sanitary compartments are provided in common areas, not less than one (1) unisex accessible sanitary compartment is required.

Compliance Summary:

Compliant

Commentary:

Accessible sanitary facilities are provided as follows:

Basement Level:

- One (1) unisex accessible sanitary compartment

Ground Floor:

- Three (3) unisex accessible sanitary compartments
ALL PROVIDED AS RIGHT-HANDED FACILITIES
- One (1) male and one (1) female ambulant toilet
(Bowling Club)

First Floor:

- Three (3) unisex accessible sanitary compartments (left and right-handed facilities provided)
- One (1) unisex accessible shower (Pool House)
- One (1) male and one (1) female ambulant toilet
(Pool House)

Second Floor:

- Two (2) unisex accessible sanitary compartments (left and right-handed facilities provided)



Third Floor:

- Three (3) unisex accessible sanitary compartments (left and right-handed facilities provided)

Roof Top Terrace:

- Three (3) unisex accessible sanitary compartments (left and right-handed facilities provided)
- One (1) male and one (1) female ambulant toilet (Function Room)

There is no requirement for an accessible adult change facility within this development.

8.2 Unisex Accessible Sanitary Compartment

Unisex accessible sanitary compartments are provided in multiple locations within this development.

Compliance Summary:

Capable of compliance

Commentary:

The overall room dimensions and the arrangement of fixtures of the unisex accessible sanitary compartments within the development is conducive to compliance with current accessibility legislation.

We recommend that a left-handed facility be provided at the ground floor level per BCA requirement for the provision of left and right-handed facilities. This can be easily addressed during detailed design.

8.3 Cubicles for People with an Ambulant Disability

Ambulant toilets are provided within this development.

Compliance Summary:

Capable of compliance

Commentary:

Ambulant toilets are provided within the bowling club, pool house and function room for male and female use.

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



8.4 Unisex Accessible Shower Facility

An accessible shower is provided within this development.

Compliance Summary:

Capable of compliance

Commentary:

A shower is provided as part of the unisex accessible sanitary compartment within the pool house.

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

9 BCA | Vertical Circulation

Lifts provide the main means of access between levels of the building. Stairs within the building are fire isolated egress stairs. The lifts provide access through all levels of the development.

9.1 Lifts

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

Compliance Summary:

Capable of compliance

Commentary:

There are three (3) main banks of lifts within the development – two (2) being located within the main building and one (1) within the secondary building. A lift is also provided for direct access between the Bowling Club and Pool House.

Lifts are generally provided in pairs, offering lift redundancy measures should a lift be non-operational

The overall size of the lift shafts can accommodate a lift car of adequate dimensions for compliance with BCA.

9.2 Fire Isolated Egress Stairs

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

Compliance Summary:

Capable of compliance



Commentary:

Stairs are provided throughout the development to enable egress in the event of a fire. The configuration of these stairs is not indicated on the current drawings.

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

10 Conclusion

This report demonstrates that the fundamental aims of accessibility legislation are achievable within the proposed Seniors Community located at Lot 3 Lakewood Drive Merimbula. Spatial planning and general arrangements of facilities will offer inclusion for all building users.

Disability is often defined as any limitation, restriction or impairment which restricts everyday activities and has lasted or is likely to last for at least 6 months. Disabilities can be very varied. They can be physical, cognitive, intellectual, mental, sensory, or developmental. They can be present at birth or can occur during a person's lifetime. They can also be permanent or temporary. In Australia, almost one in five people – 4.3 million – have a disability with one in three having severe or profound core activity limitation.

Equity and dignity are important aspects in the provision of access to buildings for all users. With respect to people with a disability, equity and dignity are sometimes overlooked in the construction of new buildings or refurbishment works. The design approach needs to maintain a high level of equity for people with disabilities and meet the performance requirements of the BCA. The performance requirements adopt two main concepts in the provision of access for people with a disability being **to the degree necessary** and **safe movement**. Both of these concepts need to be achieved within the context of equitable and dignified access.

In this respect, a wide range of disabilities needs consideration and a compromise reached between requirements of different disability groups. Measures need to be implemented to ensure inclusion of all users, not a particular disability group in isolation.

We consider that the drawings presented for assessment, for the purposes of a development application, demonstrate that compliance with current statutory requirements affecting accessibility is achievable subject to detailed design at the construction certificate stage (refer to appendices for requirements).



Appendix 1 | SEPP Housing 2021 Requirements (Seniors Living)



Part 1 Standards applying to hostels and independent living units

1. Application of standards in this Part

The standards set out in this Part apply to any seniors housing that consists of hostels or self-contained dwellings.

2. Siting standards

1) Wheelchair access

If the whole of the site has a gradient of less than 1:10, 100% of the dwellings must have wheelchair access by a continuous accessible path of travel (within the meaning of AS 1428.1) to an adjoining public road.

2) If the whole of the site does not have a gradient of less than 1:10:

- a) the percentage of dwellings that must have wheelchair access must equal the proportion of the site that has a gradient of less than 1:10, or 50%, whichever is the greater, and
- b) the wheelchair access provided must be by a continuous accessible path of travel (within the meaning of AS 1428.1) to an adjoining public road or an internal road or a driveway that is accessible to all residents.

Note. For example, if 70% of the site has a gradient of less than 1:10, then 70% of the dwellings must have wheelchair access as required by this subclause. If more than 50% of the site has a gradient greater than 1:10, development for the purposes of seniors housing is likely to be unable to meet these requirements.

3) Common areas

Access must be provided in accordance with AS 1428.1 so that a person using a wheelchair can use common areas and common facilities associated with the development.

3. Security

Pathway lighting:

- a) must be designed and located so as to avoid glare for pedestrians and adjacent dwellings, and
- b) must provide at least 20 lux at ground level.

4. Letterboxes

Letterboxes:

- a) must be situated on a hard-standing area and have wheelchair access and circulation by a continuous accessible path of travel (within the meaning of AS1428.1), and
- b) must be lockable, and
- c) must be located together in a central location adjacent to the street entry or, in the case of self-contained dwellings, must be located together in one or more central locations adjacent to the street entry.



5. Private car accommodation

If car parking (not being car parking for employees) is provided:

- a) car parking spaces must comply with the requirements for parking for persons with a disability set out in AS 2890.6, and
- b) 10% of the total number of car parking spaces (or at least one space if there are fewer than 20 spaces) must be designed to enable the width of the spaces to be increased to 3.8 metres, and
- c) any garage must have a power-operated door, or there must be a power point and an area for motor or control rods to enable a power-operated door to be installed at a later date.

6. Accessible entry

Every entry (whether a front entry or not) to a dwelling, not being an entry for employees, must comply with clauses 4.3.1 and 4.3.2 of AS 4299.

7. Interior: general

- 1) Internal doorways must have a minimum clear opening that complies with AS1428.1.
- 2) Internal corridors must have a minimum unobstructed width of 1,000 millimetres.
- 3) Circulation space at approaches to internal doorways must comply with AS 1428.1.

8. Bedroom

At least one bedroom within each dwelling must have:

- a) an area sufficient to accommodate a wardrobe and a bed sized as follows:
 - i) in the case of a dwelling in a hostel—a single-size bed,
 - ii) in the case of a self-contained dwelling—a queen-size bed, and
- b) a clear area for the bed of at least:
 - i) 1,200 millimetres wide at the foot of the bed, and
 - ii) 1,000 millimetres wide beside the bed between it and the wall, wardrobe or any other obstruction, and
- c) 2 double general power outlets on the wall where the head of the bed is likely to be, and
- d) at least one general power outlet on the wall opposite the wall where the head of the bed is likely to be, and
- e) a telephone outlet next to the bed on the side closest to the door and a general power outlet beside the telephone outlet, and
- f) wiring to allow a potential illumination level of at least 300 lux.

9. Bathroom

- 1) At least one bathroom within a dwelling must be on the ground (or main) floor and have the following facilities arranged within an area that provides for circulation space for sanitary facilities in accordance with AS 1428.1:
 - a) a slip-resistant floor surface,
As there is no real guidance with SEPP or Australian standards with respect to slip resistance, we recommend a rating of R10 be achieved



in bathroom areas – this is based on HB-107 Table 3, ensuite within aged care facilities

- b) a washbasin with plumbing that would allow, either immediately or in the future, clearances that comply with AS 1428.1,
- c) a shower that complies with AS 1428.1, except that the following must be accommodated either immediately or in the future:
 - i) a grab rail,
 - ii) portable shower head,
 - iii) folding seat,
- d) a wall cabinet that is sufficiently illuminated to be able to read the labels of items stored in it,
- e) a double general power outlet beside the mirror.

- 2) Subclause (1) (c) does not prevent the installation of a shower screen that can easily be removed to facilitate future accessibility.

10. Toilet

A dwelling must have at least one toilet on the ground (or main) floor and be a visitable toilet that complies with the requirements for sanitary facilities of AS 4299.

11. Surface finishes

Balconies and external paved areas must have slip-resistant surfaces.

Note. Advice regarding finishes may be obtained from AS 1428.1.

As there is no real guidance with SEPP or Australian standards with respect to slip resistance, we recommend a rating of R10 be achieved in bathroom areas – this is based on HB-107 Table 3, external colonnades and walkways.

12. Door hardware

Door handles and hardware for all doors (including entry doors and other external doors) must be provided in accordance with AS 4299.

13. Ancillary items

Switches and power points must be provided in accordance with AS 4299.

Light switches to be installed within the accessible height range of 900-1100mm affl and not less than 500mm from an internal corner.

Power points to be installed at a height not less than 600mm with a preferred height of 1000mm and not less than 500mm from an internal corner.

Part 2 Additional standards for self-contained dwellings

14. Application of standards in this Part

The standards set out in this Part apply in addition to the standards set out in Part 1 to any seniors housing consisting of self-contained dwellings.



15. Living room and dining room

- 1) A living room in a self-contained dwelling must have:
 - a) a circulation space in accordance with clause 4.7.1 of AS 4299, and
 - b) a telephone adjacent to a general power outlet.
- 2) A living room and dining room must have wiring to allow a potential illumination level of at least 300 lux.

16. Kitchen

A kitchen in a self-contained dwelling must have:

- a) a circulation space in accordance with clause 4.5.2 of AS 4299, and
- b) a circulation space at door approaches that complies with AS 1428.1, and
- c) the following fittings in accordance with the relevant subclauses of clause 4.5 of AS 4299:
 - i) benches that include at least one work surface at least 800 millimetres in length that comply with clause 4.5.5 (a),
 - ii) a tap set (see clause 4.5.6),
 - iii) cooktops (see clause 4.5.7), except that an isolating switch must be included,
 - iv) an oven (see clause 4.5.8), and
- d) “D” pull cupboard handles that are located towards the top of below-bench cupboards and towards the bottom of overhead cupboards, and
- e) general power outlets:
 - i) at least one of which is a double general power outlet within 300 millimetres of the front of a work surface, and
 - ii) one of which is provided for a refrigerator in such a position as to be easily accessible after the refrigerator is installed.

17. Access to kitchen, main bedroom, bathroom and toilet

In a multi-storey self-contained dwelling, the kitchen, main bedroom, bathroom and toilet must be located on the entry level.

18. Lifts in multi-storey buildings

In a multi-storey building containing separate self-contained dwellings on different storeys, lift access must be provided to dwellings above the ground level of the building by way of a lift complying with clause E3.6 of the Building Code of Australia.

19. Laundry

A self-contained dwelling must have a laundry that has:

- a) a circulation space at door approaches that complies with AS 1428.1, and
- b) provision for the installation of an automatic washing machine and a clothes dryer, and
- c) a clear space in front of appliances of at least 1,300 millimetres, and
- d) a slip-resistant floor surface, and
- e) an accessible path of travel to any clothes line provided in relation to the dwelling.



20. Storage for linen

A self-contained dwelling must be provided with a linen storage in accordance with clause 4.11.5 of AS 4299.

21. Garbage

A garbage storage area must be provided in an accessible location.



Appendix 2 | Accessibility Requirements



The following accessibility requirements are to be incorporated into the detailed design to ensure compliance of the built form.

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 bevelling edges).
- c. The maximum allowable crossfall of pathways is to be 1:40.
- d. The ground abutting the sides of the pathways should follow the grade of the pathway and extend horizontally for 600mm. We note that this is not required where there is a kerb or handrail provided to the side of the pathway.
- e. Pathways to have passing bays complying with AS1428.1 at maximum 20m intervals where a direct line of site is not available. They are required within 2m of the end of the pathway where it is not possible to continue travelling along the pathway. A passing space shall have a minimum width of 1800 for a minimum length of 2000mm. Refer to AS1428.1, Clause 6.4.
- f. Grated drains within the accessible path of travel are to have circular openings no greater than 13mm in diameter and slotted openings not greater than 13mm wide – elongated openings must traverse the direction of travel.

Stairs – External

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.

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 stipes 150 to 200mm wide with spaces 200 to 300mm between stripes. Stipes to be at an angle of 45° to the side of the space.

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.

Accessible Entrances

Access requirements for entrances are as follows.

- a. Entrance to comply with AS1428.1(2009), Clause 13 as part of the accessible path of travel.
- b. Doors are to have a minimum clear opening width of 850mm to comply AS1428.1(2009), Clause 13.2 as part of the accessible path of travel.
- c. Door threshold to be level to provide seamless entry as part of the accessible path of travel. Maximum allowable construction tolerance is 3mm for compliance with AS1428.1(2009), 5mm where beveled edges are provided between surfaces – refer to Figure 6.
- d. Door to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5)
- e. For glass doors, provide decals to assist persons with a vision impairment. Decals to be solid and have a minimum 30% luminance contrast to the background colour and be not less than 75mm high located within the height range of 900-1100mm above the finished floor level. Decals are to be solid. AS1428.1, Clause 6.6.
- f. Where double door sets are provided, one door leaf is to be capable of being held in the closed position to provide door opening widths and circulation to comply with AS 1428.1.
- g. For a best practice approach to access, and to assist people with a vision impairment locate the entrance, consider providing features with a minimum 30% luminance contrast to the background surface such as an entry mat or awning.



Circulation Areas Generally

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.

Doorways

Access requirements for doorways within the accessible path of travel are as follows:

- a. Doorways within the accessible path of travel to have a minimum clear opening width of 850mm (AS1428.1(2009), Clause 13.2). We recommend the use of a 920 leaf door as a minimum to achieve adequate clear width.

For double doors, the operable leaf must achieve this clear opening width to facilitate single leaf operation.

- b. All doorways within the accessible path of travel to have complying circulation areas as illustrated in AS1428.1(2009), Figure 31. Circulation areas to have a maximum crossfall of 1:40.
- c. Doors between indoor and outdoor spaces to have a level threshold for seamless transition.
- d. Doorways to have minimum 30% luminance contrast as described in AS1428.1(2009), Clause 13.1.
- e. Doors to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5). Note that within a childcare centre, this is applicable to the unisex accessible sanitary facilities only.
- f. Door handles and related hardware shall be able to be unlocked and opened with one hand per AS1428.1 (2009), Clause 13.5.1. The handles shall enable a person who cannot grip to operate the door without their hand slipping from the handle. We recommend the use of lever handles.
- g. For manual controls to automatic doorways, buttons to be located no closer than 500mm from an internal corner and between 1000mm and 2000mm from the hinged door leaf or surface mounted sliding door in the open position. Height of controls to be 900-1100mm affl.



- h. Doorways to external areas to achieve a level threshold as part of the accessible path of travel. Maximum allowable construction tolerance is 3mm for compliance with AS1428.1(2009), 5mm where beveled edges are provided between surfaces.
- i. Doorways to have operational forces per AS1428.1 (2009), Clause 13.5.2. A maximum allowable force of 20N is required to operate the door.

Doorways within Vestibules and Airlocks

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.

Doorways within Vestibules and Airlocks to Ambulant Toilets

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.

Hearing Augmentation

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

The hearing augmentation system is to be identified using the International Symbol for Deafness.

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.

The hearing augmentation system is to be identified using the International Symbol for Deafness.

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.



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.

Controls

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

Visual Indication to Glazing

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

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 to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background color (45% for discrete tactile indicators and 60% for discrete two-tone tactile indicators).

Signage

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

- a. Braille and tactile signage formats as outlined within BCA Specification 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.



Slip Resistance

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

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



Access to Swimming Pool

The BCA requires access for persons with a disability to swimming pools with a total perimeter greater than 40m that are associated with as Class 1b, 2, 3, 5, 6, 7, 8, or 9 building that this required to be accessible (Table D3.1).

For pools required to be accessible by this clause, not less than one accessible entry / exit must be provided by means of a fixed or moveable ramp and an aquatic wheelchair; or a zero depth entry at a maximum gradient of 1:14; or a platform swimming pool lift; or a swing style swimming pool lift.

For pools with a perimeter greater than 70m, the use of a swing stile swimming pool lift is not permitted.

Unisex Accessible Sanitary Compartment

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

- a. Accessible toilet facilities to be unisex facilities for compliance with the BCA.
- b. Unisex accessible facilities to comply with AS1428.1(2009), Clause 15 including set-out of fittings and fixtures, circulation areas and doorways.
- c. Where more than one unisex accessible toilet is provided within the building, they should be in a mirrored configuration to allow for both left and right handed use.

WC Pan:

- a. Crucial dimensions for the toilet are 450mm from centreline of pan to side wall, 800mm from front of pan to rear wall and a seat height of 470mm.
- b. A minimum clear dimension of 1400mm is required from the toilet pan to any other fixture (see figure 43).
- c. Grabrails to be provided at the side and rear of the toilet in compliance with AS1428.1 at a height of 800mm.
- d. Toilet seat shall be of the full round type, be securely fixed in position when in use and have fixings that create lateral stability. They should be load rated to 150kg, have a minimum 30% luminance contrast to the background colour (eg pan, wall or floor) and remain in the upright position when fully raised.
- e. Provide a backrest to accessible toilets to comply with AS1428.1, Clause 15.2.4.



Basin:

- f. For the basin, a minimum dimension of 425mm is required from the centreline of the basin to the side wall and height of basin to be between 800 and 830mm.
- g. Taps to have lever handles, sensor plates or similar controls. For lever taps, a minimum 50mm clearance to be provided to adjacent surfaces.

Door:

- h. 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.
- i. 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:

- j. 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.

Unisex Accessible Shower

Access requirements for the accessible shower facilities are as follows. These are **CLEAR** dimensions. Provision for wall linings needs to be considered.

- 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.

Ambulant Toilet Cubicles

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.

Passenger Lifts

The following access requirements apply to the lifts. These requirements are for disabled access only and do not include requirements for stretchers.

- a. Lift is to comply with AS1735.12 and be fully automatic as required by the BCA, Clause E3.6.
- b. Minimum internal dimensions of the lift car to be 1400mm wide x 1600mm deep BCA, Clause E3.6 – for a lift that travels over 12m.

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.

Fire Isolated Egress Stairs

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

- a. Stair nosings to have minimum 30% luminance contrast strip 50-75mm wide to the top of the stair tread to assist persons with a vision impairment. The strip can be set back 15mm from the edge of the riser.
- b. Stair nosings shall not project beyond the face of the riser.
- c. Handrails in a required exit serving an area required to be accessible, are to be designed and constructed to comply with AS 1428.1, Clause 12 (BCA D2.17).

Note: handrails within fire-isolated stars are required to one side only and do not require the provision of handrail extensions. They must have a diameter between 300-50mm; be between 865-1000mm high above the nosing; ne a consistent height along the length of the stair – no vertical sections; have a clearance to eh wall not less than 50mm; have no obstruction along the length of its passage; and have an end that turns through 180, turns to the ground, or returns fully to an end post.

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



Appendix 3 | Best Practice Options for Consideration



We recommend a best practice approach to accessibility that goes beyond minimum standards and embraces the intent of the DDA. The following measures will promote inclusion and participation for all users.

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

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.

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.

Luminance Contrast

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

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



Visual Indication to Glazing (additional measures)

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

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.

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.

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.

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.

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.



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.

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.

Places of Comparative Safety

Consider providing a refuge area within fire isolated stairs by incorporating a 800mm x 1300mm area at stair landings of every accessible floor. A 1000mm unobstructed egress width to the area should be provided.

We recommend that signage displaying the International Symbol of Access (ISA) be provided to identify any places of comparative safety provided. Signage should state that the area is safe in the event of an emergency. Evacuation procedures for the building should address the provision of places of comparative safety for people with limited mobility. Signage should comply with BCA D3.6 and BCA Specification 3.6 and have braille and tactile components.

We also recommend that as a part of the emergency evacuation plan for the building, egress for persons requiring assistance be addressed. The provision of places of comparative safety within fire isolated passages would be advantageous to persons with a disability. This consists of a waiting area large enough to accommodate a wheelchair where persons can wait for assistance from emergency services. The waiting area should be identified with appropriate signage that incorporates the International Symbol for Access.

Lighting and Glare

Minimum interior lighting levels should generally consider AS1428.2 (1992) Clause 19. Consistent lighting levels should be provided throughout, without pools of light or dark areas. AS1428.2 (1992) recommends the following minimum illumination levels:

- Entrances 150lx
- Passages and walkways 150lx
- Stairs 150lx
- Toilets and Locker rooms 200lx
- Counter tops 250lx
- General displays 200-300lx

Glare and excessively reflective surfaces should be avoided. This includes glare from windows.

