purple apple access

Access Report

Tumbi Umbi Retirement Living Project

14 Mingara Drive
TUMBI UMBI NSW 2261

For: Mingara Leisure Group Pty Ltd
Ref: PAA_23342

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:			
Jane Bryce	Draft	Issued for review	7 February 2024 27 March 2024 9 April 2024 8 July 2024 10 July 2024
Jane Bryce	Final	Issued for DA	11 July 2024
Jane Bryce	Revised	Issued for SSDA resubmission	18 February 2025
Jane Bryce	Revised	Issued post SSDA revisions	20 May 2025
Jane Bryce	Revised	Issued post revisions	21 October 2025
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Clarifications:

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

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

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

Definitions:

The following terminology has been used throughout this report:

Compliant | compliance with current accessibility legislation has been achieved
Compliant Configuration | circulation and spatial planning requirements are compliant
Capable of Compliance | compliance is achievable through detailed design
Not Yet Compliant | circulation and spatial planning requirements have not yet been met
To be addressed during detailed design stage | details not available at DA stage
To be confirmed | inadequate information is provided to determine compliance

Executive Summary

Purple Apple Access has been commissioned by Mingara Leisure Group Pty Ltd to prepare this report in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), and in support of the State Significant Development Application (SSD-63475709) for the proposed.

Development application documentation for the Tumbi Umbi Retirement Living Project located at 14 Mingara Drive, Tumbi Umbi has been reviewed against current and applicable accessibility legislation.

A further full access assessment will be undertaken of the detailed design plans and specifications, when more specific information is provided. All elements listed below have the capacity to achieve compliance on detailed design completion.

The following table summarises our findings.

Item No.	Description	Compliance Status
SEPP Siting Requirements		
4.1	Location & Access to Facilities	Compliant configuration
4.2	Accessibility	Compliant
SEPP Schedule 4		
5.1	Application of Part 1	Applicable
5.2	Siting Standards	Compliant
5.3	Letterboxes	To be addressed in detailed design.
5.4	Car parking	Compliant configuration
5.5	Accessible Entry	Compliant configuration
5.6	Interior	To be addressed in detailed design.
5.7	Main Bedroom	Compliant configuration
5.8	Bathroom	Compliant configuration
5.9	Toilet	Compliant configuration
5.10	Surface Finishes	To be addressed in detailed design.
5.11	Door Hardware	To be addressed in detailed design.
5.12	Switches and power points	To be addressed in detailed design.
5.13	Private passenger lifts	Not applicable
5.14	Application of Part 2	Applicable
5.15	Bedroom	Compliant configuration
5.16	Living and Dining Room	Compliant configuration
5.17	Main area of private open space	Compliant configuration
5.18	Kitchen	To be addressed in detailed design
5.19	Laundry	Compliant configuration
5.20	Linen Storage	Compliant configuration
5.21	Lifts in multi-storey buildings	Capable of compliance.
5.22	Garbage and recycling	To be addressed in detailed design
BCA Requirements		
6.1	Allotment Boundary to Entrance	Capable of compliance.
6.2	Accessible Carparking to Entrance	Capable of compliance.
6.3	Link between Associated Buildings	Capable of compliance.
6.4	Pathways Generally	Capable of compliance.
6.5	Accessible Carparking	Compliant configuration

6.6	Kerb Ramps	Capable of compliance.
6.7	Accessible Ramps	Capable of compliance.
6.8	Stairs	Capable of compliance.
6.9	Walkways	Capable of compliance.
6.10	Pedestrian Crossings	Capable of compliance.
6.11	Threshold Ramps	Capable of compliance.
6.12	Entrance	Compliant configuration
6.13	Tactile indicators at entrance	To be addressed in detailed design
6.14	Extent of Access Generally	To be addressed in detailed design
6.15	Circulation Areas	Compliant configuration
6.16	Doorways	To be addressed in detailed design
6.17	Doorways to Vestibules	Compliant configuration
6.18	Hearing augmentation at Service Counters	To be addressed in detailed design
6.19	Hearing Augmentation	To be addressed in detailed design
6.20	Exempt Areas	Compliant
6.21	Floor Finishes	To be addressed in detailed design.
6.22	Carpet	To be addressed in detailed design.
6.23	Controls	To be addressed in detailed design.
6.24	Visual Indication to Glazing	To be addressed in detailed design.
6.25	Tactile Indicators	To be addressed in detailed design.
6.26	Signage	To be addressed in detailed design.
6.27	Handrails RCF	To be addressed in detailed design.
6.28	Distribution of sanitary facilities	Compliant configuration
6.29	Unisex Accessible WC	To be addressed in detailed design.
6.30	Ambulant WC	To be addressed in detailed design.
6.31	Lifts	Capable of compliance
6.32	Walkways	To be addressed in detailed design.
6.33	Accessible Ramp	To be addressed in detailed design.
6.34	Stairs	To be addressed in detailed design.
6.35	Fire Isolated Egress Stairs	Compliant configuration
6.36	Slip Resistance (Ramps & Stairs)	To be addressed in detailed design.

We consider that the drawings presented for assessment, for the purposes of a development application, generally comply with current statutory requirements, unless identified as Not Yet Compliant in the table above.

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 trading as Purple Apple Access. This may differ from that of other consultants.

JANE BRYCE
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Livable Housing Assessor 20286
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1 Project Description

The site is located at 14 Mingara Drive, Tumbi Umbi, within the Central Coast Local Government Area (LGA). The development site is legally described as Lot 13 DP1204397.

The broader Mingara Club Precinct also encompasses Lot 1 and Lot 2 in DP 1010532 and Lot 71 DP1011971 and currently contains a registered club, health and wellness centre (including aquatics, gym facilities, physio, hairdresser, beautician and martial arts studio), car parking, creche, bowling greens and green space with a regional athletics centre. A hotel is currently under construction.

Immediately surrounding the Mingara Club Precinct are fast food outlets and other restaurants, service station, car wash, retail, medical centre and a retirement village to the south and west. Industrial development is to the north of Wyong Road and residential development to the west. The specific area of the site, the subject of the proposed development, is land located to the west of the Mingara Recreation Club and south of the Athletics field. This development site is currently a vacant grassed area.

The proposed development comprises subdivision of land and the construction and operation of a seniors housing development. The proposal includes thirteen villa buildings, three multi storey independent living unit (ILU) buildings and one mixed high care and ILU building housing communal facilities together with car parking, open space and associated works including site preparation works, relocation of parking for the athletics track and landscaping.

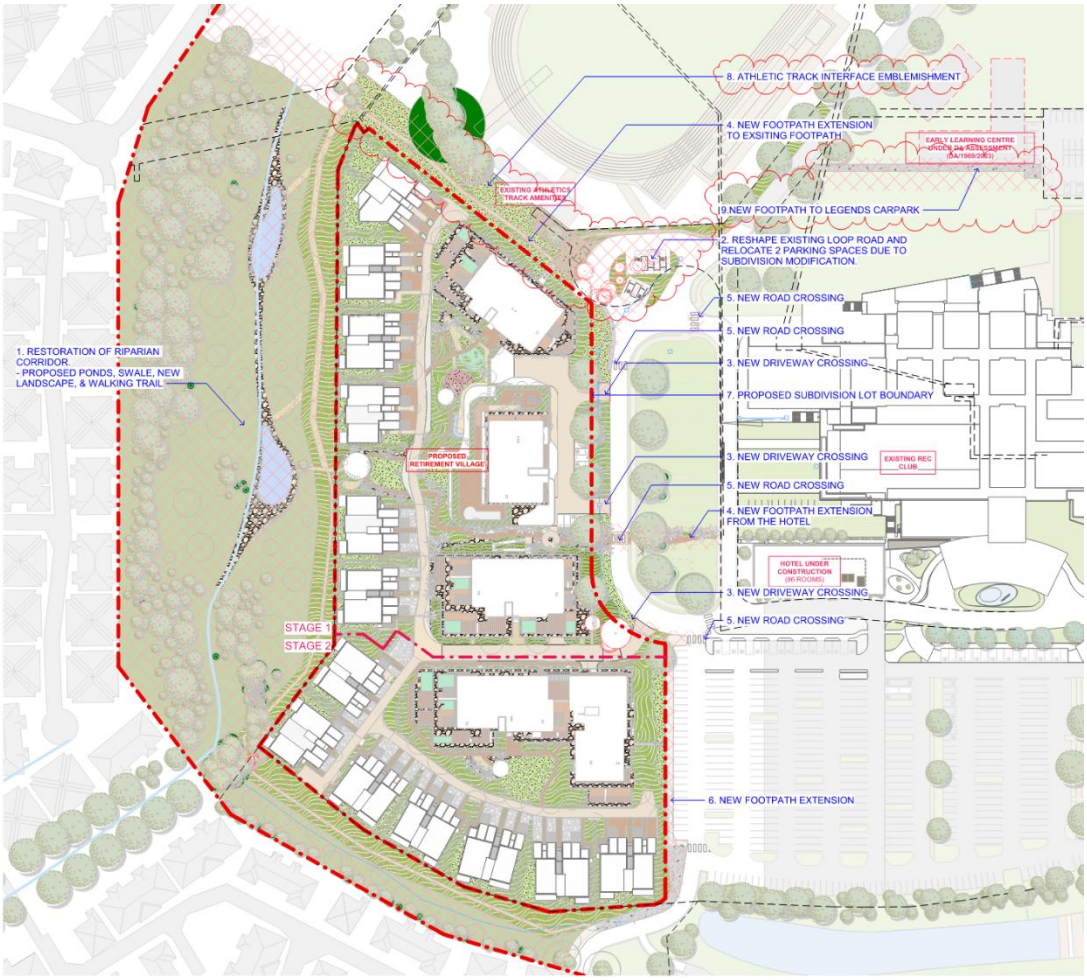


Figure 1 | Proposed Development

2 Reviewed Documentation

Documentation prepared by Marchese Partners International (architects) has been reviewed as listed in Appendix 1.

3 Legislation

Access assessment has been made against Access Legislation including:

- State Environmental Planning Policy – Housing 2021 – 19 September 2025
- The Commonwealth Disability Discrimination Act 1992 (DDA)
- Disability (Access to Premises (Buildings)) Standards 2010
- Access Code for Buildings 2010
- The National Construction Code Building Code of Australia Volume 1 2022 Amendment 2 (BCA)
  - Part D3 D15 Landings (Slip Resistance)
  - Part D3 D22 Handrails
  - Part D4 – Access for People with Disabilities
  - Section E3D7 / ED38 – Lifts
  - Section F2D5 – Accessible Sanitary Facilities
- Australian Standard AS1428.1 (2021) – Design for Access and Mobility

- 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.

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 providing development standards for the design of seniors housing. Schedule 4 Standard concerning Accessibility and usability for hostels and independent living units needs to be implemented.

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

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 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.

- Australian Standard AS1428.1 – 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
  - Version published in 2009 and Amendments 1 & 2 is referenced by NCC/BCA 2022 and earlier versions
  - Version published in 2021 is referenced by NCC/BCA 2022 and NCC Amendment 2 and the Premises Standards and the Housing SEPP.
- 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, motorized 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 within the Sydney Statistical Division (that includes all of the built up area of Sydney and the Central Coast) as applies to this location, the above listed services must be located at a distance no greater than 400m from the site or be accessible by public transport service. The public transport service must be available both to and from the development at least once between 8am and 12pm per day and at least once between 12pm and 6pm each day from Monday to Friday (both days inclusive). A suitable access pathway is to be provided from the development to the transport service within the meaning of the SEPP (average gradient of 1:14 maximum).

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 configuration

Commentary:

WALKING ROUTE

The site lies within 400m of two (2) bus stops providing different bus services to Wyong or Bateau Bay.

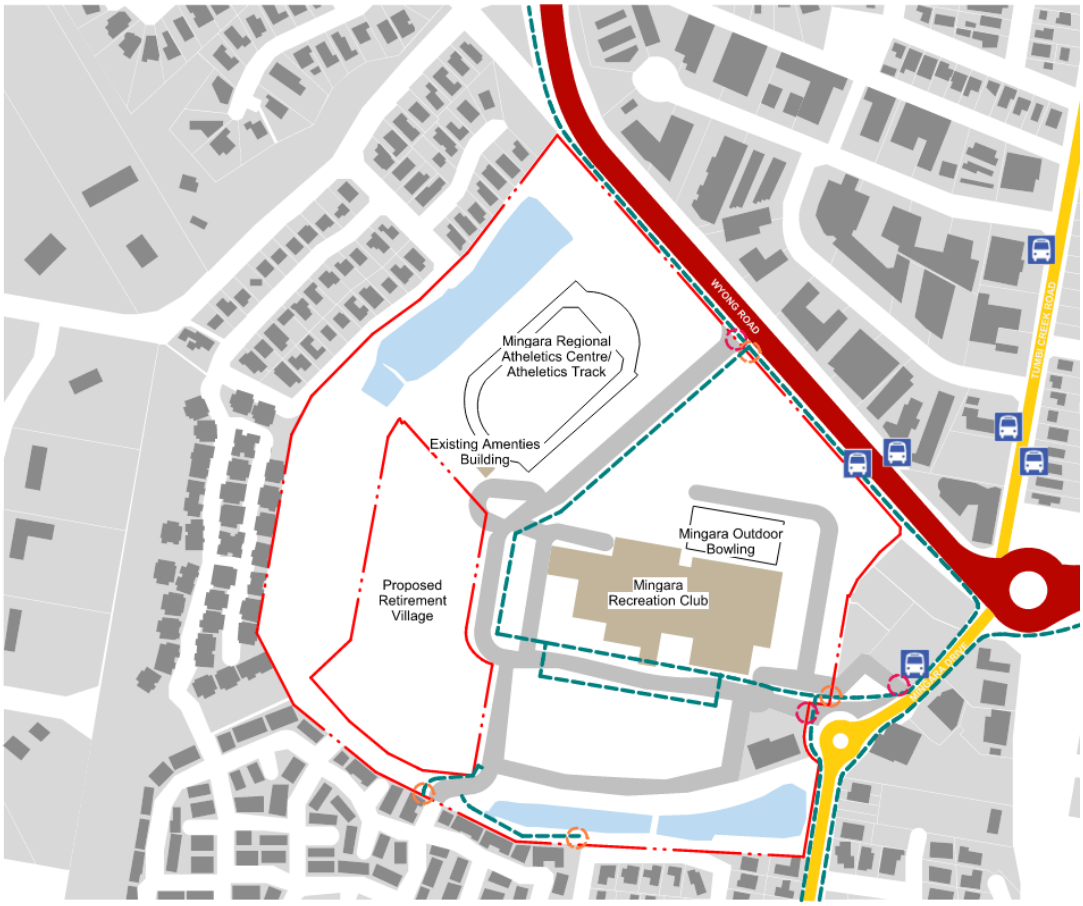
- Bus stop 1 is located on Wyong Road for services to Wyong
- Bus stop 2 is located on Mingara Drive for services to and from Bateau Bay.

Recreational facilities provided within Building 2 of the proposed development include lounge, library, multipurpose rooms, and café.

The adjacent Mingara Recreation Club include community facilities, cafes and restaurants, fitness centre, aquatics centre including swimming pools and an outdoor bowling green.

A separate medical centre is provided on the corner of Mingara Drive and Hansens Road. This is located near the bus stop and the yellow roundabout in the image below.

The existing pedestrian pathways to and from each bus stop are positioned on one side of both roadways. Additional pedestrian crossings can be provided at the time of detailed design.



CONNECTIVITY

The subject site is located within Mingara Recreation Club precinct and is connected via Wyong Road and Mingara Drive.

There is a bus stop from Mingara Drive 6 mins walk from site with bus routes servicing:
- BUS 24 - The Entrance
- BUS 45 - Mingara Bbsq
- BUS 48 - Nateau Bay Square

There are bus stops in both direction from Wyong Road 6mins walk from site with bus routes servicing:
- BUS 14X - Tuggerah Westfield, Red bus stand/ Torrens Ave before Coral St
- BUS 15 - Tuggerah Station East/ The Entrance
- BUS 25 - Wyong / The Entrance/ Bateau Bay Square

There are bus stops in both direcion from Tumbi Creek Road 10mins walk from site with bus routes servicing:
- BUS 16 - The Entrance
- BUS 19 - Wyong/ Gosford
- BUS 24 - Wyong
- BUS 26 -Wyonh Hospital/ The Entrance

The site has multiple vehicular and pedesian acess points along Wyong Road and Mingara Drive.

The pedestrian routes from Glengara Retirement Village disconnected at Shearwater Drive

LEGEND
- Main road
- Local Road
- Boundary
- Exisiting buildings
- Existing footpaths
- Pedestrian Entrance
- Vehicial Entrance
- Bus stops

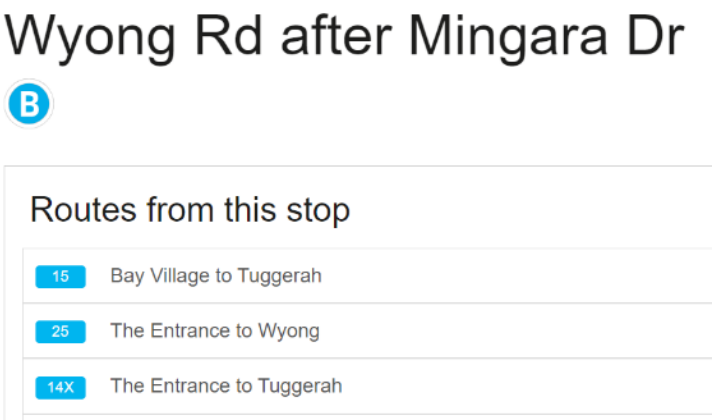
Figure 2 | Location of the Site

Bus stop 1 – Wyong Road after Mingara Drive:
Services and facilities at Wyong include the following:

- Medical Centre,
- Post Office,
- Bank ATMs
- Supermarket
- Newsagency,
- Liquor Store,

- Bakery,
- Hairdresser
- Florist,
- Cafés and Restaurants,
- Fresh food outlets
- Specialty retail.
- Train station

The walking route proposed between the development site and the bus stop on Wyong Road is via the northern end of Mingara Drive. This links to bus stop number 2261479 Wyong Road after Mingara Drive. It is noted as having accessible bus services on the Transport for NSW website.



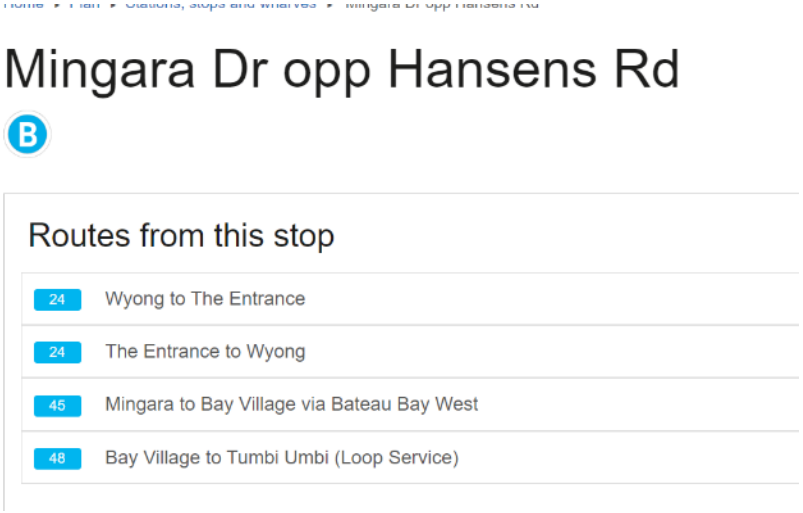
The 25 Bus Service travels between Wyong Station via Tuggerah Station, Westfield Tuggerah and Bateau Bay Square providing a service between Wyong and The Entrance via Tumbi Umbi. The service operates seven (7) days a week including public holidays meeting SEPP requirements.

Services and facilities at Bateau Bay Square include the following:

- Medical Centre,
- Post Office,
- Bank
- Supermarkets
- Newsagency,
- Liquor Store,
- Bakery,
- Hairdressers
- Cafés and Restaurants,
- Fresh food outlets
- Specialty retail.
- Community Centre
- Library

Bus stop 2 Mingara Drive opposite Hansens Road

The walking route proposed between the development site and the bus stop for bus services to and from Bateau Bay is via the eastern end of Mingara Drive. This links to bus stop number 226181 Mingara Drive opp Hansens Road. It is noted as having accessible bus services on the Transport for NSW website.



The 48 Bus Service travels loop between Bateau Bay Square / Bay Village and Tumbi Umbi. The service operates six (6) days a week including public holidays meeting SEPP requirements.

Formed footpaths are an existing condition along the full length of Mingara Drive.

The existing footpaths have a concrete surface, are relatively level and are in good condition.

Figure 3 | Existing footpaths

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 with links to public transport.

Carparking is provided for residents in the Independent Living Units within the secure carparking areas of buildings 1, 2, 3 and 4.

Car parking for residents of the thirteen (13) Villa buildings is provided in the private ground level garages and on the driveways providing access to the garages.

5 SEPP – Schedule 4

Part 1 Standards Concerning Accessibility & Usability for Hostels and Independent Living Units

5.1 Schedule 4, Clause 1 – Application

The standards set out in this Part apply to any seniors housing that consists of hostels or independent living units.

5.2 Schedule 4, Clause 2 – Siting Standards

(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:
The Reduced Levels or RLs for the overall site are noted on the plans to be between RL6.70 on the north east corner of the site and RL9.8m on the south west corner of the site. This provides a rise of 3.1 metres over 203.65 metres giving the site falls of approximately 1:66. Noting that the distance is measured as-the-crow-flies rather than the actual pathway distance, which is longer.

This means that the site overall has gradients less, or shallower, than 1:10. All units in both the four (4) multi-storey buildings and all units in the low-rise villa buildings have wheelchair access via a pathway that is shown on the plans to comply with AS1428.1.

The Residential Care Facility and Community facilities located in Building 2 are also shown on the plans on a pathway that complies with AS1428.1.

Plans show that pathways provide wheelchair access as per AS1428.1 that connects the existing pathways to the adjacent Mingara Club premises.

5.3 Clause 3 – Letterboxes

(1) Letterboxes—

a. must be located on a hard standing area, and
b. must have wheelchair access by a continuous accessible path of travel from the
c. letterbox to the relevant dwelling, and
d. must be lockable by a lock that faces a wheelchair accessible path.

(2) If a structure contains multiple letterboxes, the structure must be in a prominent location.

(3) At least 20% of the letterboxes on the site must be more than 600mm and less than 1,200mm above ground level (finished).

Compliance Summary:

To be addressed in detailed design

- location
- lock details

Commentary:

Letterboxes are required adjacent to the entrance to the building in an accessible location. A hardstand surface is to be nominated on the floor plan.

An accessible path of travel is to be provided from the letterboxes to the entrance of the dwellings via the accessible walkway and driveway area.

Height requirements for the letterboxes to be addressed during detailed design.

5.4 Clause 4 – Car parking

The following aspects of the Schedule 4 car parking requirements affect spatial planning at the development application stage (it is inclusive of all requirements - numbering is as per Schedule 4):

1) If parking spaces attached to or integrated with a class 1 building under the Building Code of Australia are provided for use by occupants who are seniors or people with disability, at least 1 parking space must—

a. be at least 3.2m wide, and
b. be at least 2.5m high, and
c. have a level surface with a maximum gradient of 1:40 in any direction, and
d. be capable of being widened to 3.8m without requiring structural modifications to a building.

2) If parking spaces associated with a class 1, 2 or 3 building under the Building Code of Australia are provided in a common area for use by occupants who are seniors or people with a disability, the following applies—

a. for a parking space not in a group—the parking space must comply with AS/NZS2890.6,
b. for a group of 2–7 parking spaces—
   (i) at least 1 of the parking spaces must comply with AS/NZS 2890.6, and
   (ii) 50% of the parking spaces must—
      (A) comply with AS/NZS 2890.6, or
      (B) be at least 3.2m wide and have a level surface with a maximum gradient of 1:40 in any direction,
c. for a group of 8 or more parking spaces—
   (i) at least 15% of the parking spaces must comply with AS/NZS 2890.6, and
   (ii) at least 50% of the parking spaces must—
      (A) comply with AS/NZS 2890.6, or
      (B) be at least 3.2m wide and have a level surface with a maximum gradient of 1:40 in any direction.

4) At least 5% of any visitor parking spaces must comply with AS/NZS 2890.6.

Compliance Summary:

Compliant configuration

Commentary:

Communal carpark is provided in the separate undercrofts of Buildings 1, 3 and 4. Communal carpark for the ILUs contained within Building 2 is provided on the ground level.

A roller door provides entry to the carparks provided under Buildings 1 to 4.

The overall gradient of the carpark including the parking aisles, car parking spaces and walkways connecting to the building entrances in Buildings 1 to 4 is 1:40 or shallower, including at the AS2890.6 and 3.2m wide bays.

Each unit within the multiple Villas has a separate lock up garage.

Building 1
A total of forty-three (43) spaces are provided on the ground floor and are configured as follows.

- 7 spaces (16.29%)
  - 5 spaces in accordance with AS2890.6 (2009)
  - 2 spaces in accordance with AS2890.6:2022 (due to the presence of a column in the shared area in location as per 2022 version)
- 53.5 % of remaining carparking spaces comprising
  - 23 spaces at 3.2m wide including
    - 15 single bays
    - 4 tandem bays providing 8 parking spaces

Building 2
A total of eighteen (18) spaces are provided on the ground level exclusively for resident parking and are configured as follows.

- 3 spaces (16.67%) in accordance with AS2890.6 (2009)
- 50 % of remaining carparking spaces comprising
  - 9 spaces at 3.2m wide

Building 3
A total of fifty-one (51) spaces are provided on the ground floor and are configured as follows.

- 8 spaces (15.69%) in accordance with AS2890.6 (2009)
- 50.1 % of remaining carparking spaces comprising
  - 26 spaces at 3.2m wide including
    - 22 single bays
    - 2 tandem bays providing 4 parking spaces

Building 4
A total of eighty-four (84) spaces are provided on the ground floor and are configured as follows.

- 13 spaces (15.48%) in accordance with AS2890.6 (2009)
- 51.2 % of remaining carparking spaces comprising
  - 43 spaces at 3.2m wide including
    - 21 single bays
    - 11 tandem bays providing 22 parking spaces

Villas

Each villa complex, as per the BCA report, is a class 2 building. All parking for the units is not provided in a common area as each unit has a separate ground level garage that is accessed via a driveway dedicated to access that garage. Therefore, only clause (7) of Schedule 4, Part 1(4) Car parking applies to the individual garages for the Villa. It states:

> *7) A parking space, other than a parking space under subsection (6), must be—*
> *(a) secured by a power-operated door, or*
> *(b) capable of accommodating the installation of a power-operated door, including by having—*
> > *(i) access to a power point, and*
> > *(ii) an area for motor or control rods for a power-operated door.*

This provision of Schedule 4 Section 4 Car parking is met with the provision of individual garages as each has a roller door.

The gradient of the external pathway between the garage and the ground level entrances for all villas is shown on the plans to be 1:40 or shallower.

Visitor Parking

One (1) accessible compliant parking space is provided for visitors to the Residential Care Facility in Building 2. This is shown on the plans to have a configuration compliant with AS2890.6 (see section .

No other visitor parking is provided on the site.

Site plans include a note stating: “All gradients (driveway, footpath and carpark) to achieve a maximum of 1:40 to comply with HSEPP”.

5.5 Clause 5 – Accessible Entry

1) The main entrance to a dwelling must have—
   a. a clear opening that complies with AS 1428.1, and
   b. a circulation space in front of the door and behind the door that complies with AS 1428.1.

2) This section does not apply to an entry for employees.

Compliance Summary:

Compliant configuration

Commentary:
Building 1, 3 and 4 main entrance doorways have double swing doors for the pedestrian approaches on both sides of the buildings.

Buildings 1, 3 and 4 have cat and kitten door arrangement (one large and one small door leaf) for the car park entrances providing compliance with AS1428.1.
Building 2 entrance doorways have automated sliding doors either side of an airlock for the pedestrian approach at ground level. The carpark lobby entry has consecutive double swing doors, configured as cat and kitten or one large and one smaller door, providing compliance with AS1428.1. The airlock provides compliant successive distance between each set of doors.

Villa ground level lobby entrances are shown with a cat and kitten door arrangement (one large and one small door leaf) providing compliance with AS1428.1.

Ground level Villa units have separate individual single swing entry doors in accordance with AS1428.1.

For the ILUs, adequate circulation area is generally achieved at entrance doors on both sides of the door leaf. Some units will need adjustments at time of detailed design.

The high care or RAC rooms have clear door opening widths to meet the NCC requirements for Class 9c. Due to the high care nature of the facility AS1428.1 door circulation will not be provided at the entrances to the individual rooms. This will be addressed by a performance solution at the time of construction certification.

A 920mm door leaf should be used as a minimum to achieve clear width of 850mm per AS1428.1 where the entry door is a swing door. Where the door is thicker due to fire-rating requirements, the door leaf width may need to be increased to meet the clear door opening width of 850mm.

5.6 Clause 6 – Interior

1) An internal doorway must have an unobstructed opening that complies with AS 1428.1.

2) An internal corridor must have an unobstructed width of at least 1,000mm.

3) The circulation spaces in front of and behind an internal doorway in the following areas must comply with AS 1428.1—
   a. a kitchen,
   b. a laundry,
   c. a bathroom,
   d. a toilet,
   e. a bedroom,
   f. a living area,
   g. the main area of private open space.

(4) To avoid doubt, subsection (3)(b) does not apply to laundry facilities in a cupboard.

Compliance Summary:

Compliant configuration – corridor widths
Building 1
Building 2 (Levels 4 and 5)

To be addressed in detailed design – provision of door schedule and door hardware details

Commentary:
A door schedule for doors within the ILUs has not been provided at this early stage of design. A 920mm door leaf should be used as a minimum to achieve clear width of 850mm per AS1428.1, assuming that the door is of a suitable thickness.

All corridors within the ILU dwellings meet or have the capacity to meet the minimum required width of 1000mm.

Most doorways within the dwellings meet the circulation requirements of AS1428.1. Those that do not have capacity for compliance at the time of detailed design.

5.7 Clause 7 – Main Bedroom

At least one bedroom in a dwelling must have the following—
   a. a clear area, not including a circulation space, sufficient to accommodate—
      (i) for a hostel—a wardrobe and a single-size bed, or
      (ii) for an independent living unit—a wardrobe and a queen-size bed,
   b. a clear area around the area for the bed of at least—
      (i) 1,200mm at the foot of the bed, and
      (ii) 1,000mm on each side of the bed,
   c. at least 2 double general power outlets on the wall where the head of the bed is likely to be,
   d. at least one general power outlet on the wall opposite the wall where the head of the bed is likely to be.

Compliance Summary:

Compliant configuration

Commentary:

The main bedroom within each ILU and Villa accommodates a queen size bed and wardrobe and achieves the required circulation areas around the bed.

Additional requirements listed above to be implemented during detailed design.

5.8 Clause 8 – Bathroom

1) At least one bathroom in a dwelling must be located on—
   a. the same floor as the entry to the dwelling, or
   b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

2) The bathroom must have the following—
   a. a slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586—2013,
   b. a washbasin with tap ware capable of complying with AS 1428.1, including by future adaptation if the washbasin and tap ware continue to use existing hydraulic lines,
   c. a shower that—
      (i) is accessible without a shower-hob or step, and
      (ii) complies with the requirements of AS 1428.1 for the entry, circulation space, floor gradient to the wastewater outlet and location of the mixer tap, and
      (iii) is in the corner of a room, and
      (iv) has a wall capable of accommodating the installation of a grab rail, portable shower head with supporting grab rail and shower seat, in accordance with AS1428.1,
   d. a wall cabinet with shelving illuminated by an illumination level of at least 300 lux,
   e. a double general power outlet in an accessible location, in accordance with AS1428.1.

3) Subsection (2)(c) does not prevent the installation of a shower screen that can easily be removed to enable compliance with that paragraph.

Compliance Summary:

Capable of compliance as a part of detailed design

Commentary:

The main ensuite within each of the ILU and Villas is provided with a floor area that accommodates the spatial requirements of an accessible bathroom within the meaning of AS1428.1.

Overall room dimensions and arrangement fixtures is generally in accordance with AS1428.1:2021.

Additional requirements listed above to be implemented during detailed design.

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

5.9 Clause 9 –Toilet

1) At least one toilet in a dwelling must be located on—
   a. the same floor as the entry to the dwelling, or
   b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

2) The toilet must have the following—
   a. a water closet pan—
      (i) in the corner of the room, and
      (ii) with a centreline set-out in accordance with AS 1428.1,
   b. a circulation space in front of the water closet pan that is—
      (i) at least 1,200mm long and at least 900mm wide, and
      (ii) clear of door swings and fixtures, other than a toilet paper dispenser or grabrails,
   c. a circulation space around the water closet pan that complies with AS 1428.1,
   d. a slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586—2013,
   e. a wall capable of accommodating the installation of a back rest and grab rail that will comply with AS 1428.1.

3) A removable shower screen may be located in the circulation space specified in subsection (2)(c).

Compliance Summary:

Compliant configuration

Commentary:

The main ensuite within each of the ILU and Villas is provided with a floor area that accommodates the spatial requirements of an accessible bathroom within the meaning of AS1428.1. 900x1200mm is achieved in front of the WC pan that is located in the corner of the room.

Additional requirements listed above, including set-out of WC pan and grabrails, is to be implemented during detailed design.

5.10 Clause 10 – Surface Finishes

Balconies and external paved areas must have surfaces that are slip resistant and comply with—

a. the Building Code of Australia, or
b. the Standards Australia Handbook SA HB 198:2014, Guide to the specification and testing of slip resistance of pedestrian surfaces, published on 16 June 2014.

Compliance Summary:

To be addressed during detailed design, when finishes are specified.

5.11 Clause 11 – Door Hardware

1) Door handles and hardware for all doors, including entry doors and external doors, must comply with AS 1428.1.

2) To avoid doubt, subsection (1) does not apply to cabinetry.

Compliance Summary:

To be addressed during detailed design when door hardware is specified.

5.12 Clause 12 – Switches and power points

1) Switches and power points must—
   a. comply with AS 1428.1, or
   b. be capable of complying with AS 1428.1 through future adaptation.

2) Subsection (1) does not apply to—
   a. remote controls, or
   b. power points likely to serve appliances that are not regularly moved or turned off.

Compliance Summary:

To be addressed during detailed design when switches and GPOs and their locations are detailed.

5.13 Clause 13 – Private passenger lifts

1) This section applies to a private passenger lift that is required by this schedule to be accessible only from inside a particular dwelling.

2) The private passenger lift must—
   a. be at least 1,100mm wide and at least 1,400mm long, measured from the lift car floor, and

b. have a clear indoor landing on all floors serviced by the lift, other than the floor on which the main area of private open space is located, at least 1,540mm long and at least 2,070mm wide, and
c. have controls that comply with—
    i. AS 1735.12:2020, Lifts, escalators and moving walks, *Part 12: Facilities for persons with disabilities, published on 26 June 2020*, or
    ii. AS 1735.15:2021, Lifts, escalators and moving walks, *Part 15: Safety rules for the construction and installation of lifts — Special lifts for the transport of persons and goods — Vertical lifting platforms intended for use by persons with impaired mobility*, published on 23 July 2021.

3) The width of the door opening of the private passenger lift must be at least 900mm.

4) The private passenger lift must not be a stairway platform lift.

Compliance Summary:

Not applicable

Part 2 Additional Standards for independent living units

5.14 Schedule 4, Clause 14– Application

The standards set out in this Part apply to any seniors housing that consists of independent living units.

5.15 Clause 15 – Bedroom

At least one bedroom in an independent living unit that complies with this schedule, section 7 must be located on—

a. the same floor as the entry to the unit, or
b. a floor serviced by a private passenger lift accessible only from inside the unit.

Compliance Summary:

Compliant configuration

5.16 Clause 16 – Living and Dining Room

1) A living room in an independent living unit must be located on—
   a. the same floor as the entry to the dwelling, or
   b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

2) The living room must have—
   a. a circulation space that—
      (i) is clear of all fixtures, and
      (ii) has a diameter of at least 2,250mm, and
   b. a telecommunications or data outlet adjacent to a general power outlet.

Compliance Summary:

Compliant configuration

Commentary:

The living areas are located at the entry level.

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

The requirement for telephone, data and power outlets to be implemented during detailed design.

5.17 Clause 17 – Main area of private open space

The main area of private open space for an independent living unit must be located on—

a. the same floor as the entry to the dwelling, or
b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

Compliance Summary:
Compliant configuration

Commentary:
All ILUs and villas are provided with a private open-air space, being a ground level courtyard for some villas, with the remaining villas and all ILU having balconies.

5.18 Clause 18 – Kitchen

1) A kitchen in an independent living unit must be located on—
   a. the same floor as the entry to the dwelling, or
   b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

2) The kitchen must have a circulation space with a diameter of at least 1,200mm between each bench top, cupboard or large appliance and each other bench top, cupboard or large appliance.

3) Each circulation space specified in subsection (2) must be capable of being increased to a diameter of 1,550mm without—
   a. relocating the sink, or
   b. moving a load-bearing wall, or
   c. breaching another circulation requirement.

4) The kitchen must have the following fittings—
   a. a bench that includes at least one work surface that is—
      (i) at least 800mm long, and
      (ii) clear of obstructions, and
      (iii) not in the corner of the room,
   b. a lever tap set with the lever and water source that is within 300mm of the front of the bench,
   c. a cooktop next to the work surface,
   d. an isolating switch for the cooktop,
   e. an oven that—
      (i) has operative elements between 450mm and 1,250mm above the finished floor level, and
      (ii) is next to the work surface,
   f. at least one double general power outlet located within 300mm of the front of a work surface.

5) The cupboards must—
   a. not be entirely located in the corner of the bench or the corner of the room, and
   b. face where the user of the fixture is likely to be.

6) An overhead cupboard in the kitchen must be capable of being fitted with “D” pull cupboard handles towards the bottom of the cupboard.

7) A below-bench cupboard in the kitchen must be capable of being fitted with “D” pull cupboard handles towards the top of the cupboard.

8) The lever tap set, cooktop, isolating switch, oven and double general power outlet must—
   a. not be in the corner of the bench or the corner of the room, and
   b. face where the user of the fixture is likely to be.

9) Cabinetry below a work surface must be able to be easily removed to allow wheelchair access to the work surface.

Compliance Summary:

To be addressed during detailed design

Commentary:

A minimum of 1200mm or greater clearance is provided between opposing benches in the kitchen. This is capable of being increased to 1550mm through relocation of the island bench. Where this is not provided there is capacity for compliance during detailed design.

The agreed approach where kitchen sinks are provided within the island bench is for continuous flooring to be provided under the bench and flexible plumbing to be provided for easy bench relocation. This avoids capped plumbing. Provision of the closer bench tops meets the needs of people with ambulant disabilities who benefit from having the bench tops closer than 1550mm apart. But also permits relocation of the bench for people who use wheelchairs and require the larger circulation areas.

Each kitchen layout achieves a bench space that is 800mm wide.

Additional requirements for kitchens, as listed above, will be implemented during detailed design to ensure full compliance.

5.19 Clause 19 – Laundry

1) A laundry in an independent living unit must be located on—

a. the same floor as the entry to the dwelling, or
b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

2) The laundry must have the following—
   a. a circulation space that complies with AS 1428.1 at the approach to any external doors,
   b. an appropriate space for an automatic washing machine and a clothes dryer,
   c. a clear space in front of each appliance of at least 1,550mm,
   d. a slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586—2013,
   e. continuous accessible path of travel to the main area of private open space or any clothes line provided for the dwelling.

3) The space specified in subsection (2)(c) may overlap with a door swing or the circulation space for a door.

4) For laundry facilities in a cupboard, the cupboard must be capable of being fitted with "D" pull cupboard handles in the following locations—
   a. for below-bench cupboards—towards the top,
   b. for overhead cupboards—towards the bottom,
   c. for floor-to-ceiling doors—between 900mm and 1,100mm above the finished floor level.

5) In this section—
   laundry includes laundry facilities in a cupboard.

Compliance Summary:

Compliant configuration – circulation areas

To be addressed in detailed design – floor finishes, joinery requirements and other fit out elements

Commentary:
Laundries where provided as a cupboard configuration have adequate circulation for compliance.

Laundry designs where it is located in a separate room typically have 1550mm in front of the appliances.

Other items listed above are to be addressed during the detailed design phase documentation to ensure full compliance.

5.20 Clause 20 – Linen storage

An independent living unit must have a floor-to-ceiling linen storage cupboard that—

a. is at least 600mm wide, and
b. has adjustable shelving.

Compliance Summary:

Compliant configuration

To be addressed in detailed design – labelling of linen storage

Commentary:

Most ILUs and villas are provided with a full height linen cupboard, that is not yet labelled as such.

The requirement for adjustable shelving will be implemented during detailed design.

5.21 Clause 21 – Lifts access in multi-storey developments

An independent living unit on a storey above the ground storey must be accessible by a lift that complies with the Building Code of Australia, Volume 1, Part E3.

Compliance Summary:

Capable of compliance – lift design to be addressed during detailed design

5.22 Clause 21 – Garbage and recycling

A garbage storage area and a recycling storage area provided for an independent living unit must be accessible by a continuous accessible path of travel from the dwelling entrance.

Compliance Summary:

Compliant configuration – Buildings 1 to 4

To be addressed in detailed design – Villa garbage storage location

Commentary:

Within buildings 1 to 4 garbage chutes are provided in the common area corridor on each level. Ground level entrances of garbage rooms provides accessibility.

Garbage facilities for the villas to be provided during detailed design.

6 BCA Accessibility Requirements

Approach & External Areas

The approach to the building needs to be addressed when considering access for persons with a disability. The BCA has three requirements for the approach to the building for persons with a disability.

An accessible path of travel is required to the building entrance from the allotment boundary at the main points of pedestrian entry, from accessible carparking areas and from any adjacent and associated accessible building.

In this instance, the approach to the building has been considered as follows:

- from the allotment boundary at the pedestrian entrance on Wyong Road to the building entrances;
- from the accessible carparking areas to the building entrances.
- Between associated accessible buildings within the site

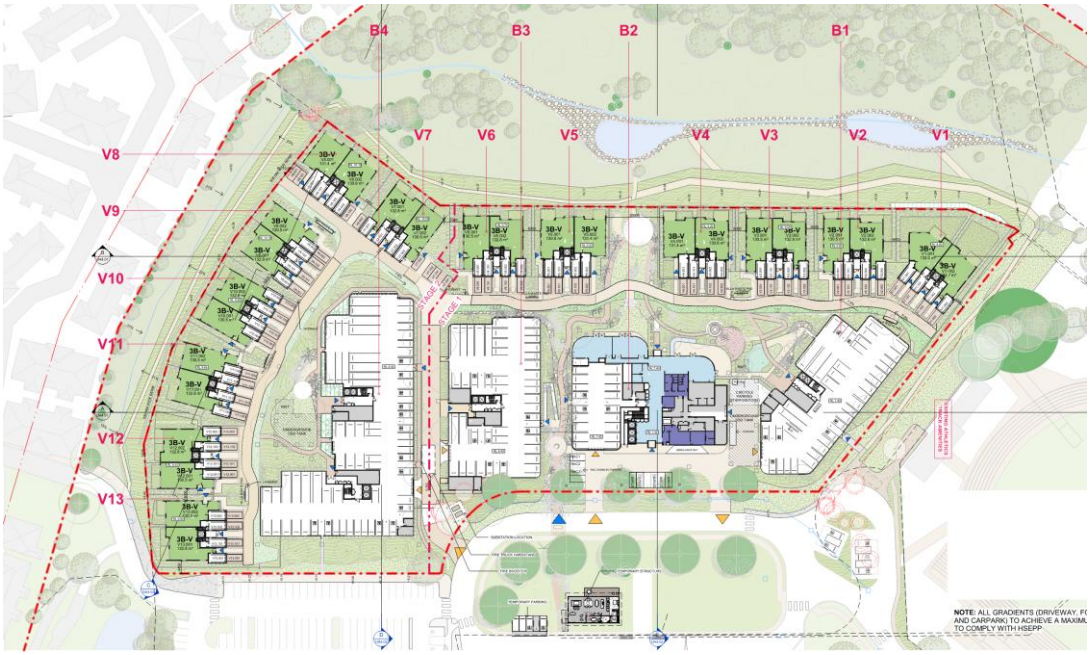


Figure 4 | Ground Level Plan

6.1 Approach from Allotment Boundary

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

Compliance Summary:

Capable of compliance during detailed design

Commentary:

Accessible paths of travel are not yet detailed on the plans. Site plans include a note indicating that on-grade or step free access will be provided.

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:

Capable of compliance during detailed design

Commentary:

An accessible path of travel is provided to the building entrance through the carparks of Buildings 1 to 4.

Villa car parking is detailed in the commentary for section 5.4 Clause 4 Parking, above.

Details of the gradients and dimensions of all external common areas have not yet been provided, but compliance requirements are noted on the site plans.

Site levels indicate that on-grade or step free access is achievable.

The accessible visitor carparking areas are located close to the entrance to building 2 on the ground level (site) plan. The contours suggest that the area between carparking areas and the main entrances of all buildings provided on the site is conducive to an accessible path of travel. Requirements for the accessible path of travel are included in Section 6.4 of this report and should be addressed during detailed design and construction to facilitate access for persons with a disability and ensure compliance.

The temporary Display Suite will have an accessible parking space adjacent to the entry. The pathway has a compliant configuration.

Relocated accessible parking for the Athletics track has capacity to be connected to an accessible path of travel during detailed design.

6.3 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 during detailed design

Commentary:
Details of the gradients and dimensions of all external common areas have not yet been provided but compliance requirements are noted on site plans.

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 during detailed design

Commentary:
Site levels and notes indicate a level or step free surface is achievable.

6.5 Accessible Carparking

There is a requirement for the provision of accessible carparking within this development.

For the residential component of the development (Class 2), there are no BCA requirements for the provision of accessible carparking within the development. See section 5.4 Clause 4 Parking, above for parking requirements under SEPP Housing that also applies to this development.

For a residential care building (Class 9c) BCA requires one (1) accessible space for every one hundred (100) carparking spaces or part thereof.

Compliance Summary:
Compliant configuration

Commentary:
Three (3) accessible carparking spaces adjacent to Building 2, that contains the Residential Care Facility (RCF Class 9c), are shown on the overall ground level floor plan.

For replacement athletics track parking, five (5) spaces have been provided. This provides the same number of accessible parking spaces, i.e. “like for like”.

The temporary Display Suite will have an accessible parking space adjacent to the entry.

Whilst it is not a BCA requirement to provide accessible parking for the ILUs, it is noted that the shared area for two (2) of the accessible parking bays includes a column in the ground level parking under Building 1. This is a

technical non-compliance with the NCC referenced version of AS2890.6 requiring bollards with AS2890.6:2022 permitting the use of columns.

Ensure

- compliant number of accessible parking bays is provided for each building class
- as agreed for the athletics track
- that the overall configuration of the accessible carparking spaces achieves compliance with current legislation including dimensions of the space and associated shared areas, chevron markings and provision of a bollard during detailed design.
- Performance solution report is required for the following functional but technical non-compliances
    - Column used in shared area in building 1
    - Bollard positioned to provide turning area in parking areas associated with Building 2

6.6 Kerb Ramps

Where kerb ramps are provided to pedestrian areas within the accessible path of travel, the configuration of kerb ramps is to be in accordance with AS1428.

Compliance Summary:

Capable of compliance during detailed design

Commentary:

Details of the gradients and dimensions of all external common areas have not yet been provided.

6.7 Accessible Ramps

AS1428.1 defines a ramp as having a gradient between 1:14 and 1:20. 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 during detailed design

Commentary:

Details of the gradients and dimensions of all external common areas have not yet been provided.

6.8 Stairs

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

Compliance Summary:

Capable of compliance during detailed design

Commentary:

Details of the external common areas have not yet been provided.

6.9 Walkways

AS1428.1 defines a walkway as having a gradient between 1:33 and 1:20. 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 during detailed design

Commentary:

Details of the gradients and dimensions of all external common areas have not yet been provided.

A graded walkway is shown as a part of the accessible path of travel for the temporary Display Suite.

6.10 Pedestrian Crossings

Due to the scale and type of the development it is assumed that there will need to be pedestrian crossings provided to facilitate safe pedestrian movement both within the development site and connecting to the broader Mingara site and bus stops.

Compliance Summary:

Capable of compliance during detailed design

Commentary:

Details of all external common areas have not yet been provided.

6.11 Threshold Ramp

To mitigate water ingress, it is sometimes necessary to contrast a threshold ramp at building entrances.

Compliance Summary:

Capable of compliance during detailed design

Commentary:

Details of all external common areas to be provided at time of detailed design.

Threshold ramps are noted for the doorways of the temporary Display Suite. They are labelled step ramps but a technically threshold ramps.

6.12 Accessible Entrance

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

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

Compliance Summary:

Compliant configuration

Commentary:

Building 1, 3 and 4 main entrance doorways have double swing doors for the pedestrian approaches on both sides of the buildings.

Buildings 1, 3 and 4 have cat and kitten door arrangement (one large and one small door leaf) for the car park entrances providing compliance with AS1428.1.

Building 2 entrance doorways have automated sliding doors either side of an airlock for the pedestrian approach at ground level. The carpark lobby entry has consecutive double swing doors, configured as cat and kitten or one large and one smaller door, providing compliance with AS1428.1. The airlock provides compliant successive distance between each set of doors.

Villa ground level lobby entrances are shown with a cat and kitten door arrangement (one large and one small door leaf) providing compliance with AS1428.1.

Ground level Villa units have separate individual single swing entry doors in accordance with AS1428.1.

For the ILUs, adequate circulation area is generally achieved at entrance doors on both sides of the door leaf. Some units will need adjustments at time of detailed design.

A 920mm door leaf should be used as a minimum to achieve clear width of 850mm per AS1428.1 where the entry door is a swing door. Where the door is thicker due to fire-rating requirements, the door leaf width may need to be increased to meet the clear door opening width of 850mm.

The high care or RAC rooms have clear door opening widths to meet the NCC requirements for Class 9c. Due to the high care nature of the facility AS1428.1 door circulation will not be provided at the entrances to the individual rooms. This will be addressed by a performance solution at the time of construction certification.

The temporary Display Suite has a sliding door with a threshold ramp providing compliance with AS1428.1.

6.13 Tactile Indicators at Entrance

BCA Clause D4D9 states that 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 – in the absence of a suitable barrier – an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building…if there is no kerb or kerb ramp at that point, except for areas exempted by D4D5.

If no kerb is provided between the entrance and the driveway area, tactile indicators are required.

Compliance Summary:

To be addressed during detailed design

Commentary:

Details of all external common areas to be provided at time of detailed design.

6.14 Extent of Access Generally – BCA

Class 2

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.

Class 9c

In addition to the requirements listed above for Class 2, the BCA requires the provision of two (2) accessible rooms based on a total of thirty-nine (39) Residential Care Facility sole occupancy units.

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

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

Compliance Summary:

To be addressed during detailed design

Commentary:

A performance solution will be provided at time of detailed design addressing accessible room provision for the High Care Units.

6.15 Circulation Areas

BCA (Clause D4D4) requires the provision of turning spaces and passing areas to corridors to enable wheelchair circulation throughout a building.

Turning spaces 1540mm wide by 2070mm long are required within 2m of the end of corridors to enable a wheelchair to turn through 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 configuration

Commentary:

Compliant circulation space has been provided throughout the common areas of all buildings.

6.16 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:

To be addressed during detailed design – door schedule and door hardware

Commentary:

Class 2

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

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

Residential aged care facilities

BCA D2D8(c) requires that the unobstructed width of a public corridor in a Class 9c building must be not less than 1.5m.

BCA D2D9(d) requires that the unobstructed width of a door must be not less than 1070mm where it opens from a sole occupancy unit onto a public corridor; 870mm in other residential areas; and 800mm in non-residential areas.

A performance solution will be provided as a part of the detailed design package to address that the residential care nature of the RCF SOUs is such that residents will be assisted, and will typically be older than the ages covered by the access requirements within AS1428.1.

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

6.17 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 configuration

Commentary:
All pedestrian entrances that have lobbies have compliant dimensions for vestibules and airlocks.

Building 2 airlock to accessible WC in Admin area provides compliant circulation distances between successive doors.

6.18 Hearing Augmentation at Service Counters

For buildings that are required to be accessible, the BCA (Clause D4D8) 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.

Commentary:
Hearing augmentation needs to be provided at time of detailed design.

6.19 Hearing Augmentation

For buildings that are required to be accessible, the BCA (Clause D4D8) 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.

Commentary:

Hearing augmentation needs to be provided at time of detailed design.

6.20 Exempt Areas

BCA Clause D4D5 does not require access for people with disabilities to areas that would be inappropriate due to the particular use of the area or would pose a health and safety risk. This includes the path of travel to these areas.

Compliance Summary:

None specified

Commentary:

- Within this development, the following areas are considered to be exempt from requiring access for people with disabilities:
  - Plant and service areas
  - Back of house and service areas for RCF including kitchen and laundry
  - Staff areas of RCF

6.21 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. Refer to AS1428.1(2009), Clause 7.2 for further details.

Compliance Summary:

To be addressed during detailed design stages

6.22 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.

6.23 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.

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

Compliance Summary:

To be addressed during detailed design stage.

Commentary:

Controls schedule to be provided at time of detailed design.

6.24 Visual Indication to Glazing

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

Compliance Summary:

To be addressed during detailed design stage.

Commentary:

Visual barrier specifications to be provided at time of detailed design.

6.25 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 D4D9).

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

Compliance Summary:

To be addressed during detailed design stage.

Commentary:

Tactile indicator details to be provided at time of detailed design.

6.26 Signage

Signage to identify sanitary facilities, hearing augmentation and required exits are to be provided in accordance with BCA Clause D4D7. This includes provision of the International Symbol for Access or International Symbol for Deafness as appropriate. Signage to comply with AS1428.1 (2009), Clause 8.

Compliance Summary:

To be addressed during detailed design stage.

Commentary:

Signage schedule to be provided at time of detailed design.

6.27 Handrails to Passageways – Residential Aged Care Facilities

In a residential care building, handrails must be provided along both sides of every passageway or corridor used by residents fixed not less than 50mm clear of the wall and where practical continuous for the full length of the corridor.

Compliance Summary:

To be addressed during detailed design

Commentary:

It is unclear if a performance solution will be required for this element at this early stage of design. Clarification to be provided prior to detailed design.

Sanitary Facilities

The BCA / Access Code for Buildings (Clause F4D5) require the provision of sanitary facilities catering for people with disabilities.

6.28 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 must be provided for use by males and females.

- A unisex accessible shower is required where showers are required by F4D7.

- Within a Class 2 buildings, where sanitary compartments are provided in common areas, not less than one (1) unisex accessible sanitary compartment is required.

Compliance Summary:

Compliant configuration

Commentary:

Unisex accessible sanitary compartments are shown on the plans within Building 2 only in the following locations:

- ground floor:
  - community facilities near café
- adjacent to the dining room on the three (3) RCF levels
- within staff area on the three (3) RCF levels

Ambulant toilet cubicles are also provided in the community facilities area on the ground floor.

An accessible WC (LH) is provided within the temporary Display Suite.

6.29 Unisex Accessible Sanitary Compartment

Unisex accessible sanitary compartments are provided within this development.

Compliance Summary:

To be addressed during detailed design

Commentary:
Overall room dimensions and the set-out of fixtures has capacity for compliance with current accessibility legislation.

Both left-and right-handed facilities are not yet provided at this early stage of design but this can be resolved in detailed design.

Fittings schedule to be provided at time of detailed design.

6.30 Cubicles for People with an Ambulant Disability

Ambulant toilets are provided within this development.

Compliance Summary:
To be addressed during detailed design

Commentary:
Ambulant toilet cubicles are provided within the male and female facilities provided in the bank of toilets within the community facilities area on the ground floor of building 2.

Overall cubicle dimensions and the set-out of fixtures have capacity for compliance with current accessibility legislation.

Fittings schedule to be provided at time of detailed design.

Vertical Circulation

Lifts provide the main means of access between levels of all of the buildings. Stairs within the building are fire isolated egress stairs.

6.31 Passenger Lifts

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

Compliance Summary:

Capable of compliance during detailed design

Commentary:

Two lifts are provided for access between levels for vertical circulation for all four (4) buildings containing SEPP Housing Independent Living Units or SOUs.

A single lift is provided for vertical circulation between levels for the residential care facilities provided within Building 2.

Single lifts are provided within each villa block.

The overall size of the lift shafts is capable of accommodating a lift car of adequate dimensions for compliance with BCA during detailed design.

Lift car dimensions and landing call button specifications to be provided at time of detailed design.

6.32 Walkways

AS1428.1 defines a walkway as having a gradient of 1:20. We note that walkways do not require the provision of handrails or tactile indicators.

Compliance Summary:

To be addressed during detailed design, where and if internal walkways are provided

Commentary:

Currently there are no internal walkways provided within the buildings.

6.33 Accessible Ramps

AS1428.1 defines an accessible ramp as having a gradient between 1:19 and 1:14 For curved ramps with a gradient of 1:14, a minimum width of 1500mm is required and the minimum allowable radius is to be 1900mm (AS1428.1 (2009), clause 10.4).

Compliance Summary:

To be addressed during detailed design, where and if internal ramps are provided

Commentary:

Currently there are no internal accessible ramps provided within the buildings.

6.34 Stairs

AS1428.1 has access requirements for all stairs other than fire isolated egress stairs and is applicable in this instance.

Compliance Summary:

To be addressed during detailed design where and if internal non-fire-isolated stairs are provided

Commentary:

Currently there are no internal accessible stairs provided within the buildings. All internal stairs are shown as fire-isolated stairs.

6.35 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:

Compliant configuration

Commentary:

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

We note the provision of offset treads typically will maintain a constant height along the length of the handrail per AS1428.,1 (2009), Clause 12.

6.36 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.

Commentary:
Finishes schedule to be provided at time of detailed design.

7 Conclusion

This report has assessed the plans for the proposed development that demonstrates compliance with the fundamental aims of accessibility legislation are achievable. 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.

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Appendix 2 | SEPP Housing 2021 Requirements (Seniors Living)

Part 1 Standards applying to hostels and independent living units

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.

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.

Letterboxes

(1) Letterboxes—
   a. must be located on a hard standing area, and
   b. must have wheelchair access by a continuous accessible path of travel from the
   c. letterbox to the relevant dwelling, and
   d. must be lockable by a lock that faces a wheelchair accessible path.

(2) If a structure contains multiple letterboxes, the structure must be in a prominent location.

(3) At least 20% of the letterboxes on the site must be more than 600mm and less than 1,200mm above ground level (finished).

Car parking

1) If parking spaces attached to or integrated with a **class 1 building** under the Building Code of Australia are provided for use by occupants who are seniors or people with disability, **at least 1 parking space** must—
    a. be at least 3.2m wide, and
    b. be at least 2.5m high, and
    c. have a level surface with a maximum gradient of 1:40 in any direction, and
    d. be capable of being widened to 3.8m without requiring structural modifications to a building.

2) If parking spaces associated with a **class 1, 2 or 3 building** under the Building Code of Australia are provided in a **common area** for use by occupants who are seniors or people with a disability, the following applies—
    a. for a parking space not in a group—the parking space must comply with AS/NZS2890.6,
    b. for a group of 2–7 parking spaces—
        (i) at least 1 of the parking spaces must comply with AS/NZS 2890.6, and
        (ii) 50% of the parking spaces must—
            (A) comply with AS/NZS 2890.6, or
            (B) be at least 3.2m wide and have a level surface with a maximum gradient of 1:40 in any direction,
    c. for a group of 8 or more parking spaces—
        (i) at least 15% of the parking spaces must comply with AS/NZS 2890.6, and
        (ii) at least 50% of the parking spaces must—
            (A) comply with AS/NZS 2890.6, or
            (B) be at least 3.2m wide and have a level surface with a maximum gradient of 1:40 in any direction.

3) To avoid doubt, a parking space that complies with AS/NZS 2890.6 is only counted toward 1 of the requirements in subsection (2)(b)(i) or (ii) or (c)(i) or (ii).

4) At least 5% of any visitor parking spaces must comply with AS/NZS 2890.6.

5) A parking space required by this section to comply with AS/NZS 2890.6, other than a visitor parking space, is not required to include the international symbol of access.

6) If multiple parking spaces are accessible by a common access point, the access point must be secured by a power-operated garage door, vehicle gate, vehicle barrier or similar device.

7) A parking space, other than a parking space under subsection (6), must be—
   a. secured by a power-operated door, or
   b. capable of accommodating the installation of a power-operated door, including by having—
      (i) access to a power point, and
      (ii) an area for motor or control rods for a power-operated door.

8) A requirement in this section for a parking space to comply with AS/NZS 2890.6 extends to the associated shared area within the meaning of AS/NZS 2890.6.

9) In this section, a parking space is in a common area if it is not attached to or integrated with a hostel or independent living unit.

Accessible entry

10) The main entrance to a dwelling must have—
   a. a clear opening that complies with AS 1428.1, and
   b. a circulation space in front of the door and behind the door that complies with AS 1428.1.

11) This section does not apply to an entry for employees.

Interior

1) An internal doorway must have an unobstructed opening that complies with AS 1428.1.

2) An internal corridor must have an unobstructed width of at least 1,000mm.

3) The circulation spaces in front of and behind an internal doorway in the following areas must comply with AS 1428.1—
   a. a kitchen,
   b. a laundry,
   c. a bathroom,
   d. a toilet,
   e. a bedroom,
   f. a living area,
   g. the main area of private open space.

(4) To avoid doubt, subsection (3)(b) does not apply to laundry facilities in a cupboard.

Main Bedroom

At least one bedroom in a dwelling must have the following—

a. a clear area, not including a circulation space, sufficient to accommodate—
   (i) for a hostel—a wardrobe and a single-size bed, or
   (ii) for an independent living unit—a wardrobe and a queen-size bed,
b. a clear area around the area for the bed of at least—
   (i) 1,200mm at the foot of the bed, and
   (ii) 1,000mm on each side of the bed,
c. at least 2 double general power outlets on the wall where the head of the bed is likely to be,
d. at least one general power outlet on the wall opposite the wall where the head of the bed is likely to be.

Bathroom

1) At least one bathroom in a dwelling must be located on—
   a. the same floor as the entry to the dwelling, or
   b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

2) The bathroom must have the following—
   f. a slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586—2013,
   g. a washbasin with tap ware capable of complying with AS 1428.1, including by future adaptation if the washbasin and tap ware continue to use existing hydraulic lines,
   h. a shower that—
      (i) is accessible without a shower-hob or step, and
      (ii) complies with the requirements of AS 1428.1 for the entry, circulation space, floor gradient to the wastewater outlet and location of the mixer tap, and
      (iii) is in the corner of a room, and
      (iv) has a wall capable of accommodating the installation of a grab rail, portable shower head with supporting grab rail and shower seat, in accordance with AS1428.1,
   i. a wall cabinet with shelving illuminated by an illumination level of at least 300 lux,
   j. a double general power outlet in an accessible location, in accordance with AS1428.1.

3) Subsection (2)(c) does not prevent the installation of a shower screen that can easily be removed to enable compliance with that paragraph.

Toilet

1) At least one toilet in a dwelling must be located on—
   a. the same floor as the entry to the dwelling, or

b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

2) The toilet must have the following—
   a. a water closet pan—
      (i) in the corner of the room, and
      (ii) with a centreline set-out in accordance with AS 1428.1,
   b. a circulation space in front of the water closet pan that is—
      (i) at least 1,200mm long and at least 900mm wide, and
      (ii) clear of door swings and fixtures, other than a toilet paper dispenser or grabrails,
   c. a circulation space around the water closet pan that complies with AS 1428.1,
   d. a slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586—2013,
   e. a wall capable of accommodating the installation of a back rest and grab rail that will comply with AS 1428.1.

3) A removable shower screen may be located in the circulation space specified in subsection (2)(c).

Surface finishes

Balconies and external paved areas must have surfaces that are slip resistant and comply with—
   a. the Building Code of Australia, or
   b. the Standards Australia Handbook SA HB 198:2014, Guide to the specification and testing of slip resistance of pedestrian surfaces, published on 16 June 2014.

Door hardware

1) Door handles and hardware for all doors, including entry doors and external doors, must comply with AS 1428.1.

2) To avoid doubt, subsection (1) does not apply to cabinetry.

Switches & power points

1) Switches and power points must—
   a. comply with AS 1428.1, or
   b. be capable of complying with AS 1428.1 through future adaptation.

2) Subsection (1) does not apply to—
   c. remote controls, or
   d. power points likely to serve appliances that are not regularly moved or turned off.

Private passenger lifts

5) This section applies to a private passenger lift that is required by this schedule to be accessible only from inside a particular dwelling.

6) The private passenger lift must—
   d. be at least 1,100mm wide and at least 1,400mm long, measured from the lift car floor, and
   e. have a clear indoor landing on all floors serviced by the lift, other than the floor on which the main area of private open space is located, at least 1,540mm long and at least 2,070mm wide, and
   f. have controls that comply with—
      iii. AS 1735.12:2020, Lifts, escalators and moving walks, *Part 12: Facilities for persons with disabilities, published on 26 June 2020*, or
      iv. AS 1735.15:2021, Lifts, escalators and moving walks, *Part 15: Safety rules for the construction and installation of lifts — Special lifts for the transport of persons and goods — Vertical lifting platforms intended for use by persons with impaired mobility*, published on 23 July 2021.

7) The width of the door opening of the private passenger lift must be at least 900mm.

8) The private passenger lift must not be a stairway platform lift.

Part 2 Additional standards for self-contained dwellings

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.

Bedroom

At least one bedroom in an independent living unit that complies with this schedule, section 7 must be located on—

a. the same floor as the entry to the unit, or
b. a floor serviced by a private passenger lift accessible only from inside the unit.

Living room and dining room

1) A living room in an independent living unit must be located on—
   a. the same floor as the entry to the dwelling, or

b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

2) The living room must have—
   c. a circulation space that—
      (i) is clear of all fixtures, and
      (ii) has a diameter of at least 2,250mm, and
   d. a telecommunications or data outlet adjacent to a general power outlet.

Main area of private open space

The main area of private open space for an independent living unit must be located on—

a. the same floor as the entry to the dwelling, or
b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

Kitchen

1) A kitchen in an independent living unit must be located on—
   a. the same floor as the entry to the dwelling, or
   b. a floor serviced by a private passenger lift accessible only from inside the dwelling.

2) The kitchen must have a circulation space with a diameter of at least 1,200mm between each bench top, cupboard or large appliance and each other bench top, cupboard or large appliance.

3) Each circulation space specified in subsection (2) must be capable of being increased to a diameter of 1,550mm without—
   a. relocating the sink, or
   b. moving a load-bearing wall, or
   c. breaching another circulation requirement.

4) The kitchen must have the following fittings—
   a. a bench that includes at least one work surface that is—
      (i) at least 800mm long, and
      (ii) clear of obstructions, and
      (iii) not in the corner of the room,
   b. a lever tap set with the lever and water source that is within 300mm of the front of the bench,
   c. a cooktop next to the work surface,
   d. an isolating switch for the cooktop,
   e. an oven that—
      (i) has operative elements between 450mm and 1,250mm above the finished floor level, and
      (ii) is next to the work surface,

f. at least one double general power outlet located within 300mm of the front of a work surface.

5) The cupboards must—
   a. not be entirely located in the corner of the bench or the corner of the room, and
   b. face where the user of the fixture is likely to be.

6) An overhead cupboard in the kitchen must be capable of being fitted with “D” pull cupboard handles towards the bottom of the cupboard.

7) A below-bench cupboard in the kitchen must be capable of being fitted with “D” pull cupboard handles towards the top of the cupboard.

8) The lever tap set, cooktop, isolating switch, oven and double general power outlet must—
   c. not be in the corner of the bench or the corner of the room, and
   d. face where the user of the fixture is likely to be.

9) Cabinetry below a work surface must be able to be easily removed to allow wheelchair access to the work surface.

Laundry

6) A laundry in an independent living unit must be located on—
   c. the same floor as the entry to the dwelling, or
   d. a floor serviced by a private passenger lift accessible only from inside the dwelling.

7) The laundry must have the following—
   f. a circulation space that complies with AS 1428.1 at the approach to any external doors,
   g. an appropriate space for an automatic washing machine and a clothes dryer,
   h. a clear space in front of each appliance of at least 1,550mm,
   i. a slip resistant floor surface that achieves a minimum rating of P3 in accordance with AS 4586—2013,
   j. continuous accessible path of travel to the main area of private open space or any clothes line provided for the dwelling.

8) The space specified in subsection (2)(c) may overlap with a door swing or the circulation space for a door.

9) For laundry facilities in a cupboard, the cupboard must be capable of being fitted with “D” pull cupboard handles in the following locations—
   d. for below-bench cupboards—towards the top,
   e. for overhead cupboards—towards the bottom,
   f. for floor-to-ceiling doors—between 900mm and 1,100mm above the finished floor level.

10) In this section—
laundry includes laundry facilities in a cupboard.

Linen storage

An independent living unit must have a floor-to-ceiling linen storage cupboard that—
   a. is at least 600mm wide, and
   b. has adjustable shelving.

Lifts access in multi-storey developments

An independent living unit on a storey above the ground storey must be accessible by a lift that complies with the Building Code of Australia, Volume 1, Part E3.

Clause 21 – Garbage and recycling

A garbage storage area and a recycling storage area provided for an independent living unit must be accessible by a continuous accessible path of travel from the dwelling
entrance.

Appendix 3 | Accessibility Requirements (BCA)

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

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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 that 13mm in diameter and slotted openings not greater than 13mm wide – elongated openings must traverse the direction of travel.

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 -refer to Figure 6 of AS1428.1).

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

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

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

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

Accessible Ramps – External

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 (1500mm for curved ramps) 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 D4D12)

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 D4D9 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).

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 D4D9 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.

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.

Step Ramps

Step ramps are to offer compliance with AS1428.1 (2009). Requirements are as follows:

a. The configuration of the step ramp is to comply with the requirements of AS1428.1, Clause 10.6.

b. Maximum gradient of the step ramp to be 1:10 and maximum length to be 1900mm (providing a maximum height of 190mm).

c. Provide landings at the top and bottom of the step ramp to comply with AS1428.1, Clause 10.8.2.

d. Step ramp to be enclosed on both sides (minimum height 450mm) or a kerb and handrail needs to be installed. Where a kerb is to be installed, 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

Accessible Carparking

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

a. Accessible carparking to be a minimum of 2400mm wide with a shared area to one side of the space 2400mm wide. Circulation space can be shared between adjacent accessible carparks. For a single space, a total width of 4800mm is required.

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

b. Provide a bollard to the shared circulation space as illustrated in AS2890.6, Figure 2.2.

c. The maximum allowable crossfall of accessible carparking area to be 1:40. This crossfall applies both parallel and perpendicular to the angle of parking.

d. For covered carparking, the clear height of the accessible carparking space to be 2500mm as illustrated in AS2890.6, Figure 2.7.

e. Designated accessible carparking is to be identified using the International Symbol for Access (ISA) between 800and 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. Stripes 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.

Threshold Ramp

Threshold ramps are to offer compliance with AS1428.1 (2009). Requirements are as follows.

a. Threshold ramp to comply with AS1428.1, Clause 10.5.

b. Threshold ramp to have a maximum rise of 35mm, maximum length of 280mm and maximum gradient of 1:8.

c. Threshold ramp to be located within 20mm of the door leaf that it services.

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.

Non-Accessible Entrances

The following access requirements apply to the non-accessible entrance.

a. Provide direction signage displaying the location of the accessible entrance that displays the International Symbol for Access per BCA Specification 15.

Tactile Indicators at Building Entrances

BCA Clause D4D9 (a) (v) states that 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 – in the absence of a suitable barrier – an accessway meeting a vehicular way adjacent to any pedestrian entrance to a building…if there is no kerb or kerb ramp at that point, except for areas exempted by D4D5. If no kerb is provided between the entrance and the driveway area, tactile indicators are required.

The following access requirements apply.

a. Where no kerb is provided, install tactile indicators for compliance with BCA Clause D3.8 and AS1428.4.

b. Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

c. Tactile indicators to be 600-800mm deep across the width of the path of travel set back 300mm from the edge of the driveway / roadway.

Circulation Areas Generally

BCA 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.

j. For residential aged care facilities, BCA D2D9(d) requires that the unobstructed width of a door must be not less than 1070mm where it opens from a sole occupancy unit onto a public corridor; 870mm in other residential areas; and 800mm in non-residential areas.

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 D4D8) 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 D4D8) 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.

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

Visual Indication to Glazing

Provide decals to all full height glazing that can be mistaken for a doorway to assist persons with a vision impairment. Decals to be solid and have a minimum 30% luminance contrast to the background colour and be not less than 75mm high located within the height range of 900-1100mm above the finished floor level. Decals are to be solid. 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 D4D9).

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

Signage

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

a. Braille and tactile signage formats as outlined within BCA Specification 15 that incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 must be provided to identify the following:
   - a sanitary facility, except a sanitary facility associated with a bedroom in a Class 1b building or a sole-occupancy unit in a Class 3 or Class 9c building
   - a space with a hearing augmentation system
   - each door required by E5D5 to be provided with an exit sign and state level
   - an accessible unisex sanitary facility and identify if the facility is suitable for left or right handed use
   - an ambulant accessible sanitary facility 1 and be located on the door of the facility
   - where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access to direct a person to the location of the nearest accessible pedestrian entrance
   - where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary

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

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

Sample signs are as follows. These are examples only – ensure selected signage complies with BCA Specification 15 including provision of Braille locator for multiple lines of text and characters.

Handrails to Passageways in RACF

Handrails must be provided along both sides of every passageway or corridor used by residents (BCA D2.17(b)(11). They are to be fixed not less than 50mm clear to the wall and where practical continuous for their full length.

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 .

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

b. Minimum internal dimensions of the lift car to be 1400mm wide x 1600mm deep a lift that travels over 12m or,
Minimum internal dimensions of the lift car to be 1100mm wide x 1400mm deep for a lift that travels less than 12m.

c. Clear opening of the lift door to be minimum 900mm.

d. Provide a handrail complying with the provisions for a mandatory handrail in AS1735.12.

e. All lift control buttons are to be in the accessible height range of 900-1100mm affl and have a minimum 30% luminance contrast to the background colour. This includes buttons within the lift car and at each public lift lobby. All buttons are to be provided with information in Braille and tactile formats.

f. Auditory / voice cues are to be provided within the lift car to assist persons with a vision impairment.

g. Series of door opening devices that will detect a 75mm diameter rod across the door opening between 50 mm and 1550mm above the floor level.

h. Emergency hands-free communication, including a button that alerts a call centre of a problem, a light to signal that the call has been received by the call centre and a light indicating assistance is being dispatched.

Stairs – Internal

Access requirements for public access stairs are as follows and should be addressed during construction to ensure compliance.

a. Stair construction to comply with AS1428.1, Clause 11.1.

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

c. Where the stair intersects with an internal corridor, the stair shall be set back in accordance with 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 D4D9 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).

Accessible Ramps – Internal

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 D3D12).

c. Where the intersection is at an internal corridor, the ramp shall be setback by a minimum 400mm so that the handrail complying with Clause 12 does not protrude into the transverse path of travel (AS1428.1, Clause 10.3 (g).

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 D4D9 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).

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

   Note: handrails within fire-isolated stars are required to one side only and do not require the provision of handrail extensions. They must have a diameter between 30-50mm; be between 865-1000mm high above the noising; 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.

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

Appendix 4 | 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 or 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.

Kitchenette

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.

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.

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.

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.

Provision of “Bed- Shakers”

We recommend the provision of “bed-shakers” within accommodation buildings such as hotels or boarding houses. For a person with hearing loss who is unable to hear the emergency alarm or smoke alarm, an alerting system becomes a critical aspect in terms of emergency egress. A specialized alarm, called a 'Bed Shaker,' can be installed next to the bed, and alerts those in the accommodation using a strobe light and vibrating pad that can be placed under the mattress or pillow. The alert is activated when an accompanying traditional smoke / fire alarm sounds.

Fire Egress Doors

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

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

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.

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.

Lockers

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

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