

Access Report

**LaHC Seniors Housing  
Development**

36-38 Birdwood Avenue  
PAGEWOOD NSW

For: CKDS Architecture

Ref: LP\_21452



#### 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:

<b>prepared by:</b> Lindsay Perry	Draft Revision 1 Revision 2 Revision 3	19 August 2022 22 November 2022 13 February 2023 27 February 2023

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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

Documentation for the LaHC Pagewood development located at 36-38 Birdwood Avenue Pagewood has been reviewed against current and applicable accessibility legislation.

The following table summarises our findings.

Item No.	Description	Compliance Status
<b>SEPP Siting Requirements</b>		
4.1	Location & Access to Facilities	Compliant in Principle
4.2	Accessibility	Compliant
<b>SEPP Schedule 4</b>		
5.1	Siting Standards	Compliant
5.2	Security	To be addressed in detailed design.
5.3	Letterboxes	Compliant configuration
5.4	Private Car Accommodation	Compliant configuration
5.5	Accessible Entry	Compliant configuration
5.6	Interior	Compliant configuration
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	Ancillary Items	To be addressed in detailed design.
5.13	Living and Dining Room	Compliant configuration
5.14	Kitchen	Compliant configuration
5.15	Access to kitchen, main bedroom & bathroom	Compliant configuration
5.16	Lifts in multi-storey buildings	Capable of compliance.
5.17	Laundry	Compliant configuration
5.18	Storage	Compliant configuration
5.19	Garbage	Compliant configuration
<b>External Areas   BCA Requirements</b>		
6.1	Allotment Boundary to Entrance	Compliant
6.2	Accessible Carparking to Entrance	Compliant
6.3	Walkways	Compliant configuration
6.4	Accessible Entrances	Compliant configuration
<b>Interior Areas   BCA Requirements</b>		
7.1	Extent of Access Generally	Compliant
7.2	Circulation Areas	Compliant
7.3	Doorways	Compliant configuration
7.4	Exempt Areas	None specified
7.5	Floor Finishes	To be addressed in detailed design.



Item No.	Description	Compliance Status
7.6	Carpet	To be addressed in detailed design.
7.7	Controls	To be addressed in detailed design.
7.8	Visual Indication to Glazing	To be addressed in detailed design.
7.9	Tactile Indicators	To be addressed in detailed design.
7.10	Signage	To be addressed in detailed design.
7.11	Slip Resistance(Ramps & Stairs)	To be addressed in detailed design.
<b>Vertical Circulation</b>		
8.1	Lift	Capable of compliance
8.2	Stairs	Capable of compliance
<b>Livable Housing Australia (LHA) Requirements   Silver level</b>		
9.1	Dwelling Access	Compliant
9.2	Dwelling Entrance	Compliant configuration
9.3	Internal Corridors and Doors	Compliant configuration
9.4	Toilet	Compliant configuration
9.5	Shower	Compliant configuration
9.6	Reinforcement of Bathroom Walls	To be addressed during detailed design
9.7	Internal Stairways	Not applicable

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

SEPP Housing requirements are included in Appendix 1 of this report and general accessibility requirements within Appendix 2, to guide the detailed design. Best Practice options are provided within Appendix 3 and we encourage their implementation into the design.

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



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## 1 Project Description

The proposed development is a seniors living development comprising ten (10) units over two (2) levels with associated carparking and common areas that have been designed for seniors living. There are eight (8) one-bedroom units and two (2) two bedroom units provided – all are capable of achieve silver level Livable Housing Australia (LHA) requirements.



Figure 1 | Proposed Development

## 2 Reviewed Documentation

Documentation prepared by CKDS Architecture has been reviewed as follows:

dwg no.	drawing name	revision
A-0001	Cover Sheet	B
A-0002	Planning Controls	A
A-0003	Context Photos	A
A-0101	Ground Floor Demolition Plan	A
A-1001	Site Location Plan	A
A-1002	Block Analysis Plan	A
A-1101	Site Plan   Ground Floor Plan	C
A-1102	First Floor Plan	A
A-1103	Roof Plan	A
A-1201	Unit Plans 1 & 6	A
A-1202	Unit Plans 2 & 7	A
A-1203	Unit Plans 3 & 8	A
A-1204	Unit Plans 4 & 9	A
A-1205	Unit Plans 5 & 10	A
A-2001	Streetscape Elevation	C
A-2002	North & East Elevations	C
A-2002	South & West Elevations	C
A-3001	Section A & B	C
A-4001	Waste Management Plan	A
A-4002	Cut & Fill Plan	A
A-5001	Shadow Diagram	B



dwg no.	drawing name	revision
A-6001	Unit 1 & 2	A
A-6002	Unit 3 & 4	A
A-6003	Unit 5 & 6	A
A-6004	Unit 7 & 8	A
A-6005	Unit 9 & 10	A
A-7001	Window Schedule	A
A-8001	External Finishes Schedule	B
A-8002	Perspectives	A
A-8003	Perspectives	A
A-8004	Height Plane Diagram	A

### 3 Legislation

Access assessment has been made against Access Legislation including:

- State Environmental Planning Policy – Housing 2021 – 12 August 2022
- The Commonwealth Disability Discrimination Act 1992 (DDA)
- Disability (Access to Premises (Buildings)) Standards 2010
- Access Code for Buildings 2010
- The National Construction Code Building Code of Australia Volume 1 2019 (BCA)
  - Section D2.14 / D2.15 / D2.17 – landings, thresholds and slip resistance
  - Section D3 – Access for People with Disabilities
  - Section E3.6 – Passenger Lifts
  - Section F2.4 – Accessible Sanitary Facilities
- Australian Standard AS1428.1 (2009) Amendment 1 & 2, – Design for Access and Mobility
- Australian Standard AS1428.2 (1992) – Design for Access and Mobility: Enhanced and additional requirements – Buildings and facilities
- Australian Standard AS1428.4.1 (2009) Amendment 1 – Design for Access and Mobility: Means to assist the orientation of people with vision impairment – Tactile ground surface indicators
- Australian Standard AS2890.6 (2009) – Parking Facilities – Off street carparking For People with Disabilities.
- Australian Standard AS4299 – Adaptable Housing
- Australian Standard AS1735.12 – Lifts, escalators and moving walks: Lifts for persons with a disability
- The Livable Housing Design Guidelines – Edition 4

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.

Division 8 Seniors Housing - Aboriginal Housing Office & Land and Housing Corporation is applicable to this development.

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#### **The Disability Discrimination Act 1992**

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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.

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#### **The Disability (Access to Premises) Standards**

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

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

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

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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 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.

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.



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### **AS1428 – Design for Access and Mobility**

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

- Australian Standard AS1428.1 (2009) Amendment 1 & 2, – Design for Access and Mobility contains access requirements that are mandatory for the provision of access for persons with a disability
- 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

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

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

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### **AS1735– Lifts, escalators and moving walks**

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

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### **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.

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### **Livable Housing Australia Design Guidelines**

The Livable Housing Design Guidelines, 2017 include Silver, Gold and Platinum Level which cater to differing levels of accessibility.





## 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, these services must be located at a distance no greater than 400m from the site or access to a 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). The 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.

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#### Compliance Summary:

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Compliant in Principle

#### Commentary:

The site lies within 450m of bus stops along Bunerong Road. While this exceeds the allowable travel distance specified by the SEPP, we note that a formed and level footpath infrastructure is an

existing condition. The additional 50m is not seen to adversely affect access to the bus stops for residents of the development.

The bus stops are identified as following and noted as accessible bus stops on the Transport for NSW website.

- Bunerong Rd at Prince Edward Cir  
Stop ID: 203520  
450m from the development site
- Bunerong Rd opp Birdwood Ave  
Stop ID: 203225  
410m from the development site

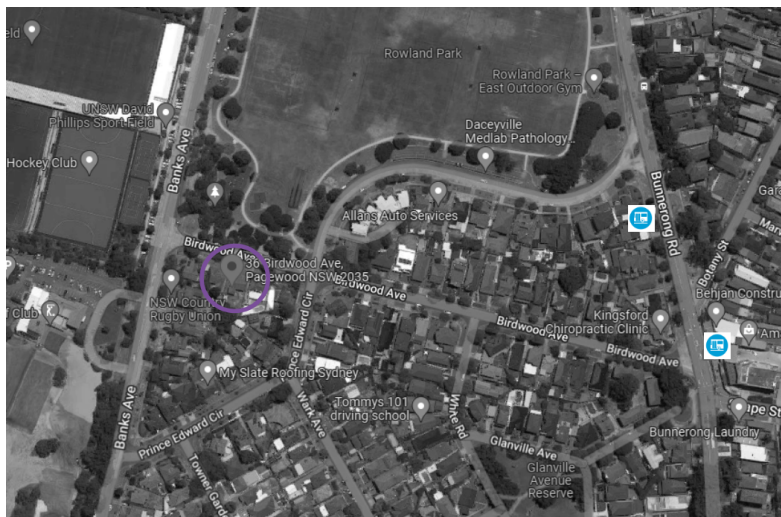


Figure 2 | Location of the Site

The 392 Bus Service travels along Bunerong Road providing a service between Little Bay and Redfern Station. The service operates seven (7) days a week including public holidays meeting SEPP requirements.

A formed footpath is provided between the development site and the bus stops along Bunerong Road. Kerb ramps are provided at the intersections of Prince Edward Circuit, White Road and Bunerong Road to facilitate wheelchair access across the roadways. The footpath has a concrete surface, is relatively level and in good condition. It provides a suitable accessway per SEPP requirements.

A signalized pedestrian crossing is available for safe pedestrian access across Bunerong Road.



Figure 2 | Birdwood Avenue



Figure 3 | Cnr Prince Edward



Figure 4 | Birdwood Avenue



Figure 5 | Cnr White Road



Figure 6 | Cnr Bunerong Road

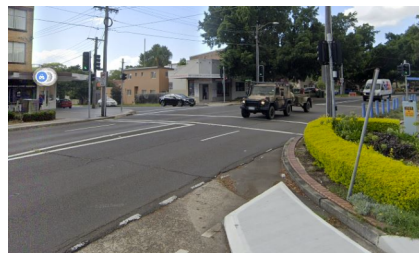


Figure 7 | Signalised Crossing Bunerong Road



Figure 8 | Bus Stop



Figure 9 | Bus Stop



#### 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.

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**Compliance Summary:**

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Compliant

**Commentary:**

The proposed development meets the intent of this Clause with links to public transport.

Carparking is provided for residents within the site and accessible carparking is available. Easy access to unit entrances is available from the carparking areas.

## 5 SEPP – Schedule 4

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

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#### 5.1 Schedule 4, Clause 1 – Application

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

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#### 5.2 Schedule 4, Clause 2 – Siting Standards

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This Clause contains 3 parts regarding siting standards as follows.

##### (1) Wheelchair Access

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

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

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

##### (3) Common Areas

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



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

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)).

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**Compliance Summary:**

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Compliant

**Commentary:**

All of the units on the site are accessible from the allotment boundary to Birdwood Avenue and the carparking areas.  
An accessible path of travel within the meaning of AS1428.1 (2009) is provided.

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**5.3 Clause 3 – Security**

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

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**Compliance Summary:**

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To be addressed during detailed design.

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**5.4 Clause 4 – Letterboxes**

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Letterboxes are required to be lockable, in a central location and be accessible to persons using a wheelchair via an accessible path of travel as per AS1428.1.

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**Compliance Summary:**

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Compliant

**Commentary:**

Letterboxes are provided at the entrance to the site.

An accessible path of travel is provided from the letterboxes to the entrance of each unit via an accessible path of travel within the meaning of AS1428.1 (2009).

Letterboxes are provided on a hard standing area.

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**5.5 Clause 5 – Private Car Accommodation**

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

- Carparking spaces must comply with the requirements for parking for persons with a disability set out in AS2890.6 and,



- 10% of the total number of car parking spaces (or at least one space if there are fewer than 10 spaces) must be designed to enable the width of the spaces to be increased to 3.8m and,
- Any garage must have a power operated door.

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**Compliance Summary:**

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Compliant

**Commentary:**

There are four (4) car parking spaces provided within the development. There are two (2) accessible spaces provided with the development.

Space 1 has been designed to reflect a configuration in keeping with AS2890.6 (2009) including a surface with 1:40 maximum grade.

The carport adjacent to Unit 4 has been provide with a width of 3800mm in keeping with SEPP requirements for 10% of spaces to be able to be increased to 3.8m.

It should be noted that SEPP carparking requirements are currently under review – Department of Planning & Environment *Explanation of Intended Effect Proposed amendments to the in-fill affordable housing, group homes, supportive accommodation and social housing provisions of the State Environmental Planning Policy (Housing) 2021, November 2022.*

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**5.6 Clause 6 – Accessible Entry**

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

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

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**Compliance Summary:**

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Compliant configuration.

**Commentary:**

Adequate circulation areas are provided at the main entrance, carpark entrance and entrances to individual units.

Door leaf sizes of 920mm should be used as a minimum which will achieve clear width of 850mm. The requirement for door hardware should be implemented during detailed design.





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## 5.7 Clause 7 – Interior

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

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### Compliance Summary:

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Compliant configuration

### Commentary:

Doorways within each unit provide the circulation areas required by AS1428.1. While the direction of the sliding glass doors to private open spaces are not clear, each is capable of achieving the required circulation at the latch side.

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

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## 5.8 Clause 8 – Main Bedroom

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

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### Compliance Summary:

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Compliant configuration

### Commentary:

The main bedroom within each unit offers adequate circulation areas as shown dashed on the floor plan.

Additional requirements listed above to be implemented during detailed design.

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## 5.9 Clause 9 – Bathroom

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At least one bathroom must be located on the entry level and have circulation areas that complies with AS1428.1, slip resistant floor, shower minimum 1100x1160mm with future provision for accessible features, washbasin capable of adaption to comply with AS1428.1 and a wall cabinet with illumination levels as described.

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### Compliance Summary:

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Compliant configuration

### Commentary:

The bathroom within each unit provides an arrangement in keeping with AS1428.1 (2009), meeting the requirements of the SEPP.



Additional requirements listed above to be implemented during detailed design. We note that the SEPP allows for future adaption of bathroom areas that reflect the individual needs of the residents.

#### **5.10 Clause 10 – Toilet**

A self-contained residence is required to have a toilet on the ground (or main) floor that complies with the requirements for sanitary facilities of AS4299. That is, a visitable toilet with 1250mm length and 900mm wide in front of toilet pan, clear of door swings and fixtures.

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**Compliance Summary:**

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Compliant

**Commentary:**

The toilet within the bathroom of each unit meets the requirements of AS4299 having 900 x 1250mm in front of the WC pan.

#### **5.11 Clause 11 – Surface Finishes**

Balconies and external paved areas must have slip resistant surfaces

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**Compliance Summary:**

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To be addressed during detailed design.

#### **5.12 Clause 12 – Door Hardware**

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

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

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**Compliance Summary:**

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To be addressed during detailed design.

#### **5.13 Clause 13 – Ancillary Items**

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

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**Compliance Summary:**

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To be addressed during detailed design.





## 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 – Living and Dining Room

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

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

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**Compliance Summary:**

Compliant configuration

**Commentary:**

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 outlet, general purpose outlet and lux levels should be implemented during detailed design.

### 5.16 Clause 16 – Kitchen

A kitchen in a self-contained dwelling must have:

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

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**Compliance Summary:**

Compliant configuration

**Commentary:**

Kitchens within each unit are an L-shape arrangement and therefore achieve the required circulation areas.

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



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

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

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**Compliance Summary:**

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Not applicable – all units are over one level.

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**5.18 Clause 18 – Lifts in multi-storey developments**

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

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**Compliance Summary:**

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Capable of compliance

**Commentary:**

A lift is provided for access between levels of the development.  
The overall shaft and car size is capable of compliance with accessibility requirements.  
design.

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**5.19 Clause 19 – Laundry**

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

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

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**Compliance Summary:**

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Compliant configuration

**Commentary:**

Laundries are provided with adequate circulation being within the bathroom areas. An accessible path of travel is available to the clothes line provided for each unit.

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

## 5.20 Clause 20 – Storage

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

### Compliance Summary:

Compliant

### Commentary:

The requirement for adjustable shelving is to be implemented during detailed design.

## 5.21 Clause 21 – Garbage

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

### Compliance Summary:

Compliant

### Commentary:

A central garbage storage area is provided at the ground floor level in an accessible location.

## 6 BCA | Access and Approach + External Areas Generally

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 along Birdwood Avenue to the building entrance;
- from the accessible carparking area to the building entrance.

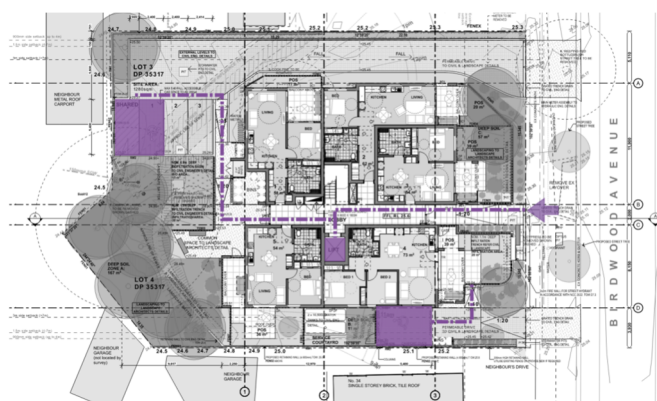


Figure 2 | Overall Site Plan



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### 6.1 Approach from Allotment Boundary

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

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#### Compliance Summary:

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Compliant

#### Commentary:

An accessible path of travel is provided to the building entrance from the allotment boundary along Birdwood Avenue.

A walkway has been provided to overcome the level difference between the street footpath level and the ground floor level.

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### 6.2 Approach from Accessible Carparking

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

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#### Compliance Summary:

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Compliant

#### Commentary:

An accessible path of travel is provided to the building entrance from the accessible carparking space at the rear of the site and carport to unit entrances.

Walkways have been provided to overcome the level difference between the carpark level and the ground floor level.

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### 6.3 Walkways

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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.

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#### Compliance Summary:

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Compliant configuration

#### Commentary:

Walkways are provided for access from Birdwood Avenue and the carparking areas to the building entrances.

Each has a nominated gradient of 1:20 and offers an accessible path of travel to the building. The length of the walkways and the circulation areas at landings is in keeping with AS1428.1.



## 6.4 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:

A single hinged door offers entry to the building from Birdwood Avenue and the carparking area. Each doorway offers compliant circulation areas, and threshold ramps are shown.

## 7 BCA | Interior

The building is provided over two (2) levels and a central corridor is provided at each level that aids easy wayfinding. The interior areas subject to accessibility requirements include the residential common areas being the entry foyer, lift lobbies and corridors. The following do not apply to individual units.

### 7.1 Extent of Access Generally – BCA

Within a residential development, access for people with disabilities is required from a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level. Where a ramp or a passenger lift is installed, access is required to the entrance doorway of each sole-occupancy unit within the building.

Access is also required to and within not less than 1 of each type of room or space for use in common by the residents.

### Compliance Summary:

Compliant

### 7.2 Circulation Areas

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

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

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

### Compliance Summary:

Compliant



### 7.3 Doorways Generally

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

#### Compliance Summary:

Compliant configuration

#### Commentary:

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

### 7.4 Exempt Areas

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

#### Compliance Summary:

None specified

### 7.5 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

### 7.6 Carpet

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

#### Compliance Summary:

To be addressed during detailed design stage.

### 7.7 Controls

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

#### Compliance Summary:

To be addressed during detailed design stage.



## 7.8 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.

### Compliance Summary:

To be addressed during detailed design stage.

## 7.9 Tactile Indicators

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

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

### Compliance Summary:

To be addressed during detailed design stage.

## 7.10 Signage

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

### Compliance Summary:

To be addressed during detailed design stage.

## 7.11 Slip Resistance (Stairs and Ramps)

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

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

### Compliance Summary:

To be addressed during detailed design stage.



## 8 BCA | Vertical Circulation

A lift and stair provide the means of access between levels of the building. They are located centrally within the building.

### 8.1 Lift

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

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#### Compliance Summary:

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Capable of compliance

#### Commentary:

The overall size of the lift shaft is capable of accommodating a lift car of adequate dimensions for compliance with BCA.

### 8.2 Stairs

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

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#### Compliance Summary:

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Capable of compliance

#### Commentary:

Stairs are provided adjacent to the lift to provide a means of access between levels.

Overall configuration is in keeping with current legislation. Handrails with extensions are provided to both sides. The stair has been designed so that handrail extensions will not protrude into the traverse path of travel at each level.

Ensure the provision of tactile indicators top and bottom of the stairs and contrasting non-slip nosings to treads.





## 9 LHA | Silver Level

There is a requirement for all units within the proposed development to achieve silver level LHA standards. These requirements are summarized below.

### 9.1 Dwelling Access

There is a safe, continuous, step-free pathway from the street entrance and/or parking area to a dwelling entrance that is level.

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**Compliance Summary:**

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Compliant

**Commentary:**

The BCA requirement for the provision of an accessible path of travel to all unit entrances satisfies this requirement.

### 9.2 Dwelling Entrance

There is at least one level (step-free) entrance into the dwelling to enable home occupants to easily enter and exit the dwelling.

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**Compliance Summary:**

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Compliant configuration

**Commentary:**

Entrances offer shelter and the required landing area. Door sizes and threshold details to be addressed during detailed design.

### 9.3 Internal Corridors and Doors

Internal doors and corridors facilitate comfortable and unimpeded movement between spaces.

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**Compliance Summary:**

---

Compliant configuration

**Commentary:**

Corridors offer adequate clear width. Door sizes and threshold details to be addressed during detailed design.

### 9.4 Toilet

The ground (or entry) level has a toilet to support easy access for home occupants and visitors.

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**Compliance Summary:**

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Compliant

**Commentary:**

The bathroom within each unit accommodates the required circulation areas and set-out of WC Pan



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#### **9.5 Shower**

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The bathroom and shower are designed for easy and independent access for all home occupants.

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**Compliance Summary:**

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Compliant

**Commentary:**

The shower within each unit is located in a corner and no hob is documented.

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#### **9.6 Reinforcement of Bathroom & Toilet Walls**

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The bathroom and toilet walls are built to enable grabrails to be safely and economically installed.

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**Compliance Summary:**

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To be addressed during detailed design stages.

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#### **9.7 Internal Stairways**

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Where installed, stairways are designed to reduce the likelihood of injury and also enable future adaptation.

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**Compliance Summary:**

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Not applicable



## 10 Conclusion

This report demonstrates that the fundamental aims of accessibility legislation are achievable within the proposed development located at 36-38 Birdwood Avenue Pagewood. Spatial planning and general arrangements of facilities will offer inclusion for all building users.

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

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

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

We consider that the drawings presented for assessment, for the purposes of a development application, demonstrate that compliance with current statutory requirements affecting accessibility is achievable subject to detailed design at the construction certificate stage (refer to Appendix 1 for requirements).



## Appendix 1 | SEPP Housing 2021 Requirements (Seniors Living)



## Part 1 Standards applying to hostels and independent living units

### 1. Application of standards in this Part

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

### 2. Siting standards

- 1) Wheelchair access  
If the whole of the site has a gradient of less than 1:10, 100% of the dwellings must have wheelchair access by a continuous accessible path of travel (within the meaning of AS 1428.1) to an adjoining public road.
- 2) If the whole of the site does not have a gradient of less than 1:10:
  - a) the percentage of dwellings that must have wheelchair access must equal the proportion of the site that has a gradient of less than 1:10, or 50%, whichever is the greater, and
  - b) the wheelchair access provided must be by a continuous accessible path of travel (within the meaning of AS 1428.1) to an adjoining public road or an internal road or a driveway that is accessible to all residents.  
Note. For example, if 70% of the site has a gradient of less than 1:10, then 70% of the dwellings must have wheelchair access as required by this subclause. If more than 50% of the site has a gradient greater than 1:10, development for the purposes of seniors housing is likely to be unable to meet these requirements.
- 3) Common areas  
Access must be provided in accordance with AS 1428.1 so that a person using a wheelchair can use common areas and common facilities associated with the development.

### 3. Security

Pathway lighting:

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

### 4. Letterboxes

Letterboxes:

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



## 5. Private car accommodation

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

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

## 6. Accessible entry

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

## 7. Interior: general

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

## 8. Bedroom

At least one bedroom within each dwelling must have:

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

## 9. Bathroom

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



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

- b) a washbasin with plumbing that would allow, either immediately or in the future, clearances that comply with AS 1428.1,
  - c) a shower that complies with AS 1428.1, except that the following must be accommodated either immediately or in the future:
    - i) a grab rail,
    - ii) portable shower head,
    - iii) folding seat,
  - d) a wall cabinet that is sufficiently illuminated to be able to read the labels of items stored in it,
  - e) a double general power outlet beside the mirror.
- 2) Subclause (1) (c) does not prevent the installation of a shower screen that can easily be removed to facilitate future accessibility.

#### **10. Toilet**

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

#### **11. Surface finishes**

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

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

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

#### **12. Door hardware**

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

#### **13. Ancillary items**

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

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

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



## Part 2 Additional standards for self-contained dwellings

### 14. Application of standards in this Part

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

### 15. Living room and dining room

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

### 16. Kitchen

A kitchen in a self-contained dwelling must have:

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

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

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

### 18. Lifts in multi-storey buildings

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

### 19. Laundry

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

- a) a circulation space at door approaches that complies with AS 1428.1, and
- b) provision for the installation of an automatic washing machine and a clothes dryer, and
- c) a clear space in front of appliances of at least 1,300 millimetres, and





- d) a slip-resistant floor surface, and
- e) an accessible path of travel to any clothes line provided in relation to the dwelling.

**20. Storage for linen**

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

**21. Garbage**

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



## Appendix 2 | Accessibility Requirements



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

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

### Accessible Entrances

Access requirements for entrances are as follows.

- a. Accessible entrances to comply with AS1428.1(2009), Clause 13 as part of the accessible path of travel.
- b. Doors are to have a minimum clear opening width of 850mm to comply AS1428.1(2009), Clause 13.2 as part of the accessible path of travel.
- c. Door threshold to be level to provide seamless entry as part of the accessible path of travel. Maximum allowable construction tolerance is 3mm for compliance with AS1428.1(2009), 5mm where beveled edges are provided between surfaces – refer to Figure 6.
- d. Door to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5)
- e. For glass doors, provide decals to assist persons with a vision impairment. Decals to be solid and have a minimum 30% luminance contrast to the background colour and be not less than 75mm high located within the height



range of 900-1100mm above the finished floor level. Decals are to be solid. AS1428.1, Clause 6.6.

- f. Where double door sets are provided, one door leaf is to be capable of being held in the closed position to provide door opening widths and circulation to comply with AS 1428.1.

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### **Circulation Areas Generally**

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

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

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

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### **Doorways**

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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.

#### **Floor Finishes**

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

#### **Carpet**

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

#### **Controls**

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

#### **Visual Indication to Glazing**

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

#### **Tactile Indicators**

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

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

## Signage

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

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

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

Exit Level G



## 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

## Passenger Lift

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

- Lift is to comply with AS1735.12 and be fully automatic as required by the BCA, Clause E3.6.
- Minimum internal dimensions of the lift car to be 1100mm wide x 1400mm deep BCA, Clause E3.6 – for a lift that travels less than 12m.
- Clear opening of the lift door to be minimum 900mm.
- Provide a handrail complying with the provisions for a mandatory handrail in AS1735.12.
- 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.
- Auditory / voice cues are to be provided within the lift car to assist persons with a vision impairment.
- 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.
- 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 D3.8 and AS1428.4.1.

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

## Livable Housing – SILVER LEVEL

Livable housing requirements for Silver Level are summarised below:

### Dwelling Access

There is a safe, continuous, step-free pathway from the street entrance and/or parking area to a dwelling entrance that is level.

- Path of travel should be minimum 1000mm wide with no steps; an even, slip resistant surface; crossfall not more than 1:40; and maximum slope of 1:14.
- Where ramps are required, landings at 9m intervals are to be provided and are to be not less than 1200mm in length.





- Where a carparking space is relied upon as the safe and continuous pathway to the dwelling, it should be at least 3200mm wide....
- Step ramps where provided to have a maximum gradient of 1:10, clear width of 1000mm and maximum length of 1900mm.
- Where ramps adjoin gates or doorways, landings no less than 1200mm in length, exclusive of the door swing, are required.

### **Dwelling Entrance**

There is at least one level (step-free) entrance into the dwelling to enable home occupants to easily enter and exit the dwelling.

- Entrance doors to have a clear opening with of 820mm and have a level transition (5mm allowable tolerance – where in excess of 5mm, threshold ramp up to 56mm high is allowable)).
- Reasonable shelter from the weather is required.
- 1200x1200mm level landing area required on the arrival side of the door.

### **Internal Corridors and Doors**

Internal doors and corridors facilitate comfortable and unimpeded movement between spaces.

- Doorways on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment purposes to have a clear opening with of 820mm and level transition between surfaces (5mm allowable tolerance).
- Corridors to be 1000mm wide.

### **Toilet**

The ground (or entry) level has a toilet to support easy access for home occupants and visitors.

- A toilet on the ground / entry floor is required to have a circulation area in front of the toilet pan 900x1200mm.
- Toilet pan is to be provided in a corner of a room.

### **Shower**

The bathroom and shower are designed for easy and independent access for all home occupants.

- A bathroom is required to have a non-slip hobless shower, located on the corner of the room.

### **Reinforcement of Bathroom & Toilet Walls**

The bathroom and toilet walls are built to enable grabrails to be safely and economically installed.

- Walls to enable safe installation of grabrails to toilet, bath and shower.
- Reinforcement to be in the form of 25mm noggins or plywood sheeting with 12mm thickness.

### **Internal Stairways**

Where installed, stairways are designed to reduce the likelihood of injury and also enable future adaptation.

- Stairs to have a continuous handrail to one side of the stair where the rise is greater than 1m.



## Appendix 3 | Best Practice Options for Consideration



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

#### **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.

#### **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.

