



**lindsay perry access**

Disability Access Report

**Residential Flat Building**

53-55 Donnison Street  
WEST GOSFORD NSW

For: SNZ Holdings +  
Australian Luxury Living  
Ref: LP\_20128



## Executive Summary

Development application documentation for the proposed Residential Flat Building located at 53-55 Donnison Street West Gosford, has been reviewed against the requirements of the Building Code of Australia 2019 and The Disability Discrimination Act 1992 regarding access for people with a disability. The requirements of the Disability (Access to Premises) Standards 2010 have also been addressed.

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

Item No.	Description	Compliance Status
<b>Access and Approach</b>		
5.1	Allotment Boundary to Entrance	Compliant
5.2	Accessible Carparking to Entrance	Compliant
5.3	Accessible Carparking	Compliant configuration
5.4	Stairs	Compliant configuration
5.5	Entrance	Compliant configuration
<b>Interior</b>		
6.1	Extent of Access Generally	Compliant
6.2	Circulation Areas	Compliant
6.3	Doorways	Compliant configuration
6.4	Exempt Areas	Compliant
6.5	Floor Finishes	To be addressed during detailed design
6.6	Carpet	To be addressed during detailed design
6.7	Controls	To be addressed during detailed design
6.8	Visual Indication to Glazing	To be addressed during detailed design
6.9	Tactile Indicators	To be addressed during detailed design
6.10	Signage	To be addressed during detailed design
6.11	Thresholds	To be addressed during detailed design
6.12	Slip Resistance	To be addressed during detailed design
6.13	Luminance Contrast	Recommendation only
<b>Vertical Circulation</b>		
8.1	Lift	Capable of compliance
8.7	Fire Isolated Egress Stairs	Capable of compliance
<b>Adaptable Housing</b>		
9.1	Pre-adaption Requirements	Compliant
9.2	Post-adaption Requirements	Compliant in Principle
<b>SEPP 65 Universal Housing Requirements (Livable Housing)</b>		
9.1	Dwelling Access	Compliant
9.2	Dwelling Entrance	Compliant
9.3	Internal Corridors and Doors	Compliant
9.4	Toilet	Compliant
9.5	Shower	Compliant
9.6	Reinforcement of Bathroom Walls	To be addressed during detailed design
9.7	Internal Stairways	Not applicable



The recommendations throughout this report reflect the professional opinion and interpretation of Lindsay Perry. This may differ from that of other consultants. We aim to provide practical, performance-based advice based on project specifics that will maximize access for persons with a disability to the built environment.

Lindsay Perry is a qualified Access Advisor, being an accredited within Australia (ACAA No. 136) and at the international level (GAATES No. BE-02-106-18). Lindsay Perry Access Pty Ltd carries public liability insurance, professional indemnity insurance and workers compensation insurance.

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#### Revision Summary

Date	Description	Revision
15 September 2020	DA Disability Access Report	draft
3 March 2021	DA Disability Access Report	1



## 1. Project Background

This Access Report considers the proposed Residential Flat Building located at 53-55 Donnison Street West Gosford, against the requirements of the Building Code of Australia 2019 and The Disability Discrimination Act 1992 regarding access for people with a disability. The requirements of the Disability (Access to Premises) Standards 2010 have also been addressed.

The project is a residential flat building that provides twenty-six (26) units over seven levels with basement carparking. A central lift core provides access between all levels. Communal areas are provided at the ground floor level and include common room, balcony, communal garden, play areas and outdoor gym. Adaptable housing has been provided within the development per Council DCP.



Figure 1 | Proposed Development

## 2. Reviewed Documentation

Documentation prepared by ELK Designs has been reviewed as follows:

— DA000 A	Cover Page
— DA010 A	Site Analysis
— DA011 A	Site Analysis
— DA020 A	Demolition Plan
— DA030 A	Site Plan
— DA040 A	Massing Perspective 01
— DA041 A	Massing Perspective 01 with Envelope
— DA042 A	Massing Perspective 02
— DA043 A	Massing Perspective 02 with Envelope
— DA050 A	Rendered Perspective 01
— DA051 A	Rendered Perspective 02
— DA052 A	Rendered Perspective 03
— DA053 A	Rendered Perspective 04
— DA054 A	Rendered Perspective 05
— DA100 A	Basement 2
— DA110 A	Basement 1
— DA120 A	Ground Floor
— DA130 A	First Floor
— DA140 A	Second Floor



— DA150 A	Third Floor
— DA160 A	Fourth Floor
— DA170 A	Fifth Floor
— DA180 A	Sixth Floor
— DA300 A	Northern Elevation
— DA301 A	Eastern Elevation
— DA302 A	Southern Elevation
— DA303 A	Western Elevation
— DA350 A	External Finishes
— DA400 A	Section AA
— DA401 A	Section BB
— DA970 A	FSR Calculations

### 3. Council Requirements

The site lies within the Central Coast Council local government area. Gosford City Council DCP 2013 Part 4 - Centres is applicable to the development as the site is within the Gosford Centre. Accessibility requirements of the DCP Part 4 are as follows:

#### 4.1.4.2 Pedestrian Access and Mobility

Any new development must be designed to ensure that safe and equitable access is provided to all, including people with a mobility problems and disabilities. This is of particular concern in Gosford where a significant percentage of the population is 55 years or older and the topography can be difficult to negotiate on foot.

#### Objectives

- To provide safe and easy access to buildings to enable better use and enjoyment by people regardless of age and physical condition, whilst also contributing to the vitality and vibrancy of the public domain.
- To ensure buildings and places are accessible to people with a disability.
- To provide a safe and accessible public domain.

#### Controls

1. Main building entry points should be clearly visible from primary street frontages and enhanced as appropriate with awnings, building signage or high quality architectural features that improve clarity of building address and contribute to visitor and occupant amenity.
2. The design of facilities (including car parking requirements) for disabled persons must comply with the relevant Australian Standard (AS 1428 Pt 1 and 2, or as amended) and the Disability Discrimination Act 1992 (as amended).
3. Barrier free access is to be provided to not less than 20% of dwellings in each development and associated common areas.
4. The development must provide at least one main pedestrian entrance with convenient barrier free access in all developments to at least the ground floor.
5. The development must provide continuous access paths of travel from all public roads and spaces as well as unimpeded internal access.
6. Pedestrian access ways, entry paths and lobbies must use durable materials commensurate with the standard of the adjoining public domain (street) with appropriate slip resistant materials, tactile surfaces and contrasting colours.



#### 4.1.6.2 Housing Choice and Mix

A choice of apartment types and mix of sizes in the city centre caters for a variety of socioeconomic groups.

##### Objectives

- Ensure that residential development provides a mix of dwelling types and sizes to cater for a range of household types.
- Ensure that dwelling layout is sufficiently flexible for residents' changing needs over time.
- Ensure a sufficient proportion of dwellings include accessible layouts and features to accommodate changing requirements of residents.
- Ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

##### Controls

In addition to the provisions for apartment mix as per Part 3 of the Residential Flat Design Code, the following additional controls apply.

1. For residential apartment buildings and multi-unit housing on land with less than 20% slope, **15% of all dwellings (or at least one dwelling – whichever is greater) must be designed to be capable of adaptation for disabled or elderly residents.** Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes “preadaptation” design details to ensure visitability is achieved.
2. Where possible, adaptable dwellings shall be located on the ground floor, for ease of access. Dwellings located above the ground level of a building may only be provided as adaptable dwellings where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities.
3. The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
4. Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard for disabled parking spaces.

There are four (4) adaptable units provided within the development, representing 15% of the total number of units and in keeping with DCP requirements.



## 4. Legislation

Access assessment has been made against Access Legislation including:

- The Commonwealth Disability Discrimination Act 1992 (DDA)
- Disability (Access to Premises (Buildings)) Standards 2010
- Access Code for Buildings 2010
- The National Construction Code Building Code of Australia Volume 1 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 Standards AS1428.1(2009) Amendment 1, AS1428.2(1992), AS1428.4(2009) – Design for Access and Mobility
- Australian Standard AS1735.12 – Lifts, escalators and moving walks: Lifts for persons with a disability
- Australian Standard AS2890.6 (2009) – Parking Facilities – Off street carparking For People with Disabilities.
- Australian Standard AS4299 – Adaptable Housing
- State Environmental Planning Policy 65 – Residential Design Quality of Residential Apartment Development (SEPP65) – Apartment Design Guide – July 2015
- The Livable Housing Design Guidelines – Edition 4

A summary of the requirements of relevant legislation follows.

- The **DDA** requires independent, equitable, dignified access to all parts of the building for all building users regardless of disability. The DDA makes it unlawful to discriminate against a person on the grounds of disability.
- The **Disability (Access to Premises - buildings) Standards 2010** (the Premises Standards) commenced on 1 May 2011. Any application for a building approval for a new building or upgrade of an existing building on or after that date triggers the application of the Premises Standards.

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

- The **Building Code of Australia (BCA)** is contained within the National Construction Code (NCC) and provides the minimum necessary requirements for safety, health, amenity and sustainability in the design and construction of new buildings (and new building work in existing buildings) throughout Australia. 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.



- **BCA 2019** for Class 2 buildings, requires access 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 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.

Access for people with disabilities is also required 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, individual shop, eating area, or the like.

- **AS1428 – Design for Access and Mobility**
  - Part 1 (2009) of this standard contains access requirements that are mandatory for the provision of access for persons with a disability and is referred by the BCA.
  - Part 2 (1992) provides enhanced and best practice requirements.
  - Requirements for tactile indicators are included in Part 4.1 (2009) of this standard.
- **AS2890.6** applies to the carparking areas generally.
- **AS1735.12** contains requirements for passenger lifts for persons with a disability.
- **SEPP 65 Residential Design Quality of Residential Apartment Development (SEPP65) – Apartment Design Guide 1.**
  - The Apartment Design Guide includes a requirement for livable housing. Developments are to provide a minimum 20% of apartments that achieve silver level for livable housing.
- **AS4299 – Adaptable Housing** 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.
- The **Livable Housing Design Guidelines** include Silver, Gold and Platinum Level which cater to differing levels of accessibility.



## 5. Access and Approach

The approach to the building needs to be considered when considering access for persons with a disability. The BCA has three requirements for the approach to the building for persons with a disability. An accessible path of travel is required to the building entrance from the allotment boundary at the main points of pedestrian entry, from accessible carparking areas and from any adjacent and associated accessible building.

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

- from the allotment boundary at the pedestrian entrance along Donnison Street to the building entrance;
- from the accessible carparking area to the building entrance.

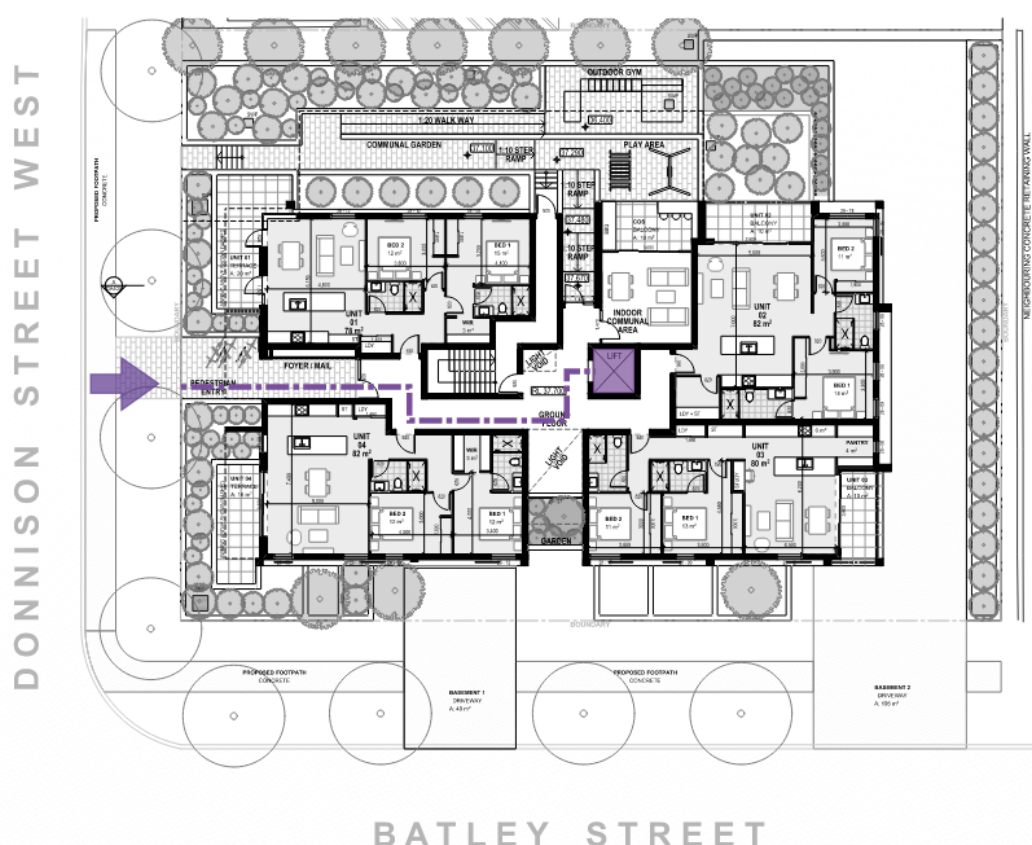


Figure 2 | Overall Site Plan

### 5.1 Approach from Street Boundary

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

#### Compliance Summary:

Compliant

On-grade access is available from the allotment boundary along Donnison Street to the entry doors.



## 5.2 Approach from Accessible Carparking

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

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### Compliance Summary:

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Compliant

Lift access is provided from the basement car parking areas to all levels of the building.

## 5.3 Accessible Carparking

As this is a residential development (Class 2), there are no BCA requires for the provision of accessible carparking within the development. However, we note the provision of two (2) accessible car parking spaces, one at each basement level.

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### Compliance Summary:

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Compliant

Overall configuration of the accessible carparking spaces is in keeping with current accessibility requirements. Sections indicate that adequate height is achievable over the spaces and associated shared areas.

Access requirements for the accessible carparking are as follows.

- 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.
- 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, 1:33 (for outdoor spaces). This crossfall applies both parallel and perpendicular to the angle of parking.
- d. For covered carparking, the clear height of the accessible carparking space to be 2500mm as illustrated in AS2890.6, Figure 2.7.
- e. Designated accessible carparking is to be identified using the International Symbol for Access (ISA) between 800 and 1000mm high placed as a pavement marking in the centre of the space between 500-600mm from its entry point. The perimeter of the space is to be identified by an unbroken yellow & slip resistant line 80-100mm wide (except where there is a kerb or wall)

Shared space to be identified using yellow slip-resistant & unbroken stipes 150 to 200mm wide with spaces 200 to 300mm between stripes. Stipes to be at an angle of 45° to the side of the space.



#### 5.4 Stairs

Stairs are provided as a direct link between the communal areas and the Donnison Street footpath. They also provided within the communal outdoor areas. AS1428.1 has access requirements for all public access stairs and is applicable in this instance.

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**Compliance Summary:**

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Capable of compliance

We note that stairs are set-back from the property boundary.

Access requirements for stairs are as follows.

- a. Stairs to comply with AS1428.1(2009), Clause 11.2.
- b. Where the stair intersects the property boundary, the stair shall be set back a minimum of 900mm so that handrail extensions and tactile indicators do not protrude into the traverse path of travel.
- c. Stairs to have closed or opaque risers. Open risers cause confusion for persons with a vision impairment and may trigger conditions such as epilepsy due to light penetrating through the open riser.
- d. Provide handrails, with extensions, to both sides of the stair (AS1428.1 (2009), Clause 11.2 & 12). Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis.

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.

- 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.

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

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



## 5.5 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.

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### Compliance Summary:

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Compliant

A swinging doorway is provided for entry to the building. Adequate circulation areas are provided to achieve compliance and finished floor levels indicate that a level threshold will be provided.

The following access requirements apply to the entrance.

- a. Entrance to comply with AS1428.1(2009), Clause 13 as part of the accessible path of travel.
- b. Doors are to have a minimum clear opening width of 850mm to comply AS1428.1(2009), Clause 13.2 as part of the accessible path of travel.
- 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.
- 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 per AS1428.1, Clause 6.6.
- f. 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.



## 6 Interior

The interior areas subject to accessibility requirements include the residential common areas being the entry foyer, lift lobbies, corridors and communal areas – internal and external – at the ground floor level. The following requirements do not extend to individual apartments.

### 6.1 Extent of Access Generally – BCA

Access for people with disabilities is required to the door of individual sole occupancy units and each type of residential communal areas.

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**Compliance Summary:**

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Compliant

### 6.2 Circulation Areas

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

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

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

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**Compliance Summary:**

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Compliant

### 6.3 Doorways Generally

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

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**Compliance Summary:**

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Compliant configuration

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

- a. Doorways within the accessible path of travel to have a minimum clear opening width of 850mm (AS1428.1(2009), Clause 13.2). We recommend the use of a 920 leaf door as a minimum to achieve adequate clear width. For double doors, the operable leaf must achieve this clear opening width.
- b. All doorways within the accessible path of travel to have complying circulation areas as illustrated in AS1428.1(2009), Figure 31. Circulation areas to have a maximum crossfall of 1:40.



- c. Doorways to have minimum 30% luminance contrast as described in AS1428.1(2009), Clause 13.1.
- d. Doors to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5).

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.

- e. Doorways to have operational forces per AS1428.1 (2009), Clause 13.5.2. A maximum allowable force of 20N is required to operate the door.

#### 6.4 Exempt Areas

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

#### 6.5 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 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.

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**Compliance Summary:**

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To be addressed during detailed design stages.

#### 6.6 Controls

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

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**Compliance Summary:**

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To be addressed during detailed design stage.

#### 6.7 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.

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**Compliance Summary:**

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To be addressed during detailed design stage.



## 6.8 Tactile Indicators

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

Tactile indicators are generally required to be 600-800mm deep across the width of the hazard and set back 300mm from the edge of the hazard (refer AS1428.4.1, Figure A1). Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background color (45% for discrete tactile indicators and 60% for discrete two-tone tactile indicators).

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**Compliance Summary:**

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To be addressed during detailed design stage.

## 6.9 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.

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**Compliance Summary:**

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To be addressed during detailed design stage.

**Recommendations:**

Signage to include information in Braille and tactile signage formats as outlined within BCA Specification D3.6.

- a. Braille and tactile components of the sign to be located not less than 1200mm and not higher than 1600mm affl.
- b. For signage identifying an exit, "exit" and the level must be stated on the sign. It must 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.

## 6.10 Thresholds

The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless in a building required to be accessible by Part D3, the doorway opens to a road or open space; and is provided with a threshold ramp or step ramp in accordance with AS 1428.1.

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**Compliance Summary:**

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To be addressed during detailed design stages.



### 6.11 Slip Resistance (Stairs & Ramps)

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

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

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#### Compliance Summary:

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To be addressed during detailed design stage.

### 6.12 Luminance Contrast (Best-practice recommendation)

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;
- Minimum 30% luminance contrast between the ground surface and obstructions such as columns, bollards and street furniture;
- 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.





## 7 Vertical Circulation

A lift provides the main means of access between levels of the building and is located centrally within the development. Stairs within the building are fire isolated egress stairs.

### 7.1 Lifts

A lift is provided centrally within the building. The size of the lifts will satisfy the requirements of BCA and AS1735.12 in terms of the internal car size.

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#### Compliance Summary:

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Capable of compliance

#### Recommendations:

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

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



## 7.2 Fire Isolated Egress Stairs

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

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### Compliance Summary:

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Capable of compliance

Access requirement or fire isolated egress stairs are as follows.

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

Note: handrails within fire-isolated stars are required to one side only and do not require the provision of handrail extensions. They must have a diameter between 30-50mm; be between 865-1000mm high above the nosing; be a consistent height along the length of the stair – no vertical sections; have a clearance to the 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.

## 8 Adaptable Housing

An adaptable housing unit is defined by AS4299 as follows:

*A housing unit which is designed and constructed to meet the performance requirements stated in the standard. It is designed in such a way that it can be modified easily in the future to become accessible to both occupants and visitors with disabilities of progressive frailties.*

There are requirements for both the pre-adaption state and post-adaption states. In the pre-adapted state, an adaptable unit is required to be “visitable” and these requirements are applicable at the time of construction. Other elements are to be provided on adaption of the unit.

Note that the documentation needs to demonstrate that compliance in the post-adapted state is achievable.

At **time of construction**, the following are required:

- An accessible entrance per AS1428.1 (2009).
- A visitable toilet at the entry level per AS4299
- An accessible path of travel from the entrance to the visitable toilet within the meaning of AS1428.1 (2009)
- An accessible path of travel from the entrance to the living area within the meaning of AS1428.1 (2009)

At **time of adaption**, the following are required:

- Compliance with AS4299 Appendix A – essential criteria. This includes kitchen layouts, laundry layouts, carparking, etc

The following requirements for adaptable apartments are based on AS4299, Section 4 – Design of the Housing Unit, essential criterion as listed in Appendix 1, AS4299 Schedule of Features for Adaptable Housing. Compliance with the following features will achieve a Class C adaptable housing unit.

Adaptable units within the development are nominated as follows:

### Unit 401 | Unit 404 | Unit 501 | Unit 504

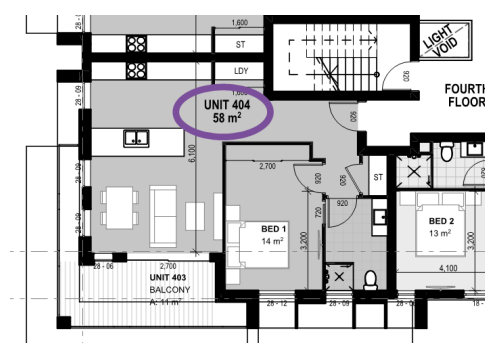


Figure 3 | Adaptable unit Layout - Typical



## Pre-Adaption Requirements:

### 8.1 Accessible Entrance

Entrances to adaptable housing units are to comply with AS4299 Clauses 4.3.1 and 4.3.2. AS4299 which require that the entry doors comply with AS1428.2 **at time of construction**. 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). Entrances to the adaptable housing units to be weatherproofed.

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

The entry doorway to the adaptable unit offers areas conducive to an accessible entrance and a leaf size of 920mm is nominated.

### 8.2 Visitable Toilet

Each adaptable housing unit is required to have a toilet on the entry floor that is a visitable toilet within the meaning of AS4299 **at time of construction**. The toilet is to be installed in compliance with AS1428 (correct set-out distance from fixed walls) and have the capacity to accommodate a grabrail that complies with Figure 4.5 of AS4299. Slip resistant floors are also required.

A visitable toilet is defined as a toilet which has a space of minimum 1250x900mm in front of the toilet clear of door swings.

---

#### Compliance Summary:

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Compliant

Bathroom offers a visitable toilet arrangement.

### 8.3 Accessible Path of Travel from Entry to Visitable Toilet & Living Area

The performance requirements of AS4299 require the provision of an accessible path of travel, within the meaning of AS1428.1 (2009), from the entrance to the visitable toilet and a living area. Door circulation and corridor widths need to be designed to reflect this requirement.

---

#### Compliance Summary:

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Compliant

Doorways have a nominated leaf size of 920mm and adequate circulation areas are provided.



## Post Adaption Requirements:

### 8.4 Private Car Accommodations

Private carparking spaces for adaptable housing units shall be large enough to enable a person with a wheelchair to get in and out of both the car and the parking space. A width of 3.8m is necessary to enable the driver to alight, open the passenger door and assist a person with a disability into a wheelchair.

Carparking spaces for the adaptable units to have a minimum floor plan dimension of 3.8m x 6.0 (AS4299, Clause 3.7.2). A clear vertical clearance of 2.5m is desirable.

The introduction of AS2890.6 in 2009 offers an approach to the provision of accessible carparking that can be easily accommodated in a standard carparking layout. It offers an accessible space 2400mm wide with a circulation area 2400mm wide adjacent to the space (4800mm for a single space). The circulation area can be “shared” between two accessible spaces (7200mm for two spaces). This offers carparking spaces in excess of the minimum requirement of AS4299 (3800mm).

---

#### Compliance Summary:

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Compliant

Accessible carparking is provided within the development. The configuration is in keeping with AS2890.6.

### 8.5 Letterboxes

Letterboxes to adaptable housing units should be located on a hard standing area connected by an accessible path of travel to the adaptable housing unit.

---

#### Compliance Summary:

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Compliant

Letterboxes are provided at the entrance along Donnison Street, satisfying AS4299 requirements.

### 8.6 Doorways

Doorways throughout adaptable housing units are required to have a clear opening width of 820mm. **At time of construction, an accessible path of travel within the meaning of AS1428.1 is required from the entrance to the visitable toilet and living area.** Other door circulation areas are to comply with AS1428.1 on adaption of the unit.

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

---

#### Compliance Summary:

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Compliant.

Doorways are generally provided with adequate circulation areas



### 8.7 Internal Corridors

There is a requirement for all corridors to be minimum 1000mm.

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**Compliance Summary:**

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Compliant

### 8.8 Bathrooms

Bathrooms within an adaptable housing unit are to comply with AS1428 after adaption. Issues to be considered include slip resistant floor, shower minimum 1100x1160mm with future provision for accessible features including handheld shower and grabrails, shower waterproofing to AS3740, recessed soap holder, washbasin with knee clearance, adequate circulation areas, automatic control of hot water, double GPO next to the mirror and the provision of capstan or lever taps. Refer to AS4299, Clause 4.4.4.

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**Compliance Summary:**

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Compliant

Bathroom offers dimensions conducive to adaption

### 8.9 Kitchens

Essential requirements for kitchens within an adaptable housing unit allow for future adaption and include items such as sinks, taps, cooktops, location of oven, cupboard handles, general power outlets, dimensions of the space and location of refrigerator. Kitchens are required to have a clear space between benches of 1550mm. An area of bench top 800mm wide is required that can be adjusted through the height range of 750 – 850mm above floor level. Alternatively, a section of this dimension needs to be easily replaceable to achieve this requirement.

---

**Compliance Summary:**

---

Compliant

Kitchen offers circulation areas as described above.

### 8.10 Bedrooms

At least one bedroom within an adaptable housing unit is required to have adequate space for a wardrobe and a queen size bed with minimum 1540mm wide circulation at the foot of the bed and 1000mm at the side of the bed (1200mm preferred) for compliance with AS1428.2, Clause 6.1.

---

**Compliance Summary:**

---

Compliant

Bedroom 1 offers compliant circulation areas.



### 8.11 Living Area

Living areas within an adaptable housing unit are required to have circulation areas that allow a wheelchair to maneuver within the space **at time of construction**. In this regard, an area with 2250mm diameter is required, clear of furniture. AS4299, Clause 4.7 outlines this requirement. A telephone outlet adjacent to a general power outlet is also a requirement for living areas.

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**Compliance Summary:**

---

Compliant

The living area within the adaptable units is an open-plan area which meets the circulation requirements of AS4299.

### 8.12 Laundry

Requirements for laundry areas within adaptable housing units include the provision for an automatic washing machine / clothes dryer with clear space in front of the appliances. An area of 1550mm diameter will achieve this requirement. Laundries are to have slip resistant floors and door circulation areas in compliance with AS1428.1.

---

**Compliance Summary:**

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Compliant

Laundry offers compliance being in a cupboard configuration.

### 8.13 Floors Generally

AS4299 requires that all floor surfaces including bathrooms, laundry and external paved surfaces be slip resistant to comply with AS3661.1.

Non-essential items include that after modification, carpets should have short pile and consideration should be given to the fire hazard indices. Floors should be easily cleanable and bold patterns should be avoided to eliminate confusion for persons with vision impairment.

---

**Compliance Summary:**

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To be addressed during detailed design

### 8.14 Ancillary Items

Ancillary items are not considered essential items. Switches such as light switches must be located within the accessible height range of 900-1100mm above the floor level.

Power outlets should be located at a height not less than 600mm affl – a height of 1000mm is preferred. They should be located not less than 500mm from internal corners.

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**Compliance Summary:**

---

To be addressed during detailed design



## 9 SEPP 65 Universal Housing Requirements (Livable Housing)

The NSW Government promotes better apartment design across NSW through the State Environmental Planning Policy No. 65 – Design Quality of Residential Apartments Development. Developments are to provide a minimum 20% of apartments that achieve silver level for livable housing.

Within this development, the adaptable units satisfy the universal housing requirements as demonstrated 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.

- 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.

---

#### Compliance Summary:

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Compliant

Pedestrian pathways achieve a gradient less than 1:14.

Shelter is provided at the main entry and entry to individual units.

The entry is on-grade.

### 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.

- 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.

---

#### Compliance Summary:

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Compliant

Entrances offer shelter and the required landing area. 920mm door leafs are nominated that will achieve the required 820mm clear opening.





### 9.3 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.

---

**Compliance Summary:**

---

Compliant

Corridors offer adequate clear width. 920mm door leafs are nominated that will achieve the required 820mm clear opening.

### 9.4 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.

---

**Compliance Summary:**

---

Compliant

### 9.5 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.

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**Compliance Summary:**

---

Compliant

### 9.6 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.

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**Compliance Summary:**

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To be addressed during detailed design stages.

### 9.7 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.

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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 Residential Flat Building located at 53-55 Donnison Street West Gosford. Spatial planning and general arrangements of facilities will offer inclusion for all building users.

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

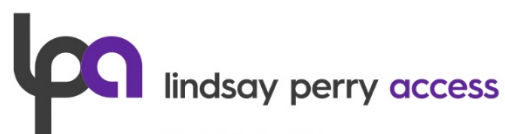
Equity and dignity are important aspects in the provision of access to buildings for all users. With respect to people with a disability, equity and dignity are sometimes overlooked in the construction of new buildings or refurbishment works. The design approach needs to maintain a high level of equity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

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

This report is limited to items within drawings listed in this report only. Future alterations and additions to the building will render the recommendations in this report null and void as we cannot guarantee continued compliance where changes to the building fabric are made.

**All dimensions quoted throughout this report and within Australian Standards are CLEAR dimensions, not structural. This needs to be considered in the preparation of the construction certificate documentation to account for wall linings and the like.**

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



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