



lindsay perry access

Disability Access Report

**Proposed Shop-top
Housing Development**

71-75 Victoria Avenue
DRUMMOYNE NSW

For: Olter Investments Pty Ltd
Ref: LP_20211



Executive Summary

Development application documentation for the Proposed Shop-top Housing Development located at 71-75 Victoria Road Drummoyne located, 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
Access and Approach		
5.1	Allotment Boundary to Entrance	Compliant
5.2	Accessible Carparking to Entrance	Compliant
5.3	Accessible Carparking	Compliant configuration
5.4	Accessible Entrances	Compliant configuration
Interior		
6.1	Extent of Access Generally	Compliant
6.2	New Work and The Affected Part	Not applicable
6.3	Circulation Areas	Compliant
6.4	Doorways	Compliant configuration
6.5	Doorways to Vestibules	Compliant configuration
6.6	Exempt Areas	Compliant
6.7	Floor Finishes	To be addressed during detailed design
6.8	Carpet	To be addressed during detailed design
6.9	Controls	To be addressed during detailed design
6.10	Visual Indication to Glazing	To be addressed during detailed design
6.11	Tactile Indicators	To be addressed during detailed design
6.12	Signage	To be addressed during detailed design
6.13	Slip Resistance	To be addressed during detailed design
6.14	Thresholds	To be addressed during detailed design
Sanitary Facilities		
7.1	Distribution	Compliant
7.2	Accessible Toilet	Capable of compliance
Vertical Circulation		
8.1	Lift	Capable of compliance
8.2	Fire Isolated Egress Stairs	Capable of compliance
Adaptable Housing		
9.1	Pre-adaption Requirements	Compliant configuration
9.2	Post-adaption Requirements	Compliant configuration



The recommendations throughout this report reflect the professional opinion and interpretation of Lindsay Perry. This may differ from that of other consultants. We 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 member of ACAA 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
14 December 2020	DA Disability Access Report	draft
17 February 2021	DA Disability Access Report	1
22 August 2022	DA Disability Access Report	2

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1. Project Background

The proposed development is a shop top housing development containing thirty-one (31) residential apartments over five (5) levels above two (2) retail tenancies. There are two (2) levels of basement carparking.

The residential lobby is entered from Day Street and a lift is provided to all levels of residential units. The units offer open plan living areas in a one- or two-bedroom arrangement. Common areas are provided at the rooftop level.

2. Reviewed Documentation

Documentation prepared by PBD Architects has been reviewed as follows:

dwg no.	drawing name	revision
DA001	Project Summary	D
DA100	Basement 2 Plan	C
DA101	Basement 1 Plan	C
DA102	Ground Floor Plan	D
DA103	Level 1 Plan	D
DA104	Level 2 Plan	D
DA106	Level 5 Plan	D
DA107	Roof Terrace	D
DA200	Elevations 01	D
DA201	Elevations 02	D
DA300	Section A	D
DA301	Section B	D
DA302	Section C	D
DA700	Adaptable Unit Plan – Type A	C

3. Council Requirements

The City of Canada Bay DCP 2020 is applicable to this development. Part C General Conditions include a section of Equity of Access (Part C1). There is provision for adaptable housing as follows.

Table C-A Adaptable housing ratios for developments including a lift

Total number of dwellings	Number of adaptable dwellings to be provided
Between 0 and 7 inclusive	Nil
Between 8 and 14	1 dwelling
Between 15 and 21	2 dwellings
Between 21 and 29	3 dwellings
30 or more	15% of total dwellings

As there are thirty-one (31) units provided within the development, 15% - five (5) are required to be adaptable.



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 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
- 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 for Class 2 buildings – **residential units** – 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.

The BCA for Class 6 buildings – **retail tenancies** – requires access for people with disabilities to and within all areas normally used by the occupants.

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

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

— **AS2890.6** 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.

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 Day Street to the Retail and Residential entrances
- from the accessible carparking areas to the building entrance.

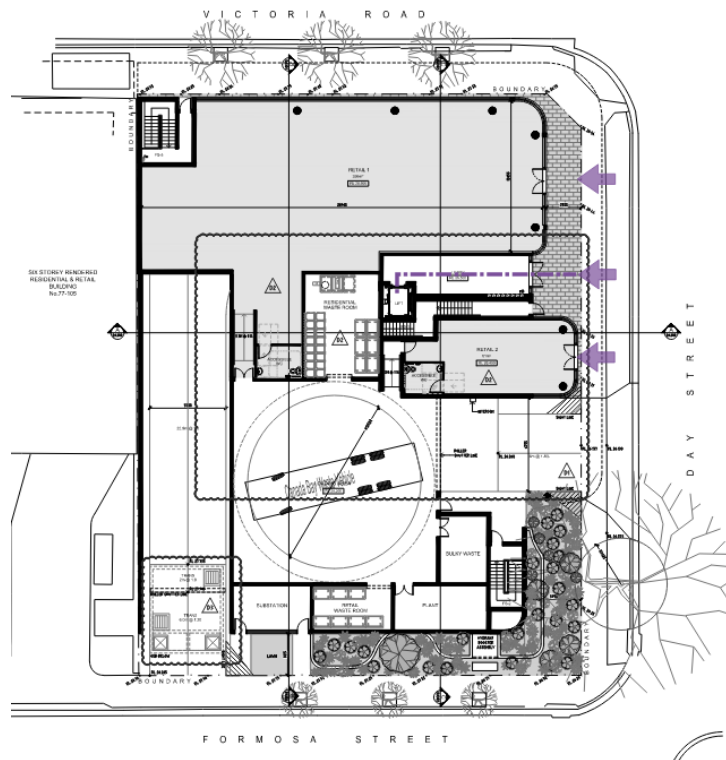


Figure 2 | Overall Site Plan

6.1 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 Day Street to the retail and residential entrances.



6.2 Approach from Accessible Carparking

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

Compliance Summary:

Compliant

A lift provides access to all levels of the building including basement car parking. On-grade access is available from the accessible car parking to the lift at each basement level.

6.3 Accessible Carparking

There is accessible carparking provided within the development – seven (7) spaces in total. requirement for the provision of accessible carparking within this development.

Compliance Summary:

Compliant configuration

There are eight (8) accessible car parking spaces that cater to both the adaptable units and retail use. The configuration of the accessible car parking and associated shared areas is in keeping with current accessibility requirements including the provision of bollards.

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, 1:40 (1:33 for bituminous surfaces). 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 stripes 150 to 200mm wide with spaces 200 to 300mm between stripes. Stripes to be at an angle of 45° to the side of the space.



6.4 Accessible Entrances

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

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

Compliance Summary:

Compliant Configuration

Double swinging doorways provide entry to the building – Retail 1, Retail 2 and Residential entrance. Levels noted on the floor plans indicate that level thresholds are achievable.

The following access requirements apply to the accessible entrances.

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

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.

- 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.



6 Interior

The interior areas subject to accessibility requirements include the retail areas and the residential common areas being the entry foyer, lift lobbies, corridor, communal open space at Level 1 and the roof terrace. The following requirements do not extend to individual apartments.

6.1 Extent of Access Generally – BCA

Access for people with disabilities is required to and within the retail tenancies and to the doorway of individual sole occupancy units. An accessible path of travel is also required to the residential communal areas.

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

Compliance Summary:

Compliant

6.2 Affected Part

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

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

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

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

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

Compliance Summary:

Not applicable – the development is not the modification of an existing building.

6.3 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.

Compliance Summary:

Compliant

Corridors are nominally 1600mm wide.



6.4 Doorways Generally

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

Compliance Summary:

Compliance configuration

Circulation area are achieved in accordance with current accessibility requirements.

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.

6.5 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.

6.6 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.

Compliance Summary:

To be addressed during detailed design stages.



6.7 Carpet

AS1428.1 has access requirements for carpet. Where carpet is used as the floor surface, pile height should not exceed 4mm. Exposed edges will be fastened to the floor surface. Carpet trims shall have a vertical face not more than 3mm high.

BCA states that clause 7.4.1(a) of AS 1428.1 does not apply and is replaced with 'the pile height or pile thickness shall not exceed 11 mm and the carpet backing thickness shall not exceed 4 mm.

Compliance Summary:

To be addressed during detailed design stage.

6.8 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.

Compliance Summary:

To be addressed during detailed design stage.

6.9 Visual Indication to Glazing

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

Compliance Summary:

To be addressed during detailed design stage.

6.10 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.

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.





6.11 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.

6.12 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.

Compliance Summary:

To be addressed during detailed design stages.

7 Sanitary Facilities

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

7.1 Distribution of Accessible Sanitary Facilities

For this development, the following is required:

- A unisex accessible toilet at each level that provides sanitary facilities. Where more than one bank of toilets is provided at any level, at least 50% of those banks will have an accessible toilet facility.
- Within a Class 2 buildings, where sanitary compartments are provided in common areas, not less than one (1) unisex accessible sanitary compartment is required.

Compliance Summary:

Compliant

A unisex accessible sanitary compartment is provided within each of the retail tenancies.

A unisex accessible sanitary compartment is provided within the communal roof terrace.



7.2 Unisex Accessible Toilets

A unisex accessible toilet is provided within each of the retail tenancies and within the common area (roof top terrace) of the residential areas. Overall room dimensions and the set-out of fixtures is conducive to compliance with current accessibility legislation.

Compliance Summary:

Capable of compliance

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

- a. Accessible toilet facilities to be unisex facilities for compliance with the BCA.
- b. Unisex accessible facilities to comply with AS1428.1(2009), Clause 15 including set-out of fittings and fixtures, circulation areas and doorways.

WC Pan:

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

Basin:

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



8 Vertical Circulation

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

8.1 Lift

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

Compliance Summary:

Capable of compliance

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.

8.2 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.

Compliance Summary:

Capable of compliance



The following access requirements apply to the fire isolated egress stairs.

- 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 stairs 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.

9 Adaptable Housing

The City of Canada Bay DCP 2020 requires the provision of adaptable housing units. Within the development, five (5) adaptable units are required (15%).

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.

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.

The nominate adaptable nits with the development are as follows:

Unit 1.07, Unit 2.06, Unit 3.06, Unit 4.06 and Unit 5.06.

Pre-Adaption Requirements:

9.1 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.

Compliance Summary:

Compliant

An accessible entrance is achievable through removal of the joinery item.

9.2 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:

Compliant

The toilet within the bathroom provides the required circulation areas for a visitable toilet.



9.3 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:

Compliant

Post Adaption Requirements:

9.4 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 abovementioned configuration has been adopted in the provision of carparking for the adaptable unit. With regard to the strata plan, the shared space could become a part of the common title to ensure it remains a circulation area.

Compliance Summary:

Compliant

Carparking for the adaptable units has been provided at the basement levels with other residential parking. The configuration is in keeping with AS2890.6.

9.5 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:

Compliant

Letterboxes are provided within the residential entry lobby along Day Street, satisfying AS4299 requirements.

An accessible path of travel is provided from the letterboxes to the entrance of the adaptable units.

Letterboxes to adaptable apartments should be provided within the accessible height range of 900-1100mm affl.



9.6 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:

Compliant

Doorways are generally provided with adequate circulation areas

9.7 Internal Corridors

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

Compliance Summary:

Compliant

9.8 Bathroom

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.

Compliance Summary:

Compliant

Post-adaption layout reflects AS1428.1 (2009).

9.9 Kitchen

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 circulation area achieved

Other items to be addressed during detailed design.



9.10 Bedroom

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 circulation area achieved

9.11 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.

Compliance Summary:

Compliant circulation area achieved

9.12 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:

Compliant circulation area achieved

9.13 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:

To be addressed during detailed design

9.14 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.

Compliance Summary:

To be addressed during detailed design



10 Conclusion

This report demonstrates that the fundamental aims of accessibility legislation are achievable within the Proposed Shop-top Housing development located at 71-75 Victoria Road Drummoyne. 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.

Curriculum Vitae



Lindsay Perry

B.Sc(Arch), B(Arch) Hons II, M.Dis.Stud

Lindsay Perry is an **Internationally Accredited Access Consultant** (Level 2) who is passionate about access and inclusion. Lindsay has over eighteen years of experience in access consulting throughout Australia and at the international level, having worked with the United Nations.

She is experienced in a wide range of access consulting including building appraisals; design reviews; policy development; management plans and general advice.

qualifications:

- 2019 Certificate IV in Access Consulting
- 2015 Master of Disability Studies, University of Newcastle
- 1996 Bachelor of Architecture (Hons II), University of Newcastle
- 1993 Bachelor of Science (Arch), University of Newcastle

professional associations:

- GAATES International
Accredited Member – ICAC BE-02-106-18
- Association of Access Consultants, Australia
Accredited Member – 136
- NSW Board of Architects
Registered Architect 7021
- Livable Housing Australia
Registered Assessor – 20047 NDIS
- SDA Assessor
Registered Assessor – SDA00049

employment history:

- 2017- Director, Lindsay Perry Access
- 2014-2017 Associate, Philip Chun Access
- 2009-2014 Part-time Teacher in Architecture, TAFE NSW
- 2002-2014 Principal, Lindsay Perry Architecture + Access
- 2001-2003 Access Consultant, Access Australia
- 2000-2001 Architect, Duc Associates
- 1998-2000 Architectural Designer, The Plan Centre of Newcastle
- 1997-1998 Architectural Graduate, Sutters Architects

committee involvement:

- 2020- **President**, Association of Access Consultants, Australia
- 2019-2020 **Vice President**, Association of Access Consultants, Australia
- 2014- Ordinary Member, ACAA NSW Network
- 2017- Member, Lake Macquarie City Council Ageing & Disability Panel
- 2017-2018 Secretary, ACAA
- 2016-2017 Treasurer, ACAA

experience:

Extensive experience in a wide range of projects including retail; commercial; healthcare; seniors living; residential; public domain; educational; entertainment; sporting facilities; and public transport.

Experienced in accessibility strategy and management procedures; performance solutions and heritage buildings.

Expert witness for private clients – seniors living, childcare centres, residential developments.

Lindsay is currently researching accessibility and universal design principles and the development of strategy / policy to guide the development of accessibility legislation in developing countries.

