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Job No: IAC-818

Friday, 9 November 2018

BINAH BY DESIGN PTY LTD
PO BOX 3142,
LIVERPOOL WESTFIELD NSW 2170

Reference: **ACCESS AUDIT CONSULTANCY DEVELOPMENT APPLICATION STAGE 26 ELIZABETH ST, LIVERPOOL NSW 2170**

Attention: Ahmad Refaieh

Dear Sir,

Thank you for inviting iAccess Consultants to undertake this access assessment of the proposed Hotel, residential and commercial development located at 26 Elizabeth Street, Liverpool NSW.

This access report has been structured in accordance with the provisions of the Disability (Access to Premises) Standard 2010 as well as the provisions of the relevant Australian Standards.

Detailed documentation addressing the specific details and requirements of the access legislation, codes and standards will need to be documented in the Construction Certificate documentation.

Several issues have been identified which will need to be addressed by the project team in the finalisation of the documents for this project.

Please do not hesitate to contact us should you wish to discuss any aspect of this Access Report.

Yours sincerely,

RICHARD SEIDMAN

M.PropDev, BArch (Hons),
ARB Reg No 4700,
ACAA (Accredited Access Consultant No 330),
Livable Housing Registered Assessor 10041

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ACCESS REPORT – DEVELOPMENT APPLICATION

HOTEL, RESIDENTIAL AND COMMERCIAL DEVELOPMENT
26 ELIZABETH STREET
LIVERPOOL, NSW

Prepared by

iAccess Consultants

A division of Seidman & Associates Pty Ltd

ABN 37 002 648 615

Revision **[B]**

9 November 2018

DOCUMENT CONTROL

Project: **Hotel and Residential development**
26 Elizabeth Street
Liverpool, NSW

Document Type: **Access Report**

Report Number: **IAC-818**

The following report register documents the development and issue of this and each subsequent report(s) undertaken by iAccess Consultants.

The technical and intellectual content contained herein remain the property of iAccess Consultants and have been prepared and may only be used for the development / buildings being the subject of this report.

Revision History:

Rev	Remarks	Issue Date
-	Access report prepared and issued to client	13 September 2018
A	Access report updated and issued to client	17 October 2018
B	Access report updated and issued to client	9 November 2018

Authorisation and Sign-off by:

Richard Seidman

ARB Reg No 4700,
M.PropDev, BArch (Hons),
ACAA (Accredited Access Consultant No 330)

CONTENTS

ABBREVIATIONS

The following abbreviations are employed in this Checklist:

ACAA	Association of Consultants in Access Australia
AS	Australian Standard
BCA	Building Code of Australia
NCC	National Construction Code
Dts	Deemed to satisfy
CAPT	Continuous Accessible Path of Travel
GPO	General Power Outlet
USAT	Unisex Accessible Sanitary Toilet
AFFL	Above Finished Floor Level
TGSI	Tactile Ground Surface Indicator
PPE	Principal Pedestrian Entrance

KEY

The following list of differing colour toning are indicators of access compliance throughout this report:

	Compliant
	Not Compliant
	Information to be provided

Examples of these compliance summaries include:

Compliance:	An accessible path of travel is provided from the set-down point to the Principal Pedestrian Entry to the event.

Compliance:	Door circulation zones are not compliant. Ensure door latch-side clearance achieves a minimum of 530mm.

Compliance:	The doorways luminance contrast levels is not able to be assessed. Information is to be provided.

Lines that are written in red and highlighted in yellow (like this line of text) indicate an item that may require action by the project team, impacting on the overall design.

1 EXECUTIVE SUMMARY

This access report has been prepared at the request of Binah By Design to provide commentary on the Preliminary Concept Plans documentation for the proposed Hotel development located at 26 Elizabeth Street, Liverpool NSW.

The purpose of this access report is to highlight and review key accessible topics as they relate to design elements of the proposed redevelopment. The key accessible areas are mainly in relation to the requirements of the NCC Section D, Access and Egress and AS1428.1:2009 Design for access and mobility.

There is generally a high level of compliance throughout the project, however there are many items that require additional information.

1.1 Access Declaration

This report confirms that the provisions for compliance with the accessible requirements nominated in the Disability (Access to Premises – Building) Standard 2010 where possible have been incorporated into the design proposed by this Preliminary Concept Plan set.

1.2 Scope of Works

The development works include the following:

4-Level Basement:

- Carparking
- Bicycle parking
- Lift Lobby
- Fire stairs
- Bin rooms
- Plant and service rooms

Basement Level 1

- Carparking
- Bicycle parking
- Residential bin room
- Plant and service rooms
- Lift lobby
- Fire stairs
- Store room
- Hotel offices + staff areas
- Commercial EOT facilities

Ground Floor:

- Hotel lobby/lounge
- Residential lobby
- Restaurant lobby
- Consolidation store
- Hotel kitchen
- Hotel amenities
- Plant and service rooms
- Hotel bin room
- Loading dock

- Fire stairs

Level One:

- Hotel carparking
- Bicycle parking
- Hotel lift lobby
- Fire stairs
- Store and servery
- Meeting rooms and function area
- Plant and service rooms

Level Two:

- Hotel lift lobby
- Fire stairs
- Commercial space
- Sanitary facilities
- Hotel carparking
- Plant and service rooms

Level 3-4:

- Commercial space
- Lift facility
- Fire stairs
- Sanitary facilities
- Plant and service rooms

Level 5:

- Lift services
- Fire stairs
- Hotel gym
- Change rooms
- Plant and service rooms
- 6 type A rooms
- 10 type A1 rooms
- 1 type B room
- 2 type C rooms
- 3 type D rooms
- 2 type E room (accessible)
- 4 type F rooms
- Terrace (for maintenance access only)

Level 6-7:

- Lift services
- Fire stairs
- Plant and service rooms
- Residential storage
- 6 type A rooms
- 10 type A1 rooms
- 1 type B room
- 2 type C rooms
- 3 type D rooms

- 2 type E rooms (accessible)
- 4 type F rooms

Level 8:

- Lift services
- Fire stairs
- Plant and service rooms
- Residential storage
- 7 type A rooms
- 12 type A1 rooms
- 1 type B room
- 2 type C rooms
- 3 type D rooms
- 4 type F rooms

Level 9:

- Lift lobby
- Fire stairs
- Resident's lounge
- Terrace
- Private dining
- Media room
- Pool
- Pool lounge
- Gym
- Manager's store
- Amenities
- Plant and service rooms

Level 10:

- Lift lobby
- Fire stairs
- 4 3-bedroom residential units
- 4 1-bedroom residential units

Level 11-14, 16-19, 21-24, 26-29, 31:

- Lift lobby
- Fire stairs
- 8 2-bedroom units

Level 15, 20, 25, 30:

- Lift lobby
- Fire stairs
- 4 3-bedroom units
- 4 1-bedroom units

Level 32-34

- Lift lobby
- Fire stairs
- 5 2-bedroom units
- 1 penthouse (4 bedrooms)

Level 35:

- Lift lobby
- Fire stairs
- Restaurant
- Kitchen
- Bar
- Amenities
- Terrace

All levels of the development are serviced by fire stairs and passenger lifts.

1.3 Building Classification

The NCC classification for this Development is:

- *Class 2 – Residential*
- *Class 3 - Hotel*
- *Class 6 - Retail*
- *Class 5 - Offices*
- *Class 7a - Carpark*
- *Class 7b - Storage*
- *Class 9b - An assembly building*

The following areas within the development are considered ancillary to the activities undertaken as part of the Class 3 facility.

- *Swimming Pool, Gym Class 10*
- *Restaurant – Class 6*
- *Office, Function Room*

1.4 Performance Solutions

The proposed design presently does not rely upon any performance solutions.

1.5 Equitable Egress Strategy - NCC Clauses DP4 & DP6

For the purpose of this report the provision of deemed to satisfy fire stairs within this development satisfies the requirements of DP4 and DP6.

1.6 NCC Clause D3.4 Concession

The NCC Clause **D3.4** notes a concession for accessibility to particular areas/rooms:

(a) An area where access would be inappropriate because of the particular purpose for which the area is used.

(b) An area that would pose a health or safety risk for people with a disability.

(c) Any path of travel providing access only to an area exempted by (a) or (b).

The development has several rooms of which the NCC **D3.4** concession applies:

- Plant rooms
- Service rooms
- Store rooms

1.7 Architecture Documentation

This Access Report references the following architectural documentation.

Dwg No	Title	Issue Date
TP00.00	COVER SHEET	-
TP00.03	PROPOSED SITE PLAN	-
TP01.00	BASEMENT 4 PLAN	-
TP01.01	BASEMENT 3 PLAN	-
TP01.02	BASEMENT 2 PLAN	-
TP01.03	BASEMENT 1 PLAN	-
TP01.04	GROUND PLAN	-
TP01.05	LEVEL 1 PLAN	-
TP01.06	LEVEL 2 PLAN	-
TP01.07	LEVEL 3 PLAN	-
TP01.08	LEVEL 4 PLAN	-
TP01.09	LEVEL 5 PLAN	-
TP01.10	LEVEL 6 PLAN	-
TP01.11	LEVEL 7 PLAN	-
TP01.12	LEVEL 8 PLAN	-
TP01.13	LEVEL 9 PLAN	-
TP01.14	LEVEL 10 PLAN	-
TP01.15	LEVEL 11-14, 16-19, 21-24, 26-29, 31 PLANS	-
TP01.16	LEVEL 15, 20, 25, 30 PLAN	-
TP01.18	LEVEL 32-34 PLANS	-
TP01.40	LEVEL 35 PLAN	-
TP01.41	ROOF PLAN	-
TP01.50	GROUND FLOOR MEZZANINE	-
TP06.30	ADAPTABLE, LHA COMPLIANT & ACCESSIBLE PLANS	-

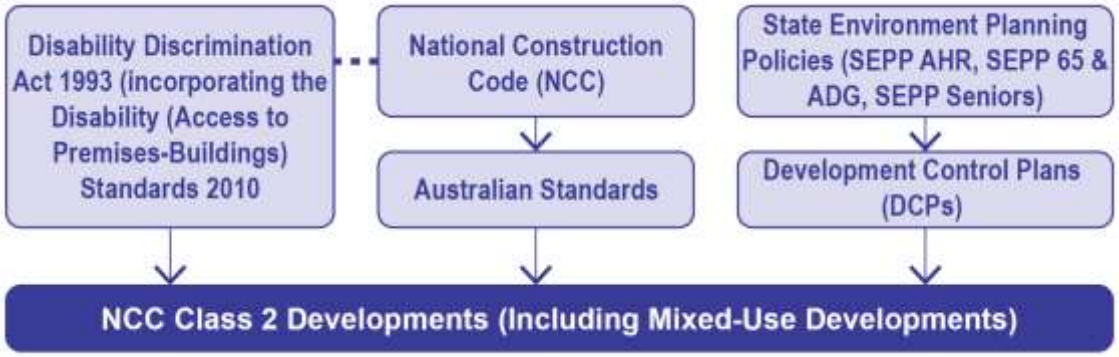
1.8 Documents to be Relied Upon

At the completion of the delivery of this project the Access Design Statement required for the issue of the Occupation Certificate will be reliant on the following documents:

- Lift certification provided by relevant lift company indicating compliance with the provisions of AS1735.12
- Slip resistance certification issued by the respective floor finishes manufacturers indicating compliance with NCC Table D2.14 and Australian Standard HB198.
- Documentation provided by the sign supplier indicating Braille Tactile signage is compliant with the provisions of NCC Specification D3.6
- Confirmation of compliant lighting levels
- Confirmation of TMV details in sanitary facilities
- Evidence of wall strengthening for the installation of grab rails associated with the accessible WC and shower facilities.

2 STATUTORY FRAMEWORK

The legislation addressing accessibility is documented in the following Act, Code and Standards:



2.1 Disability Discrimination Act 1992

Section 23 of the Disability Discrimination Act 1992 states:

It is unlawful for a person to discriminate against another person on the ground of the other person's disability:

a) by refusing to allow the other person access to, or the use of, any premises that the public or a section of the public is entitled or allowed to enter or use (whether for payment or not); or

b) in the terms or conditions on which the first-mentioned person is prepared to allow the other person access to, or the use of, any such premises; or

c) in relation to the provision of means of access to such premises; or

d) by refusing to allow the other person the use of any facilities in such premises that the public or a section of the public is entitled or allowed to use (whether for payment or not); or

e) in the terms or conditions on which the first-mentioned person is prepared to allow the other person the use of any such facilities; or

f) by requiring the other person to leave such premises or cease to use such facilities.

The Disability Discrimination Act 1992 is complaints-based legislation and the Commissioner once having heard and assessed the level of discrimination may issue orders to rectify.

2.2 Legislative Framework

- Disability Discrimination Act 1992
- Disability (Access to Premises - Buildings) Standards 2010 (DDA 1992)
- National Construction Code (BCA 2016)
- AS1428.1:2009 Design for access and mobility - General requirements for access - New building work
- AS1428.2:1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities

- AS1428.4.1:2009 Design for access and mobility - Means to assist the orientation of people with vision impairment - Tactile ground surface indicators
- AS1428.5:2010 Design for access and mobility - Communication for people who are deaf or hearing impaired
- AS1680.2.1:2008 Interior and workplace lighting - Specific applications - Circulation spaces and other general areas
- AS1735.12:1999 Lifts, escalators and moving walks - Facilities for persons with disabilities
- AS2890.6:2009 Parking facilities - Off-street parking for people with disabilities
- AS4299:1995 Adaptable Dwellings
- HB198:2014 Guide to the specification and testing of slip resistance of pedestrian surfaces

3 ACCESS REPORT

3.1 Access Repot Preamble

The Access Report following has adopted the headings of the Disability (Access to Premises) Standard 2010. The Standard provides a framework for analysis and when coupled with the technical provisions of the Building Code of Australia and the provisions of Australian Standards AS1428

Australian Standards provide certainty and direction to address accessibility compliance.

3.2 Continuous Accessible Paths of Travel

NCC Reference:	D3.2 Access to buildings
	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	Clause 6 (Continuous Accessible Paths of Travel) of AS1428.1 2009
	AS 1428.4.1 2009 Design for access and mobility - Means to assist the orientation of people with vision impairment

3.2.1 Preamble

This section discusses Continuous Accessible Paths of Travel (CAPT) throughout the development.

Accessible access to this development is proposed in the following locations:

- Commercial entry located off Elizabeth Street
- Hotel entry located off the new driveway linking Elizabeth Street with the service lane located to the south of the site
- Residential entry located off the new driveway linking Elizabeth Street with the service lane located to the south of the site
- Restaurant entry located off the new driveway linking Elizabeth Street with the service lane located to the south of the site

It will be necessary to ensure level access across the boundary at the above entry points to this development.

The internal areas include many interleading corridors to each apartment as well as communal residential areas, the Hotel, offices and shop/restaurant tenancies.

3.2.2 CAPT – Requirements to be Satisfied

The requirements for Continuous Accessible Paths of Travel is noted in the National Construction Code at Clauses DP1 and D3.2:

A continuous accessible path of travel to accessible facilities will need to be provided to enable people to *'approach the building from the road boundary'* so that they can *'access work and public spaces, accommodation and facilities for personal* hygiene' in accordance with the requirements of ***DP1*** of the National Construction Code 2016.

The NCC Clause **D3.2(a)** identifies that

An accessway must be provided to a building required to be accessible—

i. from the main points of a pedestrian entry at the allotment boundary; and

ii. from another accessible building connected by a pedestrian link; and

iii. from any required accessible carparking space on the allotment.

Compliance:	An accessible path of travel is provided from the set-down point to the Principal Pedestrian entries of this development

3.2.3 Site

The redevelopment is located at 26 Elizabeth Street, Liverpool NSW.

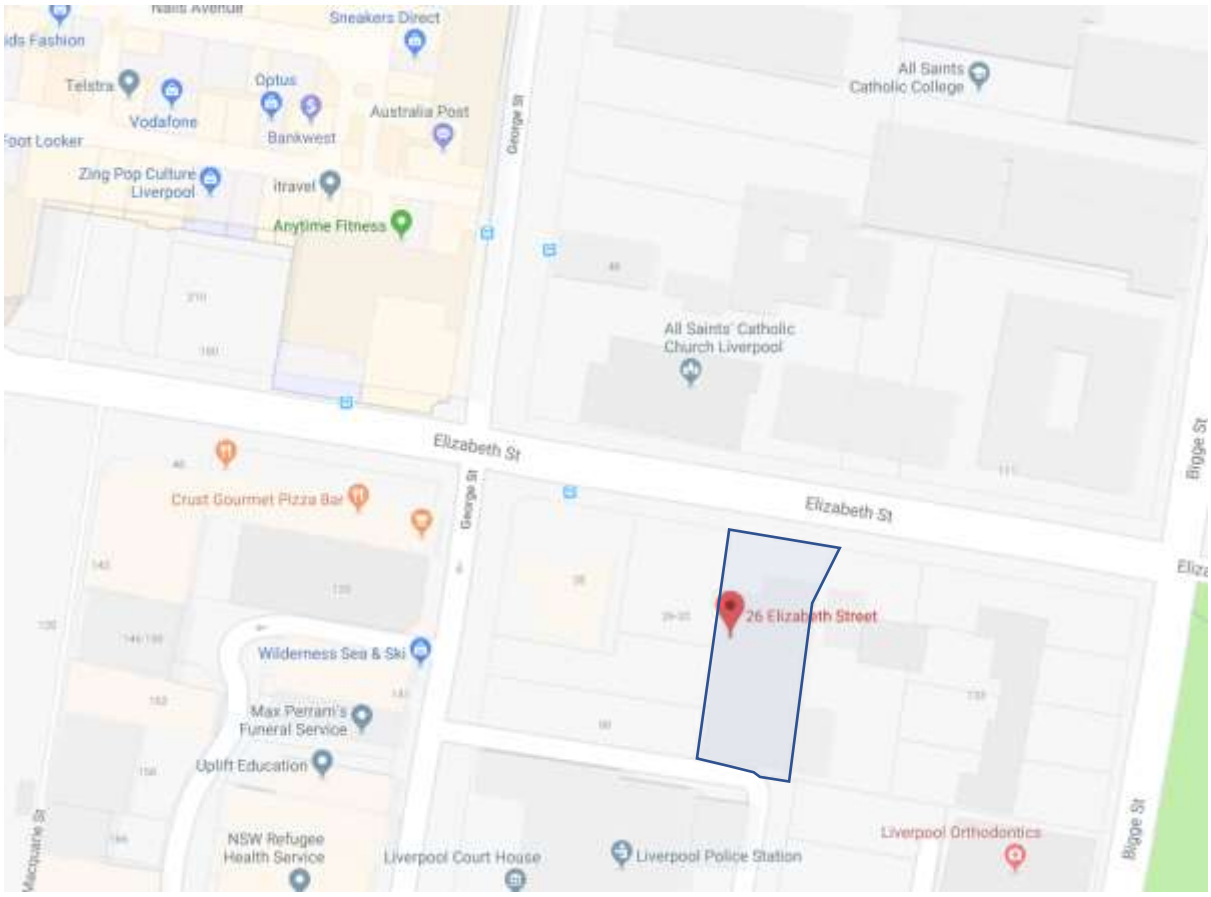


Figure 1 –Google Maps Extract

The building entrances are via Elizabeth Street. Access to the carpark is via the rear lane located to the south of the site.

Access from the carparking levels to each level of the development, including the residential towers is provided by the lift service provided within the building.

3.2.4 Set Down Areas

There is a set down area for the hotel and residential elements of this development located in the service driveway located on the eastern side of this property.

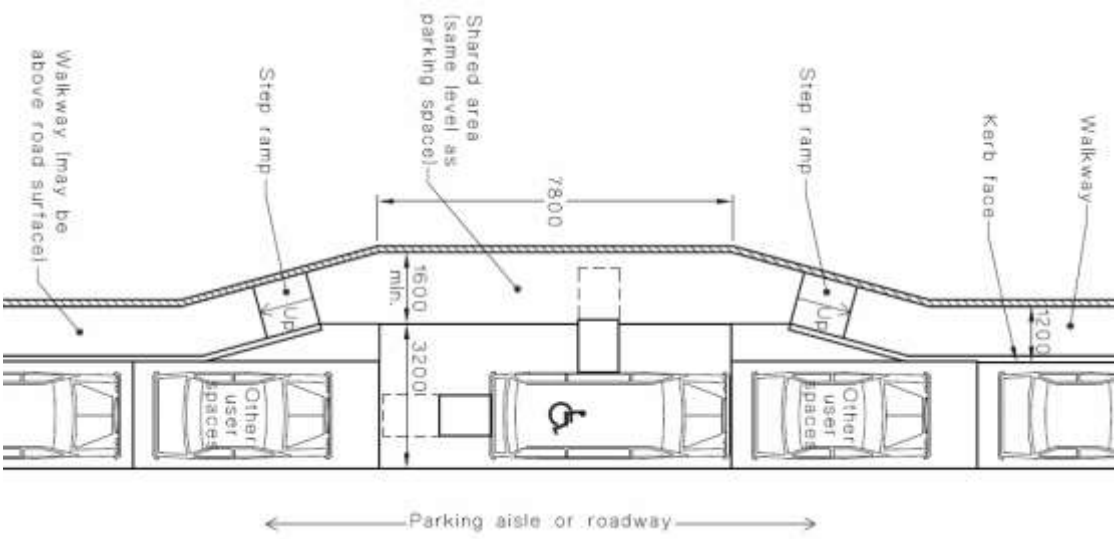


Figure 2 – Extract from AS2890.6 outlining accessible requirements for parallel parking.

If the set down is flush with the pavement, tactile indicators and bollards are required as per Figure 2.5B of AS1428.4.1:2009:

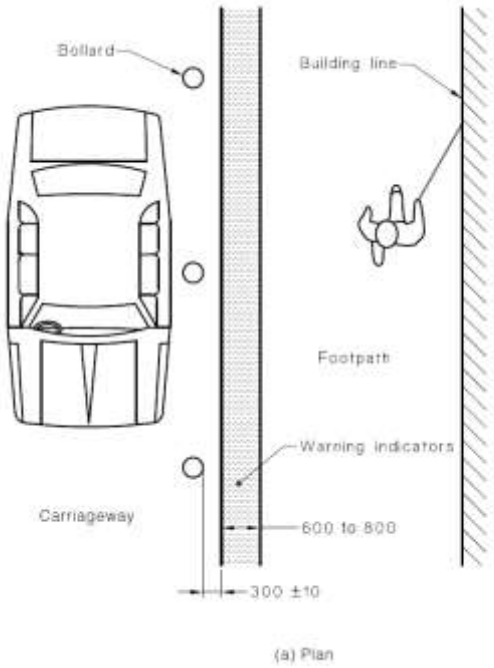


Figure 3 – Extract from AS1428.4.1:2009 – Figure 2.5B

Compliance:	Information regarding the set-down area is to be provided as part of the construction certificate documentation.

3.2.5 Pavement Luminance Contrast

Where there is alignment between the pavement and driveway, as a minimum, the luminance contrast between the finishes will need to be 30%. The pavement and driveway

materials may be similar as long as there is a 30% luminance contrast between the pavement finish and the finish of the driveway.

Compliance:	Information to be provided as part of the Construction Certificate documentation

3.2.6 Lighting Levels

The lighting level along path of travels will need to achieve a minimum level of 150lx as noted at Clause 19 of AS1428.2:1992 or the minimum lighting levels noted at AS1680.

Compliance:	Information to be provided as part of the Construction Certificate documentation

3.2.7 Height and Width of Continual Accessible Paths of Travel

The minimum unobstructed height of a continuous accessible path of travel shall be 2000mm or 1980mm at doorways.

Unless otherwise specified (such as at doors, curved ramps and similar), the minimum unobstructed width of a continuous accessible path of travel shall be 1000 mm and the following shall not intrude into the minimum unobstructed width of a continuous accessible path of travel:

(a) Fixtures and fittings such as lights, awnings, windows that, when open, intrude into the circulation space, telephones, skirtings and similar objects.

(b) Essential fixtures and fittings such as fire hose reels, fire extinguishers and switchboards.

(c) Door handles less than 900 mm above the finished floor level.

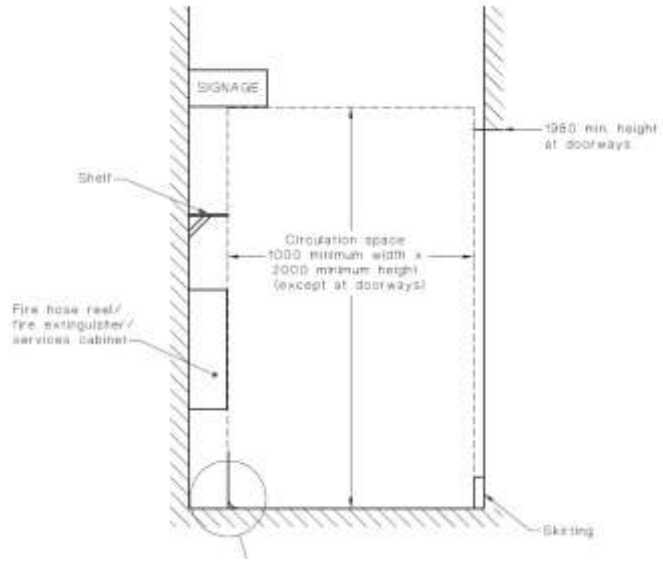


Figure 4 – Fig. 2 of Section 6, AS1428.1:2009

Compliance:	The current drawing set does not provide information indicating the heights and widths of Continual Accessible Paths of Travel. Information to be provided as part of the Construction Certificate documentation

3.2.8 Passing Spaces

Where the length of the Paths of Travel is longer than 20m, an 1800 x 2000mm passing bay is required to be provided in accordance with the provisions of Clause 6.4 of AS1428.1:2009.

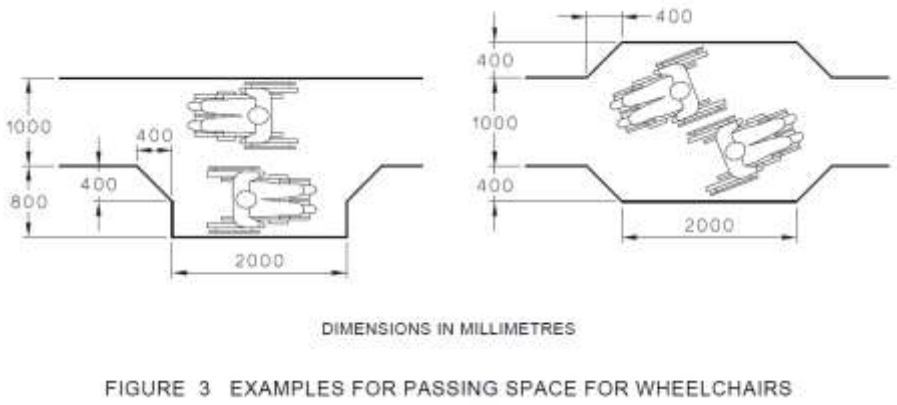


Figure 5 – Extract from Clause 6.4 of AS1428.1:2009

Compliance:	The General Arrangement plans indicate the circulation associated with the development. The dimensional setout of the corridors will be required to be provided as part of the detailed construction documentation.

3.2.9 Circulation Zones

A minimum pathway of 1m width is required throughout all accessible areas.

Compliance:	The drawing set does not include detail layout plans from which the pathway widths can be assessed in detail. Information to be provided as part of the Construction Certificate documentation

The design also requires locations where a wheelchair user can make a 180deg turn (1540 x 2070mm) at corridor/pathway ends in accordance with the provisions of Fig. 5, Clause 6 of AS1428.1 2009 as well as 1500x1500 circulation zones where the path of travel changes direction.

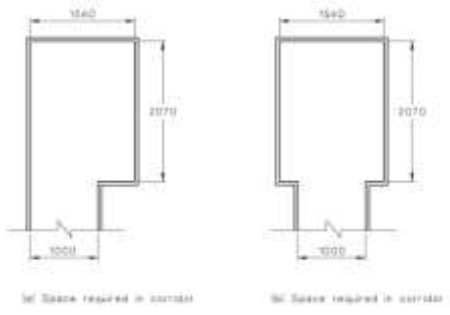


Figure 6 – Fig.3 Section 6 AS1428.1 2009

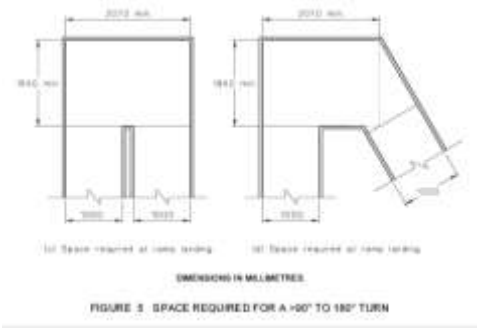


Figure 7 – Fig.5 Section 6 AS1428.1 2009

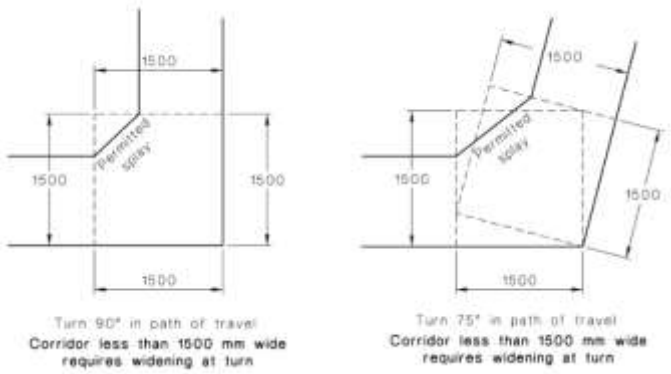


Figure 8 – Fig.4 Section 6 AS1428.1 2009

Compliance:	The drawing set does not include detail layout plans from which the circulation zones can be assessed in detail. Information to be provided as part of the Construction Certificate documentation

3.3 Visual Indicators on Glazing

NCC Reference:	D3.2 Access to buildings
	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	Clause 6.6 (Visual Indicators on Glazing) of AS1428.1 2009
	AS 1428.4.1 2009 Design for access and mobility - Means to assist the orientation of people with vision impairment

Where full height glazing is proposed, visual indicators will need to be fixed to the glazing in accordance with Clause 6.6 of AS1428.1:2009:

> *Where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights, including any glazing capable of being mistaken for a doorway or opening, shall be clearly marked for their full width with a solid and non-transparent contrasting line. The contrasting line shall be not less than 75 mm wide and shall extend across the full width of the glazing panel. The lower edge of the contrasting line shall be located between 900 mm and 1000 mm above the plane of the finished floor level.*
>
> *Any contrasting line on the glazing shall provide a minimum of 30% luminance contrast when viewed against the floor surface or surfaces within 2 m of the glazing on the opposite side.*

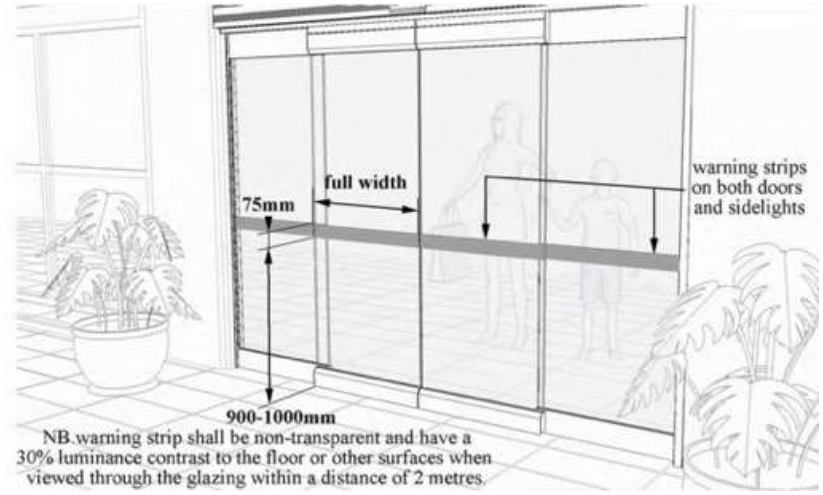


Figure 9 – Diag.4 DE-IG02 2013

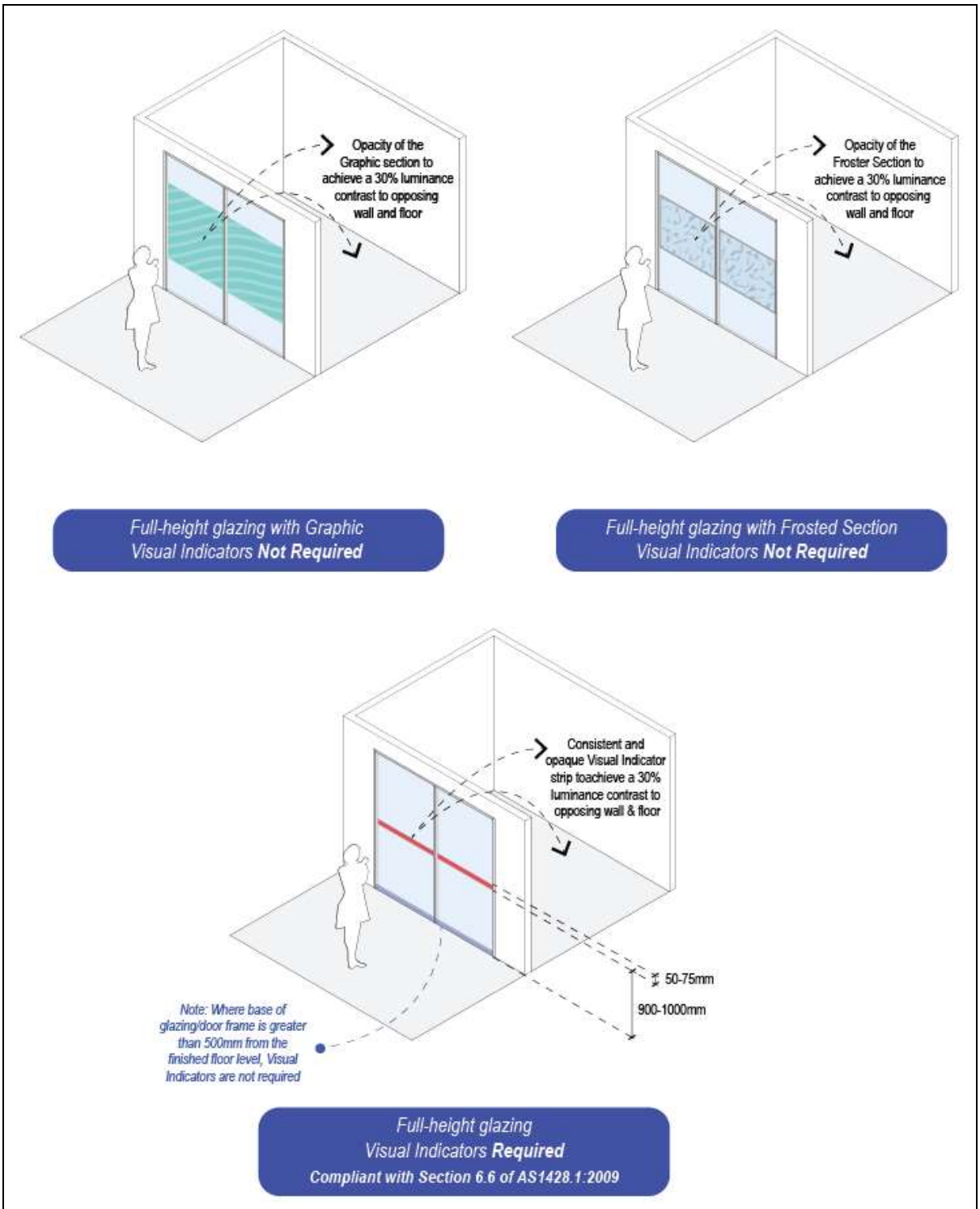


Figure 10 – Visual Indicators Summary Sketch - iAccess Consultants

The following are some compliant examples of the application of Visual Indicators on glazing.

In considering the statutory requirements for Visual Indicators on glazing, it is important to note other contextual factors; such as glare, lighting, floor finishes, furniture placement and casted shadows from building lines.

The following are some non-compliant examples of the application of Visual Indicators on glazing as a result of these contextual factors.

Luminance contrast is not achieved due to glare and shadow cast.

Luminance contrast is not achieved due to floor finish colour.

Luminance contrast is not achieved due to shadow cast.

Compliance:	Future documentation will need to be provided, detailing the application of Visual Indicators where full-height glazing is proposed to any wall or door. Information to be provided as part of the Construction Certificate documentation.

3.4 Floor or Ground Surfaces

NCC Reference: NCC Table D2.14

Australian Standard Reference: Clause 7 of AS1428.1:2009
HB198:2014 (slip resistance)

3.4.1 Slip Resistance

The slip resistance of the floor finishes will need to satisfy the minimum requirements of NCC Table 2.14 and the slip resistance ratings noted within HB198.

Certification indicating compliance with the slip resistance provisions will need to be provided from the respective flooring suppliers.

The table following summarises the minimum slip resistance levels of flooring materials to be achieved within this development.

Location	NCC Table D2.14	HB198	Criterion Satisfied
Ramp steeper than 1:14	Dry P4/R11 – Wet P5/R12	P5/R12	Additional Information to be provided
Ramp steeper than 1:20 but not steeper than 1:14	Dry P3/R10 – Wet P4/R11		Additional Information to be provided
Tread or landing surface	Dry P3/R10 – Wet P4/R11	Dry P3/R10 – Wet P4/R11	Additional Information to be provided
Nosing	Dry P3 – Wet P4	Dry P3 – Wet P4	Additional Information to be provided
Transition Areas		P2/R9	Additional Information to be provided
External ramps including sloping driveways, footpaths, etc., under 1:14, external sales areas (e.g. markets), external carpark areas, external colonnades, walkways, pedestrian crossings, balconies, verandas, carports, driveways, courtyards and roof decks		P4/R11	Additional Information to be provided
External Ramps (including sloping driveways, footpaths etc.) steeper than 1 in 14		P5/R12	Additional Information to be provided
Wet area / sanitary facilities		P3/R10	Additional Information to be provided

Compliance: Future documentation will need to be provided, detailing the various floor finishes and the respective slip-resistance ratings.
Information to be provided as part of the Construction Certificate documentation

3.4.2 Carpet

The finishes schedule will propose carpet finishes within this development.

It will be necessary that the specification and application of the carpet satisfy the provisions of:

- NCC Clause D3.3 (g) & (h) and
- AS1428.1:2009 Clause 7.4

Clause 7.4.1 of AS1428.1:2009 states:

> *Where carpets or any soft flexible materials are used on the ground or floor surface—*
>
> *(a) the pile height or pile thickness shall not exceed 6 mm and the carpet backing thickness shall not exceed 4 mm;*
>
> *(b) exposed edges of floor covering shall be fastened to the floor surface and shall have a trim along the entire length of any exposed edge; and*
>
> *(c) at the leading edges, carpet trims and any soft flexible materials shall have a vertical face no higher than 3 mm or a rounded bevelled edge no higher than 5 mm or above that height a gradient of 1 in 8 up to a total maximum height of 10 mm*

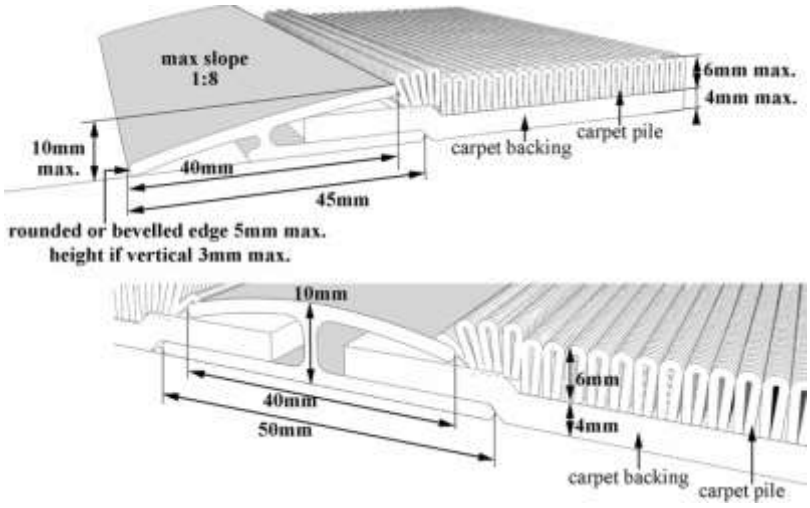


Figure 11 – Examples of carpet joints on an accessible path of travel

3.4.3 Floor transitions

Transitions between floor finishes will need to comply with Clause 7.2 of AS1428.1:2009.

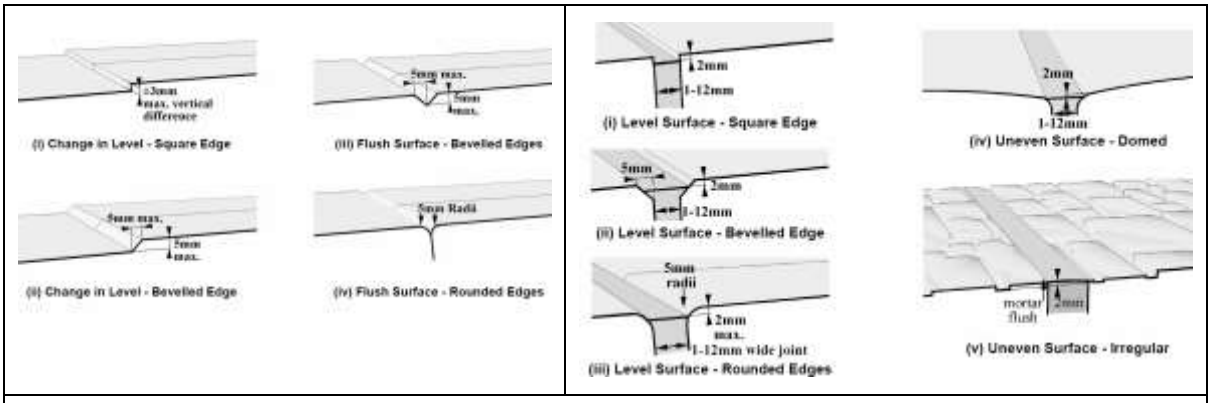


Figure 12 – diagrams indicating the acceptable tolerances between pavement finishes

Compliance:	Future documentation will need to be provided, detailing the various floor finishes and their respective transitions. Information to be provided as part of the Construction Certificate documentation

3.4.4 Recessed Matting

The design will propose the installation of recessed matting.

The installation will need to satisfy the following requirements from Clause 7.4.2 of AS1428.1:2009

Matting recessed within a continuous accessible path of travel—

(a) where of metal and bristle type construction or similar, its surface shall be no more 3 mm if vertical or 5 mm if rounded or bevelled, above or below the surrounding surface; and

(b) where of a mat or carpet type material, shall have the fully compressed surface level with or above the surrounding surface with a level difference no greater than 3 mm if vertical or 5 mm if rounded or bevelled.

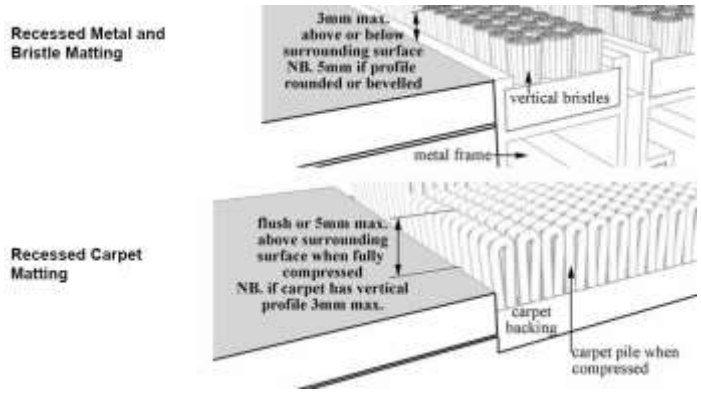


Figure 13 – Recessed matting height tolerances

Compliance:	Future documentation will need to be provided, detailing the mat specifications. Information to be provided as part of the Construction Certificate documentation

3.4.5 Grated Drains

Any grated drains located on any paths of travel will need to be fitted with compliant heel guard grates (Clause 7.5).

> ***7.5 Grates***
>
> *Grates shall comply with the following:*
>
> *(a) Circular openings shall be not greater than 13 mm in diameter.*
>
> *(b) Slotted openings shall be not greater than 13 mm wide and be oriented so that the long dimension is transverse to the dominant direction of travel.*

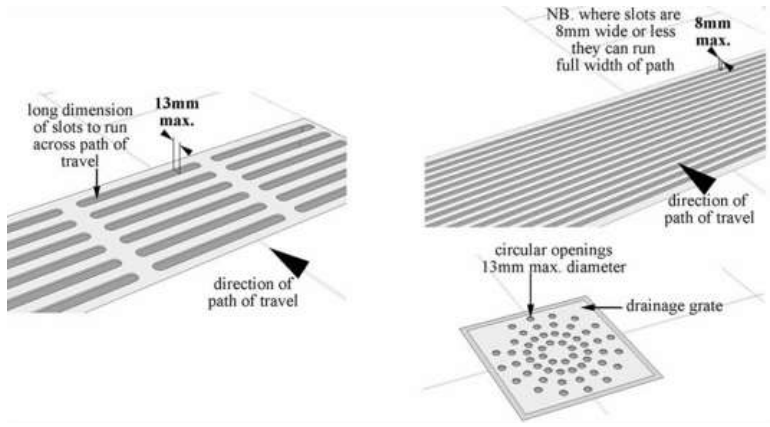


Figure 14 –Diag.7 DE-IG02 2013 – example of heel guard grates

Compliance:	Future documentation will need to be provided, detailing the location of the grated drains and their respective specifications. Information to be provided as part of the Construction Certificate documentation

3.5 Signage

The requirements are referenced in the following legislation:

NCC Reference:	D3.2 Access to buildings
	D3.6 Signage
	Specification D3.6
	D2.23 Signs on Doors
Australian Standard Reference:	Clause 8 – Signage, AS1428.4.1 2009 Design for access and mobility - Means to assist the orientation of people with vision impairment
	Clause 16 – Symbols, AS1428.4.2 1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities
	Clause 17 – Signs, AS1428.4.2 1992 Design for access and mobility - Enhanced and additional requirements - Buildings and facilities
	DR AS1428.4.2-2017 Design for access and mobility – Wayfinding

3.5.1 Preamble

The statutory requirements for signage apply to entrances, toilets, hearing augmentation and exits.

This section will reference the statutory signage requirements as well as general signage information.

3.5.2 Statutory Signage Requirements

The applicable clauses to the topic of entrances of the NCC Section **D3.6 Signage** states:

In a building required to be accessible—

*(a) braille and tactile signage complying with **Specification D3.6** must—*

(i) incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 and identify each—

(A) sanitary facility, except a sanitary facility within a sole-occupancy unit in a Class 1b or Class 3 building; and

(B) space with a hearing augmentation system; and

(ii) identify each door required by E4.5 to be provided with an exit sign and state—

*(A) **"Exit"**; and*

*(B) **"Level"** ; and either*

(aa) the floor level number; or

(bb) a floor level descriptor; or

(cc) a combination of (aa) and (bb); and

(b) signage including the international symbol for deafness in accordance with AS 1428.1 must be provided within a room containing a hearing augmentation system identifying—

(i) the type of hearing augmentation; and

(ii) the area covered within the room; and

(iii) if receivers are being used and where the receivers can be obtained; and

(c) signage in accordance with AS 1428.1 must be provided for accessible unisex sanitary facilities to identify if the facility is suitable for left or right-handed use; and

(d) signage to identify an ambulant accessible sanitary facility in accordance with AS 1428.1 must be located on the door of the facility; and

(e) where a pedestrian entrance is not accessible, directional signage incorporating the international symbol of access, in accordance with AS 1428.1 must be provided to direct a person to the location of the nearest accessible pedestrian entrance; and

(f) where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 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 facility.

DR AS 1428.4.2-2017, The Australian Standard for design for access and mobility – Wayfinding, specifies the minimum wayfinding sign requirements to enable pedestrians, particularly those who are blind, deafblind or have low vision, to enter and to navigate within buildings and/or sites, including a return route, in a safe and independent manner.

This Standard will also be of use to people with other disabilities who require enhanced information to communicate wayfinding information within buildings.

3.5.3 Exit Signage

AS2293.1:2005 outlines details for illuminated exit signs.

6.6 SIZE OF PICTORIAL ELEMENT

The minimum allowable size of any pictorial element on an exit sign shall be determined by the maximum viewing distance intended under the design as follows:

(a) For viewing distances not greater than 32 m, in accordance with Table 6.1.

TABLE 6.1

MINIMUM PICTORIAL ELEMENT HEIGHTS

Maximum viewing distance (m)	Minimum pictorial element height (mm)
16	100
24	150
32	200

(b) For viewing distances greater than 32 m, in accordance with the following equation:

$$\text{Minimum element height} = \frac{\text{Maximum viewing distance}}{160}$$

Braille tactile Exit signage will need to be provided at each level of the building associated with the fire egress door.

Examples of Braille Tactile Signage include:

Figure 15 – Examples of Braille Tactile Signage from www.brailletactilesigns.com.au

3.5.4 WC Signage

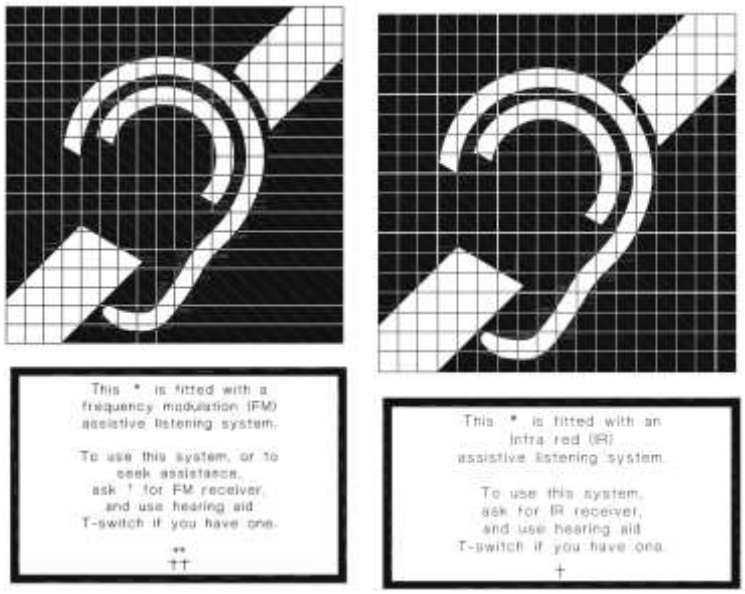
Braille tactile WC signage will need to be provided at each public sanitary facility entrance.

Examples of Braille Tactile Signage include:

NB: Text "Unisex Toilet RH" to be used where the toilet is configured adjacent to a wall on the right, and simialrly text "Unisex Toilet LH" is to be used where the toilet is adjacent to a wall on the left of the toilet pan.

3.5.5 Hearing Augmentation Signage

Braille tactile hearing augmentation signage will need to be provided in a room or area where an built in amplification system is installed.



Examples of Braille Tactile Signage include:

3.5.6 Mounting Heights

The mounting heights of signage will need to incorporate the viewing zones as identified in AS1428.2:1992.

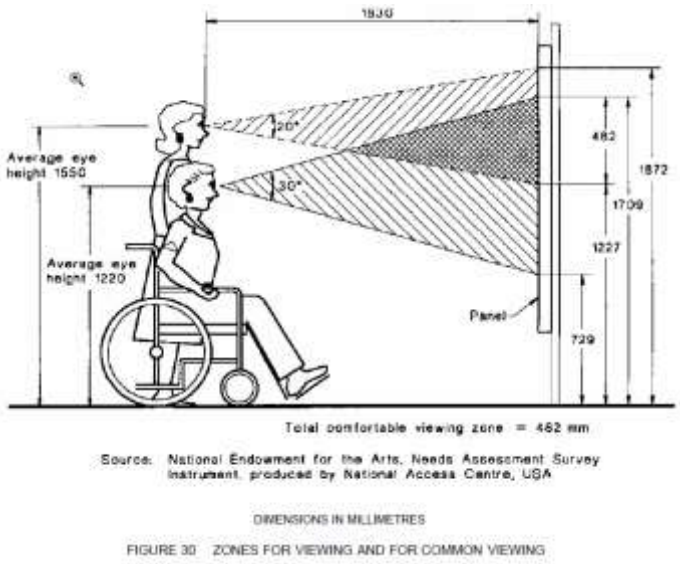


Figure 16 – Extract from Australian Standard indicating acceptable view range for signage

Compliance:	Future documentation will need to be provided, detailing the installation height of signage panels and directory boards. Information to be provided as part of the Construction Certificate documentation

3.5.7 Luminance & Colour Contrast

Signs should be matt in colour, instead of a gloss finish to avoid any glare.

The minimum recommended luminance contrast for lettering on signage to the sign background is 30%.

The minimum recommended luminance contrast of a sign to its context is 30%.

Compliance:	Future documentation will need to be provided, detailing all signage types and specifications. Information to be provided as part of the Construction Certificate documentation

3.6 Tactile Indicators (TGSIs)

NCC Reference:	D3.2 Access to buildings
	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	Clause 9 (Tactile Ground Surface Indicators (TGSIs) of AS1428.1 2009
	AS 1428.4.1 2009 Design for access and mobility - Means to assist the orientation of people with vision impairment

3.6.1 TGSIs – Overview

The design proposes locations where the driveway and the pavement may be at the same grade. TGSIs will need to be provided in these locations in accordance with the requirements of AS1428.4.1:2009.

3.6.2 TGSIs – Luminance Contrast

Clause 2.2 of AS1428.4.1:2009 requires that luminance contrast be provided between the TGSI and the adjacent base as follows:

(i) Where the integrated TGSIs are of the same colour as the underlying surface—not less than 30% across its entire area.

(ii) Where discrete TGSIs—not less than 45%.

(iii) Where discrete TGSIs are constructed using two colours or materials, the raised surface shall have a section that has 60% luminance contrast for a diameter of 25 ±1 mm.

3.6.3 TGSIs – Requirements to be satisfied

TGSIs provided to warn people of hazards shall comply with AS/NZS 1428.4.1.

Compliance:	Future documentation will need to be provided, detailing TGSI specifications. Information to be provided as part of the Construction Certificate documentation

3.7 Walkways, Ramps and Landings

NCC Reference: NCC Clause D3.3(a)(i)

Australian Standard Reference: Clause 10 of AS 1428.1:2009

3.7.1 1:20 Walkways

The detailing of a ramps within this development will need to satisfy the provisions of Clause 10 of AS1428.1:2009.

Two (2) ramps with a gradient of 1:20 are noted on the ground plan drawing.

Compliance: The design as proposed satisfies Clause 10 of AS1428.1:2009

3.7.2 Kerb Ramps

Details of the landscaping and parking will need to be provided at a later stage.

The following information on Kerbs is provided for reference:

The requirements for kerb ramps are identified at Clause 10.7 of AS1428.1:2009:

Kerb ramps shall have—

(a) a maximum rise of 190 mm;

(b) a length not greater than 1520 mm; and

(c) a gradient not steeper than 1 in 8, located within or attached to a kerb.

The profile of ramps shall comply with the following:

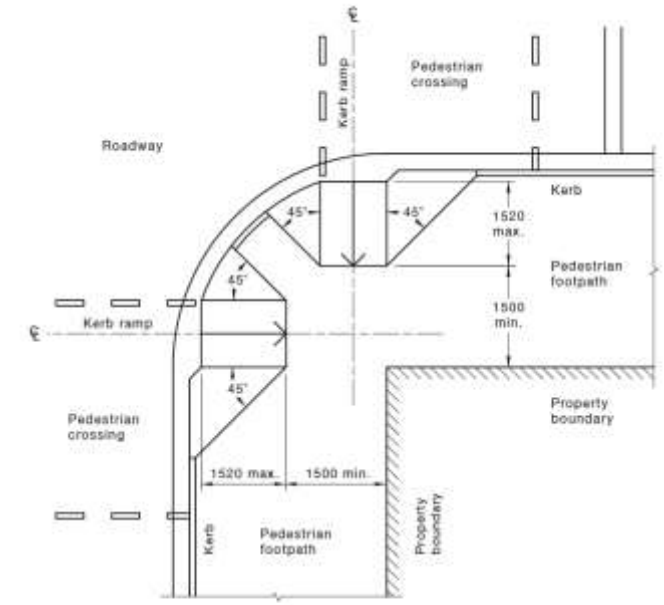
(i) The design and construction of kerb ramps shall be as shown in Figures 24(A), 24(B) and 24(C).

(ii) The sloping sides of a kerb ramp shall be tapered or splayed as indicated in Figures 24(A) and (24(B).

(iii) The angle at the base of the kerb ramp shall be a minimum of 166° as shown in Figures 24(A) and 24(B).

The slip resistance of the ramps shall be in accordance with Table 3B of HB198:2014, which identifies a rating of P5/R10 for a ramp steeper than 1:14.

The following relevant extracts from the Standard are referenced below.

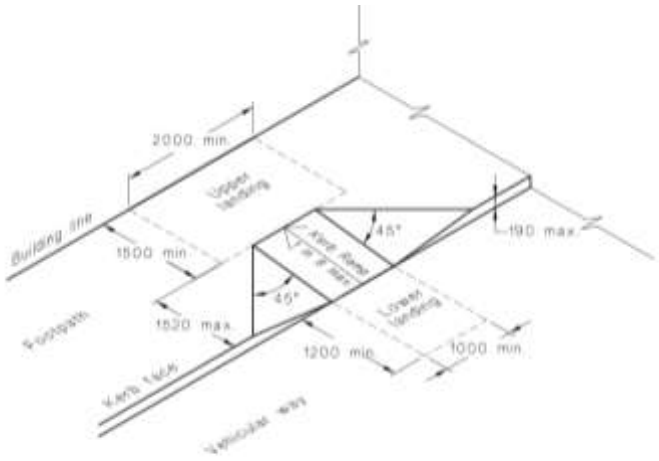


NOTES:

1 Centre-line of kerb ramps and pedestrian refuges shall align across the road or vehicular driveway within the building/property allotment.
2 Top and bottom of kerb ramps shall be aligned at 90° to path of travel.
3 Top and bottom of kerb ramps shall have a sharp gradient transition.
4 For requirements for tactile ground surface indicators see AS 1428.4.1.
5 For requirements for pedestrian lights and push-button assemblies see AS 1742.14.

(a) 90° road intersection

Figure 17 – Fig. 23 of AS1428.1:2009



ISOMETRIC VIEW

NOTE: Where there is no turn involved, top landing may be reduced to 1200 mm min. in length.

Figure 18 – Fig. 24A of AS1428.1:2009

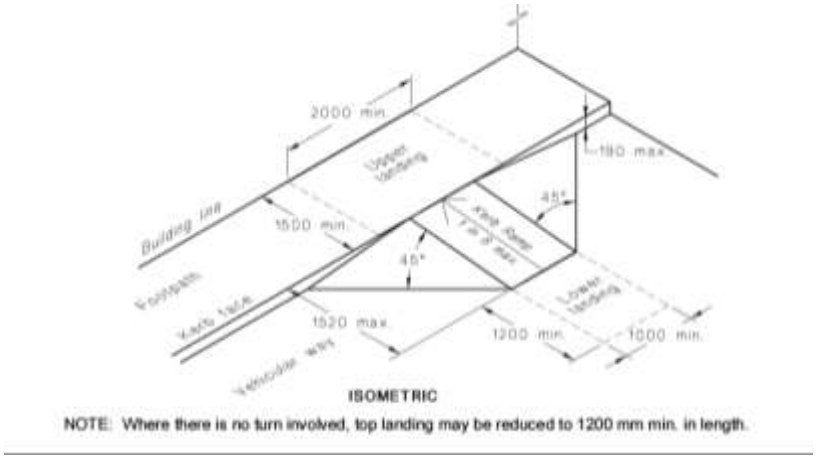


Figure 19 – Fig. 24B of AS1428.1:2009

The slip resistance of the surface of the kerb ramps will need to be P5 or R12 to satisfy the requirements of NCC Clause D2.14.

Compliance:	Future documentation will need to be provided, detailing the kerb ramps. Information to be provided as part of the Construction Certificate documentation

3.8 Stairways

NCC Reference:	Table D2.14 Slip Resistance Classification D3.3 Parts of buildings to be accessible (a)(ii) for a stairway
Australian Standard Reference:	Clause 11 Stairways AS1428.1:2009

Several sets of fire stairs proposed. Their locations are highlighted on the plan extract below.

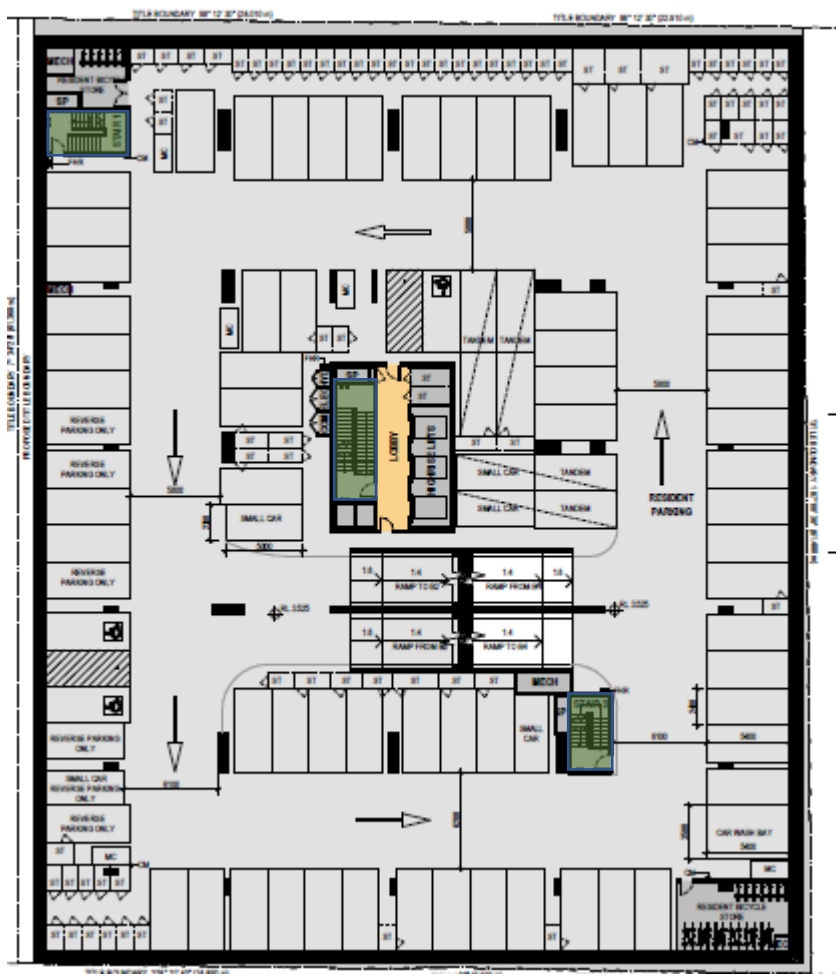


Figure 20 – Extract from Basement 3 Plan. Fire stairs marked in dark green.

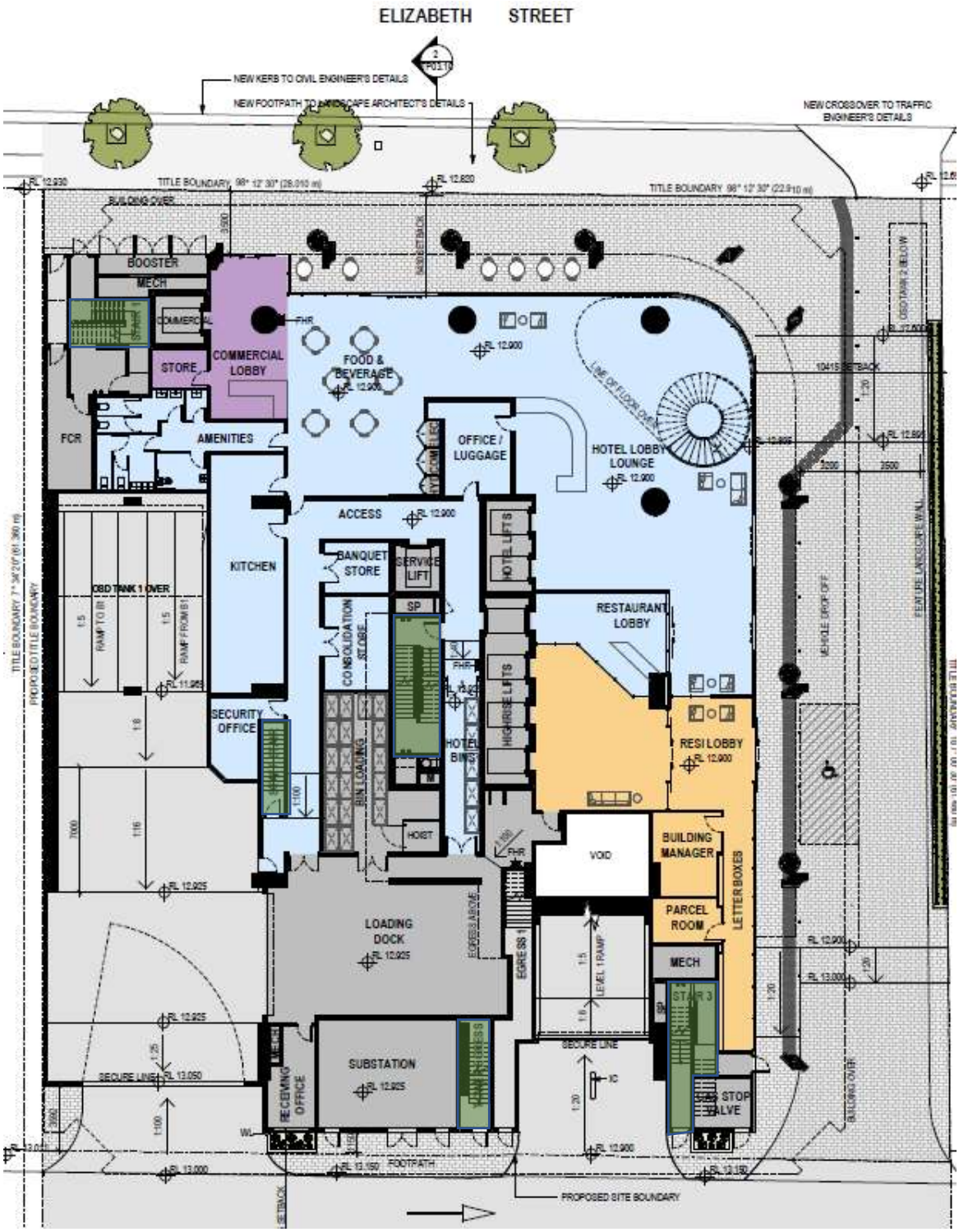


Figure 21 – Extract from Ground Floor Plan. Fire stairs marked in dark green.

3.8.1 Fire Stairs

The detailing of fire stairs will need to satisfy the requirements of Clauses 11.1 (f) & (g) of AS1428.1:2009.

Specific attention is directed to the following:

f) At the nosing, each tread shall have a strip not less than 50 mm and not more than 75 mm deep across the full width of the path of travel. The strip may be set back a maximum of 15 mm from the front of the nosing. The strip shall have a minimum luminance contrast of 30% to the background. Where the luminous contrasting strip is affixed to the surface of the tread, any change in level shall comply with Clause 7.2 and Clause 7.3.

g) Where the luminance contrasting strip is not set back from the front of the nosing then any area of luminance contrast shall not extend down the riser more than 10 mm

The provision of the nosing strip may be an applied paint finish. An example of a suitable product is the Berger Jet Dry Non-Slip Product. (Link to Berger Jet Dry Product)

The details of the handrail design will need to be provided as part of the Construction Certificate documentation.

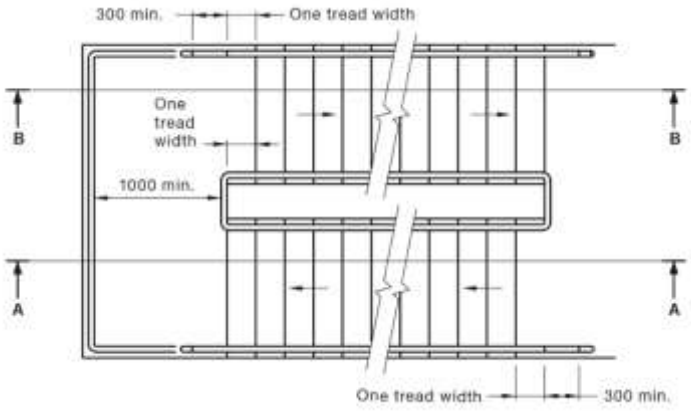


Figure 22 – Fig. 28 of AS1428.1:2009

Appropriate exit Braille Tactile Signage is required. Refer to the 'Signage' section of this report.

A detailed plan for fire emergency exit is required, including the provision of stair sleds or the like.

Compliance:	Future documentation will need to be provided, detailing the fire stairs including nosing, handrails and circulation zones. Information to be provided as part of the Construction Certificate documentation

3.8.2 Circulation Stairs

The circulation stairs will need to comply with the provisions noted at Clause 11 and 12 of AS1428.1:2009.

Specific attention is directed to the following:

a) Compliant handrail designs

b) Compliant handrail extensions to the top and bottom of each flight

c) Non-slip finish to going (Refer to NCC Table D2.14)

d) Non-slip 50-75 nosing fixed to each going

e) Opaque risers

f) Compliant TGSIs located at the top and bottom of each flight. TGSIs are not required at mid-landings where no additional pedestrians are added to the stair system

   Note: TGSIs shall be 600mm in width (or 300mm wide where the stair is closer than 3m to an adjacent wall.)

g) Minimum lighting level of 150 lx to be achieved

The following extract Figures below highlight the main features of a compliant stair design.

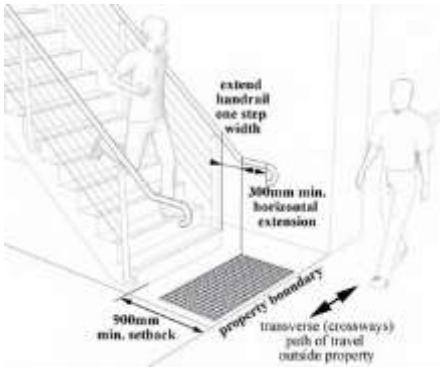


Figure 23 – Diag.25A DE-IG02 2013

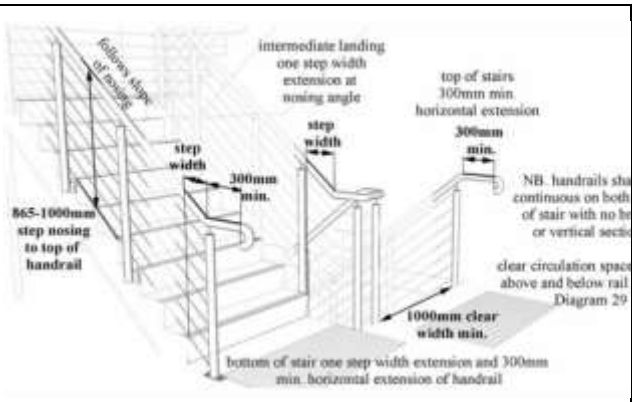


Figure 24 – Diag.25C DE-IG02 2013

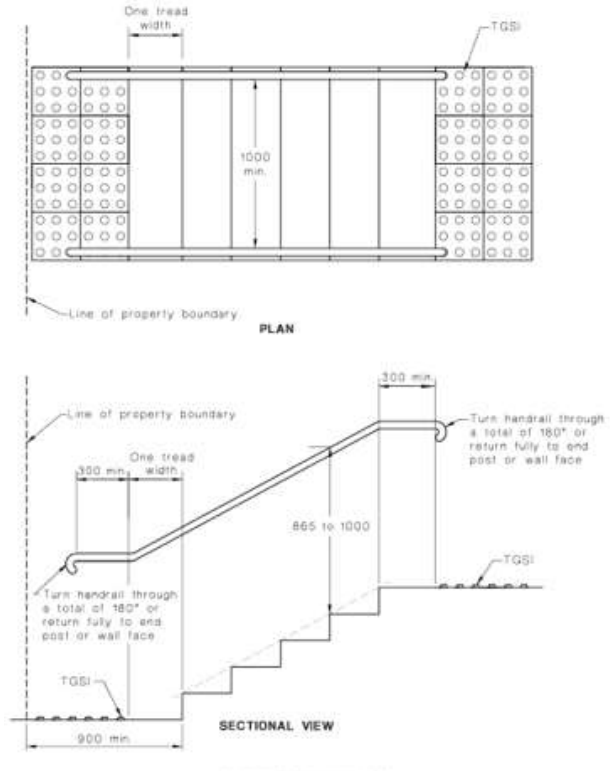


FIGURE 26(A) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT BOUNDARY

Figure 25 – Fig.26A Section 11 AS1428.1 2009

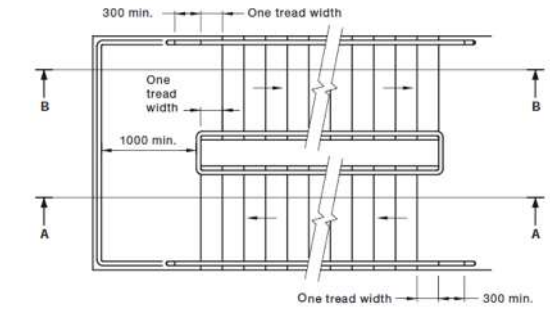
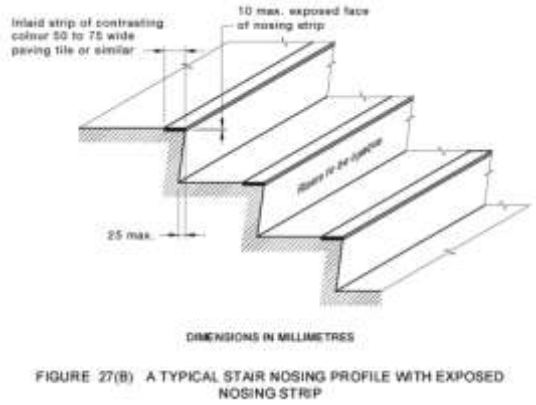
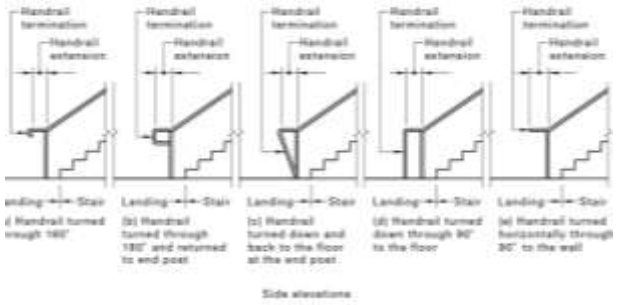


FIGURE 28 (in part) HANDRAILS TO STAIRS WITH INTERMEDIATE LANDINGS

Figure 26 – Fig.28 Section 11 AS1428.1 2009

 FIGURE 27(B) A TYPICAL STAIR NOSING PROFILE WITH EXPOSED NOSING STRIP	
Figure 27 – Fig.27B Section 11 AS1428.1 2009	*Figure 28 – Fig.26C Section 11 AS1428.1 2009*

3.9 Handrails

NCC Reference:	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	Clause 12 Handrails AS1428.1:2009

The design and construction of handrails shall comply with the following:

(a) Handrails and balustrades shall not encroach into required circulation spaces.

(b) The cross-section of handrails shall be circular or elliptical, not less than 30 mm or greater than 50 mm in height or width for not less than 270° around the uppermost surface as shown in Figures 29(a) and 29(b). Elliptical handrails shall have the greater dimension in the horizontal axis

(c) Exposed edges at ends and corners of handrails shall have a radius of not less than 5 mm.

(d) The top of handrails shall be not less than 865 mm nor more than 1000 mm above the nosing of stairway tread or the plane of the finished floor of the walkway, ramp or landing.

(e) The height of the top of the handrail, measured in accordance with Item (d), shall be consistent through the ramp (or stairs) and any landings.

(f) If a balustrade is required at a height greater than the handrail, both shall be provided.

(g) Handrails shall be securely fixed and rigid, and their ends shall be turned through a total of 180°, or to the ground, or returned fully to end post or wall face

(h) The clearance between a handrail and an adjacent wall surface or other obstruction shall be not less than 50 mm. This clearance shall extend above the top of the handrail by not less than 600 mm.

(i) Handrails shall have no obstruction to the passage of a hand along the rail

(j) The inside handrail at landings shall always be continuous

Compliance:	Future documentation will need to be provided, detailing handrails throughout the development. Information to be provided as part of the Construction Certificate documentation

3.10 Doorways

NCC Reference: D3.2 Access to buildings

D3.3 Parts of buildings to be accessible

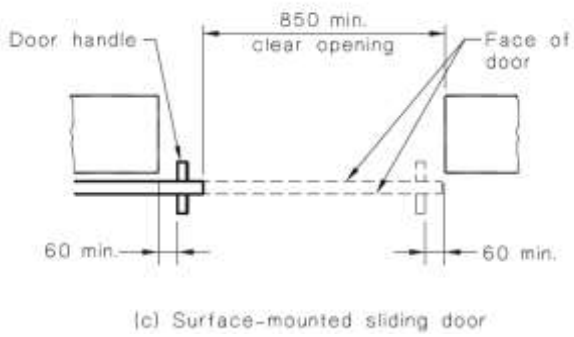
Australian Standard Reference: Clause 13 (Doorways, Doors and Circulation Spaces at Doorways) of AS1428.1 2009

3.10.1 Clear Door Width

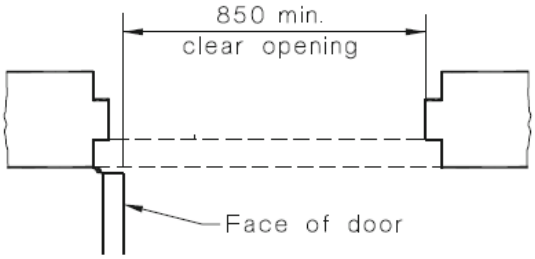
The minimum clear width of all doorways (including swing and sliding doorways) to rooms required to be accessible is to be not less than 850mm clear.

Where double doors are proposed, the active leaf is to have a minimum clear width of 850mm.

Provide confirmation of all door clear open widths.



(c) Surface-mounted sliding door



(a) Swing door

3.10.2 Luminance Contrast

Rooms that are not required to be accessible do not need to satisfy the requirements for doorway luminance contrast.

All other rooms required to be accessible require compliance with doorway luminance contrast requirements noted at Clause 13.1 of AS1428.1:2009:

> *All doorways shall have a minimum luminance contrast of 30% provided between—*
>
> *(a) door leaf and door jamb;*
>
> *(b) door leaf and adjacent wall;*
>
> *(c) architrave and wall;*
>
> *(d) door leaf and architrave; or*
>
> *(e) door jamb and adjacent wall.*
>
> *The minimum width of the area of luminance contrast shall be 50 mm*

The prevailing view is that option (b) – indicating luminance contrast between the *door leaf and adjacent wall* is the preferred option.

Compliance:	A table indicating wall colour and door colour with the associated luminance contrast level achieved will need to be prepared and provided to demonstrate compliance with the requirements of Clause 13.1 of AS1428.1:2009. Information to be provided as part of the Construction Certificate documentation

3.10.3 Door Controls

The Australian Standard requires that door hardware be located within 900-1100mm AFFL.

If lever hardware is proposed to be utilised it will be necessary for the design of the lever to comply with the provisions of Clause 13.5 of AS1428.1:2009.

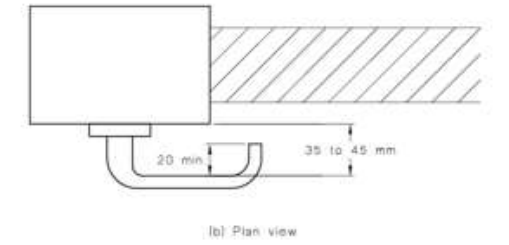


FIGURE 35(A) EXAMPLE OF ACCEPTABLE DOOR HARDWARE FOR HINGED DOORS

Figure 29 – Fig. 35 Section 13 AS1428.1:2009

Lockwood Lever 80

Lockwood Lever 70

Lockwood Lever 96

Lockwood Lever 77

The above image indicates a privacy latch set provided to accessible WC facilities as viewed from within the facility

The above image indicates a privacy latch set provided to accessible WC facilities as viewed from the outside

Figure 30 – The above images are examples of compliant hardware

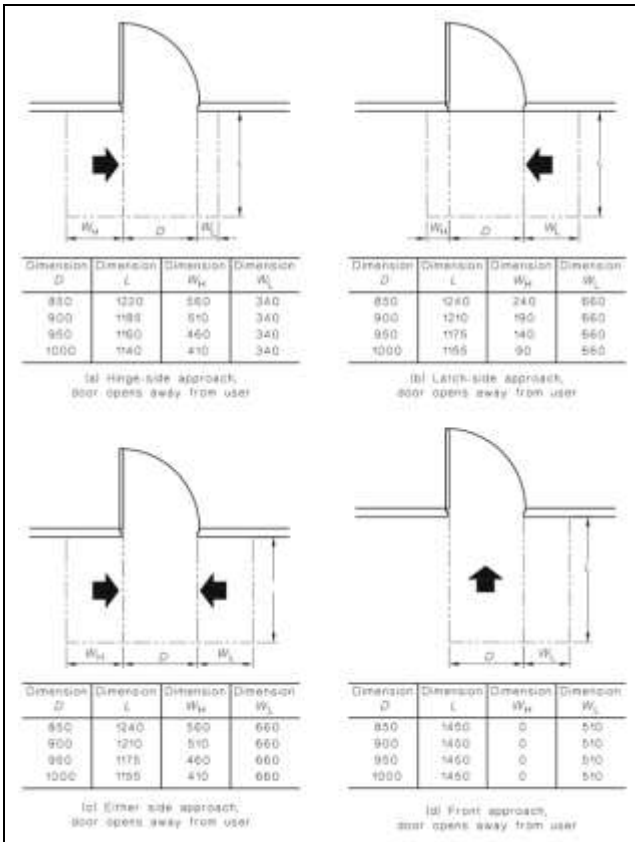
The hardware will need to be a “D” handle style fixed to both sides of the door assembly as required by Clause 13.5.2(c) of AS1428.1:2009.

3.10.4 Circulation at Doorways

Clause 13.3 of AS1428.1:2009 provides direction as to the required circulation space to approach and enter rooms required to be accessible. Doorways to rooms that are not required to be accessible do not need to comply with the requirements for circulation at doorways.

Compliance:	Once General Arrangements documentation is provided; the circulation zones of all doorways will be able to be assessed. Information to be provided as part of the Construction Certificate documentation

The following extracts from the Standard is provided by way of information.



Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1230	560	340
900	1185	510	340
950	1160	460	340
1000	1140	410	340

(a) Hinge-side approach, door opens away from user

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1240	240	660
900	1210	190	660
950	1175	140	660
1000	1155	90	660

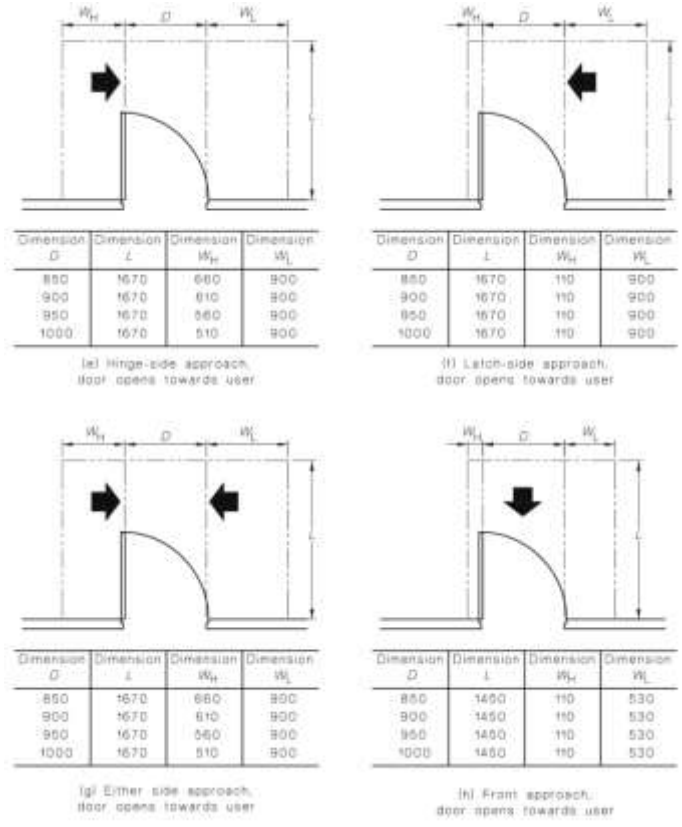
(b) Latch-side approach, door opens away from user

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1240	560	660
900	1210	510	660
950	1175	460	660
1000	1155	410	660

(c) Either side approach, door opens away from user

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	0	510
900	1450	0	510
950	1450	0	510
1000	1450	0	510

(d) Front approach, door opens away from user



Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	660	900
900	1670	610	900
950	1670	560	900
1000	1670	510	900

(e) Hinge-side approach, door opens towards user

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	110	900
900	1670	110	900
950	1670	110	900
1000	1670	110	900

(f) Latch-side approach, door opens towards user

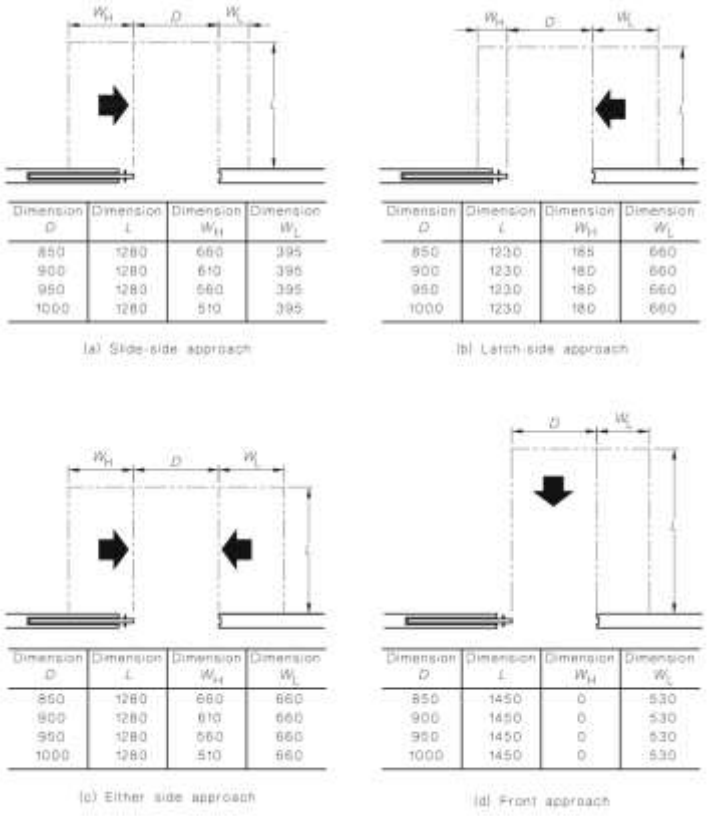
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	660	900
900	1670	610	900
950	1670	560	900
1000	1670	510	900

(g) Either side approach, door opens towards user

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	110	530
900	1450	110	530
950	1450	110	530
1000	1450	110	530

(h) Front approach, door opens towards user

Figure 31 – Figure 31 of AS1428.1:2009



(a) Side-side approach

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1280	660	395
900	1280	610	395
950	1280	560	395
1000	1280	510	395

(b) Latch-side approach

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1230	185	660
900	1230	180	660
950	1230	180	660
1000	1230	180	660

(c) Either side approach

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1280	660	660
900	1280	610	660
950	1280	560	660
1000	1280	510	660

(d) Front approach

Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	0	530
900	1450	0	530
950	1450	0	530
1000	1450	0	530

Figure 32 – Figure 32 of AS1428.1:2009

3.10.5 Door Closers

Where door closers are fitted to doors, other than fire doors associated with the fire stairs, the maximum force required to be applied to the door to open the door is not to be greater than 20N force. (Clause 13.5.2(e) AS1428.1:2009).

3.10.6 Doorway Thresholds

Doors to all accessible rooms require a level threshold whereby the maximum lip shall be 3mm high for a straight edge or 5mm high for a bevelled edge. Specific attention is drawn to the doorways leading to outdoor areas. The following photograph is an example of a level threshold transition.

Figure 33 – Photograph of door threshold

Compliance:	Future documentation will need to be provided, detailing all doorways, demonstrating doorway clear open widths, circulation zones as well as threshold details. Information to be provided as part of the Construction Certificate documentation

3.11 Switches

Australian Standard Reference:	Clause 14 (Switches and General Purpose Outlets) of AS1428.1 2009
Requirement to be Satisfied:	All switches and controls on an accessible path of travel, other than general purpose outlets, shall be located not less than 900 mm nor more than 1100 mm above the plane of the finished floor and not less than 500 mm from internal corners.

3.11.1 General

The operation of many of the doors within this building will be connected to the building access control system.

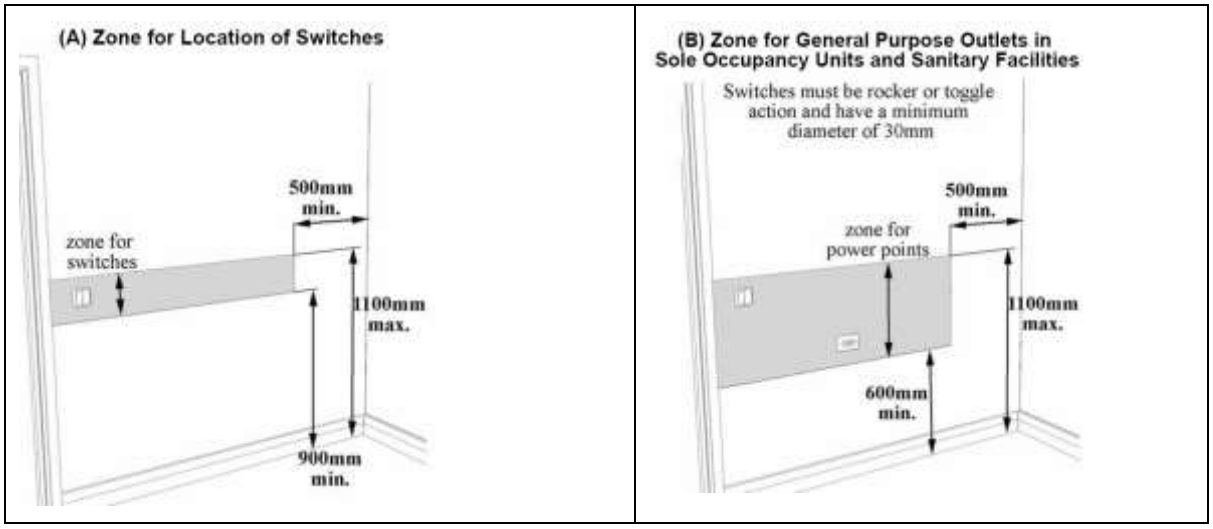
3.11.2 Video Intercoms

Any video intercom units will need to be installed in accordance with the manufacturer's instructions. The video intercom unit will need to be installed not closer than 5000mm to an internal corner.

3.11.3 Access Control

Access control swipe or fob readers will need to be installed between 900-1100mm AFFL and not closer than 500mm to an internal corner.

Door release buttons will need to be located between 900-1100mm AFFL and not closer than 500mm to an internal corner. The door release button will need to be the large format switches (35 x 35mm rocker switch) or the "mushroom" push button type.



Compliance:	Future documentation will need to be provided, detailing all switches and locations in public/common areas as well as within the adaptable units. Information to be provided as part of the Construction Certificate documentation

3.12 Accessible Sanitary Facilities

NCC Reference:	NCC Clause F2.4 Accessible Sanitary Facilities
	NCC Clause D3.6
	NCC Specification D3.6
Australian Standard Reference:	Clauses 15 of AS1428.1:2009

3.12.1 Preamble

The plans presently have not been developed to state where the detailed layout of the WC facilities is nominated

Public WC facilities are provided as follows within this development:

Level	Comments	Male	Female	Accessible
Basement 1 Staff area	Specifications to be provided	Yes	Yes	Yes
Ground Floor level	Specifications to be provided	Yes	Yes	Yes
Level 2 Commercial space	Specifications to be provided	Yes	Yes	Yes
Level 3 Commercial space	Specifications to be provided	Yes	Yes	Yes
Level 4 Commercial	Specifications to be provided	Yes	Yes	Yes
Level 9 Swimming pool	Specifications to be provided	Yes	Yes	Yes
Level 35	Specifications to be provided	Yes	Yes	Yes

3.12.2 General Requirements

A Unisex Accessible toilet (USAT) will need to be provided where any bank of toilets is provided.

Compliance: The documentation provided indicates that this requirement is capable of being achieved. Information to be provided as part of the Construction Certificate documentation

The table following summarises the NCC requirements to be satisfied.

Accessible WC requirements as nominated at NCC Clause F2.4	Additional criteria to be satisfied	Criteria satisfied by the proposed design
(a) accessible unisex sanitary compartments must be provided in accessible parts of the building in accordance with Table F2.4(a); and	Accessible WC facilities are to be provided (a) 1 on every storey containing sanitary compartments; and (b) where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks.	Additional Information to be provided
(b) accessible unisex showers must be provided in accordance with Table F2.4(b); and	Where 1 or more showers are provided, not less than 1 for every 10 showers or part thereof.	Additional Information to be provided
(c) at each bank of toilets where there are one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females; and		Additional Information to be provided
(d) an accessible unisex sanitary compartment must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary towels; and		Additional Information to be provided
(e) the circulation spaces, fixtures and fittings of all accessible sanitary facilities provided in accordance with Table F2.4(a) and Table F2.4(b) must comply with the requirements of AS 1428.1; and		Additional Information to be provided
(f) an accessible unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and		Additional Information to be provided

Accessible WC requirements as nominated at NCC Clause F2.4	Additional criteria to be satisfied	Criteria satisfied by the proposed design
(g) where two or more of each type of accessible unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible; and		Additional Information to be provided
(h) where male sanitary facilities are provided at a separate location to female sanitary facilities, accessible unisex sanitary facilities are only required at one of those locations; and		Additional Information to be provided
(i) an accessible unisex sanitary compartment or an accessible unisex shower need not be provided on a storey or level that is not required by D3.3(f) to be provided with a passenger lift or ramp complying with AS 1428.1.		Additional Information to be provided

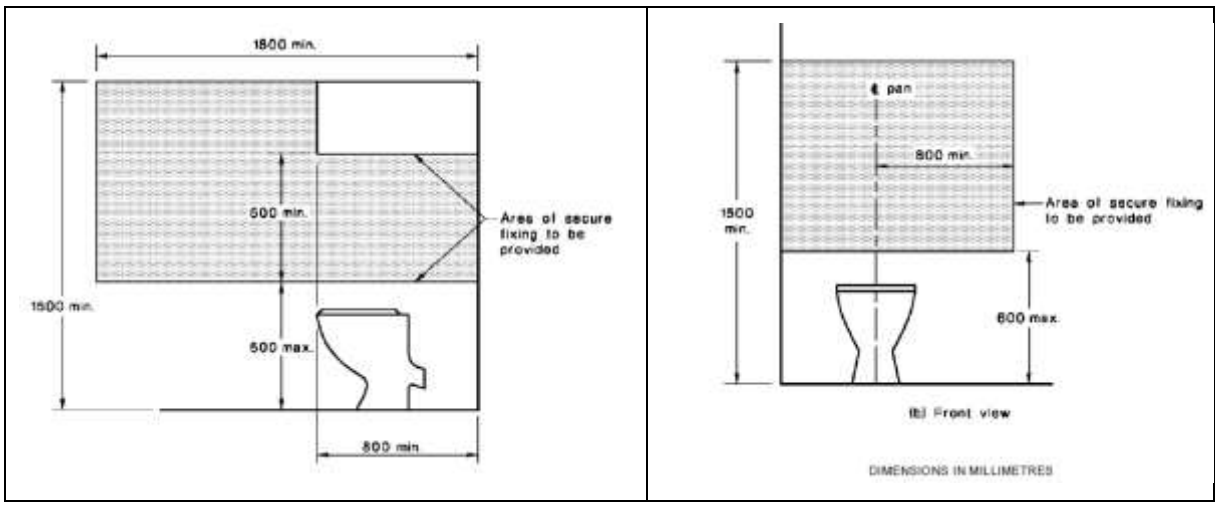
Details of the non-slip floor finish to the bathrooms will need to be provided.

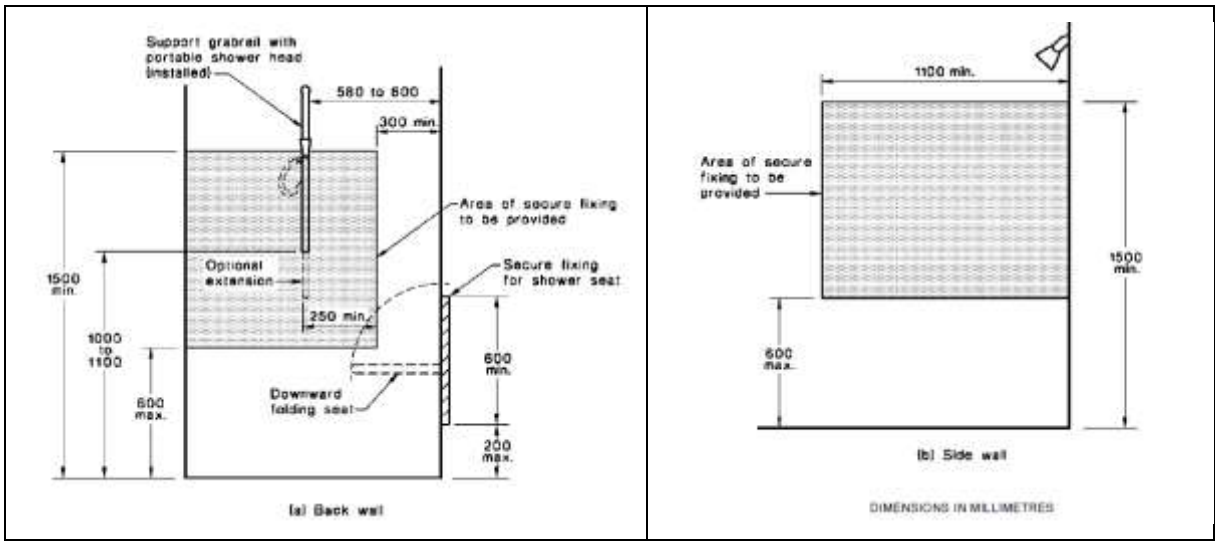
Position of TMV details are to be provided as part of the Construction Certificate documentation.

Tap sets will need to be specified with lever or capstan handles.

3.12.3 Wall Reinforcement

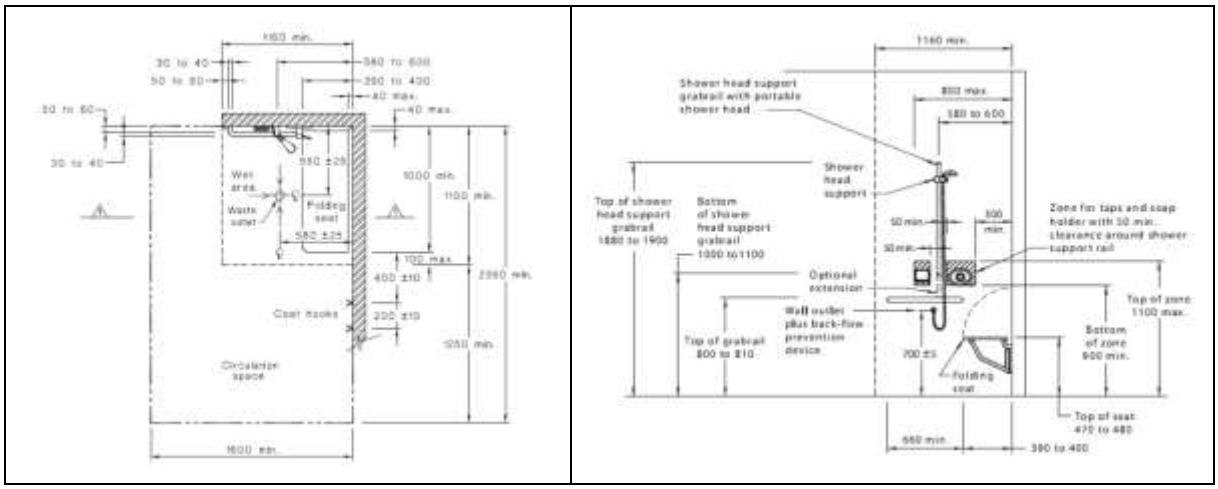
Provision of wall strengthening for grabrails will need to be provided adjacent to the WC and shower of all accessible sanitary facilities.





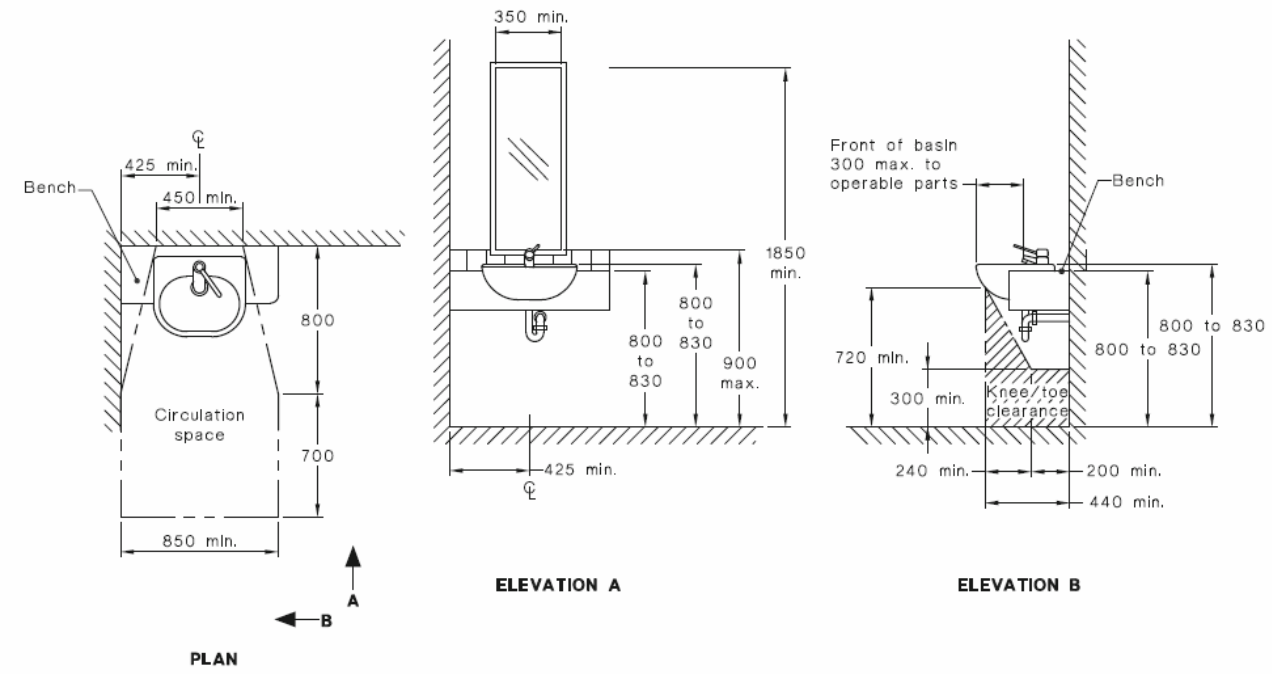
3.12.4 Shower Compartment

The shower compartment will need to have an area of 1160 x 1100mm. The position of the shower rose, tapware and the soap holder recess will need to be compliant to the provisions of Clause 15 of AS1428.1.



Specific attention is directed to the requirement of the length of the hose associated with the shower rose. The Standard requires the length of the hose to be 1500mm. The placement of the hose connection point results in the possibility of the shower head reaching the WC bowl which is prohibited by the Australian Standards. The detailing of this configuration will need to be resolved as part of the detailed documentation of detailed construction certificate documentation.

3.12.5 Hand-basins



NOTE: 'Operable parts' means the centre-line of the tap, or where a level handle is provided, the end point of the level measure throughout its arc of movement, or where a sensor is provided where the sensor is reliably activated.

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FIGURE 44(A) SEMI-RECESSED WASHBASIN INSTALLATION —OTHER THAN FOR SOLE-0CCUPANCY UNIT

A wash basin with compliant circulation to AS1428.1 will need to be provided.

3.12.6 Toilet Roll Dispensers

The location of toilet roll dispensers shall be fixed within the zone specified in Figure 41 of AS1428.1:2009.

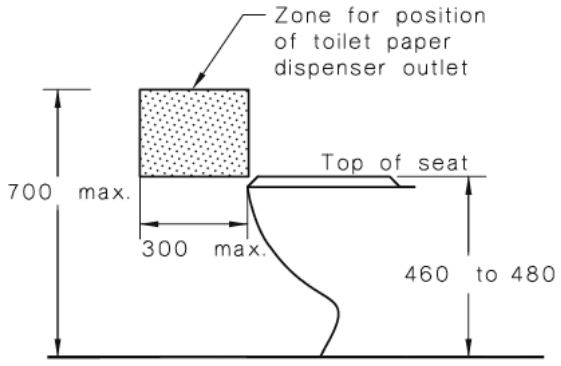


Figure 34 – Fig.41 AS1428.1 2009

Clause 17-Handrails of AS1428.1:2009 specifies the clearance requirement for grabrails.

The clearance between a grabrail and the adjacent wall surface or other obstruction shall be not less than 50 mm and not more than 60 mm. The clearance above a horizontal grabrail shall extend above the top of the grabrail by not less than 600 mm. The clearance below a horizontal or angled rail shall be a minimum of 50 mm except at fixing points.

Grabrails shall be fixed so that there is no obstruction to the passage of the hand along the top 270° arc of horizontal and angled grabrails. There shall be no obstruction to the passage of the hand for the full length of vertical grabrails.

The toilet roll dispenser shall therefore not be installed less than 50mm from underneath the grabrail.

3.12.7 Summary

The following is a summary of requirements to satisfy the WC provisions of AS1428.1:2009:

• Entry Door	The detailing of the circulation at doorways shall comply with the provisions of Clause 13 of AS1428.1:2009
• Entry door	The luminance contrast provisions at the doorway shall comply with the provisions of Clause 13.1 of AS1428.1:2009
• Force required to operate door	The force required to operate the door if fitted with a door closer is a maximum of 20N. It is assumed that autodoors will not be installed
• Door hardware	The position of door hardware is to be located between 900-1100mm AFFL.
• WC pan circulation	1900×2300mm
• hand basin circulation	850×1500mm, the basin may encroach a maximum of 100 mm into the circulation space of the adjacent WC pan circulation
• WC pan offset from side wall	450/460 mm
• WC pan offset from rear wall	800±10 mm
• WC pan backrest	to code requirements
• WC pan toilet seat	The toilet seat will need to be the full round type, securely fixed in position, be rated 250 KG and have a minimum limits contrast of 30% with the background pan, wall or floor against which it is viewed.
• WC pan grab rails	Grab rail to be mounted 800 mm above finish floor level, length of grab rail to be 1050 mm from rear wall, install 300 mm grab rail to left-hand side of the WC pan. It is assumed that the walls to which the grab rails are fixed will have the required 1100N force rating wall reinforcement required by the standard
• Hand basin mounting height	Top of hand basin to be 800/830 mm above finish floor level
• Hand basin clearances	The clearances around and under the hand basin need to comply with the provisions of clause 15.3 of AES 1428.1:2009. Specific attention is drawn to the plumbing installation where the required clearances under the hand basin necessitate special consideration of the bottle trap associated with the hand basin
• Hand basin selection	The detailing of the hand basin requires the installation of a shelf unit. It may be possible to specify a hand basin that incorporates a shelf section thereby eliminating an additional component to be installed in the USAT
• Hand basin mirror	The mirror is to be flush mounted on the wall above the sink the bottom of the mirror is to be no more than 900 mm above the

	finish floor level and the top of the mirror is to be a minimum of 1850 mm above the finish floor level
• Hand basin tap	It is recommended that a lever hand basin tap be installed in lieu of the capstan type
• Toilet roll holder	The position of the toilet roll holder is to be in accordance with code requirements
• Coat hooks	Coat hooks can be installed 1200 to 1350 mm above finish floor level and not closer than 500 mm from an internal corner. The coat hook can be installed on the wall or on the back of the door
• Soap dispensers/hand towel	These items are to be able to be operated by one hand and shall be installed so that the tap or dispenser is not less than 900 and not more than 1100 mm above the finish floor level.
• Baby change facility	The plan does not indicate if there is a baby change facility located within this USAT. If a baby change table is installed within this facility, then the unit will need to be installed outside of the WC circulation zone
• Braille Tactile Signage	The detailing of the Braille Tactile Signage will need to comply with the provision of NCC Clause D3.6 and NCC Specification D3.6. The location of the Braille Tactile sign is to be mounted on the latchside wall. The sign is to indicate the handing of the grabrails to the WC Pan. The following is an example of the type of information to be provided in the Braille Tactile Sign. Details of Braille tactile signage are highlighted in the above Signage section of this report.

Compliance:	Future documentation will need to be provided, detailing all accessible sanitary facilities. Information to be provided as part of the Construction Certificate documentation

3.13 Ambulant Sanitary Facilities

NCC Reference:	NCC Clause F2.4 Accessible Sanitary Facilities
	NCC Clause D3.6
	NCC Specification D3.6
Australian Standard Reference:	Clauses 16 of AS1428.1:2009

Where a single toilet or a bank of toilets are provided, ambulant sanitary facilities are required.

The NCC, F2.4 specifies:

> *(c) at each bank of toilets where there are one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females; and*

Compliance:	The plans provided indicate that ambulant WC facilities have been incorporated into the banks of toilet blocks provided within this development The dimensions of the ambulant sanitary facilities are required to comply with Clause 16 of AS1428.1:2009.

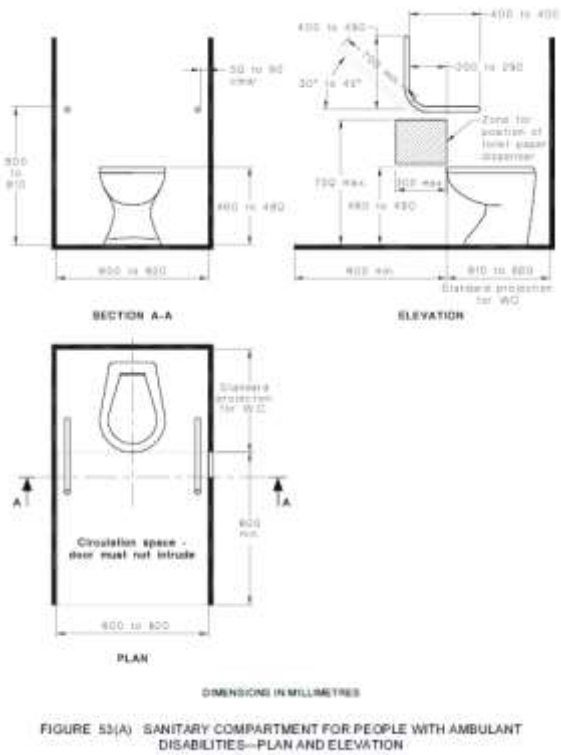


FIGURE 53(A) SANITARY COMPARTMENT FOR PEOPLE WITH AMBULANT DISABILITIES—PLAN AND ELEVATION

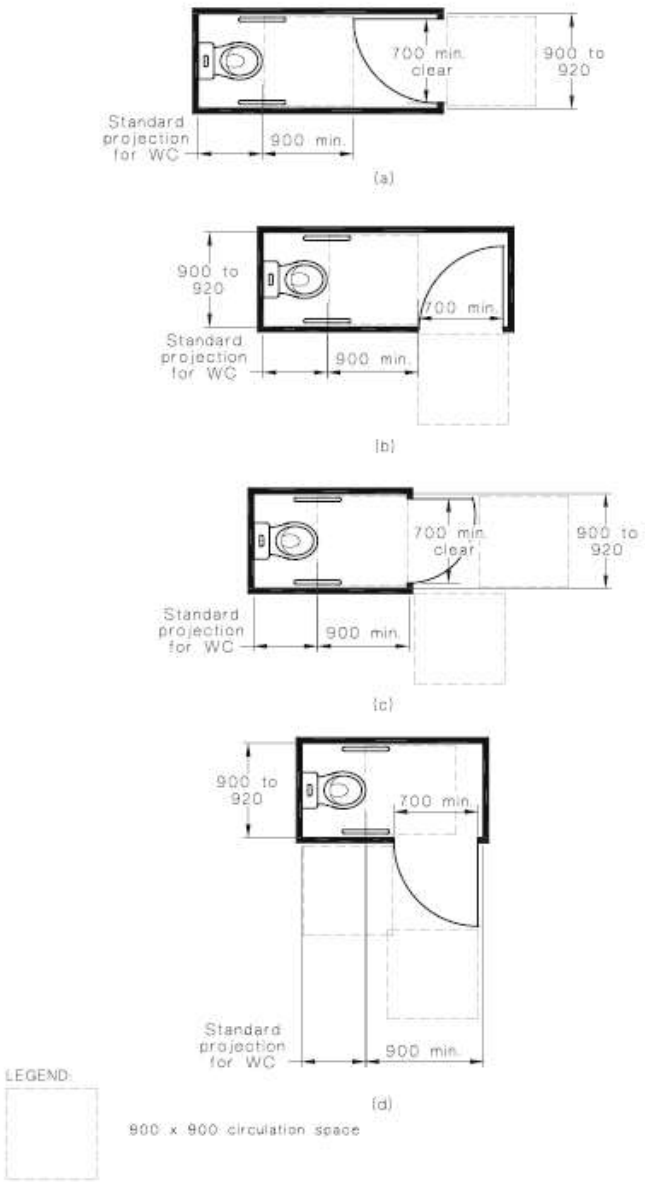


FIGURE 53(B) SANITARY COMPARTMENT FOR PEOPLE WITH AMBULANT DISABILITIES—DOORWAY OPTIONS

Figure 35 – Fig.53 AS1428.1 2009

3.14 Vertical transport

NCC Reference:	D3.3 Parts of buildings to be accessible
	E3.6 Passenger Lifts
Australian Standard Reference:	AS1735.12 1999 Lifts, Escalators and Moving Walks

3.14.1 Lifts

The building includes several passenger lifts. The arrangement of the lift services is as follows:

- Commercial lift – single lift
- Restaurant – Single Lift
- Hotel – 2 lifts
- Residential – 3 Lifts

The detailing of the lift cars will need to satisfy the requirements of NCC Clause E3.6, the provisions of AS1735.12.

The placement of the lobby call buttons for the locations where single lifts are provided will need to comply with Clause 14 of AS1428.1:2009.

The minimum clear open width of the lift door shall be 900mm.

The minimum lift car dimension to satisfy the requirements of NCC Part E is as follows:

- Passenger Lifts 1400 x 1100mm (Lift travel less than 12m)
- Passenger Lifts 1600 x 1400mm (Lift travel greater than 12m)

Attention is directed to the placement of the lift call button at each level. Many lift suppliers are locating the call button for single lift car installations in the jamb of the lift door assembly. If this surface is not flush with the adjoining wall the position of the button is not complainant with the provisions of Clause 14 of AS14281:2009. This clause requires switches not to be located within 500mm of an internal corner.

The lift call button in this case should be located next to the lift door as indicated in the plan extract below:

Figure 36 - Image of non-compliant lift call button installation

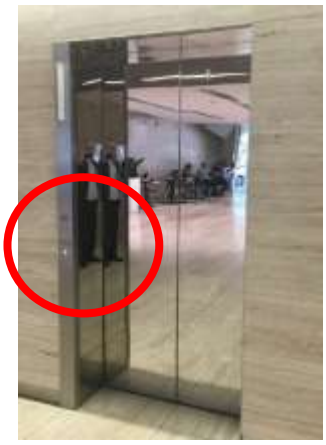
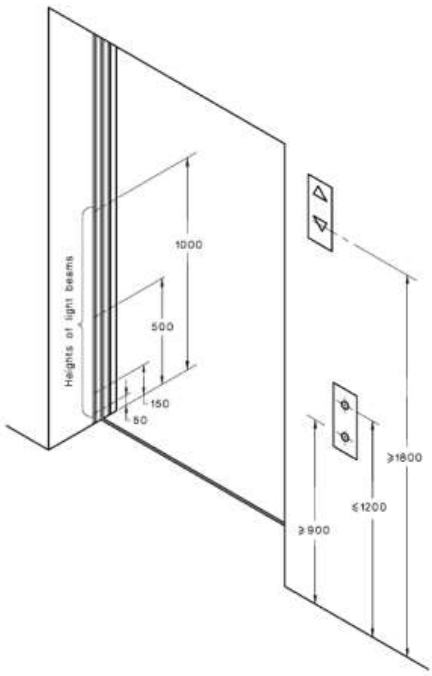


Figure 37 -Image of compliant lift call button installation

 FIGURE A1 TYPICAL ARRANGEMENT OF A LIFT ENTRANCE	
Figure 38 – Fig.A1 AS35.12 1999	

For placement of buttons, handrails and the like, we rely upon verification of compliance with AS1735.12 from the lift manufacturer.

Compliance:	Future documentation will need to be provided, detailing all lift internal sizes and location of lift call buttons. Information to be provided as part of the Construction Certificate documentation

3.15 Carparking

NCC Reference:	DP1(a)(i)
	DP8(a) and (b)
	D3.5 Accessible Parking
Australian Standard Reference:	AS 2890.6:2009 Carparking

3.15.1 Preamble

The design proposes basement parking for this development. Parking is provided within the 4 basement levels.

3.15.2 AS4299 Hotel - Carparking

The development comprises 113 hotel rooms. Compliance with the provisions of NCC Table D3.1 requires the provision of 6 Accessible hotel rooms as part of the development. The number of accessible hotel room equates to 5.3% of the total hotel rooms provided.

The plan proposes 64 parking spaces for the hotel component of this development. Compliance with NCC Table D3.5 necessitates the provision of 4 accessible parking spaces associated with the Hotel.

Compliance:	A total of 4 accessible parking spaces has been nominated on the plans satisfying this requirement

3.15.3 AS4299 Adaptable Housing - Carparking

Clause 3.7.2 of AS4299 requires that each nominated adaptable dwelling be provided with a dedicated accessible parking space.

The development comprises 194 residential units of which Twenty (20) accessible parking spaces will need to be provided and nominated for the adaptable dwellings.

Compliance:	The plan nominates 20 accessible parking spaces to be allocated to each of the strata lots of the nominated adaptable dwellings. Compliance with the provisions of Clause 3.7.2 of AS4299:2009 has been achieved. The parking bay sizing has been nominated as being in accordance with the provisions of AS2890.6:2009.

3.15.4 AS4299 Adaptable Housing – Carparking – Line marking

The line marking for the accessible parking spaces provided for the nominated adaptable dwellings will need to be line marked in accordance with the provisions of Section 3 of AS2890.6:2009.

The provision of the International Symbol of access is not required to be provided for the parking spaces attached to adaptable dwellings.

3.15.5 Carparking – Retail areas

Accessible parking spaces for the retail component of this development is to be provided at the rate of 1:50 parking spaces provided.

A total of 45 parking spaces are provided for the retail component of this development. Based on the provision of 45 parking spaces 1 Accessible parking spaces are required to be provided for the retail component of this development.

3.15.6 Accessible Carparking Summary

The following is a summary of accessible parking to be provided as part of this development.

• Hotel	4 Accessible parking spaces
• Residential	20 Carparking spaces
• Retail Commercial	1 Accessible parking space
• Visitor parking	1 Accessible parking space
• Total Accessible parking spaces to be provided	26 Accessible parking spaces

3.15.7 Hotel and Retail parking - Line marking

The line marking associated with the accessible parking spaces will need to satisfy the provisions of Section 3 of AS2890.6:2009. The international symbol for access shall be marked in accordance with Figure 3.1 of AS2890.6:2009. Refer to the extracts from the Standard below.

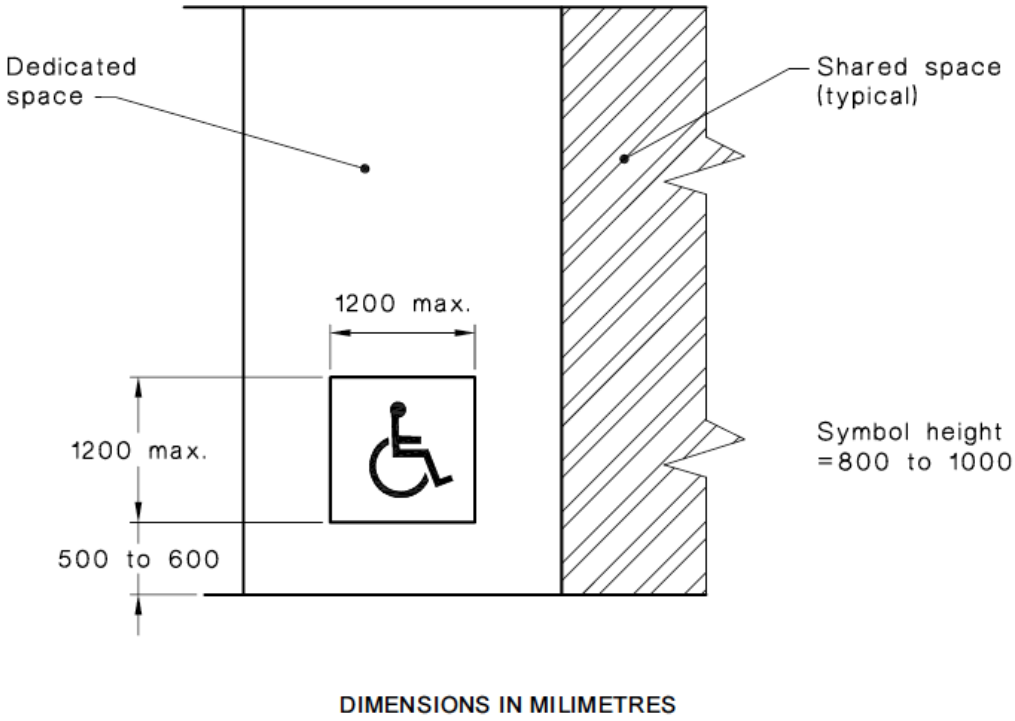


Figure 39 – Fig. 3.1 of AS2890.6 2009

3.15.8 Carparking – Dimensional setout

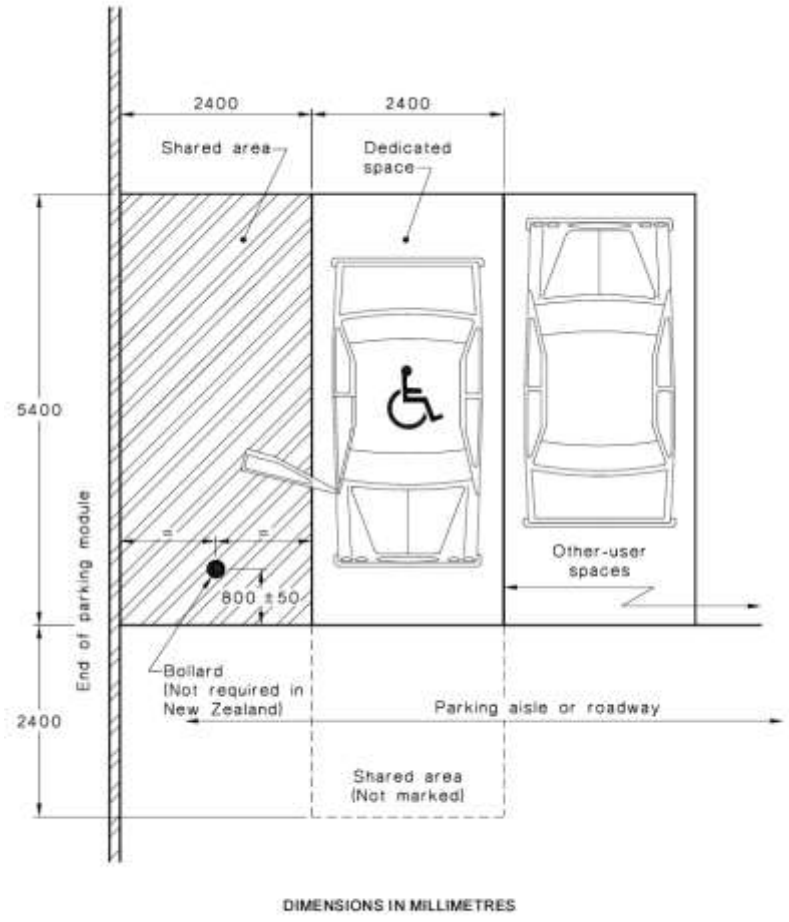


FIGURE 2.2 EXAMPLE OF AN ANGLE PARKING SPACE WITH SHARED AREA ON ONE SIDE ONLY—DIMENSIONS FOR AUSTRALIA ONLY*

Figure 40 – Fig. 2.2 of AS2890.6 2009

3.15.9 Height above accessible parking spaces.

A 2200mm high clear path of travel is to be provided within the traffic aisle ways of the carpark. A clear zone of 2500mm will need to be provided above the accessible parking space.

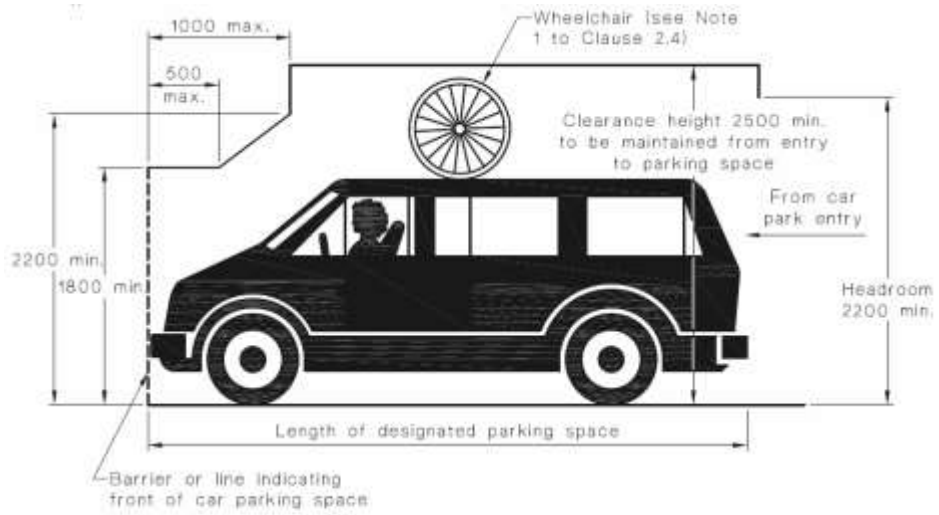


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FIGURE 2.7 HEADROOM REQUIRED ABOVE CAR SPACES FOR PEOPLE WITH DISABILITIES

Figure 41 – Fig. 2.7 of Section 2 AS2890.6 2009

Compliance:	Future documentation will need to be provided, detailing carparking locations and specifications. Information to be provided as part of the Construction Certificate documentation

3.16 Furniture and Fitments

NCC Reference:	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	24 (Furniture and Fitments) of AS1428.2 1992

3.16.1 Counters

All reception counters associated with the Childcare, Office or other tenancies shall include a portion of the counter that is accessible.

The height of this portion shall be between 830-870mm AFFL, with knee clearance at 800-840mm AFFL.

Compliance:	Future documentation will need to be provided. Information to be provided as part of the Construction Certificate documentation

3.16.2 Tables

Furniture layouts have not been provided.

Compliance:	Future documentation will need to be provided in order to assess table seating within the tenancies. Information to be provided as part of the Construction Certificate documentation

The height of clearance beneath the unit from the finished floor should be 820 ±20 mm.

Where there are two tables/counters provided, the following dimensions apply:

(a) Height from the finished floor to the top of the unit:

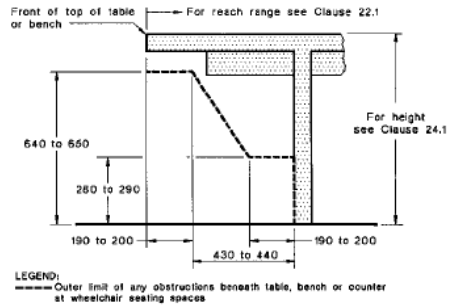
(i) 1st unit: 750 ± 20 mm.

(ii) 2nd unit: 850 ± 20 mm.

(b) Height of clearance beneath unit, from the finished floor:

(i) 1st unit: 730 ± 20 mm.

(ii) 2nd unit: 820 ± 20 mm.



NOTE: For width of seating spaces see Clause 24.1.3.

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FIGURE 25 KNEE AND FOOT CLEARANCE BENEATH A TABLE, BENCH OR COUNTER

Figure 42 – Fig.25 AS1428.2:1992

3.17 Lighting

Australian Standard Reference: Clause 19 of AS1428.2:1992
Appendix D of AS1680.2.1:2008

3.17.1 Preamble

The plans presently do not indicate the minimum lighting levels to be achieved. It will be necessary that the Construction Certificate documentation confirm that the minimum lighting levels nominated by the Australian Standards are achieved.

Compliance: Future documentation will need to be provided in order to assess lighting levels compliance.
Information to be provided as part of the Construction Certificate documentation

3.17.2 General

In additional to the minimum lighting levels identified at Clause 19 of AS1428.2:1992 the provisions of Table D1 of AS168.2.1:2008 which nominates interior light levels to be achieved must be considered.

The following table schedules the lighting levels nominated within the Australian Standards for accessibility:

LOCATION	CLAUSE 19 AS1428.2:1992	APPENDIX D AS1680.2.1:2008
Entrances, passages & walkways	150lx	160lx
Corridors Passageways	-	40lx
Ramps	150lx	40lx
Toilets	200lx	
Counter tops	250lx	320lx
General displays	200-300lx	
Accessible parking spaces	-	40lx

The electrical documentation will need to indicate compliance with these minimum lighting levels.

3.18 Hearing augmentation

NCC Reference:	NCC Clause D3.7
	NCC Clause D3.6
	NCC Specification D3.6
Australian Standard Reference:	AS1428.5:2010 Design for access and mobility - Communication for people who are deaf or hearing impaired
	AS1428.4.1:2009
Requirement to be Satisfied:	NCC D3.7 Hearing Augmentation
	A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed—
	ii. in an auditorium, conference room, meeting room or room for judicatory purposes; or
	iii. at any ticket office, teller's booth, reception area or the like, where the public is screened from the service provider.

A hearing augmentation system is to be provided in locations where a built-in amplification system is provided and to rooms provided for judicatory purposes.

A built-in amplification system is a system where either speakers are installed within a room or the wall mounted monitor has built-in speakers. Such installations are typically found in meeting rooms, training rooms and waiting areas.

Where the wall mounted screen is not capable of broadcasting sound and any audio is provided by way of the speakers attached to a laptop or that are portable, the hearing augmentation provisions will not need to be applied.

Rooms with inbuilt communication systems will need to provide a hearing augmentation system.

Section 2.3 of AS1428.1:2010 highlights the types of hearing augmentation system:

Persons with a hearing loss may or may not have a personal hearing aid or a cochlear implant fitted. When choosing an ALS the outcome should enable communication by all people with hearing impairment whether they wear hearing aids, or have hearing aids or cochlear implants without a telecoil (T-switch), or have hearing aids or cochlear implants with a telecoil (T-switch).

ALS types include—

(a) audio frequency induction loop systems (AFILSs);

(b) modulated radio systems (commonly referred to as FM systems); and

(c) infra-red (IR) systems.

Details of the proposed method of hearing augmentation to be installed will need to be provided as part of the detailed documentation provided for this project.

Where hearing Augmentation systems are installed, a Braille Tactile Sign incorporating the international symbol of deafness will need to be provided.

NCC D3.6 identifies the requirement for Braille Tactile Signage to be implemented where a hearing augmentation system is installed.

(b) signage including the international symbol for deafness in accordance with AS1428.1 must be provided within a room containing a hearing augmentation system identifying –

(i) the type of hearing augmentation; and

(ii) the area covered within the room; and

(iii) if receivers are being used and where the receivers can be obtained

Refer to the 'Signage' section of this report for details of Braille Tactile Signage requirements.

Compliance:	Future documentation will need to indicate if any rooms include in-built communication systems and subsequently, the specified hearing augmentation system that is proposed. Information to be provided as part of the Construction Certificate documentation

3.19 Accessible Rooms

NCC Reference:	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	AS4299 1995 Adaptable Units
	AS1428.2 1992 Design for access and mobility – enhanced and additional requirements – buildings and facilities.

The DA drawing set does not indicate the detailed arrangements of the accessible room layouts.

The Hotel includes 113 rooms, six (6) of which need to be accessible.

Compliance:	The provision of a total of 6 accessible rooms satisfies the requirements of NCC Table D3.1

The accessible rooms will need to include a fully compliant accessible toilet and provision of counter heights and circulation spaces in accordance with AS4299:1995 and AS1428.2:1992.

The following references are providing by way of information.

General Requirements

The layout of the accessible rooms requires the following accessible features:

- Compliant circulation associated with the entry doors
- Compliant circulation within the hotel room
- An indication that the planning of the bathroom will satisfy the requirements of Clause 15 of AS1428.1:2009
- There is the ability to achieve compliant circulation around the bed locations
- GPOs located at 600mm AFFL
- Switches to be the large format rocker type
- Door hardware to be the lever type
- Luminance contrast to be provided at doorways
- Level threshold detailing to the doorway leading to the balcony
- The application of visual indicators to the glazing giving onto the balconies
- The pile height of the carpet to satisfy the pile height thickness nominated at Clause D3.3(g) & (h)
- Any floor tile to be non-slip
- The junction of floor finishes to satisfy the requirements of Clause 7.2 of AS1428.1:2009.
- Lighting levels to satisfy the requirements of AS4299.

Bedrooms

- Bedroom areas –bedroom shall accommodate a queen size bed and a wardrobe and the circulation space requirements of AS 1428.2 clear of wardrobe fixtures.

- The circulation space at the foot of the bed will need to be 1550mm min clear
- The circulation space to the side of the bed will need to be 1m to either side of the bed.
- Provision shall be made for circulation space within the room to enable a 360° wheelchair turn after the furniture has been placed.
- Window sills – Sleeping area window sills are preferred to be 600 mm above floor level. Elevations of the window wall to the bedrooms will need to be provided as part of the construction certificate documentation.
- Full height glazed panels or door units where provided shall have a transom at 600 to 730 mm above floor. The glazing shall be of safety glazing materials in accordance with AS 1288.
- Power outlets – A minimum of two double socket general purpose outlets shall be provided on the wall of the bedroom where the bedhead is likely to be located. GPOs should be provided to opposite walls in the main bedroom. These should be approximately 1800 mm apart. Height to be in accordance with Clause 4.11.1.
- Light switches – Two-way light switches should be provided, one located near the planned bed position. Height to be in accordance with Clause 4.11.1.
- Telephone – A telephone outlet should be provided in each bedroom next to the bed on the side closest to the door.
- Television outlet – A television outlet should be provided in each bedroom on the opposite wall to the bedhead, adjacent to the double GPO.
- Sliding doors to wardrobe – Wardrobe sliding doors are desirable, with a full-length mirror on the most accessible door.

Lighting

- Lighting levels will need to satisfy the provisions of Table 4.1 of AS4299 as wells as the provisions of AS1680.

TABLE 4.1

RECOMMENDED ILLUMINATION LEVELS FOR PEOPLE WITH VISION IMPAIRMENT

Area	Illumination level (Lux)	
	General	For people with vision impairment
Entries and passages	50–150	300
Steps, stairs and ramps NOTE: The higher level of illumination on steps and stairs is required for safety reasons	50–160	350
Living areas	110–200	300–350
Kitchens — general — task lighting	160 240	300 550–600
Laundries — general — task lighting	100 250	300 550–600
Toilets	80	300–350
Bathrooms — general — task lighting	100 200	300–350 550–600
Bedrooms	50–150	300
Garages — general — task lighting	50 200	300 550–600

Ancillary

4.11.1 Switches and power points. These shall be as follows:

- (a) Switches Light switches shall be located at a height not less than 900 mm or more than 1100 mm above the finished floor and in line with the door handles. Switches shall be located adjacent to door handles where practical. Two-way switching is preferred.
- Rocker action, toggle or push pad switches with a recommended width of 35 mm are preferred. For people with severe finger or hand disabilities, these allow convenient operation by arm or elbow.
- GPOs shall be located at a height of not less than 600 mm, with a preferred height of 1000 mm, above the finished floor and in line with the door handles. GPOs shall be located not less than 500 mm horizontally from internal corners
- 4.11.3 Additional telephone outlets. The main living area should be prewired for a second outlet.
- 4.11.4 Windows Operating controls should be located in an accessible position.

The following extract from the Standard is noted for reference:

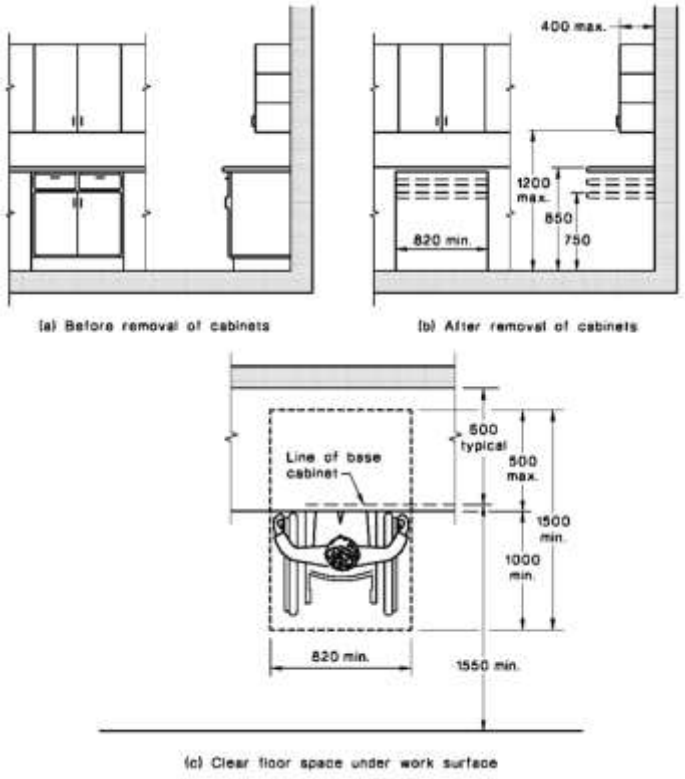


Figure 43 – Fig.4.8 AS4299:1995

3.20 Adaptable Units

NCC Reference:	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	AS4299 1995 Adaptable Units

3.20.1 Preamble

The Liverpool Development Control Plan 2008 incorporates Development in the Liverpool City Centre 25 July 2014 Section 6.1 Housing Choice and Mix addressing the provision of adaptable housing within residential developments. This section nominated that 10% of units shall be provided as 'Accessible Units'.

Therefore, of the 194 proposed units, 20 will need to be nominated as adaptable.

Compliance: Post-adaptation drawings compliant with the provisions of AS4299:1995 and AS1428.1:2009 have been prepared.

3.20.2 Compliance with Section 4Q of the Liveable Housing Design Guidelines

The development will need to comply with Silver Liveable Housing Australia (LHA) guidelines.

The requirement is that 20% of apartment units are compliance with the Silver LHA guidelines. A total of 39 dwellings will need to be provided to satisfy this requirement.

Note: the 20 adaptable units may be included within the count of 39 LHA nominated units.

The following extracts indicate some of the LHA requirements to be satisfied:

Section 2: Dwelling Entrance

a. *The dwelling should provide an entrance door with -i. a minimum clear opening width of 820mm (see Figure 2(a));*

   ii. *a level (step-free) transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled); and*

   iii. *reasonable shelter from the weather.*

b. *A level landing area of 1200mm x 1200mm should be provided at the level (step-free) entrance door.*

c. *Where the threshold at the entrance exceeds 5mm and is less than 56mm, a ramped threshold may be provided (see Figure 1(b)).*

d. *The level (step-free) entrance should be connected to the safe and continuous pathway as specified in Element 1.*

Note The entrance must incorporate waterproofing and termite management requirements as specified in the NCC.

Section 3: Carparking

a. *Where the parking area forms part of the dwelling access the space should incorporate: i. minimum dimensions of at least 3200mm (width) x 5400mm (length);*

ii. an even, firm and slip resistant surface; and

iii. a level surface (1:40 maximum gradient, 1:33 maximum gradient for bitumen).

Section 4: Internal Doors and Corridors

a. *Doorways to rooms on the entry level used for living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment purposes should provide:*
   i. *a minimum clear opening width of 820mm (see Figure 2(a)); and*
   ii. *a level transition and threshold (maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled).*

b. *Internal corridors/passageways to the doorways referred to in (a) should provide a minimum clear width of 1000mm.*

Section 5: Toilet

a. *Dwellings should have a toilet on the ground (or entry) level that provides:*
   i. *a minimum clear width of 900mm between the walls of the bathroom if located in a separate room; and*
   ii. *a minimum 1200mm clear circulation space forward of the toilet pan exclusive of the swing of the door in accordance with Figure 3(a).*

b. *If the toilet is located within the ground (or entry) level bathroom, the toilet pan should be located in the corner of the room to enable the installation of grabrails.*

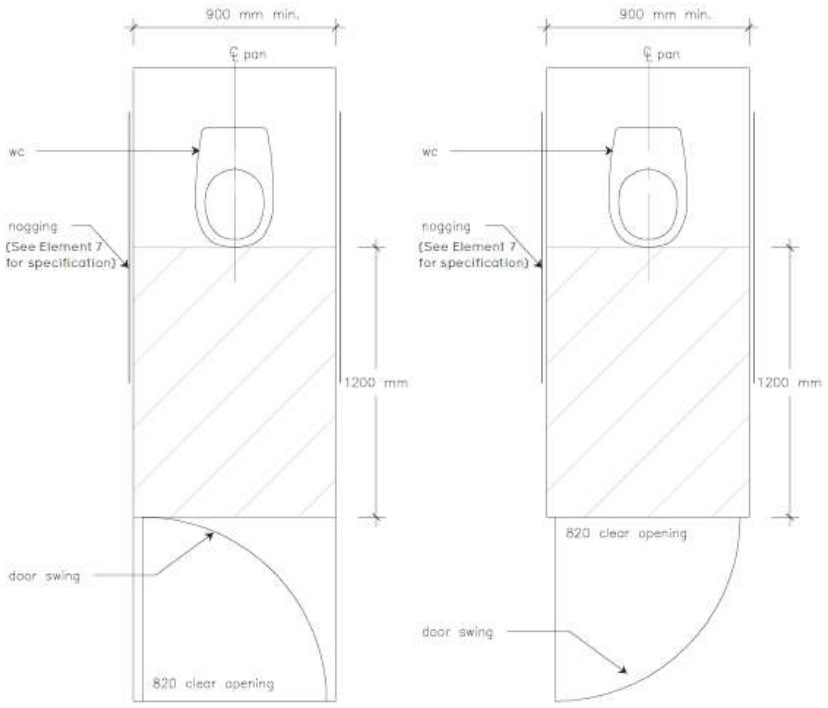


Figure 3(a) Silver level ground (or entry) level toilet layout and space requirements in a separate room.

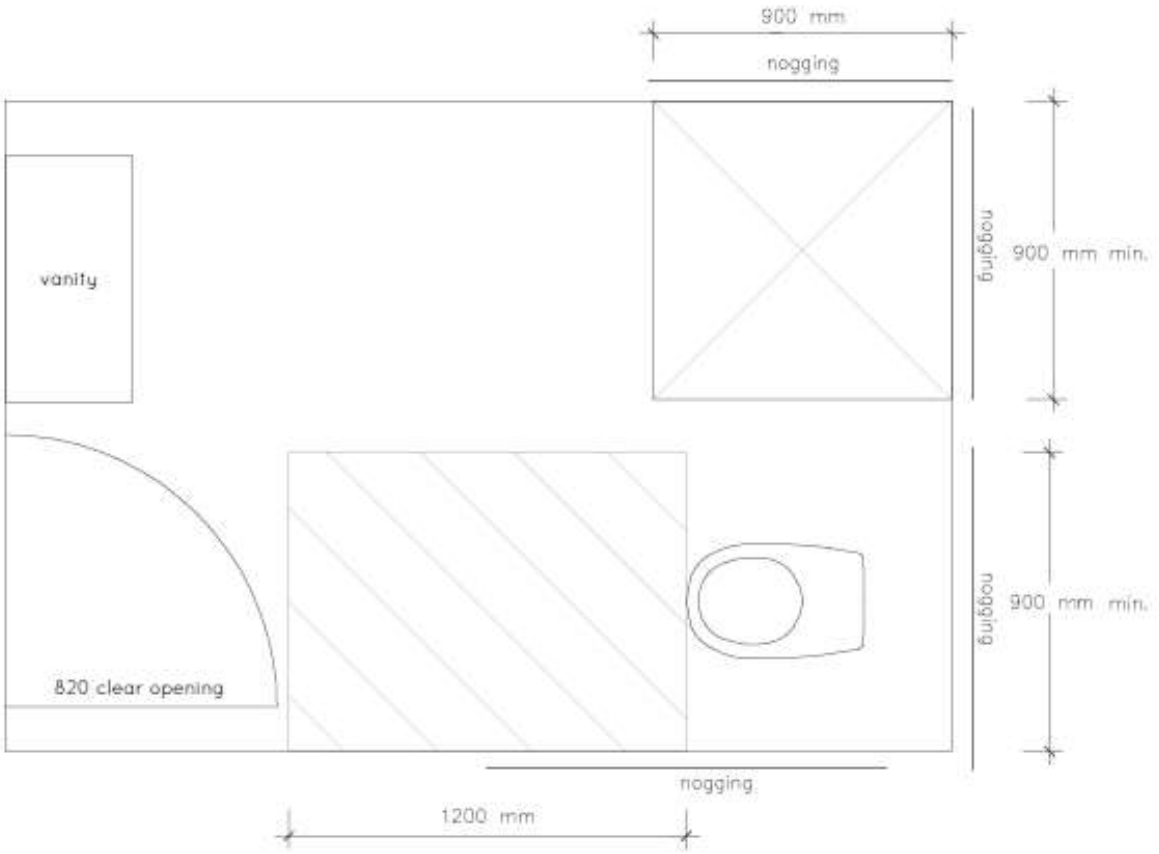


Figure 3(b) Silver level ground (or entry) level toilet layout and space requirements in a combined bathroom.

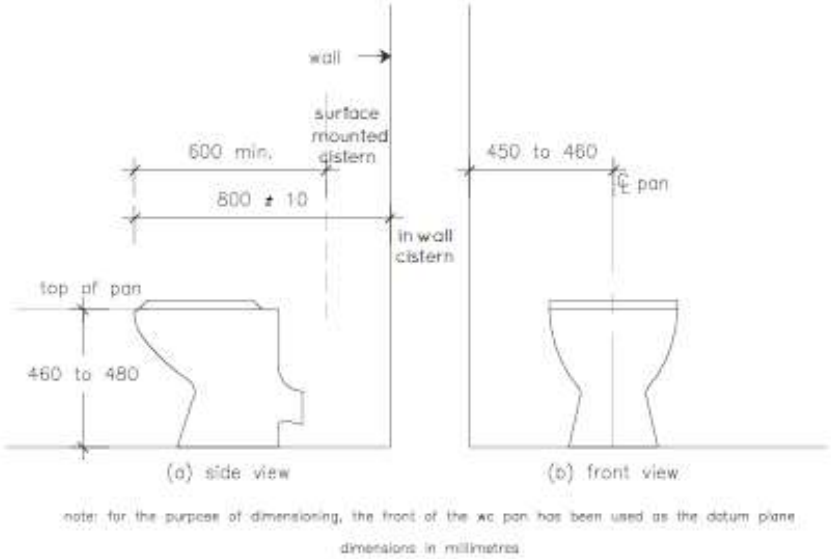


Figure 4 Platinum level toilet pan clearances

Section 6: Shower

a. *One bathroom should feature a slip resistant, hobless (step-free) shower recess. Shower screens are permitted provided they can be easily removed at a later date.*
b. *The shower recess should be located in the corner of the room to enable the installation of grabrails at a future date.*

Section 7: Reinforcement of bathroom and toilet walls

a. *Except for walls constructed of solid masonry or concrete, the walls around the shower, bath (if provided) and toilet should be reinforced to provide a fixing surface for the safe installation of grabrails.*
b. *The fastenings, wall reinforcement and grabrails combined must be able to withstand 1100N of force applied in any position and in any direction.*
c. *The walls around the toilet are to be reinforced by installing:*
    i. *noggings with a thickness of at least 25mm in accordance with Figure 6(a); or*
    ii. *sheeting with a thickness of at least 12mm in accordance with Figure 6(b).*
d. *The walls around the bath are to be reinforced by installing:*
    i. *noggings with a thickness of at least 25mm in accordance with Figure 7(a); or*
    ii. *sheeting with a thickness of at least 12mm in accordance with Figure 7(b).*
e. *The walls around the hobless (step-free) shower recess are to be reinforced by installing:*
    i. *noggings with a thickness of at least 25mm in accordance with Figure 8(a); or*
    ii. *sheeting*

3.20.3 General Requirements

The following extracts highlights the post-adaptable units in the development.

The layout of the adaptable units requires the following accessible features:

- Compliant circulation associated with the entry doors
- Accessible circulation within the unit
- An indication that the planning of the bathroom within the SOU will satisfy the requirements of Clause 15 of AS1428.1:2009
- There is the ability to achieve compliant circulation around the bed locations within the adaptable units.
- GPOs located at 600mm AFFL
- Switches to be the large format rocker type
- Door hardware to be the lever type
- Luminance contrast to be provided at doorways
- The detailing of the servery to include the ability for a wheelchair to forward approach the bench (refer to layout requirements of AS4299)

- Level threshold detailing to the doorway leading to the balcony
- The application of visual indicators to the glazing onto the balconies, if full-height glazing is provided
- The pile height of the carpet to satisfy the pile height thickness nominated at Clause D3.3(g) & (h)
- Any floor tile to be non-slip
- The junction of floor finishes to satisfy the requirements of Clause 7.2 of AS1428.1:2009.

Kitchen Areas

- Circulation – Minimum clearances in front of appliances and between opposing base cabinets shall be provided at the outset. A minimum clear floor space of 1500 mm × 820 mm that allows either a forward or parallel approach by a person in a wheelchair shall be provided at the sink and all appliances in the kitchen. In addition, a minimum clearance of 1550 mm shall be maintained between all opposing base cabinets, appliances and walls to allow for a 180° turn by a person in a wheelchair.
- Floor surfaces – The floor surface shall be slip-resistant
- Work surfaces – At least one section of the work surface, not less than 800 mm in length, should comply with the following:
    - The work surface should be adjustable within the range 750 mm to 850 mm above the finished floor surface.
    - Base cabinets, if provided, should be removable over the full 800 mm length of the work surface. The finished floor shall extend under the work surface to the wall.
    - The required clear floor space of 1500 mm × 820 mm should allow a forward approach to the work surface. No more than 500 mm of this clear floor space should extend beneath the work surface.
    - There should be no sharp, abrasive or heat-transferring surfaces or corners protruding into travel paths under the work surface, sink or cooktop.
    - A refrigerator shall be located adjacent to a work surface.
- Sinks – The sink and an adjacent work surface which shall be a minimum of 800 mm in length shall comply with the following:
    - The sink and surrounding work surface shall be adjustable within the range 750 mm to 850 mm above the finished floor surface
    - Where sinks are installed to be adjustable in height, plumbing shall be installed to accept supply and drainage connections for sinks remounted at any height referred to in Item (a).
    - The maximum depth of the bowl of the sink should be 150 mm. This would only apply to the main bowl of a double bowl sink.
    - The required clear floor space of 1500 mm × 820 mm should allow a forward approach to the sink. No more than 500 mm of this clear floor space should extend beneath the sink.

- Taps shall comply with AS 1428.1 Taps or their operating handles shall be within 300 mm of the front of the sink to allow for ease of operation.
- Hot water systems shall be installed to deliver hot water at a maximum of 50°C at the hot water outlet.

- Cooktops – Circulation spaces and clearances shall be as for sinks.
  - Cooktops shall have controls which do not require reaching over the hotplates to adjust them. Controls shall have raised cross-bars for ease of grip.
  - Cooktops shall have an adjacent work surface of 800 mm minimum length at the same height.
  - Cooktops should be provided with isolating switches or gas stop valves which can be easily and safely operated while the cooktop is in use.
- Ovens shall be located adjacent to a work surface. Where the oven door is hinged, the clear work surface shall be on the opposite side to the hinge.
- Microwave ovens – Provision shall be made for a microwave shelf to be installed at any height between 750 mm and 1200 mm above the floor.

Bedrooms

- Bedroom areas – At least one bedroom shall can accommodate a queen size bed and a wardrobe and the circulation space requirements of AS 1428.2 clear of wardrobe fixtures.
- The circulation space at the foot of the bed will need to be 1550mm min clear
- The circulation space to the side of the bed will need to be 1m to either side of the bed.
- Window sills – Sleeping area window sills are preferred to be 600 mm above floor level. Elevations of the window wall to the bedrooms will need to be provided as part of the construction certificate documentation.
- Full height glazed panels or door units where provided shall have a transom at 600 to 730 mm above floor. The glazing shall be of safety glazing materials in accordance with AS 1288.
- Power outlets – A minimum of two double socket general purpose outlets shall be provided on the wall of the bedroom where the bedhead is likely to be located. GPOs should be provided to opposite walls in the main bedroom. These should be approximately 1800 mm apart. Height to be in accordance with Clause 4.11.1.
- Light switches – Two-way light switches should be provided, one located near the planned bed position. Height to be in accordance with Clause 4.11.1.
- Telephone – A telephone outlet should be provided in each bedroom next to the bed on the side closest to the door.
- Television outlet – A television outlet should be provided in each bedroom on the opposite wall to the bedhead, adjacent to the double GPO.
- Sliding doors to wardrobe – Wardrobe sliding doors are desirable, with a full-length mirror on the most accessible door.

Living Areas

- Circulation space – Provision shall be made for circulation space to enable a 360° wheelchair turn after the furniture has been placed.

- 4.7.2 Windows Living area window sills are preferred to be 730 mm above floor level. Details indicating compliance with this requirement will need to be provided as part of the construction certificate documentation
- Full height glazed panels or door units where provided shall have a transom at 600 to 730 mm above floor. The glazing shall be of safety glazing materials in accordance with AS 1288.
- Power outlets – A minimum of four double GPOs should be provided in the living room. Height to be in accordance with Clause 4.11.1.
- Telephone – A telephone outlet shall be provided in the living-dining area. This should be adjacent to a GPO.
- Television outlets – 2 television outlets should be provided in the living area; one location to enable viewing from dining and kitchen. Locate television outlets adjacent to GPOs.
- Security screens – Exterior doors and windows should have the capability for fitting security screens.

Laundry Areas

- Post adaptation drawings have yet to be prepared indicating compliance with this provision. Details to be provide with the construction certificate documentation.

Lighting

- Lighting levels will need to satisfy the provisions of Table 4.1 of AS4299 as wells as the provisions of AS1680.

TABLE 4.1

RECOMMENDED ILLUMINATION LEVELS FOR PEOPLE WITH VISION IMPAIRMENT

Area	Illumination level (Lux)	
	General	For people with vision impairment
Entries and passages	50–150	300
Steps, stairs and ramps NOTE: The higher level of illumination on steps and stairs is required for safety reasons	50–160	350
Living areas	110–200	300–350
Kitchens — general — task lighting	160 240	300 550–600
Laundries — general — task lighting	100 250	300 550–600
Toilets	80	300–350
Bathrooms — general — task lighting	100 200	300–350 550–600
Bedrooms	50–150	300
Garages — general — task lighting	50 200	300 550–600

Ancillary

4.11.1 Switches and power points. These shall be as follows:

- (a) Switches Light switches shall be located at a height not less than 900 mm or more than 1100 mm above the finished floor and in line with the door handles.

Switches shall be located adjacent to door handles where practical. Two-way switching is preferred.

- Rocker action, toggle or push pad switches with a recommended width of 35 mm are preferred. For people with severe finger or hand disabilities, these allow convenient operation by arm or elbow.
- GPOs shall be located at a height of not less than 600 mm, with a preferred height of 1000 mm, above the finished floor and in line with the door handles. GPOs shall be located not less than 500 mm horizontally from internal corners
- 4.11.2 Electrical distribution board. The electrical distribution board should be located inside the housing unit and be accessible.
- 4.11.3 Additional telephone outlets. The main living area should be prewired for a second outlet.
- 4.11.4 Windows Operating controls should be located in an accessible position.
- 4.11.5 Linen storage A linen storage cupboard of minimum 600 mm width, with adjustable shelving should be provided.
- Garbage storage area which is accessible from the housing unit and which is connected to an accessible path leading to an off-site disposal point.

The following extracts from the Standard are noted for reference:

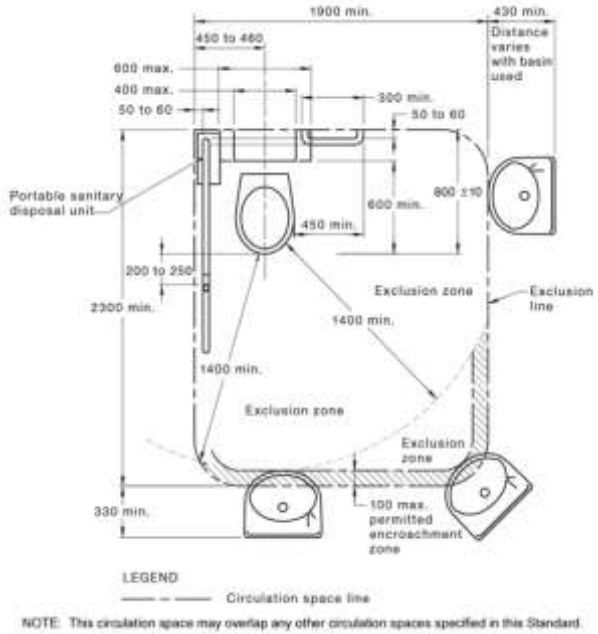


Figure 44 – Fig. 43 AS1428.1:2009

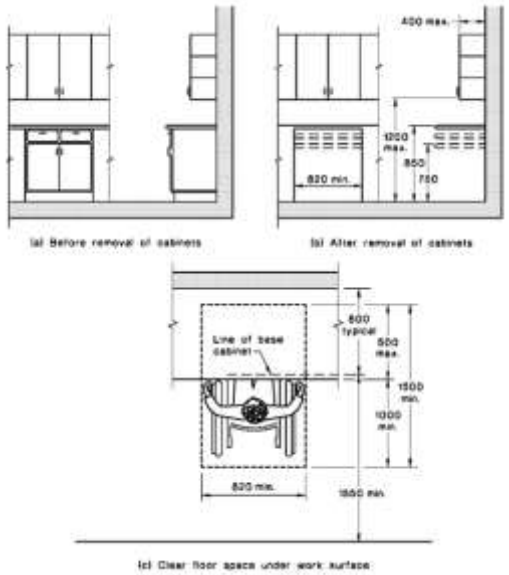
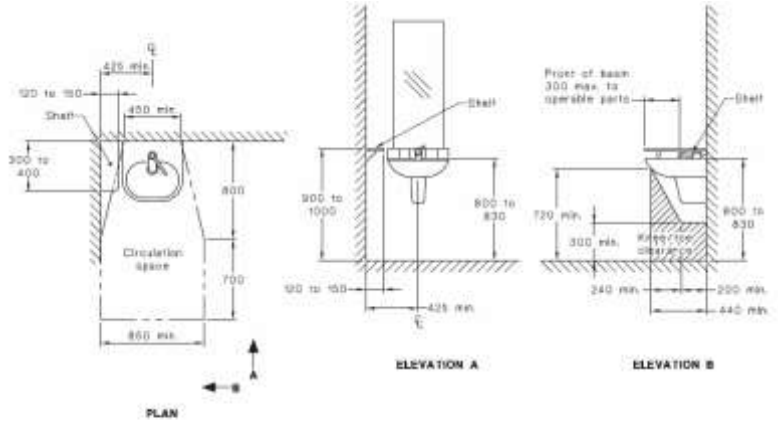


Figure 45 – Fig.4.8 AS4299:1995



NOTE: 'Operable parts' means the centre-line of the tap or, where a level handle is provided, the end point of the level measure throughout its arc of movement, or where a sensor is provided where the sensor is reliably activated.

DIMENSIONS IN MILLIMETRES

FIGURE 44(B) WALL-MOUNTED WASHBASIN INSTALLATION—OTHER THAN FOR SOLE-OCCUPANCY UNIT

Figure 46 - Fig.44B AS1428.1 2009

The following Appendix A of AS4299:1995 is noted for reference as iAccess Consultants will be using this table for OC sign-off.

Modified Extract APPENDIX A of AS4299-1995

SCHEDULE OF FEATURES FOR ADAPTABLE HOUSING

CLASS C

Review undertaken by iAccess Consultants

(a Division of Seidman & Associates Pty Ltd ACN 37 002 648 615)

The table shown below indicates essential features to be incorporated into a housing unit for it to be termed an 'Adaptable House'. All essential items are pre-checked in the 'essential' feature's column.

Prior to commencing construction, the Architect is to sign the checklist to certify that the essential features have been incorporated into the design.

The Head Contractor must initial the second column to certify that each essential feature has been incorporated into the building (prior to Handover).

The Head Contractor shall sign the checklist signifying achievement of Class C adaptability.

Item No.	Room/Item	Clause No.	Essential	
			Required feature	Certified by
	DRAWINGS			
1	Provision of drawings showing the housing unit in its pre-adaptation and post-adaptation stages	2.3	✓	***Satisfied*** ***R Seidman***
	SITING			
3	A continuous accessible path of travel from street frontage and vehicle parking to entry complying with AS 1428.1	3.3.2	✓	***Satisfied*** ***R Seidman***
	LETTERBOXES IN ESTATE DEVELOPMENTS			
11	Letterboxes to be on hard standing area connected to accessible pathway	3.8	✓	***Satisfied*** ***R Seidman***
	PRIVATE CAR ACCOMMODATION			
14	Carparking space or garage min. area 5.4m ×□3.8 m	3.7.2	✓	***Satisfied*** ***R Seidman – The accessible parking spaces have been sized to satisfy the requirements of AS2890.6:2009***
16	Internal clearance of garage or carport 2.5 m min.	3.7.2	✓	***Satisfied*** ***R Seidman***
	ACCESSIBLE ENTRY			
20	Accessible entry	4.3.1	✓	***Satisfied*** ***R Seidman***
22	Accessible entry to be level (i .e. max. 1:40 slope)	4.3.2	✓	***Satisfied*** ***R Seidman***
23	Threshold to be low-level	4.3.2	✓	***Satisfied*** ***R Seidman***

Item No.	Room/Item	Clause No.	Essential	
			Required feature	Certified by
24	Landing to enable wheelchair manoeuvrability	4.3.2	✓	***Satisfied*** ***R Seidman***
25	Accessible entry door to have 850 mm min. clearance	4.3.1	✓	***Satisfied*** ***R Seidman***
27	Door lever handles and hardware to AS 1428.1	4.3.4	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
	INTERIOR: GENERAL			
32	Internal doors to have 820 mm min. clearance	4.3.3	✓	***Satisfied*** ***R Seidman***
33	Internal corridors min. width of 1000 mm	4.3.7	✓	***Satisfied*** ***R Seidman***
34	Provision for compliance with AS 1428.1 for door approaches	4.3.7	✓	***Satisfied*** ***R Seidman***
	LIVING ROOM & DINING ROOM			
36	Provision for circulation space of min. 2250 mm diameter	4.7.1	✓	***Satisfied*** ***R Seidman***
38	Telephone adjacent to GPO	4.7.4	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
41	Potential illumination level min. 300 lux	4.10	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
	KITCHEN			
42	Minimum width 2.7 m (1550 mm clear between benches)	4.5.2	✓	***Satisfied*** ***R Seidman***
43	Provision for circulation at doors to comply with AS 1428.1	4.5.1	✓	***Satisfied*** ***R Seidman***
44	Provision for benches planned to include at least one work surface of 800 mm length, adjustable in height from 750 mm to 850 mm or replaceable. Refer to Figure 4.8	4.5.5	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
45	Refrigerator adjacent to work surface	4.5.5	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
46	Kitchen sink adjustable to heights from 750 mm to 850 mm or replaceable	4.5.6	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
47	Kitchen sink bowl max. 150 mm deep	4.5.6	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***

Item No.	Room/Item	Clause No.	Essential	
			Required feature	Certified by
48	Tap set capstan or lever handles or lever mixer	4.5.6(e)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
49	Tap set located within 300 mm of front of sink	4.5.6(e)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
51	Cooktops to include either front or side controls with raised cross bars	4.5.7	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
52	Cooktops to include isolating switch	4.5.7	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
53	Work surface min. 800 mm length adjacent to cooktop at same height	4.5.7	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
54	Oven located adjacent to an adjustable height or replaceable work surface	4.5.8	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
59	GPOs to comply with AS 1428.1. At least one double GPO within 300 mm of front of work surface	4.5.11	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
60	GPO for refrigerator to be easily reachable when the refrigerator is in its operating position	4.5.11	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
61	Slip-resistant floor surface	4.5.4	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
	MAIN BEDROOM			
62	At least one bedroom of area sufficient to accommodate queen size bed and wardrobe and circulation space requirements of AS 1428.2	4.6.1	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
	BATHROOM			
75	Provision for bathroom area to comply with AS 1428.1	4.4.1	✓	
76	Slip-resistant floor surface	4.4.2	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***

Item No.	Room/Item	Clause No.	Essential	
			Required feature	Certified by
77	Shower recess - no hob. Minimum size 1160 × 1100 to comply with AS 1428.1.	4.4.4(f)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
78	Shower area waterproofed to AS 3740 with floor to fall to waste	4.4.4(f)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
79	Recessed soap holder	4.4.4(f)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
80	Shower taps positioned for easy reach to access side of shower sliding track	4.4.4(f)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
82	Provision for adjustable, detachable hand held shower rose mounted on a slider grabrail or fixed hook (plumbing and wall – strengthening provision)	4.4.4(h)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
83	Provision for grabrail in shower (Refer to Figure 4.7) to comply with AS 1428.1	4.4.4(h)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
86	Tap sets to be capstan or lever handles with single outlet	4.4.4(c)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
88	Provision for washbasin with clearances to comply with AS1428.1	4.4.4(g)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
90	Double GPO beside mirror	4.4.4(d)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
	TOILET			
92	Provision of either 'visitable toilet' or accessible toilet	4.4.3	✓	***Not Applicable in this development***
93	Provision to comply with AS 1428.1	4.4.1	✓	***Not Applicable in this development***
94	Location of WC pan at correct distance from fixed walls	4.4.3	✓	***Not Applicable in this development***
95	Provision for grab rail zone. (Refer Figure 4.6)	4.4.4(h)	✓	***Not Applicable in this development***
96	Slip resistant floor surf ace. (Vitreous tiles or similar)	4.4.2	✓	***Not Applicable in this development***
	LAUNDRY			
98	Circulation at doors to comply with AS 1428.1	4.8	✓	***Satisfied*** ***R Seidman***

Item No.	Room/Item	Clause No.	Essential	
			Required feature	Certified by
99	Provision for adequate circulation space in front of or beside appliances (min. 1550 mm depth)	4.8	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
100	Provision for automatic washing machine	4.8(e)	✓	***Satisfied*** ***R Seidman***
102	Where clothes line is provided, an accessible path of travel to this	4.8(a)	✓	***Not Applicable in this development***
105	Double GPO	4.8(g)	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
108	Slip-resistant floor surface	4.9.1	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***
	DOOR LOCKS			
110	Door hardware operable with one hand, located 900–1100 mm above floor	4.3.4	✓	***Satisfied*** ***R Seidman – Assumed that this will be specified as part of the detailed documentation prepared for this project.***

Design

Adaptable house class C achieved	**Class C (Occupation Certificate) compliance has been achieved subject to receiving the posted annotation drawings from the architect and the provision of necessary documentation indicating the items noted above.**
Head Contractor's Representative	**iAccess Consultants (a division of Seidman & Associates Pty Ltd ACN 37 002 648 615**
Name of Head Contractor's Representative	**Richard Seidman**
Date	13 November 2018

3.21 Swimming Pools

NCC Reference:	D3.3 Parts of buildings to be accessible
	Table D3.1
Australian Standard Reference:	Clause 10 (Walkways Ramps and Landings) of AS1428.1 2009

3.21.1 Preamble

According to the Access to Premises Standards, for swimming pools with a total perimeter greater than 70m, access is required to and into the swimming pool (ref. Disability Access to Premises Standards 2010 pg. 31).

According to the NCC Table D3.1 for a Class 10b *Swimming Pool.*

Access is required: To and into swimming pools with a total perimeter greater than 40 m, associated with a Class 1b, 2, 3, 5, 6, 7, 8 or 9 building that is required to be accessible, but not swimming pools for the exclusive use of occupants of a Class 1b building or a sole-occupancy unit in a Class 2 or Class 3 building.

The perimeter of the swimming pool nominated on Level 2 is measured at approximately 36m.

3.21.2 General Requirements

Should the swimming pool be greater than 40m, the following requirements are noted:

Not less than one means of accessible water entry/exit in accordance with Part D5 must be provided for the swimming pool required by Table D3.1 to be accessible.

An accessible entry/exit must be by means of:

(a) a fixed or movable ramp and an aquatic wheelchair; or

(b) a zero depth entry at a maximum gradient of 1:14 and an aquatic wheelchair; or

(c) a platform swimming pool lift and an aquatic wheelchair; or

(d) a sling-style swimming pool lift.

Where a swimming pool has a perimeter of more than 70 m in length, at least one accessible water entry/exit must be provided by a means specified in paragraph (2) (a), (b) or (c).

D5.3 of Disability Access to Premises Standards 2010 outlines the provisions for a Zero Depth Entry:

A zero depth entry must have:

(a) a slip-resistant surface; and

(b) a maximum gradient of 1:14; and

(c) a single handrail complying with the requirements for handrails in AS 1428.1, from the top of the entry point continuous to the bottom level area; and

(d) a level area:

(i) *1 500 mm long for the width of the zero depth entry at the entry point; and* [SEP]

(ii) *located at the bottom of the zero depth entry at a level between 900 mm and 1 100 mm below the stationary water level.*

The ramp does not require TGSIs (reg. Disability Access to Premises Standards 2010 pg. 37)

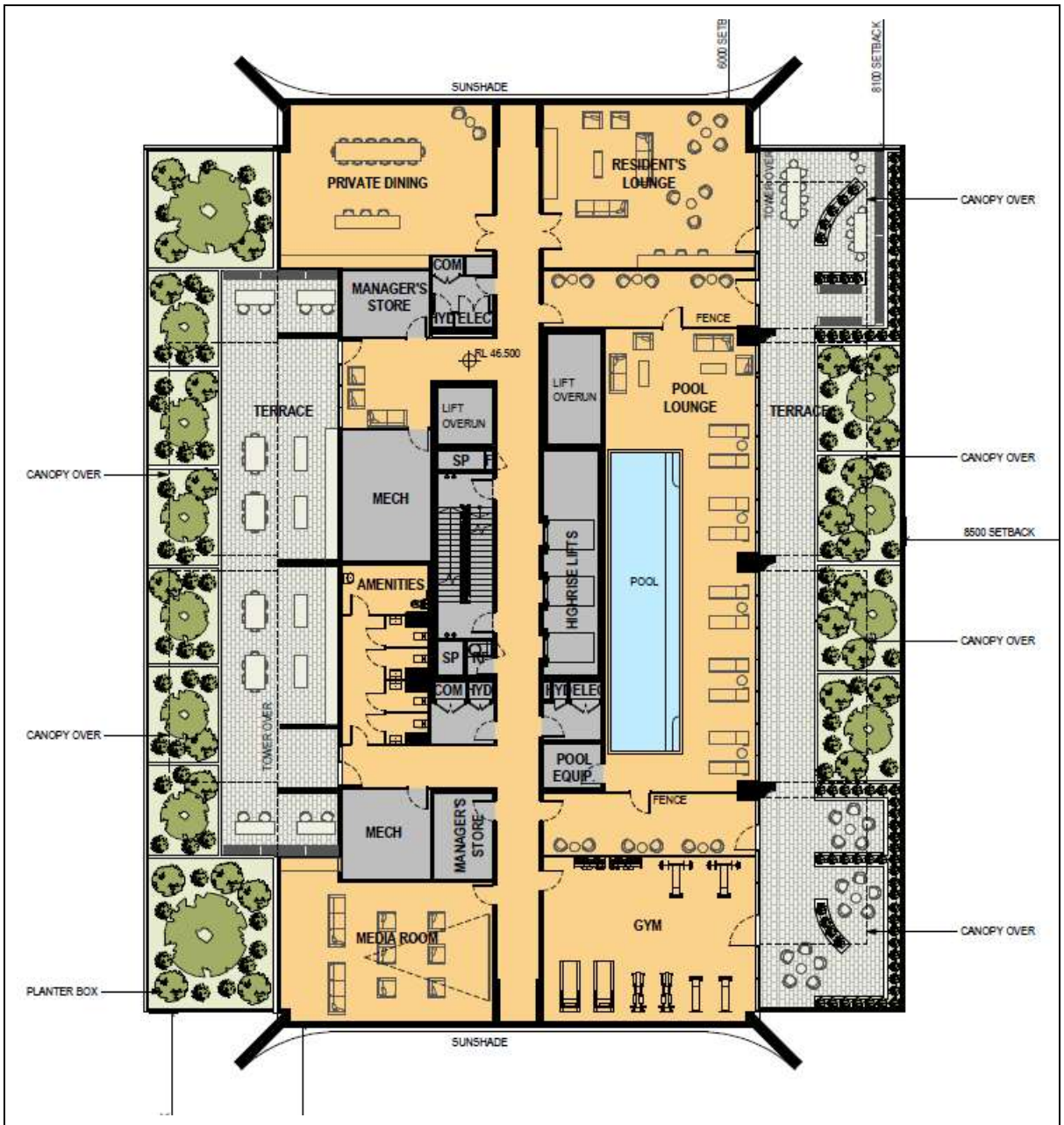


Figure 47 – Extract from Level 9 Floor Plan

Compliance:	As the pool perimeter is less than 40m there is no requirement to provide any accessible entry to the swimming pool itself.

3.22 Other Pool Facilities

NCC Reference:	D3.3 Parts of buildings to be accessible
Australian Standard Reference:	Clause 10 (Walkways Ramps and Landings) of AS1428.1 2009

3.22.1 Preamble

The residential amenities area also includes a Sauna and two Jacuzzies.

3.22.2 General Requirements

For accessible access to be achieved, compliant circulation zones will need to be demonstrated in accordance with the Circulation Zones Section of this report.

The doorway to the Sauna will need to comply with the Doorways Section of this report, with a minimum clear open width of 850mm and doorway circulation zones compliant with Figure 31 of AS1428.1:2009.

Compliance:	Future documentation to include details of the pool facilities. Information to be provided as part of the Construction Certificate documentation

4 DISABILITY (ACCESS TO PREMISES) STANDARDS 2010 – COMPLIANCE SUMMARY

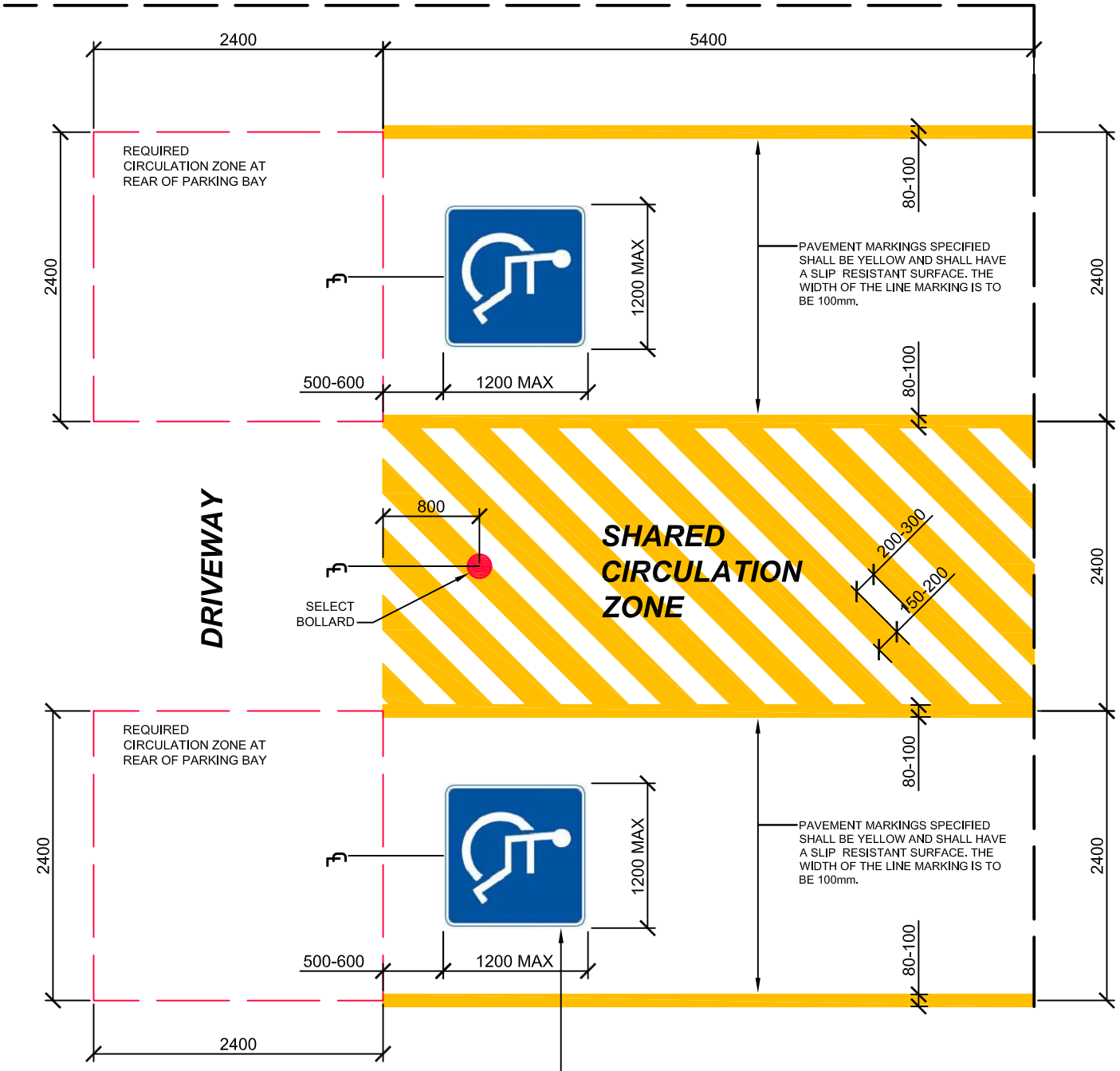
PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
A4.1	**Classifications** **Class 2** — a building containing 2 or more sole-occupancy units each being a separate dwelling. **Class 6** – a shop or other building for the sale of goods by retail **Class 7a** – Carparking **Class 3** — Accommodation The following areas within the development are considered ancillary to the activities undertaken as part of the Class 2 facility. *Swimming Pool* *Offices* *Function Room*	Note	
DP1	**Performance requirement** Access must be provided, to the degree necessary, to enable: a) people to: i . approach the building from the road boundary and from any *accessible* carparking spaces associated with the building; and	Satisfied	
	ii. approach the building from any accessible associated building; and	Not Applicable	
	iii. access work and public spaces, accommodation and facilities for personal hygiene; and	Satisfied	
	b) Identification of accessways at appropriate locations which are easy to find.	Satisfied	
DP4	**Performance requirement** *Exits* must be provided from a building to allow occupants to evacuate safely, with their number, location and dimensions being appropriate to: a) the travel distance; and b) the number, mobility and other characteristics of occupants; and c) the function or use of the building; and d) the height of the building; and e) Whether the *exit* is from above or below ground level.	Satisfied	

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
DP6	**Performance requirement** So that occupants can safely evacuate the building, *accessways* to *exits* must have dimensions appropriate to: a) the number, mobility and other characteristics of occupants; and b) the function or use of the building.	Satisfied	
DP8	**Performance requirement** Carparking spaces for use by people with a disability must be: 1. provided, to the degree necessary, to give equitable access for carparking; and 2. designated and easy to find.	Additional Information to be provided	Information to be provided as part of the Construction Certificate documentation
DP9	**Performance requirement** An inbuilt communication system for entry, information, entertainment, or for the provision of a service, must be suitable for occupants who are deaf or hearing impaired.	Additional Information to be provided	Information to be provided as part of the Construction Certificate documentation
D3.1	**General Building Access Requirements Class 2 — a building containing 2 or more sole-occupancy units each being a separate dwelling.,**		
Table D3.1	From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level. To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed— (a) to the entrance doorway of each sole-occupancy unit; and (b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.	Satisfied	
D3.1	**General Building Access Requirements Class 6 — retail**		
Table D3.1	To and within all areas normally used by the occupants	Satisfied	
D3.1	**General Building Access Requirements Class 3 - accommodation**		
Table D3.1	To and within all areas normally used by the occupants	Satisfied	
D3.2	**Access to Buildings**		

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
	(1) An *accessway* must be provided: (a) to a building *required* to be *accessible*;	Satisfied	
	(b) from the main points of a pedestrian entry at the allotment boundary; and	Satisfied	
	I. from another *accessible* building connected by a pedestrian link; and	Not Applicable	
	II. from any required accessible carparking space on the allotment.	Satisfied	
	(2) In a building *required* to be *accessible,* an *accessway* must be provided through the principal pedestrian entrance, and: a. through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and b. in a building with a total *floor area* more than 500sqm, a pedestrian entrance which is not *accessible* must not be located more than 50 m from an *accessible* pedestrian entrance; Except for pedestrian entrances serving only areas exempted by clause D3.4.	Satisfied	
D3.3	**Parts of buildings to be accessible**		
	In a building *required* to be *accessible*: a) every ramp and stairway, except for ramps and stairways in areas exempted by clause D3.4, must comply with:		
	i. for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and	Satisfied	
	ii. for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1;	Satisfied	
	iii. for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1;	Satisfied	
	b) every passenger lift must comply with clause E3.6;	Additional Information to be provided	Information to be provided as part of the Construction Certificate documentation
	c) *accessways* must have: i. passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an accessway where a direct line of sight is not available; and ii. turning spaces complying with AS 1428.1: A. within 2m of the end of *accessways where* it is not possible to continue travelling along the *accessway*; and B. at maximum 20 m intervals along the *accessway*;	Additional Information to be provided	
	d) an intersection of *accessways* satisfies the spatial requirements for a passing and turning space;	Additional Information to be provided	

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
	e) a passing space may serve as a turning space;	Satisfied	
	f) a ramp complying with AS 1428.1 or a passenger lift need not be provided to serve a *storey* or level other than the entrance *storey* in a Class 5, 6, 7b or 8 building- (i) containing not more than 3 *storeys*; and (ii) with a *floor area* for each *storey*, excluding the entrance *storey*, of not more than 200sqm.	Not Applicable	
D3.5	**Carparking**	Satisfied	
D3.6	**Signage**	Additional Information to be provided	Information to be provided as part of the Construction Certificate documentation
D3.7	**Hearing Augmentation**	Additional Information to be provided	If in-built communication systems are proposed, hearing augmentation will need to be provided.
D3.8	**Tactile Indicators**	Additional Information to be provided	Information to be provided as part of the Construction Certificate documentation
D3.9	**Wheelchair seating**	Not Applicable	
D3.10	**Swimming pool**	Not Applicable	
D3.11	**Ramps (Connecting Ramps)**	Not Applicable	
D3.12	**Glazing on an accessway** On an *accessway*, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with Clause 6.6 of AS 1428.1.	Additional Information to be provided	If full-height glazing is provided, visual indicators are required.
Part D4	**Braille & Tactile Signs**	Additional Information to be provided	The signage detailing will need to comply with the provisions of Clause D3.6 and Specification D3.6 of the BCA as well as Clauses 16.3 and 17 of AS1428.2 which addresses the size of the pictogram as well as the height of lettering. Information to be provided as part of the Construction Certificate documentation

PART / CLAUSE	DISABILITY (ACCESS TO PREMISES) STANDARD 2010 CRITERIA TO BE SATISFIED	COMPLIANCE	ACTION / COMMENT
Part E3	**Lift Installation**	Additional Information to be provided	Information to be provided as part of the Construction Certificate documentation
Part F2	**Sanitary and other facilities**	Additional Information to be provided	Information to be provided as part of the Construction Certificate documentation



EACH DEDICATED SPACE SHALL BE IDENTIFIED BY MEANS OF A WHITE SYMBOL OF ACCESS IN ACCORDANCE WITH AS 1428.1 BETWEEN 800mm AND 1000mm HIGH PLACED ON A BLUE RECTANGLE WITH NO SIDE MORE THAN 1200mm, PLACED AS A PAVEMENT MARKING IN THE CENTRE OF THE SPACE BETWEEN 500mm AND 600mm FROM ITS ENTRY POINT.

THE BLUE BACKGROUND SHALL BE B21-ULTRAMARINE OF AS2700 OR SIMILAR.

1 ACCESSIBLE PARKING SPACES

PLAN VIEW Scale: 1:50@A4

ACCESSIBLE PARKING SIGN TO BE POLE FIXED OR MOUNTED ON WALL. BOTTOM OF SIGN TO BE MOUNTED 1200mm AFFL.
THE BLUE BACKGROUND SHALL BE B21-ULTRAMARINE OF AS2700 OR SIMILAR.

SIGNS MAY BE EQUAL TO RMS STANDARD SIGNAGE.

2 ACCESSIBLE PARKING SIGN

Scale: NTS

NOTE: The grid is for positional purposes only.

THE ABOVE DETAIL INDICATES THE PROPORTIONAL SETOUT OF THE INTERNATIONAL SYMBOL OF ACCESS AS DESIGNATED IN AS1428.1

3 ACCESSIBLE SYMBOL SETOUT

Scale: NTS

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ROSE BAY, NSW 2029
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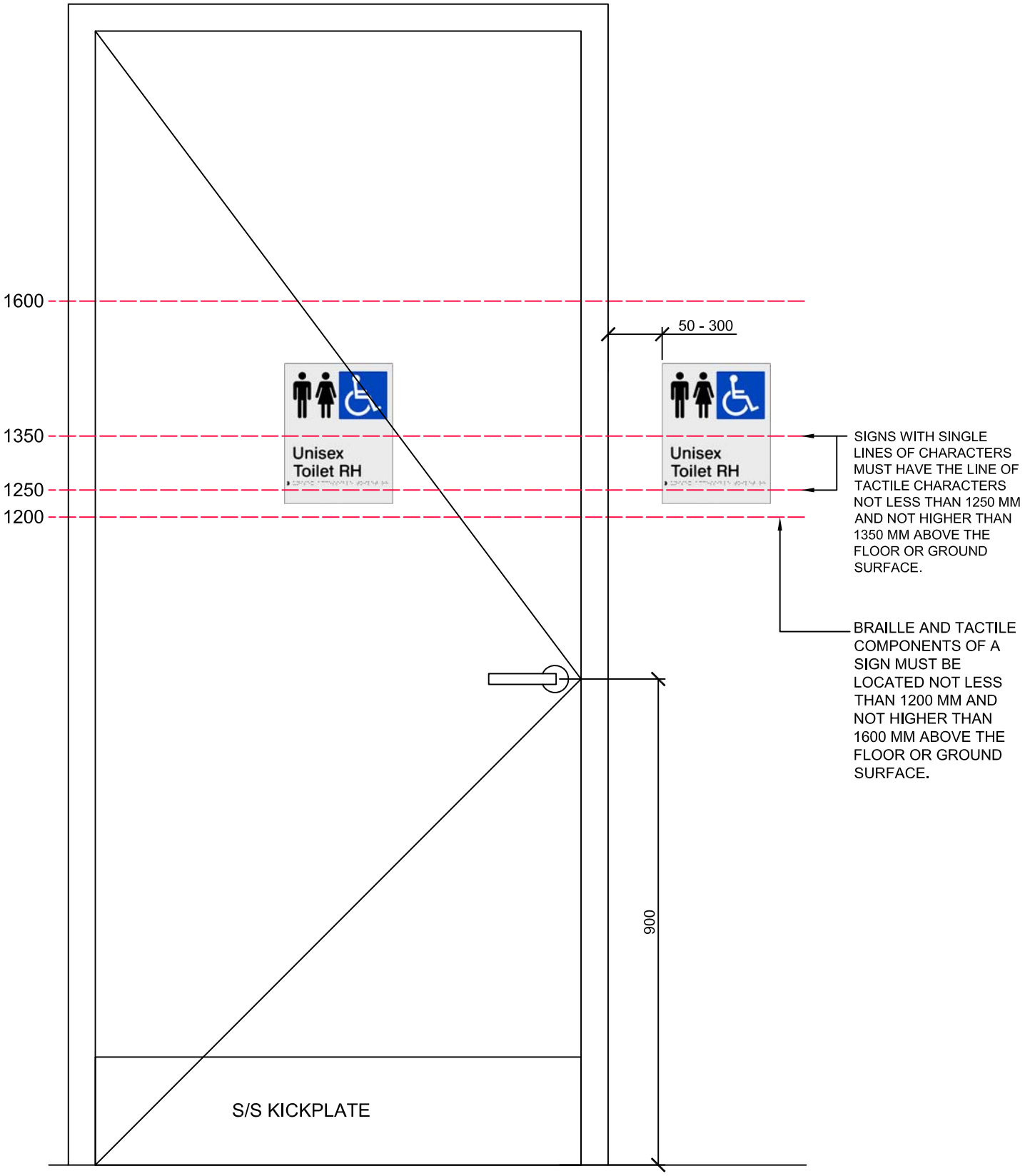
[E] r.seidman@iaccessconsultants.com
[W] www.iaccessconsultants.com

TITLE:
ACCESSIBLE PARKING - PERPENDICULAR LINE MARKING SETOUT

DWG.No. ####
PLOTTED: 21/11/2014

TECHNICAL SHEET
DATE: OCT 2014
SCALE: AS SHOWN
STAGE: -
DRAWN: RAS
TYPE: -
REVISION: [-]

A20



1 ACCESSIBLE DOOR SIGN

Scale: 1:10@A4

THE LOCATION OF THE SIGN IS PREFERRED TO BE LOCATED ON THE LATCH SIDE OF THE DOOR. WHERE THIS IS **NOT POSSIBLE** THE SIGN MAY BE LOCATED ON THE DOOR.

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TITLE: DOOR SIGNAGE SETOUT

DWG.No. ####

PLOTTED: 03/11/2014

TECHNICAL SHEET

DATE: OCT 2014 | SCALE: AS SHOWN

STAGE: - | DRAWN: RAS

TYPE: - | REVISION: [-]

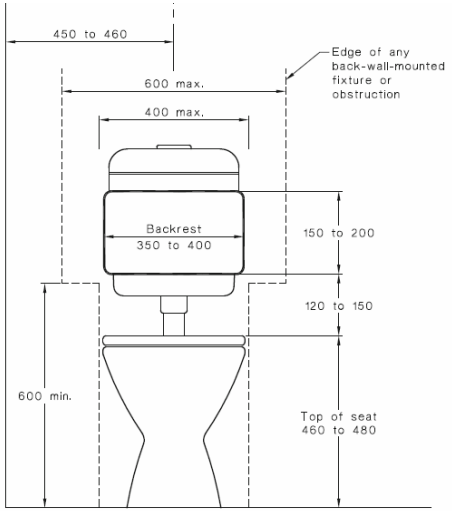
D3.6

ACCESSIBLE WC REQUIREMENTS TO BE SATISFIED

AS 1428.1:2009 ACCESSIBLE WC CHECKLIST

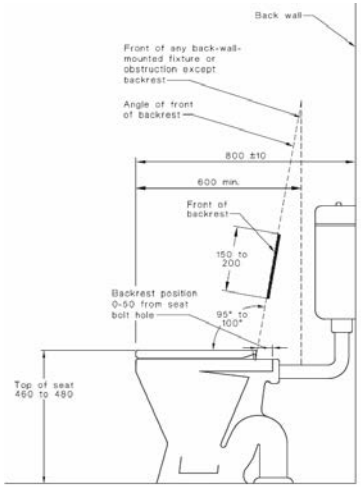
WATER TAPS	STATUS
Taps shall have lever handles, sensor plates, or other similar controls.	
Lever handles shall have not less than 50 mm clearance from an adjacent surface.	
Where separate taps are provided for hot and cold water, the hot water tap shall be placed to the left of the cold water tap for horizontal configurations, or above the cold water tap for vertical configurations.	
Where hot water is provided, the water shall be delivered through a mixing spout.	

WC PAN CLEARANCES		STATUS
Offset from side wall to CL of WC pan	450-460 mm	
Distance from rear wall to front of WC Pan	800 ±10 mm	
Top of seat height	460-480 mm AFFL	



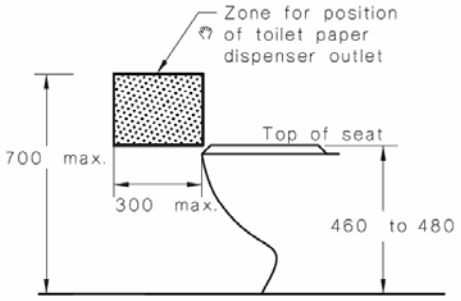
WC SEAT	STATUS
be of the full-round type	
be securely fixed in position when in use;	
have seat fixings that create lateral stability for the seat when in use;	
be load-rated to 150 kg;	
have a minimum luminance contrast of 30% with the background (e.g., pan, wall or floor against which it is viewed).	

BACKREST	STATUS
Shall be capable of withstanding a force in any direction of 1100 N;	
Width of backrest – 350- 400 mm	
Height of backrest – 150-200 mm	
Bottom of back rest – 120-150 mm above top of seat	
Angle of incline 95-100 °	

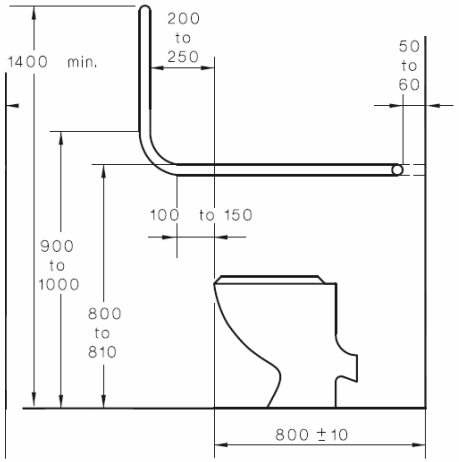


FLUSHING CONTROL	STATUS
Flushing controls shall be user activated, either hand operated or automatic..	
The flushing control shall be proud of the surface and shall activate the flush before the button becomes level with the surrounding surface.	

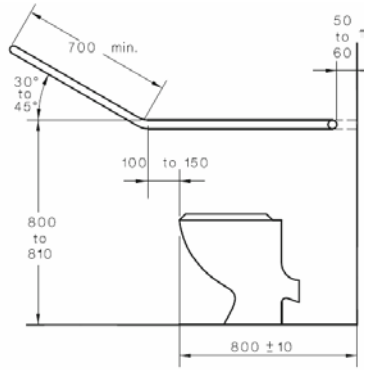
TOILET PAPER DISPENSER		STATUS
Distance in front of front of WC pan	300 mm max	
Height above floor	700 mm max	



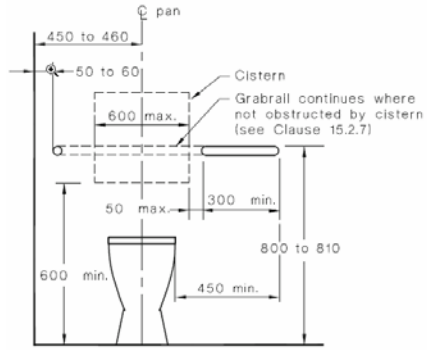
GRABRAILS 90 DEG		STATUS
Horizontal rail height	800 ±10 mm	
Distance from front of WC pan to vertical rail	200-250 mm	
Top of vertical rail	1400 mm AFFL min	



GRABRAILS 45 DEG		STATUS
Horizontal rail height	800 ±10 mm	
Distance from front of WC pan to inclined rail	100-150 mm	
Length of inclined rail	700 mm min	



GRABRAILS REAR RAIL		STATUS
Horizontal rail height	800 ±10 mm	
Distance from front of WC pan to vertical rail	200-250 mm	
Top of vertical rail	1400 mm AFFL min	



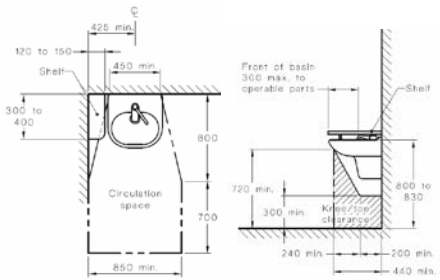
ACCESSIBLE WC REQUIREMENTS TO BE SATISFIED

AS 1428.1:2009 ACCESSIBLE WC CHECKLIST

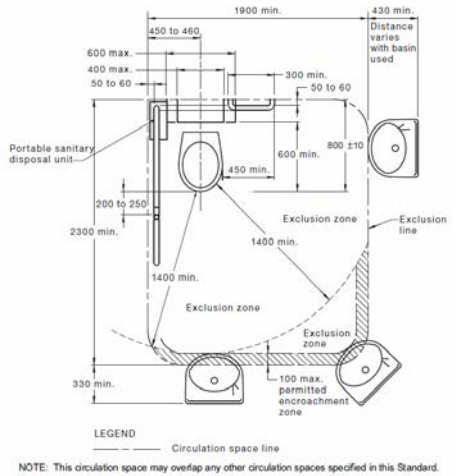
BABY CHANGE TABLES	STATUS
not encroach into the circulation space of any other toilet facility when in the folded up position;	
have a maximum height of 820 mm and a minimum clearance underneath of 720 mm when in the open position.	

WC DOORS	STATUS
WC doors may be either hinged or sliding.	
Outward-opening doors shall have a mechanism that holds the door in a closed position without the use of a latch.	
Doors shall be provided with an in-use indicator and a bolt or catch. Where a snib catch is used, the snib handle shall have a minimum length of 45 mm from the centre of the spindle.	
In an emergency, the latch mechanism shall be openable from the outside.	
The force required to operate the door shall be not greater than 20N	
Door handles and hardware shall be lever or "D" handle type	

HANDBASINS	STATUS
The washbasin shall be outside the pan circulation	
Exposed hot water supply pipes shall be insulated or located so as not to present a hazard.	
The projection of the washbasin from the wall and the position of taps, bowl and drain outlet shall be determined in accordance with Figures 44(A) and 44(B);	
Water supply pipes and waste outlet pipes shall not encroach on the required clear space under the washbasin.	
Centreline distance from side wall – 425 mm	
Circulation space 1500 x 850 mm min	
Top of basin – 800-830 mm	



WC CIRCULATION		STATUS
Width of WC zone	1900 mm min	
Length of WC zone	2300 mm min	
Exclusion zone in front of WC pan	1400 mm min	
Encroachment by handbasin	100 mm max	



NOTE: This circulation space may overlap any other circulation spaces specified in this Standard.

MIRROR	STATUS
In all sanitary facilities, the mirror shall be located either above or adjacent to the washbasin.	
Top of vanity – 800-830 mm	
Bottom of mirror – 900 mm max	
Top of mirror – 1850 mm min	

SHELVES	STATUS
As a vanity top at a height of 800 mm to 830 mm and a minimum width of 120 mm and depth of 300 mm to 400 mm without encroaching into any circulation space.	
A separate fixture within any circulation space at a height of 900 mm to 1000 mm with a width of 120 mm to 150 mm and length of 300 mm to 400 mm;	
A separate fixture external to all circulation spaces at a height of 790 mm to 1000 mm with a minimum width of 120 mm and minimum length of 400 mm.	

SOAP DISPENSERS, TOWEL DISPENSERS	STATUS
soap dispensers, towel dispensers, hand dryers and similar fittings shall be operable by one hand	
be installed with the height of their operative component or outlet not less than 900 mm and not more than 1100 mm above the plane of the finished floor	
no closer than 500 mm from an internal corner	

CLOTHES HOOKS	STATUS
A clothes-hook shall be installed 1200 mm to 1350 mm above the plane of the finished floor and not less than 500 mm out from any internal corner.	

SLIP RESISTANCE HB198	STATUS
Wet pendulum test – P3	
Oil-wet inclining platform test – R10	

BRAILLE TACTILE SIGNS NCC D3.6	STATUS
signage in accordance with AS 1428.1 must be provided for accessible unisex sanitary facilities to identify if the facility is suitable for left or right handed use	
Braille and tactile components of a sign must be located not less than 1200 mm and not higher than 1600 mm above the floor or ground surface.	

BRAILLE TACTILE SIGNS NCC D3.6	STATUS
Signs with single lines of characters must have the line of tactile characters not less than 1250 mm and not higher than 1350 mm above the floor or ground surface.	
Signs identifying rooms containing features or facilities listed in D3.6 must be located— (i) on the wall on the latch side of the door with the leading edge of the sign located between 50 mm and 300 mm from the architrave; and (ii) where (i) is not possible, the sign may be placed on the door itself.	
where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 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 facility.	
The background, negative space, fill of a sign or border with a minimum width of 5 mm must have a luminance contrast with the surface on which it is mounted of not less than 30%.	
Tactile characters, icons and symbols must have a minimum luminance contrast of 30% to the surface on which the characters are mounted	
Luminance contrasts must be met under the lighting conditions in which the sign is to be located.	
Braille and tactile signs must be illuminated to ensure luminance contrast requirements are met at all times during which the sign is required to be read.	

DISABLED ACCESS & EGRESS – DESIGN STATEMENT – DEVELOPMENT APPLICATION

DATE	**13 November 2018**
Job No:	**IAC-818**
Project Name	**Hotel and residential development**
Address	**26 Elizabeth Street Liverpool NSW 2170**
Part of Building to be certified	**Entire Building**

I hereby certify that:

a) A review of the Development Application Documentation was undertaken on 9 November 2018.

b) The Development Application documentation prepared for this project reflects compliance with the nominated Standards of Performance for accessibility in accordance with the applicable Act, Code and Australian Standards.

c) The documentation prepared indicates that the design is capable of satisfying Part D3 of the National Construction Code 2016 and the Disability (Access to Premises – Buildings) Standard provisions of the Disability Discrimination Act 1992.

d) The table following confirms compliance with the requirements of the National Construction Code

MEASURE AND/OR SYSTEM	STANDARDS OF PRACTICE	N/A	SATISFIED DETAILE TO BE PROVIDED AS PART OF THE CONSTRUCTION CERTIFICATE DOCUMENTATION
D3.1	**Access into and within the building** BCA 2016 Part D3 and AS1428.1-2009 & AS1428.2:1992	☐	✓
D3.2	**Access to Buildings** – AS1428.1:2009	☐	✓
D3.3	**Parts of Buildings to be accessible** – AS1428.1:2009	☐	✓
D3.4	**Exemptions**	☐	✓
D3.5	**Accessible parking** –AS2890.6:2009	☐	✓
D3.6	**Braille & Tactile signage** NCC 2016 Clause D3.6, Specification D3.6 and AS1428.1-2009	☐	✓
D3.7	**Hearing Augmentation**	✓	☐
D3.8	**Tactile Ground Surface Indicators** NCC 2016 Clause D3.8 and AS1428.4.1-2009	☐	✓
D3.9	**Wheelchair seating spaces in Class 9b assembly Buildings**	✓	☐
D3.12	**Glazing on an accessway** – AS1428.1:2009	✓	☐
Specification D3.6	**Braille & Tactile Signs**	☐	✓
Part E3	**Lift Installations** NCC 2016 Clause E3.6 and AS1735.12	☐	✓
Part F2	**Sanitary Facilities** NCC 2016 Clause F2.4 and AS1428.1-2009	☐	✓

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e) Performance / Design Statements relied upon:

This DA Design Statement does not rely on any Performance Solutions.

f) Compliance with AS1428

The DA documentation was reviewed on 13 November 2018. This design statement confirms that the works as proposed is capable of satisfying the requirements of AS1428:2009

g) NCC Clause D3.4 Exemptions

Applying the **NCC D3.4 *Exemptions*** concession the following rooms within this development has been designated as not requiring to be accessible:

- Stores
- Plant areas

h) Documents relied upon

In providing this Statement for the DA we have relied upon the following documents:

- Slip resistance certification issued by the respective floor finishes manufacturers
- Confirmation of compliant lighting levels

i) Architectural Documentation

The following documents form the basis of this access report:

Dwg No	Title	Issue Date
TP00.00	COVER SHEET	-
TP00.03	PROPOSED SITE PLAN	-
TP01.00	BASEMENT 4 PLAN	-
TP01.01	BASEMENT 3 PLAN	-
TP01.02	BASEMENT 2 PLAN	-
TP01.03	BASEMENT 1 PLAN	-
TP01.04	GROUND PLAN	-
TP01.05	LEVEL 1 PLAN	-
TP01.06	LEVEL 2 PLAN	-
TP01.07	LEVEL 3 PLAN	-
TP01.08	LEVEL 4 PLAN	-
TP01.09	LEVEL 5 PLAN	-
TP01.10	LEVEL 6 PLAN	-
TP01.11	LEVEL 7 PLAN	-
TP01.12	LEVEL 8 PLAN	-
TP01.13	LEVEL 9 PLAN	-
TP01.14	LEVEL 10 PLAN	-
TP01.15	LEVEL 11-14, 16-19, 21-24, 26-29, 31 PLANS	-
TP01.16	LEVEL 15, 20, 25, 30 PLAN	-
TP01.18	LEVEL 32-34 PLANS	-

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Dwg No	Title	Issue Date
TP01.40	LEVEL 35 PLAN	-
TP01.41	ROOF PLAN	-
TP01.50	GROUND FLOOR MEZZANINE	-
TP06.30	ADAPTABLE, LHA COMPLIANT & ACCESSIBLE PLANS	-

j) Qualifications

I am a properly qualified person and have good working knowledge of the relevant codes and standards referenced above.

My qualifications are:

- M.PropDev (UTS),
- BArch (Hons) (UNSW), ARB Reg No 4700,
- Cert IV - ACCESS
- ACAA Accredited Access Consultant (No 330)

The information contained in this statement is true and accurate to the best of my knowledge.

Richard Seidman
M.PropDev, BArch (Hons),
ARB Reg No 4700,
ACAA (Accredited Access Consultant No 330)
Livable Housing Registered Assessor 10041

DISABLED ACCESS & EGRESS – DESIGN STATEMENT – DEVELOPMENT APPLICATION

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STATEMENT OF EXPERTISE

Name	**Richard Seidman**
Qualifications	• 2014 Accredited assessor Livable Housing Australia • 2011 Certificate IV Access Consulting (IATA) • 2008 – Accredited Green Star Professional (GBCA) • 2007 – Graduate Diploma in Building Surveying (Fire Engineering) University of Western Sydney • 2005 – Masters in Property Development University of Technology (Graduating 1st in year) • 1999 – Graduate Diploma in Architectural Design Science (Facilities Management) University of Sydney • 1983 – Bachelor of Architecture (Hons) University of NSW
Memberships	• Royal Australian Institute of Architects (No. 4700) • NSW Architects Registration Board (No. 4829) • Association of Consultants in Access Australia (Accredited Access Consultant No 330) • Livable Housing Australia (10041)
Experience	Richard Seidman has practised for more than 30 years in the built environment and has developed extensive skills and expertise in the residential, commercial, industrial, health, retail, education and transport industries. Richard has extensive expertise in all aspects of AS1428, AS4299 and AS2890.6 which has been honed as part of the plan check role undertaken as part of the NBESP Social Housing Initiative undertaken for the Department of Human Services – Housing NSW and 10 years' experience with Westfield Design and Construction in the capacity of Project Design Manager. IN 2010 Richard established iAccess Consultants a division of Seidman & Associates Pty Ltd. Since 2010 Richard has undertaken a wide range of consultancies