Date: 2 July 2018
Our Ref: P18158

GreenForest RE Pty Ltd
Att: Mr Jim Shi

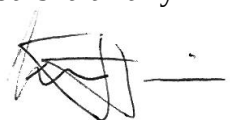
Dear Jim,

RE: 23 - 29 Harvey Ave, Moorebank.
ACCESS COMPLIANCE REPORT

Please find enclosed our Access Assessment Report prepared in respect of the proposed design contained within the architectural documentation provided.

Should you require any further information, please do not hesitate to contact me on the number provided.

Yours faithfully



Kieran Tobin
Director

ACCESS ASSESSMENT

PREPARED FOR

GreenForest RE Pty Ltd

REGARDING

23 - 29 Harvey Ave, Moorebank .

Prepared By

BCA vision

REPORT REGISTER

The following report register documents the development and issue of this report and project as undertaken by this office, in accordance with the *Quality Assurance* policy of BCA Vision Pty Ltd.

Our Reference	Issue No.	Remarks	Issue Date
P18158	1		2 July 2018

CONTENTS PAGE

1.0 INTRODUCTION

1.1 GENERAL

This "Access Assessment" report has been prepared at the request of GreenForest RE Pty Ltd, and relates to the premises known as 23 - 29 Harvey Ave, Moorebank.

The project proposal includes construction of a new 8 storey residential unit building with basement car parking.

This report is based upon, and limited to, the information depicted in the documentation provided for assessment, and does not make assumptions regarding "design intention" or the like.

1.2 REPORT BASIS

The content of this report reflects –

(a) The principles and provisions of BCA 2016 Part D3,
(b) The requirements of AS 1428.1 – 2009, Design for access and mobility Part 1: General requirements for access;
(c) The requirements of AS 4299 – Adaptable Housing
(d) Architectural documentation prepared by Pagano Architects: –

Plan Number	Titled	Dated
A00.01	Cover Page	08/05/18
A02.01	Site and Roof Plan	08/05/18
A03.01	Basement Level 2 Plan	08/05/18
A03.02	Basement Level 1 Plan	08/05/18
A03.03	Ground Level Plan	08/05/18
A03.04	Level 1 Plan	08/05/18
A03.05	Level 2 Plan	08/05/18
A03.06	Level 3 Plan	08/05/18
A03.07	Level 4 Plan	08/05/18
A03.08	Level 5 Plan	08/05/18
A03.09	Roof Level	08/05/18
A04.01	Elevations	08/05/18
A04.02	Elevations	08/05/18
A05.01	Sections	08/05/18
A05.02	Sections	08/05/18

1.3 EXCLUSIONS

It is conveyed that this report should not construed to infer that an assessment for compliance with the following has been undertaken –

(a) Structural and services design documentation;
(b) General building services (i.e. passenger lifts);

(c) The individual requirements of service providers (i.e. Telstra, Water Supply, Energy Australia);
(d) The individual requirements of the Workcover Authority;
(e) Disability Discrimination Act (DDA);

2.0 BUILDING DESCRIPTION

2.1 GENERAL

In the context of the Building Code of Australia (BCA), the subject development is described within items 2.2 – 2.6 below.

2.2 RISE IN STOREYS (CLAUSE C1.2)

The building is proposed to have a rise in storeys of eight (8)

2.2 BUILDING CLASSIFICATION (CLAUSE A3.2)

The subject tenancy incorporates the following classifications:-

Class	Description
Class 2	Residential Units
Class 7a	Car Park

2.2 LEGISLATIVE REQUIREMENTS (ACCESS TO PREMISES CODE)

1.1 Name of Standards
These Standards are the Disability (Access to Premises — Buildings) Standards 2010.
1.2 Commencement
These Standards commence on 1 May 2011.
Note these standards take effect subject to subsection 31 (4) of the Disability Discrimination Act 1992.
1.3 Objects
The objects of these Standards are:
(a) to ensure that dignified, equitable, cost-effective and reasonably achievable access to buildings, and facilities and services within buildings, is provided for people with a disability; and
(b) to give certainty to building certifiers, building developers and building managers that, if access to buildings is provided in accordance with these Standards, the provision of that access, to the extent covered by these Standards, will not be unlawful under the Act.

3.0 BCA "ACCESS" ASSESSMENT – SUMMARY

Note: Capable of Complying identifies elements requiring further reference by the builder during construction

3.1 BCA REQUIREMENTS

Clause No	Description	Complies	Doesn't Comply	Capable of Complying	Not Applicable
D3.1	General building access requirements			✓	
D3.2	Access to buildings			✓	
D3.3	Parts of buildings to be accessible			✓	
D3.4	Exemptions				✓
D3.5	Accessible car parking				✓
D3.6	Signage			✓	
D3.7	Hearing augmentation				✓
D3.8	Tactile indicators			✓	
D3.9	Wheelchair seating spaces in Class 9b assembly buildings				✓
D3.10	Swimming pools				✓
D3.11	Ramps				✓
D3.12	Glazing on an access way			✓	
Part D4 Braille and tactile signs					
D4.2	Location of braille and tactile signs			✓	
D4.3	Braille and tactile sign specification			✓	
D4.4	Luminance contrast			✓	
D4.5	Lighting			✓	
D4.6	Braille			✓	
Part D5 Accessible water entry/exit for swimming pools					
D5.2	Fixed or moveable ramp				✓
D5.3	Zero depth entry				✓
D5.4	Platform swimming pool lift				✓
D5.5	Sling-style swimming pool lift				✓
D5.6	Aquatic wheelchair				✓
Part E3 Lift installations					
E3.6	Passenger lifts			✓	
Part F2 Sanitary and other facilities					
F2.4	Accessible sanitary facilities			✓	

3.2- ACCESS AND MOBILITY STANDARDS CHECKLIST

Clause No	Description	Complies	Does Not Comply	Capable of Complying	Not Applicable
6 - CONTINUOUS ACCESSIBLE PATHS OF TRAVEL					
6.1	**General**			✓	
6.2	**Heights of a continuous accessible**			✓	
6.3	**Width of a continuous accessible path of travel**			✓	
6.4	**Passing space for wheelchairs**			✓	
6.5	**Circulation space for wheelchair turn**			✓	
6.6	**Visual indicators on glazing**			✓	
7 FLOOR OR GROUND SURFACES ON CONTINUOUS ACCESSIBLE PATHS OF TRAVEL AND CIRCULATION SPACES					
7.1	**General**			✓	
7.2	**Construction tolerances for abutment of surfaces**			✓	
7.3	**Changes in level**			✓	
7.4 Fixed or recessed floor coverings—					
7.4.1	**Carpets and other soft flexible materials**			✓	
7.4.2	**Recessed matting**			✓	
7.5	**Grates**			✓	
8 SIGNAGE					
8.1	**Form of signs**			✓	
8.2	**Symbols indicating access for people with disabilities**			✓	
9	**TACTILE GROUND SURFACE INDICATORS (TGSIs)**			✓	
10 WALKWAYS, RAMPS AND LANDINGS					
10.1	**General**			✓	
10.2	**Walkways**			✓	
10.3	**Ramps**				✓
10.4	**Curved walkways, ramps, and landings**				✓
10.5	**Threshold ramps**			✓	
10.6	**Step ramp**				✓
10.7	**Kerb ramps**				✓
10.7.2	**Profile**			✓	
10.8	**Landings**			✓	
10.8.2	**Step ramps**				✓
10.8.3	**Kerb ramps**				✓
11 STAIRWAYS					
11.1	**Stair construction**			✓	
11.2	**Stairway handrails**			✓	
12	**HANDRAILS**			✓	

13 DOORWAYS, DOORS AND CIRCULATION SPACE AT DOORWAYS					
13.1	**Luminance contrast**			✓	
13.2	**Clear opening of doorways**			✓	
13.3	**Circulation spaces at doorways on a continuous accessible path of Travel**			✓	
13.3.2	**Swinging doors**			✓	
13.3.3	**Sliding doors**				✓
13.3.3.2	**Cavity sliding doors**				✓
13.3.3.3	**Surface-mounted doors**				✓
13.3.4	**Power operated doors**				✓
13.4	**Distance between successive doorways in passages in an accessible path of travel**				✓
13.5	**Door controls**			✓	
13.5.2	**Design and performance**			✓	
13.5.3	**Location**			✓	
13.5.4	**Power-operated door controls**				✓
14 SWITCHES AND GENERAL PURPOSE OUTLETS (POWER POINTS)					
14.1	**General**			✓	
14.2	**Accessible sole-occupancy units and accessible sanitary facilities**			✓	
15 SANITARY FACILITIES					
15.1	**General**			✓	
15.2	**Accessible unisex sanitary facilities**			✓	
15.2.2	**WC pan clearances**			✓	
15.2.3	**Seat**			✓	
15.2.4	**Backrest**			✓	
15.2.5	**Flushing control**			✓	
15.2.6	**Toilet paper dispenser**			✓	
15.2.7	**Grab rails**			✓	
15.2.8	**Circulation space**			✓	
15.2.8.2	**Baby change tables**			✓	
15.2.10	**Washbasins for unisex accessible sanitary facilities**			✓	
15.3	**Washbasins**			✓	
15.3.2	**Accessible sole occupancy units**			✓	
15.4	**Fixtures and fittings within a sanitary facility**			✓	
15.4.2	**Shelves**			✓	
15.4.3	**Soap dispensers, towel dispensers and similar fittings**			✓	
15.4.4	**Clothes-hanging devices**			✓	
15.4.5	**Sanitary disposal unit**			✓	
15.4.6	**Switches and general purpose outlets**			✓	
15.5 Showers					
15.5.2	**Floor and waste outlet**				✓

15.5.3	**Opening shower screens**				✓
15.5.4	**Grab rails**				✓
15.5.5	**Shower head support grab rail**				✓
15.5.6	**Shower head**				✓
15.5.7	**Soap holder**				✓
15.5.8	**Taps**				✓
15.5.9	**Folding seat**				✓
15.5.10	**Clothes hanging devices**				✓
15.6	**Circulation spaces in accessible sanitary facilities**				✓
16 SANITARY COMPARTMENT FOR PEOPLE WITH AMBULANT DISABILITIES					
16.2	**Grab rails**				✓
16.3	**Doors**				✓
16.4	**Signage**				✓
16.5	**Coat hook**				✓
17	**GRABRAILS**				✓
18 ASSEMBLY BUILDINGS					
18.2	**Surfaces**				✓
18.3	**Spatial requirements**				✓

4.0 BCA "ACCESS" ASSESSMENT – DETAILED REQUIREMENTS

4.1 BCA REQUIREMENTS

CLAUSE	CLAUSE REQUIREMENTS	ACTION/RECOMMENDATION
Cl. D3.1	**General building access requirements** Buildings and parts of buildings must be *accessible* as *required* by Table D3.1, unless exempted by D3.4	Access within the subject building is required to the doorway of every unit from the street and to the any communal spaces. The following key elements require further detail within the proposed plans:- 1) A Lift is required to provide access from the Accessible Car space; 2) Details of compliant floor surface materials will be required in accordance with Clause 7 of AS 1428.1; 3) Details of compliant turning and passing areas within the pathway to all units will be required in accordance with Clause 7 of AS 1428.1; 4) Details of the walkways From the street to each unit entry will be required in accordance

		with Clause 10 & 12 of AS 1428.1; 5) Details of the hand rail compliance to the stairs from the basement car park; will be required in accordance with Clause 12 of AS 1428.1; 6) Details of the door dimensions, circulation and door approach dimensions door hardware and colour contrast at doors in accordance with Clause 13 of AS 1428.1 7) Details of the compliance of fixtures and fittings to the Accessible sanitary facilities in accordance with Clause 15 of AS 1428.1 - 2009
Cl. D3.2	**Access to buildings** (a) 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. (b) In a building *required* to be *accessible*, an *accessway* must be provided through the principal pedestrian entrance, and— (i) through not less than 50% of all pedestrian entrances including the principal	As Above

	pedestrian entrance; and (ii) in a building with a total *floor area* more than 500 m^2, 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 D3.4. (c) Where a pedestrian entrance *required* to be *accessible* has multiple doorways— (i) if the pedestrian entrance consists of not more than 3 doorways — not less than 1 of those doorways must be *accessible*; and (ii) if a pedestrian entrance consists of more than 3 doorways — not less than 50% of those doorways must be *accessible*. (d) For the purposes of (c)— (i) an *accessible* pedestrian entrance with multiple doorways is considered to be one pedestrian entrance where— (A) all doorways serve the same part or parts of the building; and (B) the distance between each doorway is not more than the width of the widest doorway at that pedestrian entrance (see Figure D3.2); and (ii) a doorway is considered to be the clear, unobstructed opening created by the opening of one or more door leaves (see Figure D3.2). (e) Where a doorway on an *accessway* has multiple leaves, (except an automatic opening door) one of those leaves must have a clear opening width of not less than 850 mm in accordance with AS 1428.1.	
Cl. 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 Above

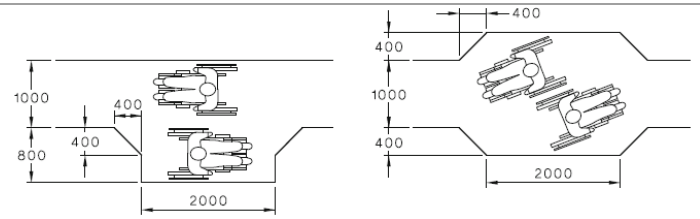
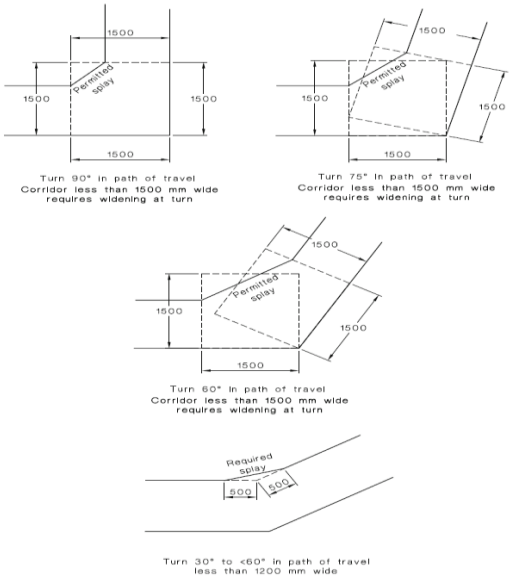
	AS 1428.1; and (ii) for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1; (iii) for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1; (b) every passenger lift must comply with clause E3.6; (c) *access ways* must have: (i) passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an *access way* where a direct line of sight is not available; and (ii) turning spaces complying with AS 1428.1: (A) within 2 m of the end of *access ways* where it is not possible to continue travelling along the *access way*; and (B) at maximum 20 m intervals along the *access way*; (d) an intersection of *access ways* satisfies the spatial requirements for a passing and turning space; (e) a passing space may serve as a turning space; (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 200 m^2.	
Cl. D3.5	**Accessible carparking** *Accessible* carparking spaces— (a) subject to (b), must be provided in accordance with Table D3.5 in— (i) a Class 7a building *required* to be *accessible*; and (ii) a carparking area on the same allotment as a building *required* to be *accessible*;	Required where adaptable units may be proposed

	and (b) need not be provided in a Class 7a building or a carparking area where a parking service is provided and direct access to any of the carparking spaces is not available to the public; and (c) subject to (d), must comply with AS/NZS 2890.6; and (d) need not be designated where there is a total of not more than 5 carparking spaces, so as to restrict the use of the carparking space only for people with a disability.	
Cl. D3.8	**Tactile indicators** (1) For a building *required* to be *accessible*, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching: (a) a stairway, other than a *fire-isolated stairway*; (b) an escalator; (c) a passenger conveyor or moving walk; (d) a ramp other than a *fire-isolated ramp*, a step ramp, a kerb ramp or a *swimming pool* ramp; and (e) in the absence of a suitable barrier: (i) an overhead obstruction less than 2 m above floor level, other than a doorway; and (ii) an *access way* meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in clause D3.4, if there is no kerb or kerb ramp at that point; except for areas exempted by clause D3.4. (2) Tactile ground surface indicators *required* by subclause (1) must comply with sections 1 and 2 of AS/NZS 1428.4.1. (3) A hostel for the aged, nursing home for the aged, a *residential aged care building*, Class 3 accommodation for the aged, Class 9a *health-care building* or a Class 9c *aged care building* need not comply with paragraphs (1) (a) and (d) if handrails	Tactile Indicators are required for all stairs and ramps within the proposed building.

	incorporating a raised dome button in accordance with the requirements for stairway handrails in AS 1428.1 are provided to warn people who are blind or have a vision impairment that they are approaching a stairway or ramp.	
Cl. D3.8	**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 AS 1428.1.	All glazed doors require markings – this issue is discussed in detail further within this report.

5.2 - ACCESS AND MOBILITY STANDARDS CHECKLIST

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMMENDATION
PART 6 – CONTINUOUS ACCESSIBLE PATHS OF TRAVEL		
6.1	General A continuous accessible path of travel shall not include a step, stairway, turnstile, revolving door, escalator, moving walk or other impediment.	For Reference
6.2	Heights of a continuous accessible path of travel The minimum unobstructed height of a continuous accessible path of travel shall be 2000 mm or 1980 mm at doorways	For Reference
6.3	Width of a continuous accessible path of travel Unless otherwise specified (such as at doors, curved ramps and similar), the minimum unobstructed width (see Figure 2) 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.	Further detail Required within the construction drawings
6.4	Passing space for wheelchairs Passing space for 2 persons using wheelchairs shall be a minimum width of 1800 mm for a minimum length of 2000 mm.	For Reference

		 DIMENSIONS IN MILLIMETRES FIGURE 3 EXAMPLES FOR PASSING SPACE FOR WHEELCHAIRS
6.5	Circulation space for wheelchair turn 60° to 90° turn The space required for a wheelchair to make a 60° to 90° turn shall have a gradient no steeper than 1 in 40 and shall be not less than 1500 mm wide and 1500 mm long in the direction of travel. The space may be splayed across the internal corner as shown in Figure 4. 30° to <60° Where the angle of turn is 30° to less than 60° and the width of the path of travel is less than 1200 mm, a splay of at least 500 mm × 500 mm shall be made on the internal corner, as shown in Figure 4. >90° to 180° The space required for a wheelchair to make a >90° to 180° turn shall be not less than 2070 mm in the direction of travel and not less than 1540 mm wide, as shown in Figure 5.	Additional information must be included within the Construction Documentation submitted with the Construction Certificate  DIMENSIONS IN MILLIMETRES FIGURE 4 SPACE REQUIRED FOR A 30° TO 90° DEGREE TURN

6.6	Visual indicators on glazing 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.	Further detail Required within the construction drawings
PART 7 – FLOOR & GROUND SURFACES ON CONTINUOUS PATHS OF TRAVEL & CIRCULATION SPACES		
7.1	General A continuous accessible path of travel and any circulation spaces shall have a slip-resistant surface. The texture of the surface shall be traversable by people who use a wheelchair and those with an ambulant or sensory disability.	Further detail Required within the construction drawings
7.2	Construction tolerances for abutment of surfaces Abutment of surfaces shall have a smooth transition. Design transition shall be 0 mm. Construction tolerances shall be as follows: (a) 0 • }3 mm vertical, as shown in Figure 6(a). (b) 0 • }5 mm, provided the edges have a bevelled or rounded edge to reduce the likelihood of tripping, as shown in Figure 6(b).	Further detail Required within the construction drawings
7.3	Changes in level When a vertical change of not more than 5 mm occurs between the abutment of	Further detail Required within the construction drawings

	two surfaces along a continuous accessible path of travel, such change in surface level shall comply with the tolerances given in Clause 7.2.	
7.5	Grates Grates shall comply with the following: (a) 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. NOTE: Where slotted openings are less than 8 mm, the length of the slots may continue across the width of paths of travel. Circular openings shall be not greater than 13 mm in diameter.	Further detail Required within the construction drawings
Part 8 - SIGNAGE		
8.1	Form of signs The BCA contains requirements for Braille and tactile signage in Specification D3.6. Where signs are required, the form of signs shall be as follows: (a) Where required, raised tactile and/or Braille signage shall be provided as follows: (i) Sanitary facilities shall be identified with the following: (A) Raised and visual versions of the international symbol of access. (B) Raised and visual versions of the male and female symbols. (C) Raised text that shall be in title case (e.g. Male Toilet). NOTE: Title case has the first letter of each word capitalized and the rest are lower case. Short articles, prepositions and conjunctions are not capitalized. (D) Braille that fully describes the visual information displayed by symbols and raised text.	Further detail Required within the construction drawings

8.2	Symbols indicating access for people with disabilities 8.2.1 International symbol of access The form of the international symbol of access shall be as follows: (a) The symbol of access shall consist of two elements: a stylized figure in a wheelchair pointing to the right on a plain square background. (b) The proportional layout of the symbol of access shall be in accordance with Figure 10. (c) The colour of the Figure shall be white on a blue background in accordance with Figure 11. The blue shall be B21, ultramarine, of AS 2700, or similar. (d) For signs indicating the direction to a facility, an arrow shall be used in combination with the international symbol of access. 8.2.2 International symbol for deafness The form of the international symbol for deafness shall be as follows: (a) The symbol for deafness shall consist of two elements: a stylized ear and diagonal slash on a plain square background. (b) The proportional layout of the symbol for deafness shall be in accordance with Figure 12. (e) The colour of the symbol shall be white on a blue background. The blue shall be B21, ultramarine, of AS 2700, or similar.	Further detail Required within the construction drawings
PART 9 – Tactile Ground Surface Indicators		
9.1	TGSIs to warn people of hazards shall comply with AS/NZS 1428.4.1	Further detail Required within the construction drawings
PART 10 – Walkways Ramps & Landings		
10.1	General Walkways, ramps and landings that are provided on a continuous accessible path of travel shall be as follows: (a) Sharp transitions shall be provided between the planes of landings and ramps, as shown in Figure 14.	Further detail Required within the construction drawings

	(b) Landings shall be provided at all changes in direction in accordance with Clause 10.8. (c) Landing or circulation space shall be provided at every doorway, gate, or similar opening. (d) For walkways and landings having gradients in the direction of travel shallower than 1 in 33, a camber or crossfall shall be provided for shedding of water and shall be no steeper than 1 in 40, except that bitumen surfaces shall have a camber or crossfall no steeper than 1 in 33.	
10.2	Walkways Walkways shall comply with the following: (a) The floor or ground surface abutting the sides of the walkway shall provide a firm and level surface of a different material to that of the walkway at the same level of the walkway, follow the grade of the walkway and extend horizontally for a minimum of 600 mm unless one of the following is provided: (i) Kerb in accordance with Figure 18. (ii) Kerb rail and handrail in accordance with Figure 19. (iii) A wall not less than 450 mm in height. (b) Walkways shall be provided with landings, as specified in Clause 10.8, at intervals not exceeding the following: (i) For walkway gradients of 1 in 33, at intervals no greater than 25 m. (ii) For walkway gradients of 1 in 20, at intervals no greater than 15 m. (iii) For walkway gradients between 1 in 20 to 1 in 33, at intervals that shall be obtained by linear interpolation. For walkways shallower than 1 in 33, no landings are required. The intervals specified above may be increased by 30% where at least one side of a walkway is bounded by— (A) a kerb or kerb rail as specified in Clause 10.3(j) and a handrail as specified in Clause 12; or (B) a wall and a handrail as specified in Clause 12.	Further detail Required within the construction drawings

10.5	Threshold ramps Threshold ramps at doorways on a continuous path of travel shall have— (a) a maximum rise of 35 mm; (b) a maximum length of 280 mm; (c) a maximum gradient of 1:8; and (d) be located within 20 mm of the door leaf which it serves, as shown in Figure 21. The edges of the threshold ramp shall be tapered or splayed at a minimum of 45° where the ramp does not abut a wall. NOTE: For door controls, see Clause 13.5	Further detail Required within the construction drawings
10.8	Walkways and ramps The length of landings at walkways (up to a gradient of 1 in 33) and ramps shall comply with one of the following: (a) Where there is no change in direction, the length shall be not less than 1200 mm, as shown in Figure 25(A). (b) Where there is a change of direction not exceeding 90°, the landing shall be not less than 1500 mm. The internal corner shall be truncated for a minimum of 500 mm in both directions, as shown in Figure 25(B). (c) For a 180° turn, the landing shall be as shown in Figure 25(C),	Further detail is required within the current drawings to ensure compliance of landings.
PART 11 – Stairways		
11.1	Stair construction Where required, stairs shall be constructed as follows: (a) Where the intersection is at the property boundary, the stair shall be set back by a minimum of 900 mm so that the handrail (complying with Clause 12) and TGSIs do not protrude into the transverse path of travel, as shown in Figure 26(A). (b) Where the intersection is at an internal corridor, the stair shall be set back in accordance with Figure 26(B).	Stairs from the basement car park must comply with AS 1428.1. Further detail Required within the construction drawings

	NOTE: Examples of stair handrail terminations are given in Figures 26(C) and 26(D). (c) Stairs shall have opaque risers. (d) Stair nosings shall not project beyond the face of the riser and the riser may be vertical or have a splay backwards up to a maximum 25 mm, as shown in Figures 27(A) and 27(B). (e) Stair nosing profiles shall— (i) have a sharp intersection; (ii) be rounded up to 5 mm radius; or (iii) be chamfered up to 5 mm × 5 mm. (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. (h) TGSIs shall be installed in accordance with AS 1428.4.1.	
11.2	Stairway handrails Handrails shall be continuous throughout the stair flight and, where practicable, around landings (see Figure 28) and have no obstruction on or above up to a height of 600 mm and as follows: (a) The design and construction of handrails shall comply with Clause 12. (b) Handrails shall be installed on both sides of the stairs and as shown in Figures 26(A) and 26(B). (c) Handrails shall have no vertical sections and shall follow the angle of the	Stairs from the basement car park must comply with AS 1428.1. Further detail Required within the construction drawings

	stairway nosings, as shown in Figure 28(b). (d) Where a handrail terminates at the bottom of a flight of stairs, the handrail shall extend at least one tread depth parallel to the line of nosings plus minimum of 300 mm horizontally from the last riser (see Figure 28(b)). (e) The handrail shall extend a minimum of 300 mm horizontally past the nosing on the top riser. (f) Where the handrail is continuous, the 300 mm extension is not required in the inner handrail at intermediate landings as shown in Figure 28(a). (g) The dimensions indicating the heights of handrails shall be taken vertically from the nosing of the tread to the top of the handrail or from the landing to the top of the handrail.	
PART 12 – Handrails		
12	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 as shown in Figure 29(b). (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	Further detail Required within the construction drawings

	through a total of 180°, or to the ground, or returned fully to end post or wall face, as shown in Figures 26(C) and 26(D). (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, as shown in Figures 29(a) and 29(b). (j) The inside handrail at landings shall always be continuous, as shown in Figure 28(a).	
Part 13 - Doorways		
13.1	Luminance contrast 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.	Further detail Required within the construction drawings
13.2	Clear opening of doorways The minimum clear opening of a doorway on a continuous accessible path of travel shall be 850 mm when measured from the face of the opened door to the doorstop, as shown in Figure 30. Where double doors are used, the 850 mm minimum clear opening shall apply to the active leaf.	Door clearance must be clarified for common area doors Further detail Required within the construction drawings.
13.3	Circulation spaces shall be provided at every doorway, gate, or similar entry way, on a continuous accessible path of travel. Circulation spaces at doorways shall have a gradient and cross fall not steeper than	Further detail Required within the construction drawings

	1 in 40. Doorway circulation spaces shall be used in combination to allow access through doorways in both directions, as shown in Figures 31 and 32. The dimensions shall also apply in mirror image configurations. Where clear doorway openings are intermediate to those shown in Figures 31 and 32 then the required circulation spaces shall be interpolated.	
13.3.2	Swinging doors The clear circulation space at doorways with swinging doors is based on the clear opening width of the doorway (D). The clear circulation space shall be not less than the dimensions specified in the tables of Figure 31 for the appropriate clear opening width.	Further detail Required within the construction drawings.
13.3.5	General Door controls in, or forming part of, the continuous accessible path of travel shall comply with the requirements of this Clause.	Further detail Required within the construction drawings.
13.3.5.2	Design and performance Door handles and related hardware and accessories shall comply with the following: (a) The door handle and related hardware shall be of the type that allows the door to be unlocked and opened with one hand. The handle shall be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch. NOTES: 1 Figure 35(A) shows an example of a suitable hinged door handle. Figure 35(B) shows an example of a suitable door handle for sliding doors. 2 Door handles of 'D' lever type provide an adequate grip for people with hand impairments. (b) The clearance between the handle and the back plate or door face at the centre grip section of the handle shall be not less than 35 mm and not more	Further detail Required within the construction drawings.

	than 45 mm. (c) 'D' type handles shall be provided on sliding doors. (d) Where snibs are installed, they shall have a lever handle of a minimum length of 45 mm from the centre of the spindle. (e) For doors other than fire doors and smoke doors where a door closer is fitted, the force required at the door handle to operate the door shall not exceed the following: (i) To initially open the door..... 20 N (ii) To swing or slide the door .....20 N. (iii) To hold the door open between 60° and 90°.....20 N. (f) Where an outward opening door is not self-closing, a horizontal handrail or pull bar shall be fixed on the closing face of a side-hung door	
13.3.5.3	Location Except in early childhood centres, swimming pool barriers or similar situations where the location of the opening and locking controls is prescribed by the relevant statutory authority, the location of the controls for doors and gates shall be above a level surface and as follows: (a) Controls that need to be grasped or turned shall be not less than 900 mm and not more than 1100 mm above the plane of the finished floor, as shown in Figure 36. (b) Controls that only need to be pushed, such as panic bars on egress routes, shall be not less than 900 mm, and not greater than 1200 mm above the plane of the finished floor. (c) Controls that only need to be touched shall be not less than 900 mm, and not greater than 1250 mm above the plane of the finished floor, and not less than 500 mm from an internal corner except as specified in AS 1735.12. (d) Handles on sliding doors shall be not less than 60 mm from the door jamb or	Further detail Required within the construction drawings.

	doorstop when in the open or closed position, as shown in Figure 30. (e) Manual controls to power-operated doors shall be located on the continuous accessible path of travel no closer than 500 mm from an internal corner and between 1000 mm to 2000 mm from the hinged door leaf in any position or clear of a surface-mounted sliding door in the open position.	
15	**SANITARY FACILITIES**	
15.1	General The facilities described in this Clause may be used as individual modules, in mirror image configurations or in a combined form, as specified in Clause 15.6.	For Reference
15.2.1	Water taps Water taps shall comply with the following: (a) Taps shall have lever handles, sensor plates, or other similar controls. (b) Lever handles shall have not less than 50 mm clearance from an adjacent surface. (c) 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. (d) Where hot water is provided, the water shall be delivered through a mixing spout.	Further detail Required within the construction drawings.
15.2.4	Backrest A backrest shall be provided on accessible toilets. The backrest shall— (a) be capable of withstanding a force in any direction of 1100 N; (b) have a height, at the lower edge of backrest to the top of the WC seat, of 120 mm to 150 mm, as shown in Figure 39(a); (c) have a vertical height of 150–200 mm and a width of 350–400 mm, as shown in Figure 39(a); and (d) the front edge of the centre of the backrest be positioned to achieve an angle	Further detail Required within the construction drawings.

	of between 95° to 100° back from the seat hinge	
15.2.5	Flushing controls shall be user activated, either hand operated or automatic. Where hand-operated flushing controls are used, they shall be located within the zone shown in Figure 40, or centred on the centre-line of the toilet, wholly within the vertical limits of that zone. The position of the flushing control within this zone shall not be within the area required for any grab rails or backrest. The flushing control shall be proud of the surface and shall activate the flush before the button becomes level with the surrounding surface.	Further detail Required within the construction drawings.
15.2.6	Toilet paper dispenser The outlet for the toilet paper dispenser shall be located within the zone specified in Figure 41. The toilet paper dispenser shall not encroach upon the clearance space required around the grabrail specified in Clause 15.2.7.	Further detail Required within the construction drawings.
15.2.7	Grabrails Where a concealed or high-level cistern or flush valve is used, a continuous grabrail, as specified in Clause 17, shall be provided across the rear wall and side wall nearest the WC pan, as shown in Figure 42. Where a low-level non-concealed cistern or flush valve is used, the grabrail shall be terminated at each side of the cistern	Further detail Required within the construction drawings.
15.2.8	Circulation space 15.2.8.1 General For each WC, the unobstructed circulation space from the finished floor to a height of not less than 2000 mm shall be as shown in Figure 43, except for the following, which are allowed to intrude into the circulation space: (a) The toilet paper dispenser (see Clause 15.2.6). (b) Grabrails (see Clause 15.2.7).	Further detail Required within the construction drawings.

	(c) Washbasin limited to 100 mm intrusion as shown in Figure 43. (d) Hand dryers and towel dispensers. (e) Soap dispensers (see Clause 15.4.3). (f) Shelves (see Clause 15.4.2). (g) Wall cabinets, where provided, which shall not protrude more than 150 mm into the circulation space. The mounting of wall cabinets shall be at least 900 mm above floor level and the top shelf shall be a maximum of 1250 mm above floor level. (h) Clothes hanging devices (see Clause 15.4.4). (i) Portable sanitary disposal unit as shown in Figure 43. (j) Other wall mounted fixtures, such as dispensing units and sharps disposal units, which shall have 900 mm minimum height clearance from the finished floor level and a maximum projection of 150 mm from finished wall surface. The overlapping of circulation spaces shall be in accordance with Clause 15.6	
15.2.9	WC doors WC doors may be either hinged or sliding. WC doors shall comply with the following: (a) Outward-opening doors shall have a mechanism that holds the door in a closed position without the use of a latch. (b) 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. (c) The force required to operate the door shall be in accordance with Clause 13.5.2(e). (d) Door handles and hardware shall be in accordance with Clause 13.5.	Further detail Required within the construction drawings.
15.2.10	Washbasins for unisex accessible sanitary facilities A hand-washing facility shall be provided inside the toilet cubicle and shall form part of the accessible unisex facility (see Clause 15.3).	Further detail Required within the construction drawings.

15.3	Washbasins 15.3.1 General The installation of washbasins shall comply with the following: (a) The washbasin shall be outside the pan circulation space as shown in Figure 43. (b) Water taps shall comply with Clause 15.2.1. (c) Exposed hot water supply pipes shall be insulated or located so as not to present a hazard. (d) 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); except in sole-occupancy units, where Figure 45 shall apply. (e) Water supply pipes and waste outlet pipes shall not encroach on the required clear space under the washbasin. For each washbasin fixture, the unobstructed circulation space shall be as shown in Figure 46; except in sole occupancy units, where Figure 45 shall apply. The washbasin fixture and its fittings are the only fixtures permitted in this space.	Further detail Required within the construction drawings.
15.3.2	Accessible sole occupancy units Accessible sole occupancy units shall have the following characteristics: (a) The projection of the washbasin from the wall and the position of taps, bowl and drain outlet shall be determined in accordance with Figure 45. (b) Water supply pipes and waste outlet pipes shall not encroach on the required clear space under the washbasin, as shown in Figure 45. (c) For each washbasin fixture, the unobstructed circulation space shall be in accordance with Figure 46. The washbasin fixture and its fittings are the only fixtures permitted in this space. (d) Shelf space shall be provided adjacent to the washbasin in one of the following ways: (i) As a vanity top— (A) at a height of 800 mm to 830 mm above the floor;	Further detail Required within the construction drawings.

	(B) with a minimum width of 120 mm beside the basin; (C) with a minimum depth of 300 mm from the front to the rear wall; and (D) with no encroachment into any knee and toe clearance space for a minimum width of 850 mm centred on the basin. (ii) As a separate fixture— (A) within any circulation space at a height of 900 mm to 1000 mm with a minimum underside clearance of 850 mm for a width of 120 mm to 150 mm and length of 300 mm to 400 mm; and (B) external to all circulation spaces at a height of 800 mm to 1000 mm with a minimum width of 120 mm and minimum length of 400 mm.	
15.4	Fixtures and fittings within a sanitary facility 15.4.1 Mirrors In all sanitary facilities, the mirror shall be located either above or adjacent to the washbasin. Where provided, a vertical mirror with a reflective surface not less than 350 mm wide shall extend from a height of not more than 900 mm to a height of not less than 1850 mm above the plane of the finished floor. Where provided, a second vertical mirror shall extend from a height of not less than 600 mm to a height of not less than 1850 mm above the plane of the finished floor. NOTE: Angled or tilted mirrors should not be used since they do not work for all users or accessible facilities. In an accessible sole occupancy unit, the mirror shall be centred over the washbasin.	Further detail Required within the construction drawings.
15.4.4	Clothes-hanging devices A clothes-hanging device 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.	Further detail Required within the construction drawings.
15.4.3	Soap dispensers, towel dispensers and similar fittings	Further detail Required within the

	Where provided, soap dispensers, towel dispensers, hand dryers and similar fittings shall be operable by one hand, and shall 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, and no closer than 500 mm from an internal corner.	construction drawings.
15.4.5	Sanitary disposal unit Where provided, the sanitary disposal unit shall be located as follows: (a) Portable unit as shown in Figure 43. (b) Recessed unit within 500 mm from the pan.	Further detail Required within the construction drawings.
15.4.6	Switches and general purpose outlets Where provided near the washbasin, switches and general purpose outlets shall be located in accordance with Clause 14 and as close to the shelf or worktop as practicable.	Further detail Required within the construction drawings.

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Certificate in Access Appraisal

5.0 KEY POINT SUMMARY

5.1 – GENERAL

Access within the subject building is required to the doorway of every unit from the street and to the any communal spaces.

The following key elements require further detail within the proposed plans:-

1) A Lift is required to provide access from the Accessible Car space;
2) Details of compliant floor surface materials will be required in accordance with Clause 7 of AS 1428.1;
3) Details of compliant turning and passing areas within the pathway to all units will be required in accordance with Clause 7 of AS 1428.1;
4) Details of the walkways
   From the street to each unit entry will be required in accordance with Clause 10 & 12 of AS 1428.1;
5) Details of the hand rail compliance to the stairs from the basement car park; will be required in accordance with Clause 12 of AS 1428.1;
6) Details of the door dimensions, circulation and door approach dimensions door hardware and colour contrast at doors in accordance with Clause 13 of AS 1428.1
7) Details of the compliance of fixtures and fittings to the Accessible sanitary facilities in accordance with Clause 15 of AS 1428.1 - 2009

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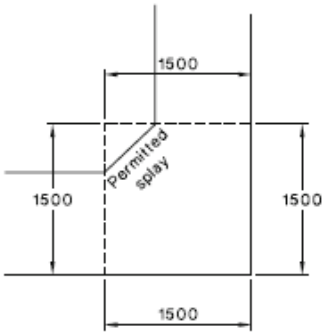
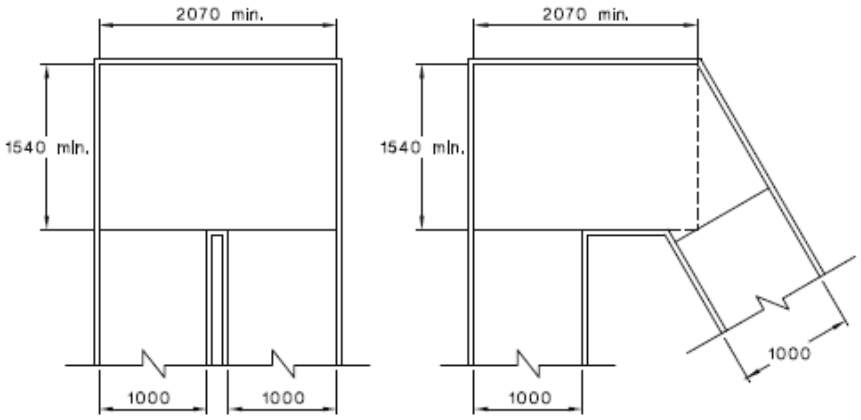


Turn 90° in path of travel
Corridor less than 1500 mm wide requires widening at turn

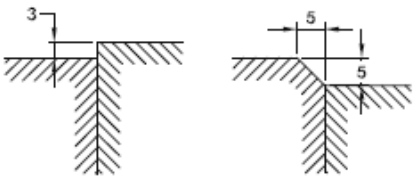
Required Turning Area at Landings



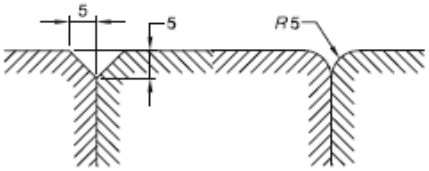
(c) Space required at ramp landing (d) Space required at ramp landing

DIMENSIONS IN MILLIMETRES

FIGURE 5 SPACE REQUIRED FOR A >90° TO 180° TURN



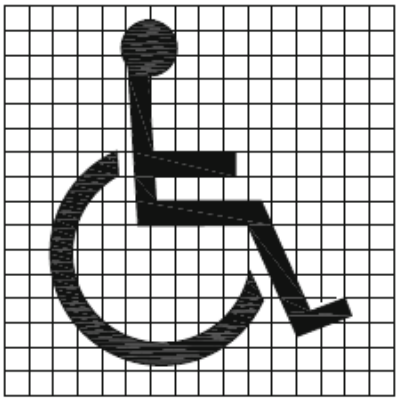
(a) Change in level



(b) Continuous paving units—flush-jointed with level surfaces

DIMENSIONS IN MILLIMETRES AND ARE MAXIMUM

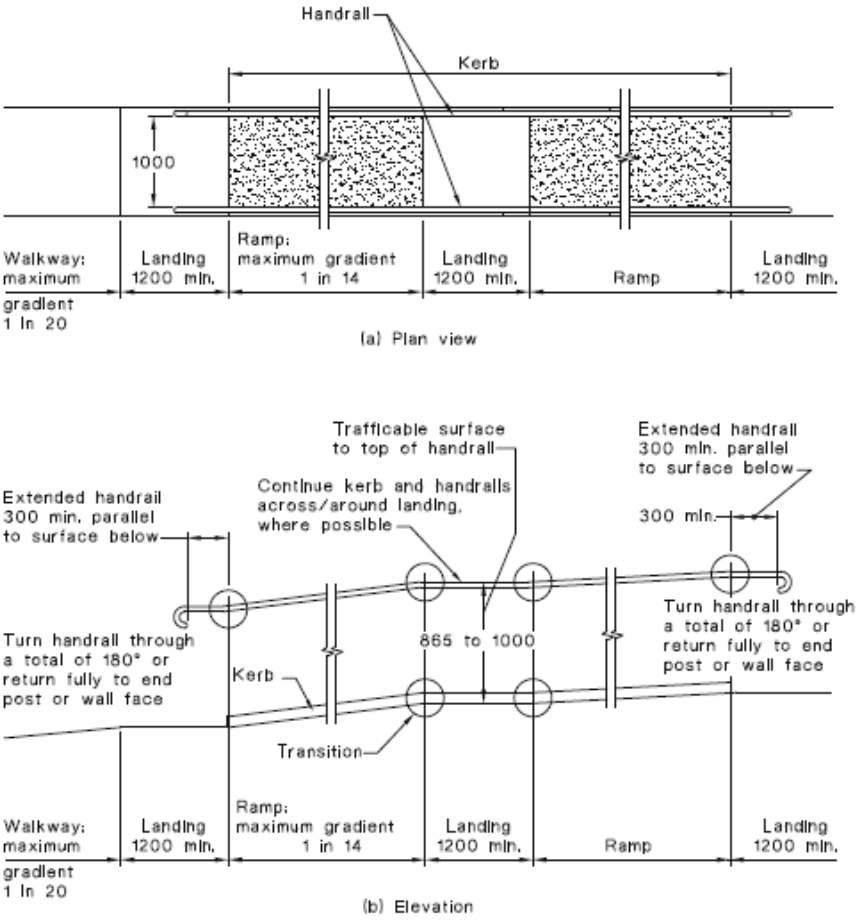
RE 6 ACCEPTABLE CONSTRUCTION TOLERANCES FOR ABUTMENT OF SURFACES



NOTE: The grid is for positional purposes only.

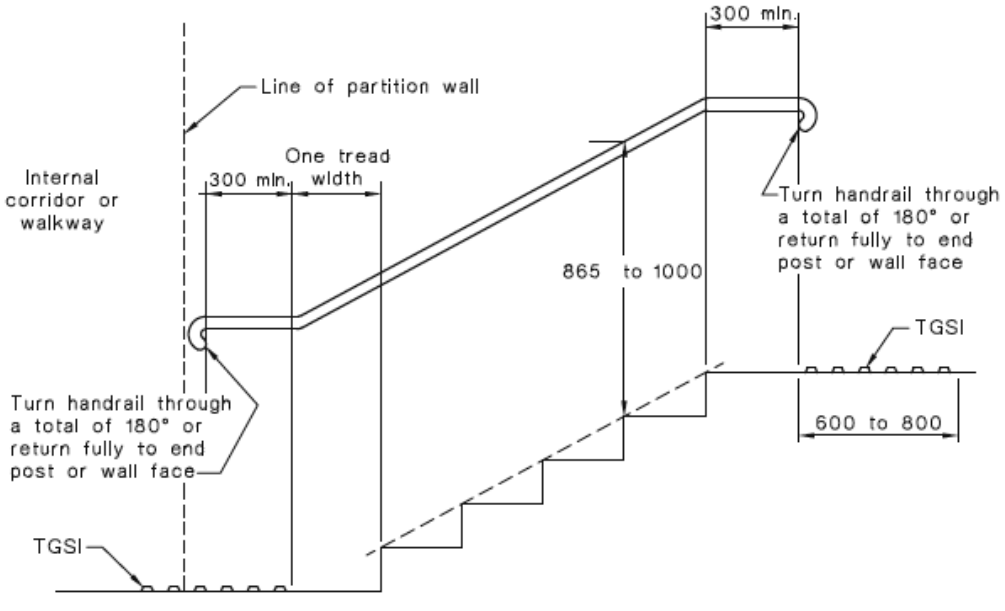
FIGURE 10 PROPORTIONAL LAYOUT FOR INTERNATIONAL SYMBOL OF ACCESS

FIGURE 11 COLOUR CONTRAST FOR SYMBOL OF ACCESS



DIMENSIONS IN MILLIMETRES

FIGURE 14 RAMP HANDRAILS



SECTIONAL VIEW

DIMENSIONS IN MILLIMETRES

FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY

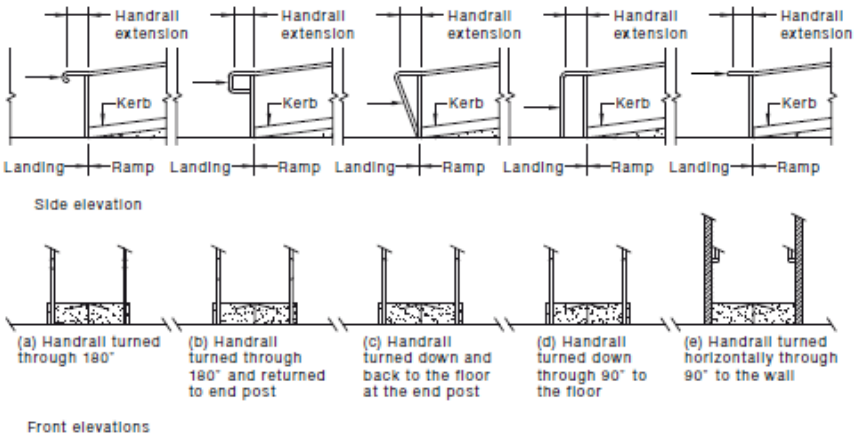
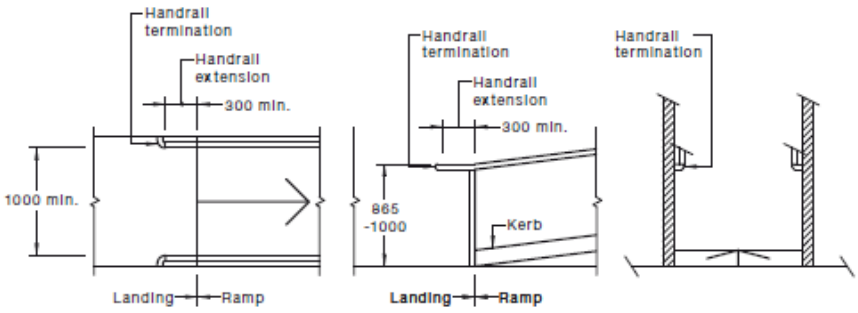
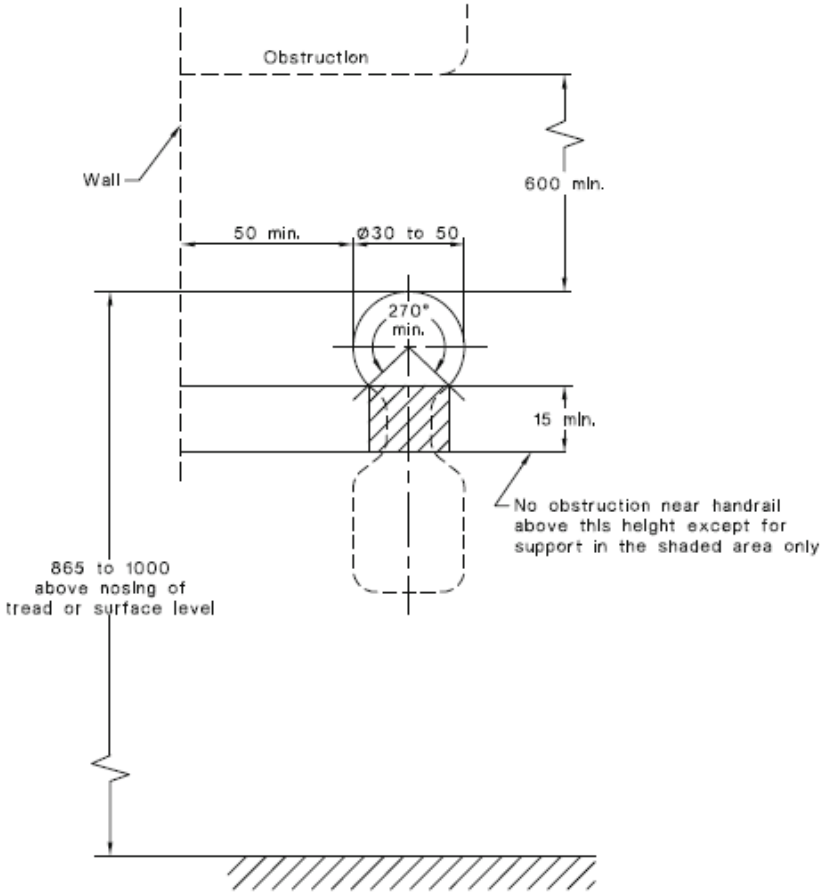


FIGURE 15(A) RAMP HANDRAILS—EXAMPLES OF HANDRAIL TERMINATIONS



DIMENSIONS IN MILLIMETRES

FIGURE 15(B) RAMP HANDRAILS—DETAIL FOR HANDRAILS TERMINATED BY TURNING HORIZONTALLY THROUGH 90° TO THE WALL



(a) Circular

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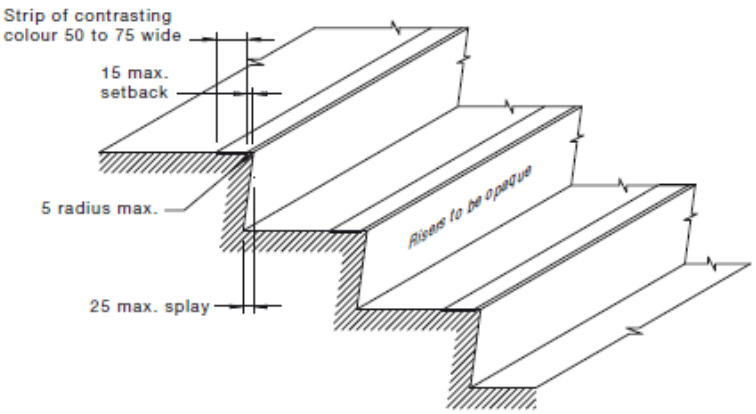
FIGURE 29 (in part) HANDRAILS



NOTE: A chamfered nosing 5 × 5 mm may be used.

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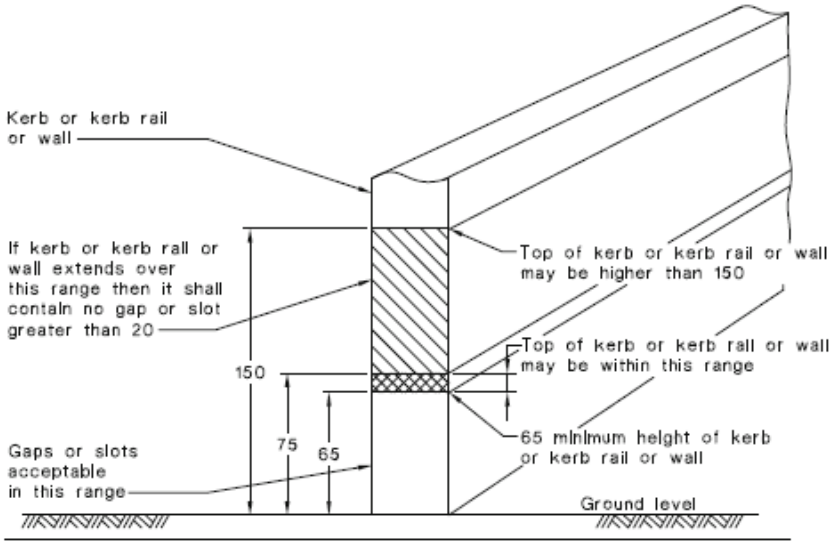
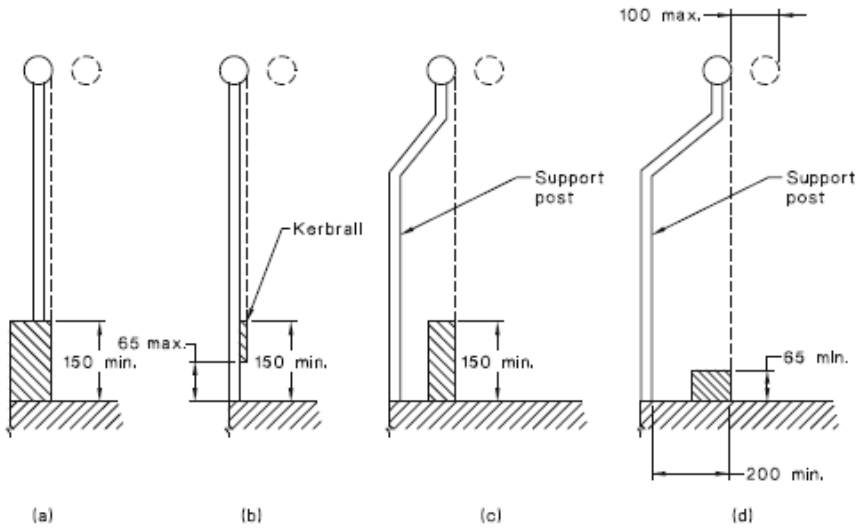
FIGURE 27(A) A TYPICAL STAIR NOSING PROFILE WITH NOSING STRIP



DIMENSIONS IN MILLIMETRES

FIGURE 18 KERB



NOTE: See Appendix A for further clarification.

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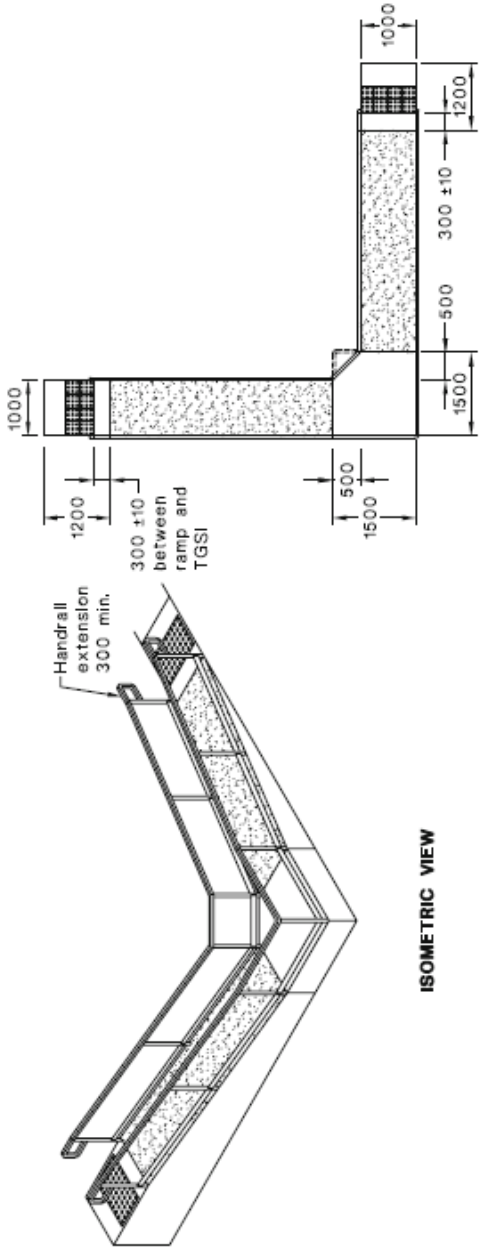
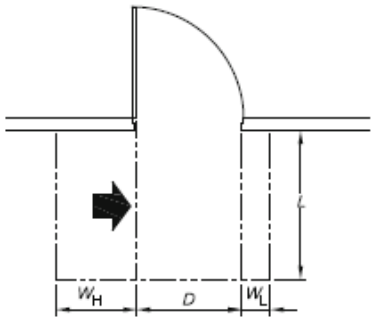
FIGURE 19 SECTION SHOWING LOCATION OF KERB OR KERB RAIL
IN RELATION TO HANDRAIL WITH VERTICAL SUPPORT



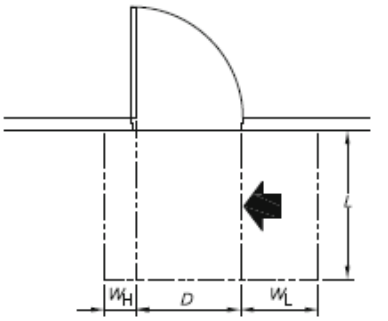
DIMENSIONS IN MILLIMETRES

FIGURE 25(B) RAMPS AND LANDINGS—90° LANDING—INTERNAL



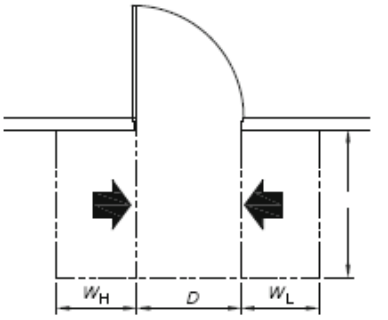
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1220	560	340
900	1185	510	340
950	1160	460	340
1000	1140	410	340

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



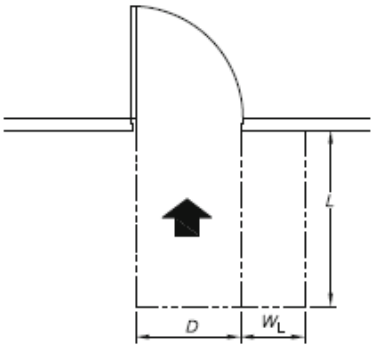
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1240	240	660
900	1210	190	660
950	1175	140	660
1000	1155	90	660

(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



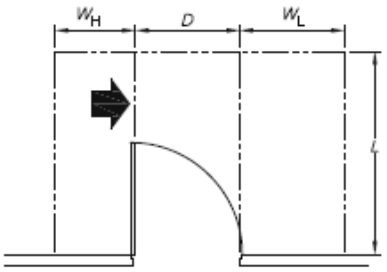
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	0	510
900	1450	0	510
950	1450	0	510
1000	1450	0	510

(d) Front approach, door opens away from user

LEGEND:
D = Clear opening of width of doorway
L = Length
W_H = Width—hinge side
W_L = Width—latch side
➡ = Direction of approach
–·– = Circulation space

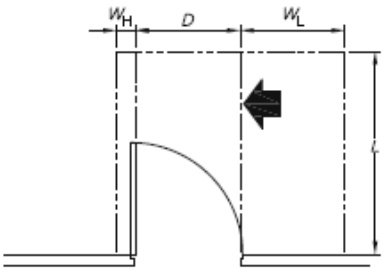
DIMENSIONS IN MILLIMETRES

FIGURE 31 (in part) CIRCULATION SPACES AT DOORWAYS WITH SWINGING DOORS



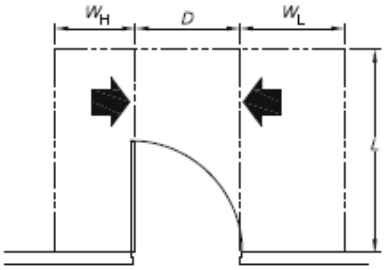
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	660	900
900	1670	610	900
950	1670	560	900
1000	1670	510	900

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



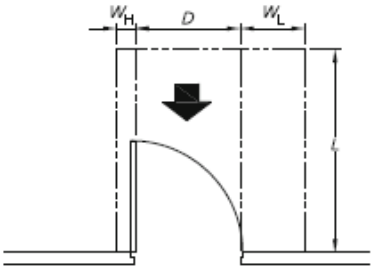
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1670	110	900
900	1670	110	900
950	1670	110	900
1000	1670	110	900

(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



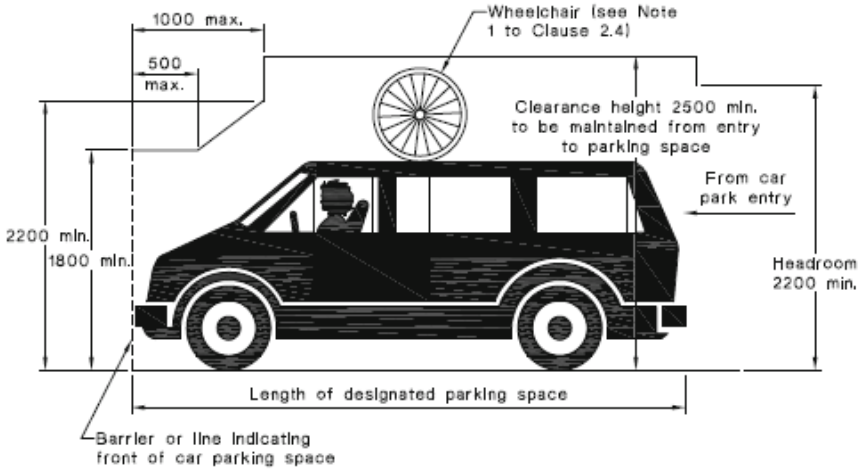
Dimension D	Dimension L	Dimension W_H	Dimension W_L
850	1450	110	530
900	1450	110	530
950	1450	110	530
1000	1450	110	530

(h) Front approach, door opens towards user

LEGEND:
D = Clear opening of width of doorway
L = Length
W_H = Width—hinge side
W_L = Width—latch side
➡ = Direction of approach
- - - = Circulation space

DIMENSIONS IN MILLIMETRES

FIGURE 31 (in part) CIRCULATION SPACES AT DOORWAYS WITH SWINGING DOORS



DIMENSIONS IN MILLIMETRES

FIGURE 2.7 HEADROOM REQUIRED ABOVE CAR SPACES FOR PEOPLE WITH DISABILITIES