DESIGN CONFIDENCE

MHDNUNION

# Access Design Assessment Report

Development Application

17-19 Sydney Road
Manly NSW 2095

ACCESSIBILITY | BUILDING REGULATIONS | FIRE ENGINEERING | MANAGEMENT SERVICES

| | |
|---|---|
| Project: | 17-19 Sydney Road, Manly |
| Document Type: | Access Design Assessment Report |
| Our Reference: | P221_387-2 (ACCESS) KG |

The following report register documents the development and issue of this and each subsequent report(s) undertaken by Design Confidence (Sydney) Pty Ltd.



Revision History—

| OUR REFERENCE | REMARKS | ISSUE DATE |
|---|---|---|
| P221_387-1 (ACCESS) KG | Draft report issued to client | 16 May 2022 |
| P221_387-2 (ACCESS) KG | FINAL report issued to client | 6 December 2022 |

# CONTENTS

# EXECUTIVE SUMMARY

This Access Design Assessment Report has been prepared by Design Confidence at the request of MHNDUNION and relates to the proposed mixed-use development located at 17-19 Sydney Road, Manly.

Based upon our assessment to date we are of the opinion that the subject development is capable of achieving compliance with the accessibility provisions of the BCA, either by complying with the prescriptive requirements or via a performance-based approach.

With respect to the assessment undertaken, the following items shall be reviewed further as the project develops—

| ITEM | DESCRIPTION | RESPONSIBILITY |
|---|---|---|
| 1 | Reduced accessibility provisions relating to the accessway from the site boundary to commercial tenancies – bi-fold doors proposed. | Project Architect |
| 2 | Reduced accessibility provisions relating to the accessway from the site boundary to commercial tenancies – rise in level. | Project Architect |
| 3 | Reduced turning space proposed at the end of corridor in Tenancy 1 basement (behind the lift). | Project Architect |
| 4 | Reduced accessibility provisions relation to gate door circulation space, being nil latch side clearance. | Project Architect |
| 5 | Reduced accessibility provision to stairways in retail units. | Project Architect |
| 6 | As design progresses, further details shall be provided to ensure compliance with the requirements of the BCA / AS1428.1-2009 is achieved, such as:<br>a. Walkway and stairway details;<br>b. Door and door hardware details;<br>c. Tactile indicator details;<br>d. Visual indicator details;<br>e. Handrail details;<br>f. Signage details;<br>g. Lift details. | Project Architect |

In addition to undertaking a detailed assessment of the design against the prescriptive requirements of the BCA a preliminary performance-based assessment has also been undertaken.

The implementation of a performance-based approach in lieu of compliance with the deemed-to-satisfy (DtS) provisions of the BCA shall be disclosed to the relevant stakeholders and is subject to the approval of the certifying authority.

The table below lists scenarios where we believe the adoption of a performance design may add value to development in-lieu of complying with the prescriptive (DtS) provisions—

| ITEM | PROPOSED PERFORMANCE SOLUTION | BCA DtS CLAUSE | PERFORMANCE REQUIREMENT |
|---|---|---|---|
| 1 | Justify principal pedestrian entry to be non-accessible. | D3.1 | DP1 |
| 2 | Justify use of bi-fold doors. | D3.1 & D3.2 | DP1 & DP2 |
| 3 | Justify stair only access between levels in retail units. | D3.1 | DP1 |
| 4 | Justify reduced turning space of 1350mm width in lieu of 1540mm. | D3.3 | DP1 |
| 5 | Justify nil latch side clearance. | D3.1 | DP1 |

# 1.0 INTRODUCTION

## 1.1 General

This report has been prepared at the request of MHNDUNION and relates to the proposed mixed-use development located at 17-19 Sydney Road, Manly.

The proposed development includes the construction of a new mix-use development which will be located above existing common basement.

In the context of this report and the BCA the building use can be described as follows—

| CLASSIFICATION | DESCRIPTION |
|---|---|
| Class 2 | Multi-unit residential building |
| Class 6 | Retail |

| STOREYS CONTAINED (INCLUDING BASEMENT LEVELS) |
|---|
| Five (05) |

## 1.2 Purpose of Report

The purpose of this report is to identify the extent to which the architectural design documentation complies with the *accessibility provisions* of the National Construction Code – Building Code of Australia Volume 1, Edition 2019 Amendment 1 (hereinafter referred to as the BCA), as are principally contained within Parts D3, E3.6, F2.4 and F2.9.

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

## 1.3 Documentation Provided for Assessment

This assessment is based upon the architectural documentation prepared by MHNDUNION and listed within **Appendix 1**.

## 1.4 Limitations

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

This assessment does not contain comments regarding detailed design issues such as (but not limited to): luminance contrast, slip resistance, handrail design, door schedule and door hardware specification and lift specification.

## 1.5 Report Exclusions

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

(i) Work Health & Safety Act and Regulations; and

(ii) Work Cover Authority requirements; and

(iii) Structural and Services Design Documentation; and

(iv) The Disability Discrimination Act (DDA) 1992; and

(v) Any parts of the BCA or any standards other than those directly referenced in this report.

## 1.6 BCA Assessment – Interpretation Notes

To provide the reader with additional context the following information regarding assessment methodology used in this assessment is provided below—

(i) The following rooms / areas and associated accessways have been afforded the concession under D3.4 and access for people with disabilities need not be provided to these areas—

- Pump room;
- Residential storage/Bike parking;
- Commercial waste;
- Grease trap;
- Elect + Comms room;
- Garbage holding room;
- Services.

(ii) Movable furniture is the ongoing responsibility of the occupants who should maintain appropriate circulation spaces between and around furnishings.

(iii) For the purpose of this assessment retail tenancies are being assessed as cold shell.

(iv) For an assessment of the adaptable housing (AS4299-1995) provisions, refer to the report prepared by Design Confidence [reference P221_387-2 (AS4299) KG].

# 2.0 BCA ACCESS DESIGN ASSESSMENT SUMMARY

## 2.1 Interpretation

The following tables summarise the compliance status of the architectural design in terms of each *applicable* prescriptive provision of the BCA and indicates a ***capability for compliance*** ('COMPLIES') with the accessibility provisions of the BCA.

A detailed analysis and commentary are provided in **Section 3.0** of this report in the instance that prescriptive non-compliance occurs ('DOES NOT COMPLY') or further 'DESIGN DETAIL' is required. Such instances should not necessarily be considered BCA deficiencies, but rather matters which need to be considered by the design team, the certifying authority and all other relevant stakeholders as design progresses.

## 2.2 Part D3 – Access for People with a Disability

| BCA CLAUSE | | COMPLIES | DOES NOT COMPLY | DESIGN DETAIL |
|---|---|---|---|---|
| D3.1 | General building access requirements | | | ✓ |
| D3.2 | Access to buildings | | | ✓ |
| D3.3 | Parts of buildings to be accessible | | | ✓ |
| D3.5 | Accessible carparking | | **N/A** | |
| D3.6 | Signage | | | ✓ |
| D3.7 | Hearing augmentation | | **N/A** | |
| D3.8 | Tactile indicators | | | ✓ |
| D3.9 | Wheelchair seating spaces | | **N/A** | |
| D3.10 | Swimming pools | | **N/A** | |
| D3.11 | Ramps | | **N/A** | |
| D3.12 | Glazing on an accessway | | | ✓ |

## 2.3 Part E3.6 – Passenger Lifts

| BCA CLAUSE | | COMPLIES | DOES NOT COMPLY | DESIGN DETAIL |
|---|---|---|---|---|
| E3.6 | Passenger lifts | | | ✓ |

## 2.4 Part F2.4 – Accessible Sanitary Facilities

| BCA CLAUSE | | COMPLIES | DOES NOT COMPLY | DESIGN DETAIL |
|---|---|---|---|---|
| F2.4 | Accessible unisex sanitary compartments | | **N/A** | |
| F2.4 | Sanitary facilities for people with ambulant disabilities | | **N/A** | |

## 2.5 Part F2.9 – Accessible Adult Change Facilities

| BCA CLAUSE | | COMPLIES | DOES NOT COMPLY | DESIGN DETAIL |
|---|---|---|---|---|
| F2.9 | Accessible adult change facilities | | **N/A** | |

# 3.0 BCA DETAILED ASSESSMENT

## 3.1 General

With reference to the BCA Access Design Assessment Summary contained in **Section 2.0** above, the following analysis and commentary is provided.

In all instances, reference is also made to **Appendix 2**, which contains design guidance and other items which shall be coordinated by the relevant stakeholders as design progresses to ensure compliance with the deemed-to-satisfy (DtS) accessibility provisions of the BCA is achieved.

Furthermore, the analysis below contains preliminary advice regarding opportunities for the implementation of a performance-based approach in lieu of complying with the prescriptive (DtS) provisions of the BCA.

## 3.2 Part D3 – Access for People with a Disability

### 3.2.1 Clause D3.1 – General building access requirements

| BUILDING CLASS | ACCESSIBILITY REQUIREMENTS |
|---|---|
| Class 2 | Access is required to be provided—<br>(i) From a pedestrian entrance required to be accessible to at least one (1) floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level; and<br>(ii) To and within not less than one (1) of each type of room/space for use in common by the residents; and<br>(iii) To the entrance doorway of each sole-occupancy unit located on the levels served by the lift;<br>(iv) To and within rooms/spaces for use in common by the residents located on the levels served by the lift. |
| Class 6 | Access is required to and within all areas normally used by the occupants. |
| All buildings | Access is not required to be provided to the areas afforded the concession under Clause D3.4 and identified in **Section 1.6** above. |

### 3.2.2 Clause D3.2 – Access to buildings

An accessway to residential part of building from the site boundary is proposed from Sydney Road and Market Place via 1:20 walkways and flat pathway, shown in **pink**. Commercial tenancies are accessed directly from public domain area and site link between Sydney Road and Market Place, shown in **green**.

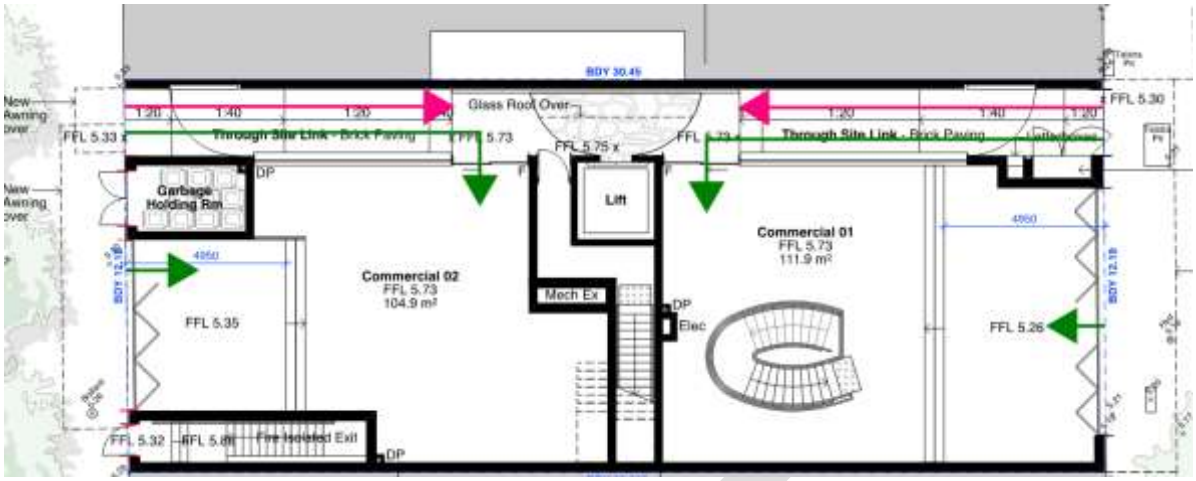



**Figure 1 –** Pedestrian Entries

The following comments are provided in regards the requirements of Clause D3.2 of the BCA—

| DESCRIPTION | COMPLIANCE DEPARTURE | RESOLUTION |
|---|---|---|
| Bi-fold doors – principal pedestrian entry | Principal pedestrian points to retail tenancies 1 and 2 are proposed with bi-fold entry doors. | Level of detail is suitable for DA stage.<br>Bi-fold doors are not permitted on the accessible path of travel.<br>Opt 1: Provide first leaf as hinged door with door circulation space and door opening, compliant with AS1428.1-2009.<br>Opt 2: Alternatively seek a performance solution to justify current design. |
| Level difference – principal pedestrian entries | Drawings indicate a rise of approx. 50mm is proposed at the principal pedestrian entries to retail units. | Level of detail is suitable for DA stage.<br>Opt 1: Provide step free entry from within site boundary in compliance with AS1428.1-2009.<br>Opt 2: Alternatively seek a performance solution to justify current design. |
| Door circulation area – principal pedestrian entries | Principal pedestrian entry door circulation areas to retail units are proposed on public domain area. | Level of detail is suitable for DA stage.<br>Evidence (official survey) will be required that public domain area is on a grade minimum 1:40 for the whole door circulation area required. |
| Gates – entry corridors | Gates with nil latch side clearance are proposed on the main walkway leading to lift lobby on ground floor level. | Level of detail is suitable for DA stage.<br>Opt 1: Provide latch side clearance to gates/doors on a grade not less |

| DESCRIPTION | COMPLIANCE DEPARTURE | RESOLUTION |
|---|---|---|
| | | than 1:40. Minimum 1450mm length for front approach.<br>Opt 2: Alternatively seek a performance solution to justify current design (automated door will be required). |
| Walkways | Walkways are proposed with landings at the bottom of the walkway located on public domain area. | Level of detail is suitable for DA stage.<br>Evidence (official survey) will be required that public domain area is on a grade minimum 1:40 in all directions. 1500mm length required to allow for 90-degree turn. |
| Detailed drawings | Entry walkway detailed drawings have not yet been provided for assessment. | Level of detail is suitable for DA stage.<br>As design progresses detailed drawings will be required.<br>Ensure walkway design complies with Clause 10.2 of AS1428.1-2009. |

Refer to **Appendix 2** below for further design guidance.

3.2.3 Clause D3.3 – Parts of the building to be accessible

The following comments are provided in regards the requirements of Clause D3.3 of the BCA—

| DESCRIPTION | COMPLIANCE DEPARTURE | RESOLUTION |
|---|---|---|
| Turning area – basement retail 1 | End of corridor behind the lift is proposed with reduced turning area. | Level of detail is suitable for DA stage.<br>Opt 1: Provide minimum 1540x2070mm at the end of an accessway.<br>Opt 2: Alternatively seek a performance solution to justify current design. |
| Internal stair – Retail 1 | Retail tenancy 1 is proposed with stair only connection within the unit, between basement and ground floor level. | Level of detail is suitable for DA stage.<br>Opt 1: Provide general access in the tenancies via ramp or lift.<br>Opt 2: Seek a performance solution to justify stair only access to basement floor. |
| Internal stairs – retail tenancies | Stair only access is provided in retail tenancies 1 and 2 between lower and upper level. | Level of detail is suitable for DA stage.<br>Opt 1: Provide general access in the tenancies via ramp or lift.<br>Opt 2: Seek a performance solution to justify stair only access. |

| DESCRIPTION | COMPLIANCE DEPARTURE | RESOLUTION |
|---|---|---|
| Detailed drawings | Stairway detailed drawings have not yet been provided for assessment. | Level of detail is suitable for DA stage.<br>As design progresses detailed drawings will be required.<br>Ensure non fire isolated stairways design complies with Clause 11 and 12 of AS1428.1-2009.<br>Fire isolated stairways require:<br>• Single continuous handrail,<br>• 1000mm clear width between handrail and opposite wall,<br>• Contrasting nosing strips. |

Refer to **Appendix 2** below for further design guidance

3.2.4 Clause D3.4 – Exemptions

Refer to **Section 1.6** above for areas afforded the concession under D3.4.

3.2.5 Clause D3.5 – Accessible carparking

Not applicable – nil car parking provided for the proposed development.

3.2.6 Clause D3.6 – Signage

The following comment is provided in regards the requirements of Clause D3.6 of the BCA—

| DESCRIPTION | COMMENT | RESOLUTION |
|---|---|---|
| General | Signage details have not yet been provided for assessment. | Level of detail is suitable for DA stage.<br>Signage will be required in accordance with the requirements of this clause. |

Refer to **Appendix 2** below for further design guidance.

3.2.7 Clause D3.7 – Hearing augmentation

Not applicable.

3.2.8 Clause D3.8 – Tactile indicators

The following comment is provided in regards the requirements of Clause D3.8 of the BCA—

| DESCRIPTION | COMPLIANCE DEPARTURE | RESOLUTION |
|---|---|---|
| General | Tactile indicators at stairways and ramps have not yet been detailed within the design documentation. | Level of detail is suitable for DA stage.<br>Tactile indicators will be required in accordance with the requirements of this clause. |
| Fire isolated stairs | Fire isolated stairs do not require tactile indicators. | N/A |

Refer to **Appendix 2** below for further design guidance.

3.2.9 Clause D3.9 – Wheelchair seating spaces in Class 9b assembly buildings

Not applicable.

3.2.10 Clause D3.10 – Swimming pools

Not applicable.

3.2.11 Clause D3.11 – Ramps

Refer to **Sections 3.2.2 and 3.2.3** above.

3.2.12 Clause D3.12 – Glazing on an accessway

The following comment is provided in regards the requirements of Clause D3.12 of the BCA—

| DESCRIPTION | COMPLIANCE DEPARTURE | RESOLUTION |
|---|---|---|
| General | Visual indicators have not yet been detailed within the design documentation. | Level of detail is suitable for DA stage.<br>Visual indicators will be required in accordance with the requirements of this clause. |

Refer to **Appendix 2** below for further design guidance.

## 3.3 Part E3.6 – Passenger Lifts

The following comments are provided in regards the requirements of Clause E3.6 of the BCA—

| DESCRIPTION | COMPLIANCE DEPARTURE | RESOLUTION |
|---|---|---|
| General | A total of one (01) passenger lift is proposed within the subject development. | Level of detail is suitable for DA stage.<br>Every passenger lift proposed must comply BCA Clause E3.6 and AS1735.12-1999 as applicable to the subject lift type. |

| DESCRIPTION | COMPLIANCE DEPARTURE | RESOLUTION |
|---|---|---|
| | | Ensure lifts travelling over 12m is provided with minimum 1400 wide and 1600mm deep floor area.<br>Ensure call buttons are located minimum 500mm away from any internal corner. |

Refer to **Appendix 2** below for further design guidance.

## 3.4 Part F2.4 – Accessible Sanitary Facilities

### 3.4.1 Accessible unisex sanitary facilities

Not applicable.

### 3.4.2 Sanitary compartment for people with ambulant disabilities

Not applicable.

## 3.5 Part F2.9 – Accessible Adult Change Facilities

Not applicable.

# 4.0 CONCLUSION

## 4.1 General

Our strategy for ensuring compliance will be refined and documented during the design process in conjunction with the continual development of the architectural documentation, as required.

Based upon our assessment to date we are of the opinion that the subject development is capable of achieving compliance with the relevant accessibility provisions of the National Construction Code – Building Code of Australia Volume 1, Edition 2019 Amendment 1, subject to the comments provided in **Section 3.0** and the design detail contained in **Appendix 2**.

Compliance can be achieved either by meeting the deemed-to-satisfy requirements of the BCA, as are principally contained within Parts D3, E3.6, F2.4 and F2.9, or via a performance-based approach.

We trust that the above information is sufficient for the consent authority in assessing the merit of the architectural design from a planning perspective.

| Report By | Verified By |
|---|---|
| Katja Gavran | Luke Sheehy |
| **Access Consultant** | **Principal** |
| For Design Confidence (Sydney) Pty Ltd | For Design Confidence (Sydney) Pty Ltd |

# APPENDIX 1 – Documentation Provided for Assessment

This accessibility assessment was based upon the architectural documentation prepared by MHNDUNION namely—

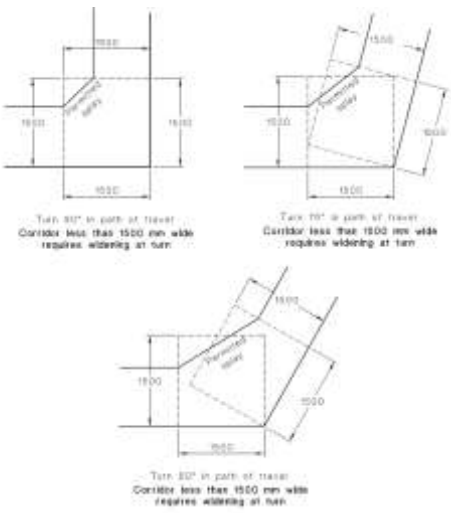
| DRAWING | REV | TITLE | DATE |
|---|---|---|---|
| DA 3001 | A | Basement Plan | 02.12.2022 |
| DA 3002 | A | Ground Floor Plan | 02.12.2022 |
| DA 3003 | A | Level 1 Floor Plan | 02.12.2022 |
| DA 3004 | A | Level 2 Floor Plan | 02.12.2022 |
| DA 3005 | A | Level 3 Floor Plan | 02.12.2022 |
| DA 3006 | A | Roof Plan | 02.12.2022 |
| DA 4001 | A | Sections AA + BB | 02.12.2022 |
| DA 4002 | A | Elevations – North + East | 02.12.2022 |
| DA 4003 | A | Elevations – South + West | 02.12.2022 |

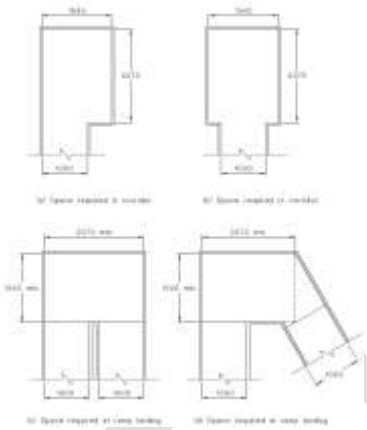
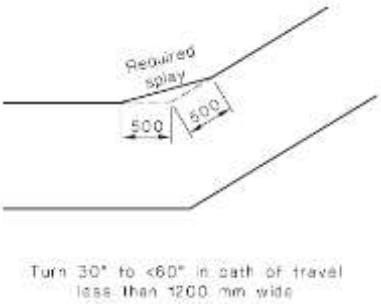
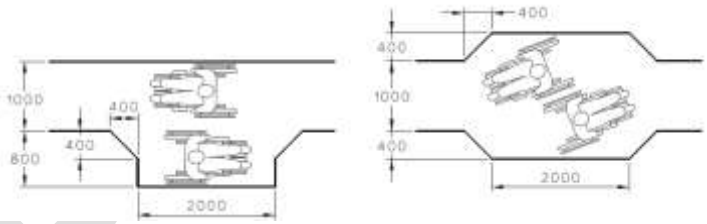
# APPENDIX 2 – Design Checklist – Prescriptive Requirements

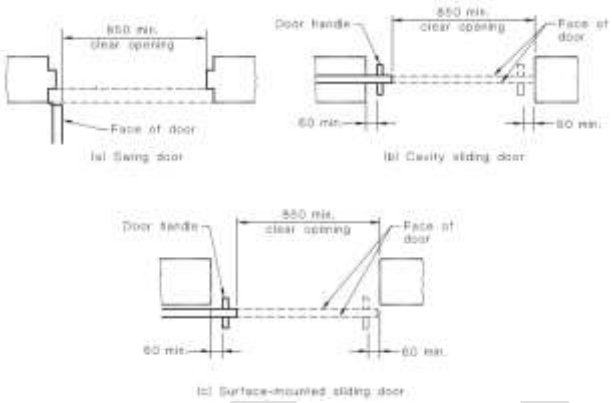
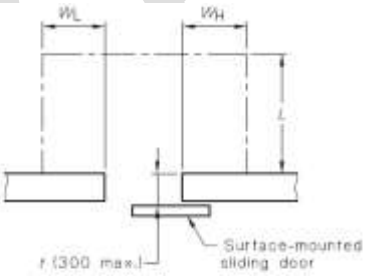
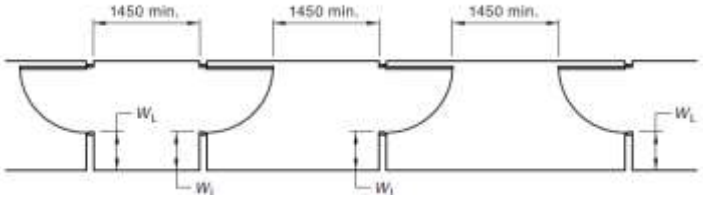
The following design guidance checklist is provided for implementation and coordination during construction in order to achieve compliance with the prescriptive requirements of the BCA, AS1428.1-2009, AS/NZS1428.4.1:2009 andAS1735.12-1999.

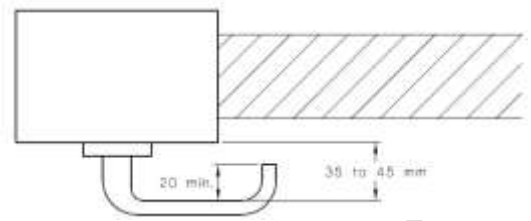
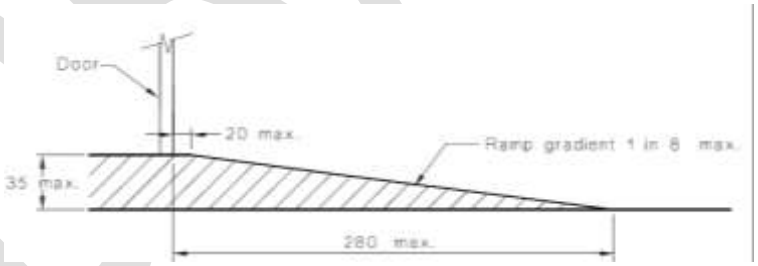
| 1. | ACCESS TO BUILDINGS |
|---|---|
| 1.1. | Provide an accessible path of travel compliant with AS1428.1-2009 from all main pedestrian entry points at the site boundary to the principal pedestrian entrance/s of the building. |
| 1.2. | Where a building is afforded with multiple pedestrian entries, an accessway shall be provided through and through:<br>(i) The principal pedestrian entrance (PPE); and<br>(ii) Not less than 50% of pedestrian entrances, including the PPE.<br><br>Where the building area is greater than 500m$^2$:<br>(i) A non-accessible pedestrian entrance shall not be located more than 50m from an accessible pedestrian entrance. |
| 1.3. | Provide an accessible path of travel compliant with AS1428.1-2009 from another building connected by a pedestrian link (not being the public footpath) within the allotment. |
| 1.4. | Provide an accessible path of travel compliant with AS1428.1-2009 from accessible car parking spaces on the site. |
| 1.5. | An accessible path of travel/accessway shall be in accordance with AS1428.1-2009 as applicable.<br>*Note: this includes requirements relating to floor finishes, stairway, ramps, doorways etc. Refer to the relevant section below for further detail.* |

| 2. | PATHS OF TRAVEL |
|---|---|
| 2.1. | A continuous accessible path of travel shall not include a step, stairway, turnstile, revolving door, escalator, moving walk or the like. |
| 2.2. | Provide 1000mm minimum clear width of path of travel compliant with AS1428.1-2009.<br>*Note: the width of the path of travel shall be taken clear of any obstructions, such as handrails, kerb rails, skirting, fire hose reels, fire extinguishers or the like.* |
| 2.3. | The minimum unobstructed height of a continuous path of travel shall be 2000mm or 1980mm at doorways. |
| 2.4. | An accessway shall be provided with turning spaces in accordance with the BCA and AS1428.1-2009 where required. |
| 2.5. | A turning space not less than 1500 x 1500mm is required to allow for a 60-90° turn on the accessway. A splay across the internal corner is permitted in accordance with Figure 4 of AS1428.1-2009. |



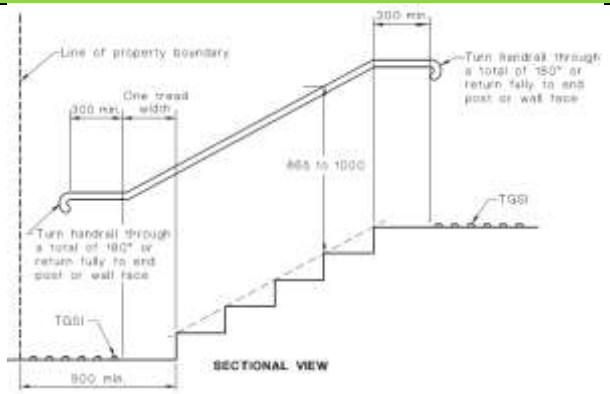
| 2. | PATHS OF TRAVEL |
|---|---|
| 2.6. | A turning space not less than 1540mm W x 2070mm L in accordance with Figure 5 of AS1428.1-2009 shall be provided:<br>(i) to allow for a 180° turn on the accessway;<br>(ii) along pathways at maximum 20m intervals;<br>(iii) at corridor ends, within 2m of the corridor end.<br>  |
| 2.7. | Where the width of the path of travel is less than 1200mm, a minimum 500x500mm splay is required to allow for a 30 to <60° turn on the accessway in accordance with Figure 4 of AS1428.1-2009.<br>  |
| 2.8. | A passing space not less than 1800mm W x 2000mm L is required along pathways at maximum 20m intervals where a direct line of sight is not available.<br>  |
| 2.9. | Floor finishes and abutment of surfaces shall be in accordance with Clause 7 of AS1428.1-2009.<br>*Note: Reference is made to BCA Clause D2.14 in regards slip resistance requirements.* |
| 2.10. | Where carpet or similar soft flexible flooring surface is proposed, the pile height shall be no more than 11mm with 4mm max backing surface. |
| 2.11. | Ensure drainage grates on accessible path of travel have openings no more than 13mm wide (or 13mm diameter).<br>Slotted openings shall be oriented such that the long dimension is transverse to the direction of travel. |
| 2.12. | Where recessed matting is proposed, it shall be in accordance with Clause 7.4.2 of AS1428.1-2009. |

| 3. | DOORS |
|---|---|
| 3.1. | Every door and/or gate on the accessway shall be in accordance with Clause 13 of AS1428.1-2009. |
| 3.2. | Minimum 850mm clear opening width (generally required 920mm door leaf), measured from the face of the door to the door stop.<br>*Note: where double doors are proposed, at least the active/operable leaf shall achieve the minimum 850mm clear opening width.*<br>  |
| 3.3. | A minimum 30% luminance contrast shall be provided at doorways for ease of visual identification for people with vision impairment. The contrasting area (e.g. wall, architrave etc.) must have minimum 50mm width. |
| 3.4. | Every door and/or gate on the accessway shall be provided with circulation space on both sides to allow for operation of the door. |
| 3.5. | Circulation spaces shall be not steeper than 1:40. Refer to Figure 31 (hinged doors) and Figure 32 (sliding doors) of AS1428.1-2009 for the minimum required depth, latch-side and hinge-side circulation spaces as applicable. |
| 3.6. | Where surface-mounted sliding doors are proposed, the circulation spaces shall be increased by a factor of ***t*** as shown in Figure 33 of AS1428.1-2009.<br>*Note: The factor **t** is the wall thickness to the face of the door.*<br>  <br>**Door approach** \| **Increase from Figure 32**<br>Figure 32(d) \| Add dimensions $t$ to dimensions $W_L$ and $W_H$<br>Figure 32(a), 32(b), 32(c) \| Add dimensions $t$ to dimensions $L$, $W_L$ and $W_H$ |
| 3.7. | Provide minimum 1450mm length between successive door swings in airlocks/vestibules or other similarly enclosed spaces on accessible path of travel.<br>  |
| 3.8. | All fully glazed doors and surrounding glazing (including glazed walls with no transom or similar) shall be clearly marked with 75mm min. wide, solid, non-transparent, contrasting line across their full width. The lower edge of line must be between 900-1000mm FFL and have 30% luminance contrast when viewed against floor or background surface within 2m of glazing. |
| 3.9. | Door hardware shall: |

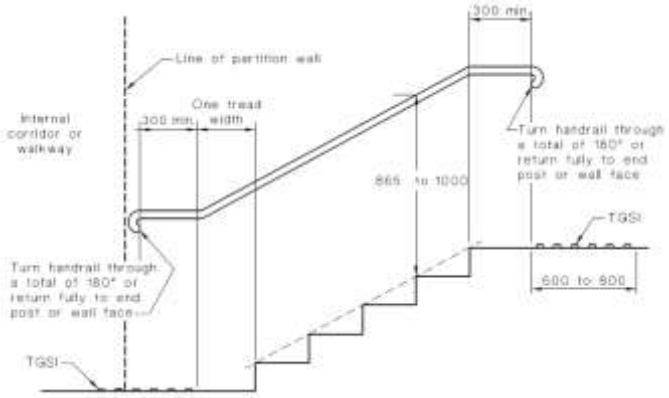
| 3. | DOORS |
|---|---|
| | (i) be a type that allows the doors to be operated with one hand;<br>(ii) allow for adequate grip for people with hand impairments;<br>(iii) have a clearance between the handle and the backplate or door face of 35-45mm;<br>(iv) where snibs are installed, have a lever handle with minimum 45mm length form the centre of the spindle.<br>  |
| 3.10. | Door controls shall be located:<br>(i) Door handles: 900-1100mm above FFL;<br>(ii) Panic bars on egress routes: 900-1200mm above FFL;<br>(iii) Intercoms, push buttons and the like: 900-1250mm above FFL and minimum 500mm from an internal corner;<br>(iv) Handles on sliding doors shall be not less than 60mm from the door jamb or doorstop in the open or closed position;<br>(v) Manual controls to power-operated doors (push buttons) shall be 1-2m from the door leaf (hinged or cavity-sliding doors) or clear of a surface-mounted sliding door in the open position.<br><br>*Note 1: this is not applicable in early childhood centres, swimming pools and the like.*<br>*Note 2: Per BCA 2019 Clause D2.21, push buttons for emergency release power operated doors shall comply with item (iv) above. Braille and tactile signage in accordance with Clause 3 and 6 of Spec. D3.6 of the BCA is also required.* |
| 3.11. | Door operational forces shall be not more than 20 N.<br>*Note: If this cannot be achieved, the subject door shall be automated, or power operated.* |
| 3.12. | A threshold ramp may be employed to address a maximum 35mm rise / FFL difference. Threshold ramp shall be in accordance with Clause 10.5 of AS1428.1-2009.<br>  <br>*Note: Where ramp edges are not enclosed by walls/other side barrier, ensure ramp edges are splayed at 45 degrees.* |

| 4. | STAIRWAYS |
|---|---|
| 4.1. | The requirements of this section shall apply to all stairways for general circulation and to external (non-fire isolated) egress stairways. |
| 4.2. | Stairs located at site boundary shall be recessed (900mm min. from boundary) to allow required handrail extensions and TGSI's to not protrude into transverse path of travel. |

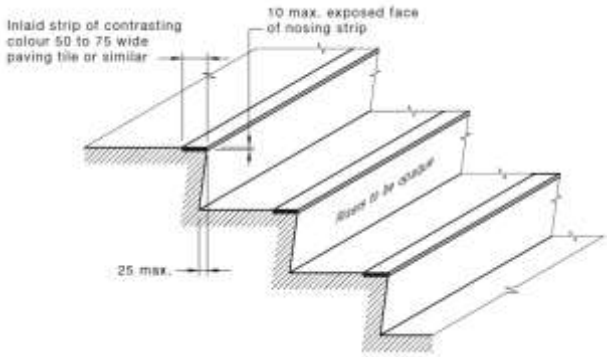
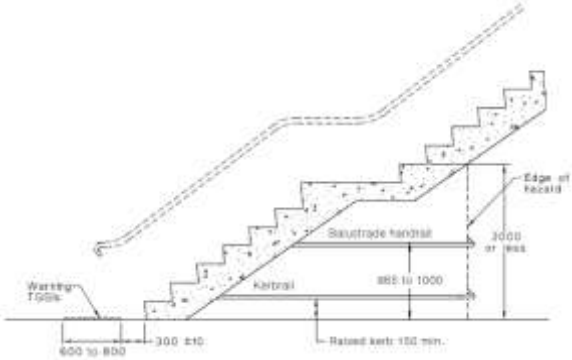
## 4. STAIRWAYS




| | |
|---|---|
| 4.3. | Stairs adjacent to internal corridors shall be recessed to allow required handrail extensions & termination to not protrude into transverse path of travel. The set-back shall be:<br>(i) 1 tread width plus handrail extension/turn down (approx. 650mm) at the bottom of a flight of stairs;<br>(ii) Handrail extension/turn down (approx. 400mm) at the top of a flight of stairs. |

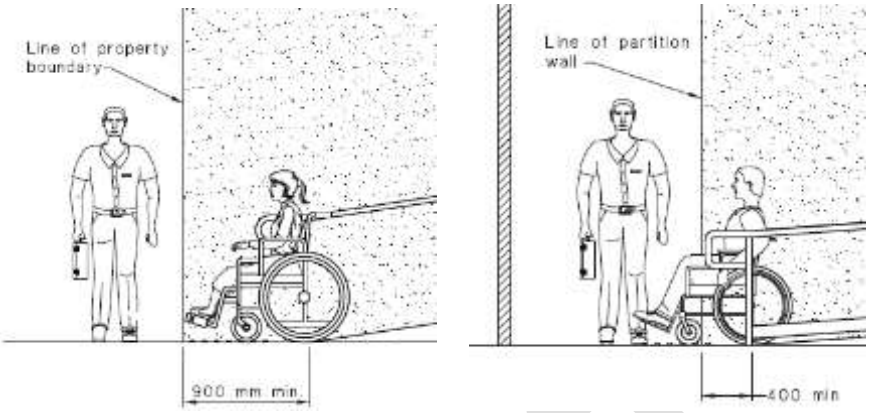
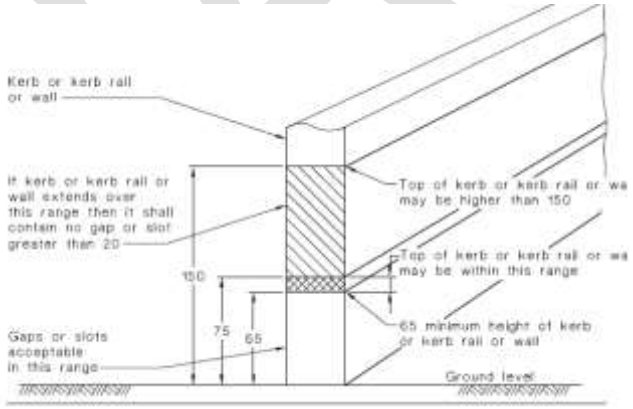


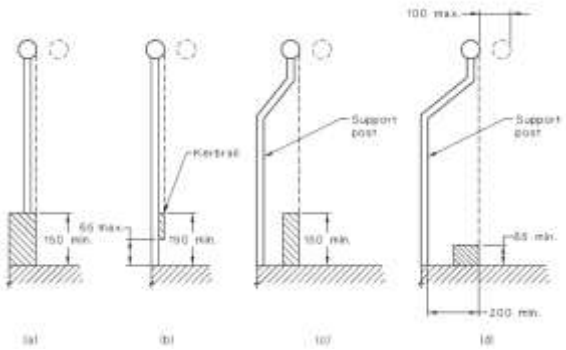

| | |
|---|---|
| 4.4. | Minimum 1m clearance required between handrails. |
| 4.5. | Stairways shall have closed risers. |
| 4.6. | Stair nosings shall not project beyond the face of the riser. Risers shall be vertical or splay backwards a max. 25mm. |
| 4.7. | In order to achieve consistent height of the handrail along stairways, an offset tread is required at the bottom of the flight, as shown in Figure 28 of AS1428.1-2009. |
| 4.8. | Handrails compliant with Clause 12 of AS1428.1-2009 shall be provided to both sides of stairs. Refer to handrail section below for handrail requirements. |
| 4.9. | Handrail extensions are required at landings in accordance with the above:<br>(i) At the top of a flight of stairs: min. 300mm horizontal extension past the nosing;<br>(ii) At the bottom of a flight of stairs: one tread depth parallel to the line of nosings + min. 300mm horizontal extension;<br>(iii) Where the inner handrail is continuous at landings, the 300mm horizontal handrail extension is not required. |
| 4.10. | Provide warning tactile ground surface indicators (TGSI's) stairs landings in accordance with AS/NZS1428.4.1:2009. Refer to TGSIs section below for TGSI's requirements. |
| 4.11. | Provide contrasting step nosing strips on all stair treads compliant with AS1428.1 as follows:<br>(i) Step nosing strips to be across full width of stair, between 50-75mm wide, in a continuous colour solid strip with 30% luminance contrast to background surface.<br>(ii) Step nosing strips to be located on edge of tread (15mm max. setback if applied) and not extend onto risers more than 10mm. (if exposed). |

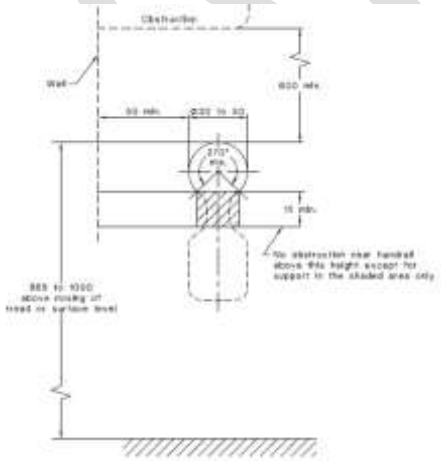
| 4. | STAIRWAYS |
|---|---|
| |  |
| 4.12. | Where people can traverse under open stairs, a suitable barrier to the underside of the stairs shall be provided such that people do not traverse where the headroom is less than 2 meters. An example of a suitable barrier is illustrated in Figure 2.6(A) of AS/NZS1428.4.1:2009.<br>  |

| 5. | FIRE-ISOLATED STAIRWAYS |
|---|---|
| 5.1. | Provide contrasting step nosing strips on all stair treads compliant with AS1428.1 as follows:<br>(i) Step nosing strips to be across full width of stair, between 50-75mm wide, in a continuous colour solid strip with 30% luminance contrast to background surface.<br>(ii) Step nosing strips to be located on edge of tread (15mm max. setback if applied) and not extend onto risers more than 10mm. (if exposed). |
| 5.2. | Handrails compliant with Clause 12 of AS1428.1-2009 shall be provided to at least one side of stairs. Refer to handrail section below for handrail requirements. |
| 5.3. | In order to achieve consistent height of the handrail along stairways, an offset tread is required at the bottom of the flight, as shown in Figure 28 of AS1428.1-2009. |
| 5.4. | Minimum 1m clearance required between handrail and opposite wall.<br>*Note: subject to BCA D1.6 relating to minimum requirements for exits.* |

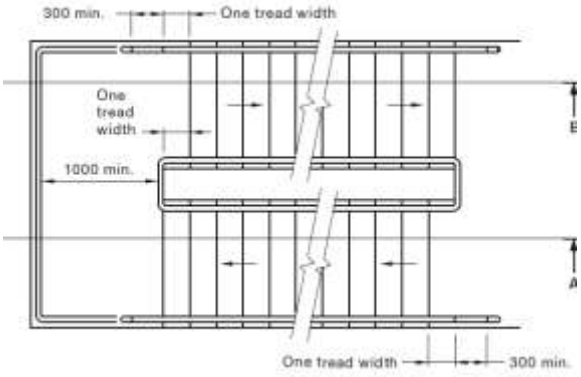
| 6. | RAMPS |
|---|---|
| 6.1. | Ensure a series of connected ramps does not exceed 3.6m vertical rise, in accordance with BCA Clause D3.11. |
| 6.2. | A ramp shall be not steeper than 1:14 and shall be constant throughout. |
| 6.3. | 1:14 walkways shall have suitable landings at 9m maximum intervals.<br>*Note: for gradients other than 1:14, the maximum interval between landings shall be confirmed with Design Confidence.* |
| 6.4. | Ramp landings shall be not steeper than 1:40. |
| 6.5. | Landings shall be:<br>(i) Minimum 1200mm length where there is no change in direction;<br>(ii) Where there is a change in direction, refer to Section 2 – Paths of Travel above;<br>(iii) Where there is a doorway, the landing shall be capable of accommodating the required doorway circulation spaces. |

| 6. | RAMPS |
|---|---|
| 6.6. | Ramps shall be set back from a transverse path of travel, being:<br>(i) Minimum 900mm set back at property boundary;<br>(ii) Minimum 400mm set back other than at property boundary.<br>  |
| 6.7. | Handrails shall be provided on both sides of a ramp. |
| 6.8. | Handrail extensions are required at landings in accordance with the above:<br>(i) At the top and bottom landings: min. 300mm horizontal extension past the nosing;<br>(ii) Where the inner handrail is continuous at landings, the 300mm horizontal handrail extension is not required. |
| 6.9. | Ramps and intermediate landings shall have kerbs or kerb rails on both sides, being:<br>(i) Kerbing to be between 65-75mm height above FFL, or;<br>(ii) At least 150mm height above FFL;<br>(iii) The top of kerbing must not be within 75-150mm range above FFL to minimise risk of wheelchair footplate entrapment. If kerbing extends within 75-150mm range between it must be continuous with no gap greater than 20mm.<br>  <br>*Note: where a handrail is wall mounted, the wall serves as a suitable side barrier, subject to the ramp-side face of the handrail being not more than 100mm from the wall (refer to Fig. 19 (d)).* |
| 6.10. | The kerb to be suitably located in relation to handrail (and vertical supports if provided) i.e. Internal face of kerb in line with internal face of handrail or up to 100mm max. off-set inside the ramp, compliant with AS1428.1-2009 fig. 19. |

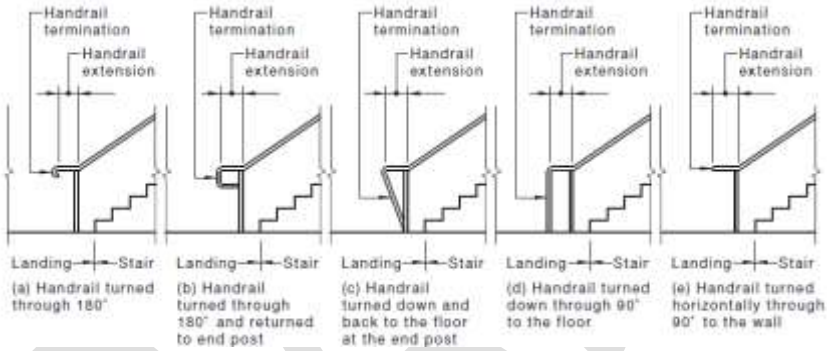
| 6. | RAMPS |
|---|---|
| |  |
| 6.11. | Provide warning tactile ground surface indicators (TGSI's) at top and bottom of ramps in accordance with AS/NZS1428.4.1:2009.<br>At intermediate landings, TGSIs are only required where the outer handrail is not continuous. |
| 6.12. | Curved ramps shall have 1500mm min. clear width with appropriate min. inside curve radius compliant with AS1428.1-2009 fig. 20. |

| 7. | HANDRAILS |
|---|---|
| 7.1. | All stairs and ramps shall be provided in accordance with Clause 12 of AS1428.1-2009, including fire-isolated stairways and ramps.<br>*Note: for stairs/ramps in areas afforded the concession under D3.4, handrails are only required to comply with Clause D2.17 of the BCA.* |
| 7.2. | The cross section of handrail shall be circular/elliptical handrails have 30mm - 50mm diameter, with 270-degree clear arc around top of handrail (extending for 600mm min. height) compliant with Figure 29 of AS1428.1-2009.<br>  |
| 7.3. | Handrails shall be installed at a consistent height between 865mm - 1000mm height above step nosing or FFL ramp surface.<br>*NB. The specified height should allow for construction tolerance as outside of this range will be non-compliant.* |
| 7.4. | Where a balustrade for fall protection is required at a height above 1m, both the balustrade and the handrails shall be provided. |
| 7.5. | Handrails shall have no vertical sections. |
| 7.6. | In order to achieve consistent height of the handrail along stairways, an offset tread is required at the bottom of the flight, as shown in Figure 28 of AS1428.1-2009. |

## 7. HANDRAILS




| | |
|---|---|
| 7.7. | Handrails shall be installed no less than 50mm away from an adjacent side wall/ obstruction (finger clearance). |
| 7.8. | Refer to Stairs and Ramps sections for the requirements relating to handrail extensions. |
| 7.9. | Handrail ends shall be turned through a total of 180° OR to the ground OR returned fully to the end post/wall face. Suitable handrail ends are shown in Figure 26 (C) of AS1428.1-2009. |

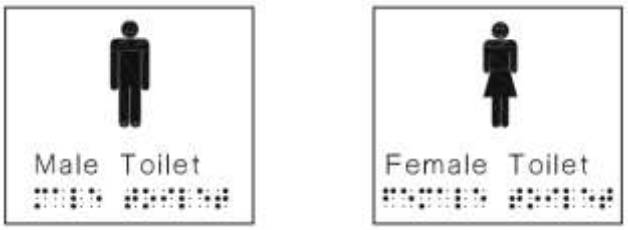



*Note: fire-isolated stairs and ramps are not required to be provided with handrail extensions at landings, however handrail ends shall be in accordance with Figure 26 (C) of AS1428.1-2009 as shown above.*

| | |
|---|---|
| 7.10. | The inner handrail shall always be continuous at landings. |

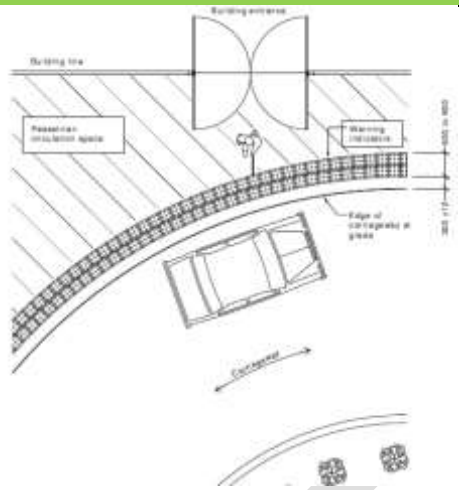
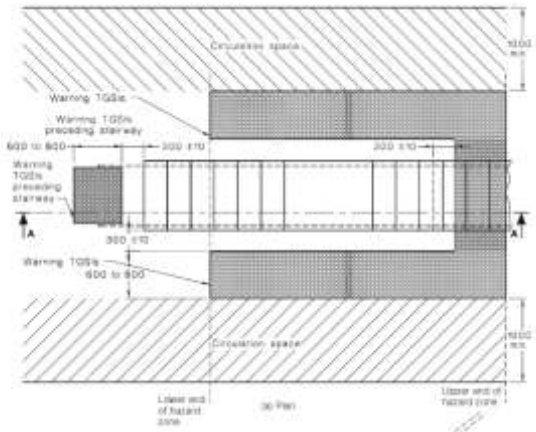
## 8. SIGNAGE

| | |
|---|---|
| 8.1. | Braille and tactile signage will be required to:<br>(i) Identify each sanitary facility, including an accessible sanitary facility and a sanitary compartment suitable for people with ambulant disabilities;<br>(ii) Identify each space provided with hearing augmentation;<br>(iii) Within each space provided with hearing augmentation;<br>(iv) Identify each door required by BCA Clause E4.5 to be provided with an exit sign;<br>(v) Identify a sanitary compartment suitable for people with ambulant disabilities;<br>(vi) At entry doors to airlocks containing either accessible and/or ambulant WCs, identifying each facility provided within. |
| 8.2. | Braille and tactile directional signage will be required at:<br>(i) A non-accessible pedestrian entrance to direct a person to the nearest accessible entrance;<br>(ii) A sanitary bank which is not provided with an accessible sanitary facility to direct a person to the nearest accessible sanitary facility. |
| 8.3. | Signage required to comply with Clause D3.6 of the BCA shall be in accordance with BCA Spec. D3.6 and Clause 8 of AS1428.1-2009. |
| 8.4. | Per BCA 2019, signage complying with Clause 3 and 6 of Specification D3.6 shall be provided to identify the latch-operation device (manual controls for power-operated doors). |
| 8.5. | At standard sanitary facilities, the signage shall include:<br>(i) Minimum required message: "Male Toilet" or "Female Toilet", as applicable; |

| 8. | SIGNAGE |
|---|---|
| | (ii) Raised & visual versions of the male and female symbols;<br>(iii) Braille that fully describes the information displayed by symbols and text.<br>  |
| 8.6. | At an accessible sanitary facility, the signage shall include:<br>(i) Minimum required message: "Unisex Toilet RH" or "Unisex Toilet LH" (as applicable)<br>(ii) Information if the toilet pan is suitable for RH or LH transfer;<br>(iii) Raised & visual versions of the international symbol of access;<br>(iv) Raised & visual versions of the male and female symbols;<br>(v) Braille that fully describes the information displayed by symbols and text.<br>  |
| 8.7. | At an ambulant sanitary compartment, the signage shall include:<br>(i) Minimum required message: "Ambulant Male Toilet" or "Ambulant Female Toilet", as applicable;<br>(ii) Raised & visual versions of the male and female ambulant symbols;<br>(iii) Braille that fully describes the information displayed by symbols and text.<br>  |
| 8.8. | At exits, the signage shall include:<br>(i) The word "Exit"; and<br>(ii) The word "Level" and the floor level number OR a floor level descriptor OR a combination of both the number and the descriptor;<br>(iii) Braille that fully describes the information display by text. |
| 8.9. | At the door to rooms/spaces provided with hearing augmentation, the signage shall include raised & visual versions of the international symbol of deafness. |
| 8.10. | Within the room/spaces provided with hearing augmentation, the signage shall include:<br>(i) The type of hearing augmentation;<br>(ii) The area covered within the room;<br>(iii) If receivers are being used & where they can be obtained. |
| 8.11. | Directional signage shall include:<br>(i) A wayfinding arrow that indicates the location of the subject accessible facility (being an accessible toilet or accessible entry);<br>(ii) Raised & visual versions of the international symbol of access; |

| 8. | SIGNAGE |
|---|---|
| | (iii) Raised text that describes the subject accessible facility;<br>(iv) If the accessible path of travel to the subject accessible facility is on a different level, include a symbol to denote travel via lift (if applicable).<br>  |
| 8.12. | Location of signage:<br>(i) Braille and tactile components shall be at a height of 1200-1600mm above FFL; and<br>(ii) On the wall on the latch-side of the door, leading edge of the sign 50-300mm from the architrave, except at ambulant sanitary facilities;<br>(iii) Where b. is not possible, signage shall be on the door itself; and<br>(iv) At ambulant sanitary facilities, the signage shall be placed on the door. |
| 8.13. | Minimum 30% luminance contrast between the wall/door to the backplate of the sign and between the backplate and the symbols, tactile and braille contained in the sign. |

| 9. | TACTILE GROUND SURFACE INDICATORS (TGSIs) |
|---|---|
| 9.1. | Ensure that TGSI's are slip-resistant and achieve minimum luminance contrast against background surface in accordance with the following:<br>(i) Integrated TGSI's (i.e. tiles) require 30% min. luminance contrast.<br>(ii) Discrete TGSI's (i.e. buttons) require 45% min. luminance contrast.<br>(iii) Composite TGSI's with 2 materials/colours requires 60% min. luminance contrast. |
| 9.2. | Ensure that warning TGSI's extend across the full width of the path of travel and commence 300mm from the edge of stairs, ramps etc.<br>*Note 1: tactile indicators are **not** required where the gradient is not steeper than 1:20 (walkways) or at step ramps and kerb ramps.*<br>*Note 2: tactile indicators are **not** required at fire-isolated stairs and ramps.*<br>*Note 3: tactile indicators **are** required at external (non-fire-isolated) egress stairs and ramps.* |
| 9.3. | Ensure that warning TGSI's have between 600mm - 800mm depth at open areas, or at landings >3m length and/or when handrail is discontinuous. |
| 9.4. | Ensure that warning TGSI's have between 300mm - 400mm depth at enclosed landings (<3m) when external handrail is discontinuous. |
| 9.5. | Where a pedestrian pathway and vehicular way are at the same level (i.e. no kerb provided), warning tactile indicators shall be provided. |

| 9. | TACTILE GROUND SURFACE INDICATORS (TGSIs) |
|---|---|
| |  |
| 9.6. | TGSI's may be provided in lieu of a barrier to the underside of stairs where the headroom is less than 2 meters.<br>  |

| 10. | PASSENGER LIFTS |
|---|---|
| 10.1. | All passenger lifts are required to be of a type in accordance with BCA Table E3.6a, have accessible features in accordance with BCA Table E3.6b and shall not rely on a constant pressure device for operation if the lift car is fully enclosed. |
| 10.2. | Passenger lifts travelling more than 12m require 1400mm W x 1600mm L min. dimensions.<br>*Note: a concession is available for existing lifts in existing building, subject to the requirements of the Disability (Access to Premises – Buildings) Standards 2010.* |
| 10.3. | Passenger lifts travelling less than 12m (except stair platform lifts) require 1100mm W x 1400mm L min. dimensions. |
| 10.4. | Stairway platform lifts (previous AS1735.7) require 810mm W x 1200mm L min. dimensions, compliant with BCA Part E3.6.<br>Note: the use of stairway platform lifts is subject to a case-by-case assessment. |
| 10.5. | Low-rise platform lifts (previous AS1735.14), require 1100mm W x 1400mm L min. dimensions compliant with BCA Part E3.6 and must not travel more than 1000mm height variation. |
| 10.6. | Low rise, low speed constant pressure lifts, unenclosed type (previous AS1735.15), require 1100mm W x 1400mm L min. dimensions compliant with BCA Part E3.6 and must not travel more than 2m. They cannot be used high traffic public areas. |
| 10.7. | Low rise, low speed constant pressure lifts, enclosed type (previous AS1735.15), require 1100mm x 1400mm min. dimensions compliant with BCA Part E3.6 and must not travel more than 4m. They cannot be used high traffic public areas. |
| 10.8. | Any low-rise lifts (previous part AS1735.14 or 15) that require constant pressure to be applied to the lift control buttons to either call and/or operate the lift (i.e. Press and Hold) are to include signage to explain operations of use. |

| 10. | PASSENGER LIFTS |
|---|---|
| 10.9. | Small size low-speed automatic lifts (previous AS1735.16), require 1100mm W x 1400mm L min. dimensions and must not travel more than 12m. |
| 10.10. | Ensure all passenger lifts (except stair platform lifts) have 900mm min. clear door opening, compliant with AS1735.12. |
| 10.11. | Ensure all Low-rise platform and Low rise, low speed constant pressure lifts with manual door opening (previous AS1735.14, 15 and 16) have suitable door circulation areas compliant with AS1428.1. |
| 10.12. | Ensure the centre line of standard lift call buttons in all lift lobbies are located at height of 900-1200mm and at least 500mm distance from an internal corner to be accessible to people using wheelchairs, compliant with AS1735.12. |
| 10.13. | Ensure all passenger lifts (except stair platform and low-rise platform lifts) include an internal lift control panel with centre line of control buttons located at a height no less than 700mm and no greater than 1250mm above FFL.<br>The components of the floor level buttons shall possess Braille, raised tactile symbols and numbers, visual and auditory indicators, compliant with AS1735.12.<br>*Advisory note: horizontal lift control panels are preferred over vertical panels for ease of reach as they generally can be positioned with control buttons within 900-1100mm FFL which is the preferred range for most wheelchair users.* |
| 10.14. | Ensure all passenger lifts (except stair platform and low-rise platform lifts) include 2 x lift control panels when the width/length dimension is less than 1400mm. |
| 10.15. | Ensure all passenger lifts (except stair platform and low-rise platform lifts) include an internal handrail installed at a height 850-950mm. The handrail ends shall be no more than 500mm away from any operating device or button. |
| 10.16. | Ensure all passenger lifts (except stair platform lifts) include emergency hands free communication, including a button to alert call centre of a problem and a signal light to confirm that call has been received. |
| 10.17. | Ensure all lifts serving more than 2 levels provides automatic audible information within the lift car to identify each level the lift stops. |
| 10.18. | Ensure all lifts serving more than 2 levels provides appropriate visual and audible arrival signals of the lift car in all lift lobbies. |
| 10.19. | Ensure all lifts serving more than 2 levels provides appropriate audible range and frequency, (between 20-80dbA at maximum frequency of 1500 Hz). |
| 10.20. | The lighting in all enclosed lift cars must be at least 100 lux. |
| 10.21. | All visible information to provide 30% min. luminance contrast to background surface. |
| | The clearance between the face of the grabrail and the wall shall be 50-60mm (finger/knuckle clearance). |
| 10.22. | 270-degree clear arc around top of handrail required (extending for 600mm min. height above the grabrails). |

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