

# **BCA COMPLIANCE ASSESSMENT REPORT**

| Building Address | Level 3, 1 Garigal Road, Belrose   |  |
|------------------|------------------------------------|--|
| Report No.       | 3029                               |  |
| Report For       | C2cglobal Pty Ltd                  |  |
| Report By        | Greg Murrow                        |  |
| Title / Company  | Director Murrow Consulting Pty Ltd |  |
| Date             | 21 May 2021                        |  |



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# **REPORT REVISION STATUS**

| Report No. | Revision | Issue Date | Report Status   |                           | Author               |         |
|------------|----------|------------|-----------------|---------------------------|----------------------|---------|
| 3029       | А        | 21/05/2021 | Original report | Prepared and approved by: | Greg Murrow Director | reglina |



# A. EXECUTIVE SUMMARY

This report provides a Building Code of Australia (BCA) compliance assessment of the proposed office fitout of Level 3 in the existing multi-storey commercial building at 1 Garigal Road, Belrose, in relation to the proposed new works.

The primary purpose of this report is to identify the non-compliance matters contained in the proposed design against the current Deemed-to-Satisfy (DTS) Provisions of the BCA Volume One and to provide recommendations to overcome the DTS non-compliances.

The proposed design, in relation to numerous DTS Provisions, shall be further detailed as nominated in the Section D table prior to the issue of a Construction Certificate (CC), however the following is a list of identified <u>DTS non-compliances</u> that should be addressed either by design amendments, additional information or by way of a Performance Solution prior to issue of CC (as indicated below):

| DTS Provision                                   | Outline of DTS non-compliance  | Recommendation to address DTS non-compliance   |
|---|--|--|
| D1.4<br>Exit travel<br>distances                | The southwestern corner of the terrace is more than 20 m (is 27m) from a point from which travel in different directions to 2 exits is available – <b>does not comply with D1.4(c)(i).</b>   | Design amendments or obtain a<br>Performance Solution formulated in<br>accordance with BCA Part A2.        |
| E1.3<br>Fire hydrants                           | Coverage: Each internal fire hydrant shall have a single valve-controlled outlet and attack hydrant performance. Internal fire hydrants shall cover only the level on which they are located. All points on a floor shall be within reach of a 10 m hose stream issuing from a nozzle at the end of a 30 m length of hose laid on floor connected to the fire hydrant outlet. The hose shall extend a minimum length of 1 m into the area to which the fire hydrant is providing coverage.                     | To be confirmed.   |
| F2.3<br>Facilities in Class 3<br>to 9 buildings | As per Table F2.3, the new Level 3 tenancy requires the following sanitary facilities numbers to accommodate the proposed population of 50 office employees:  • Males (50):  • WCs: 3 (2 provided – does not comply with Table F2.3);  • Urinals: 2 (2 provided – complies);  • Washbasins: 2 (2 provided considering the accessible unisex sanitary compartment washbasin counts once for each sex – complies);  • Females (37):  • WCs: 4 (4 provided – complies);  • Washbasins: 2 (2 provided – complies). | Rely on the accessible unisex sanitary compartment on Level 2 for the additional male WC. To be confirmed. |



# **B. INTRODUCTION**

This report provides a Building Code of Australia 2019 Amendment 1 (BCA) compliance assessment of the proposed office fitout on Level 3 of the existing multi-storey commercial building at 1 Garigal Road, Belrose.

This report is limited to an assessment of the <u>proposed</u> building works and does not extend to proposing an upgrade to the parts of the building not subject to the proposed building works.

## PURPOSE OF THE REPORT

This report only applies to Level 3 of the existing multi-storey commercial building at 1 Garigal Road, Belrose.

The primary purpose of this report is to identify the non-compliance matters contained in the proposed design against the current DTS Provisions of the BCA Volume One and to provide recommendations to overcome the DTS non-compliances.

## INFORMATION RELIED UPON

The following information has been relied upon in the execution of this report.

| Item    | Documentation   | Date     |
|---------|---|----------|
| No.     |   |          |
| Plans   |   |          |
| 1.      | Proposed plan (Project No. 21112, Drawing No. A-002, Revision DA) issued by Maxam + Co        | 27.04.21 |
| Applica | ble BCA   |          |
| 2.      | National Construction Code – Volume One – Building Code of Australia 2019 Amendment 1,        | 2020     |
|         | published by the Australia Building Codes Board (ABCB)  |          |
| 3.      | National Construction Code – Guide to Volume One 2019 Amendment 1, published by the Australia | 2020     |
|         | Building Codes Board (ABCB)   |          |

# REPORT EXCLUSIONS

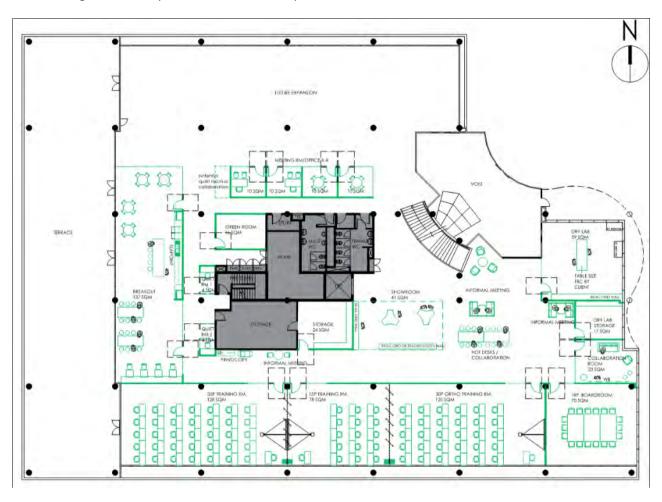
The following exclusions / limitations apply to this report:

- 1. This report only applies to the proposed office fitout on Level 3 of the existing multi-storey commercial building at 1 Garigal Road, Belrose;
- 2. This report does not address any matters that are outside the scope of the BCA;
- 3. This report is limited to an assessment of sections C, D, E, F and G of the BCA only;
- 4. This report is limited to an assessment of the proposed building works and does not extend to proposing an upgrade to the parts of the building not subject to the proposed building works;
- 5. This report does not provide any guarantee against complaints made under the Disability Discrimination Act 1992;
- 6. This report does not provide any assessment of the existing fire resistance levels (FRLs) of the building or the combustibility or fire hazard properties of any materials inside / outside the building, such as cladding;
- 7. This report does not provide any assessment of any external wall systems including but not limited to any external insulation, finishing system, wall panelling, cladding or façade material;
- 8. This report does not provide any Performance Solutions as recognised in the BCA, or fire engineering advice;
- 9. This report does not consider any structural elements or geotechnical matters relating to the building;
- 10. There was no assessment of hydraulic systems, mechanical systems or electrical systems;
- 11. The heritage or conservation area status of the building was not considered;
- 12. This report does not consider Work Health & Safety considerations;
- 13. This report does not consider energy or water authority requirements; and
- 14. This report does not consider Council's local planning policies or any development consent that applies to the development.



# PLAN RELIED UPON

The following Level 3 floor plan is assessed in this report.





# C. BUILDING INFORMATION

# **BUILDING BCA INFORMATION SUMMARY**

The following is a summary of the BCA assessment data in relation to Level 3 of the existing multi-storey commercial building at 1 Garigal Road, Belrose.

| Applicable Volume of BCA       | One                       |  |
|--------------------------------|---------------------------|--|
| Applicable Edition of BCA      | 2019 Amendment 1          |  |
| BCA Building Classification(s) | Class 5 offices           |  |
| "Rise in storeys"              | 3 (TBC)                   |  |
| Type of Construction           | Type B Construction (TBC) |  |
| "Effective height"             | Less than 25m (TBC)       |  |

Note: Terms in italics above are BCA defined terms as reproduced below:

Rise in storeys means the greatest number of storeys calculated in accordance with C1.2 of Volume One.

**Effective height** means the vertical distance between the floor of the lowest storey included in the calculation of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).



# D. BCA COMPLIANCE ASSESSMENT TABLE

The following table details the DTS compliance of the proposed new works.

| BCA DEEMED-TO-SATISFY<br>PROVISION  | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS  |
|---|--|---|
| SECTION C<br>FIRE RESISTANCE  |  |   |
| Part C1 Fire Resistance and Stability   |  |   |
| C1.1 Type of construction required & Specification C1.1 Fire-resisting construction | Not applicable                         | Type B Construction would be required (in accordance with clauses 2 and 4 and Table 4 of Specification C1.1), but no new building elements require an FRL.  |
| C1.2<br>Calculation of rise in storeys  | Noted                                  | RIS – 3   |
| C1.3 Buildings of multiple classification   | Noted                                  |   |
| C1.4 Mixed types of construction  | Not applicable                         |   |
| C1.5<br>Two storey Class 2, 3 or 9c<br>buildings                                    | Not applicable                         |   |
| C1.6<br>Class 4 parts of buildings  | Not applicable                         |   |
| C1.7 Open spectator stands and indoor sports stadiums                               | Not applicable                         |   |
| C1.8<br>Lightweight construction  | Not applicable                         |   |
| C1.9 Non-combustible building elements  | To be further detailed at CC stage     | Subclause (a) The following new building elements and their components must be non-combustible: (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. (ii) The flooring and floor framing of lift pits. (iii) Non-loadbearing internal walls where they are required to be fire-resisting.  Subclause (b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction.  Subclause (c) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1.  Subclause (d) The requirements of (a) and (b) do not apply to the following: (i) Gaskets. (ii) Caulking. (iii) Sealants. (iv) Termite management systems. (v) Glass, including laminated glass. (vi) Thermal breaks associated with glazing systems. (vii) Damp-proof courses. |



| BCA DEEMED-TO-SATISFY<br>PROVISION          | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS  |
|---|--|---|
| C1.10 Fire hazard properties                | To be further detailed at CC stage     | Subclause (e) The following materials may be used wherever a non-combustible material is required: (i) Plasterboard. (ii) Perforated gypsum lath with a normal paper finish. (iii) Fibrous-plaster sheet. (iv) Fibre-reinforced cement sheeting. (v) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (vi) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5. (vii) Bonded laminated materials where—  (A) each lamina, including any core, is non-combustible; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively.  Except where an exemption is provided for in C1.10(c), the fire hazard properties of the following new linings, materials and assemblies must comply with Specification C1.10:  Floor linings and floor coverings.  Wall linings and ceiling linings.  Air-handling ductwork.  Sarking-type materials.  Attachments to floors, ceilings, internal walls, common walls, fire walls and to internal linings of external walls.  Other materials including insulation materials other than sarking-type materials.  Paint or fire-retardant coatings must not be used to achieve compliance with the required fire hazard properties. |
| C1.11 Performance of external walls in fire | Not applicable                         |   |
| C1.12                                       | Blank clause                           |   |
| C1.13 Fire-protected timber: Concession     | Not applicable                         |   |
| C1.14 Ancillary elements                    | To be further detailed at CC stage     | A new ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following:  (a) An ancillary element that is non-combustible.  (b) A gutter, downpipe or other plumbing fixture or fitting.  (c) A flashing.  (d) A grate or grille not more than 2 m² in area associated with a building service.  (e) An electrical switch, socket-outlet, cover plate or the like.  (f) A light fitting.  (g) A required sign.  (h) A sign other than one provided under (a) or (g) that—  (i) achieves a group number of 1 or 2; and  (ii) does not extend beyond one storey; and  (iii) does not extend beyond one fire compartment; and  (iv) is separated vertically from other signs permitted under  (h) by at least 2 storeys.  (i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that—   |



| BCA DEEMED-TO-SATISFY<br>PROVISION                            | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS   |
|---|--|--|
|   |  | (i) meets the relevant requirements of Table 4 of Specification C1.10 as for an internal element; and (ii) serves a storey—  (A) at ground level; or (B) immediately above a storey at ground level; and (iii) does not serve an exit, where it would render the exits unusable in a fire.  (j) A part of a security, intercom or announcement system.  (k) Wiring.  (l) A paint, lacquer or a similar finish.  (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k). |
| Part C2 Compartmentation and Separation                       |  |  |
| C2.1 Application of Part                                      | Noted                                  |  |
| C2.2 General floor area and volume limitations                | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| C2.3<br>Large isolated buildings                              | Not applicable                         |  |
| C2.4 Requirements for open spaces and vehicular access        | Not applicable                         |  |
| C2.5<br>Class 9a and 9c buildings                             | Not applicable                         |  |
| C2.6<br>Vertical separation of openings in external walls     | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| C2.7<br>Separation by fire walls                              | Not applicable                         |  |
| C2.8 Separation of classifications in the same storey         | Not applicable                         |  |
| C2.9<br>Separation of classifications in<br>different storeys | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| C2.10<br>Separation of lifts shafts                           | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| C2.11<br>Stairways and lifts in one shaft                     | Not applicable                         |  |
| C2.12<br>Separation of equipment                              | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| C2.13<br>Electricity supply system                            | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| C2.14 Public corridors in Class 2 and 3 buildings             | Not applicable                         |  |
| Part C3 Protection of Openings                                |  |  |
| C3.1<br>Application of Part                                   | Noted                                  |  |
| C3.2<br>Protection of openings in external<br>walls           | Not applicable                         | There are no new openings in an external wall that are required to have an FRL within 3m of a side or rear boundary of the allotment.  |
| <u>l</u>  |  |  |



| PROVISION                           | DOES NOT COMPLY/   |  |
|-------------------------------------|--|--|
|                                     | OTHER  | COMMENTS   |
| C3.3                                | Not applicable   |  |
| Separation of external walls and    |  |  |
| associated openings in different    |  |  |
| fire compartments                   |  |  |
| C3.4                                | Not applicable   |  |
| Acceptable methods of               |  |  |
| protection                          |  |  |
| C3.5                                | Not applicable   |  |
| Doorways in fire walls              |  |  |
| C3.6                                | Not applicable   |  |
| Sliding fire doors                  |  |  |
| C3.7                                | Not applicable   |  |
| Protection of doorways in           |  |  |
| horizontal exits                    |  |  |
| C3.8                                | Not applicable   | No proposed change to existing building in relation to this clause.      |
| Openings in fire-isolated exits     |  |  |
| C3.9                                | Not applicable   |  |
| Service penetrations in fire-       |  |  |
| isolated exits                      |  |  |
| C3.10                               | Not applicable   |  |
| Openings in fire-isolated lift      |  |  |
| shafts                              |  |  |
| C3.11                               | Not applicable   |  |
| Bounding construction: Class 2      |  |  |
| and 3 buildings and Class 4 parts   |  |  |
|                                     | To be further detailed   | All new services passing through the floors above or below Level 3       |
| Openings in floors and ceilings for | at CC stage  | (required to have an FRL with respect to integrity and insulation) must  |
| services                            |  | be protected by a shaft complying with Specification C1.1; or in         |
|                                     |  | accordance with C3.15.   |
| C3.13                               | To be further detailed   | A new opening in a wall providing access to a ventilating, pipe,         |
| Openings in shafts                  | at CC stage  | garbage or other service shaft must be protected by—                     |
|                                     | , and the second | (a) if it is in a sanitary compartment — a door or panel which, together |
|                                     |  | with its frame, is non-combustible or has an FRL of not less than –      |
|                                     |  | /30/30; or   |
|                                     |  | (b) a self-closing –/60/30 fire door or hopper; or                       |
|                                     |  | (c) an access panel having an FRL of not less than –/60/30; or           |
|                                     |  | (d) if the shaft is a garbage shaft — a door or hopper of non-           |
|                                     |  | combustible construction.  |
| C3.14                               | Blank clause   |  |
| C3.15                               | To be further detailed   | All new services passing through the floors above or below Level 3       |
| Openings for service installations  | at CC stage  | (required to have an FRL with respect to integrity and insulation) must  |
|                                     |  | be protected in accordance with a tested system (identical with a        |
|                                     |  | prototype assembly of the service, building element and protection       |
|                                     |  | method which has been tested in accordance with AS 4072.1 and AS         |
|                                     |  | 1530.4); AS 1668.1-2015; or Specification C3.15 of the BCA.              |
| C3.16                               | Not applicable   | No proposed change to existing building in relation to this clause.      |
| Construction joints                 |  |  |
| C3.17                               | Not applicable   | No proposed change to existing building in relation to this clause.      |
| Columns protected in lightweight    |  |  |
| construction to achieve an FRL      |  |  |
|                                     |  |  |
| SECTION D                           |  |  |
| ACCESS AND EGRESS                   |  |  |
|                                     |  |  |
| Part D1                             |  |  |
|                                     |  |  |
| Provision for Escape                |  |  |
| Provision for Escape                | Noted  |  |



| BCA DEEMED-TO-SATISFY<br>PROVISION  | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS  |
|---|--|---|
| D1.2<br>Number of exits required  | Complies                               | No proposed change to existing building in relation to this clause. 2 exits required and 2 exits (fire-isolated exit and non-fire-isolated stairway) provided.  |
| D1.3 When fire-isolated stairways and ramps are required                              | Not applicable                         |   |
| D1.4<br>Exit travel distances   | Does not comply                        | The southwestern corner of the terrace is more than 20 m (is 27m) from a point from which travel in different directions to 2 exits is available – does not comply with D1.4(c)(i).   |
|   |  | Otherwise there is no point on the floor of Level 3 which is more than 20 m from a point from which travel in different directions to 2 exits is available, and the maximum distance to one of those exits does not exceed 40m.                           |
| D1.5 Distance between alternative exits   | Complies                               | The two exits are between 9-60m apart (measured through the points of choice).  |
| D1.6 Dimensions of exits and paths of travel to exits                                 | To be further detailed at CC stage     | The following details of new paths of travel to exits shall be provided on plan:  • Widths: Unobstructed width of not less than 1m;  • Heights: The unobstructed height of not less than 2 m;  • New doorways: Unobstructed width of not less than 850mm. |
| D1.7<br>Travel via fire-isolated exits  | Not applicable                         | No proposed change to existing building in relation to this clause.   |
| D1.8 External stairways or ramps in lieu of fire-isolated exits                       | Not applicable                         |   |
| D1.9 Travel by non-fire-isolated stairways or ramps                                   | Not applicable                         | No proposed change to existing building in relation to this clause.   |
| D1.10 Discharge from exits  | Not applicable                         | No proposed change to existing building in relation to this clause.   |
| D1.11<br>Horizontal exits   | Not applicable                         |   |
| D1.12<br>Non-required stairways, ramps or escalators                                  | Not applicable                         |   |
| D1.13<br>Number of persons<br>accommodated  | Noted                                  | According to the sanitary facilities numbers, the storey is restricted to accommodating a population of 100 persons.  |
| D1.14 Measurement of distances  | Noted                                  |   |
| D1.15<br>Method of measurement  | Noted                                  |   |
| D1.16 Plant rooms, lift machine rooms and electricity network substations: concession | Not applicable                         |   |
| D1.17<br>Access to lift pits  | Not applicable                         |   |
| D1.18 Egress from early childhood centres   | Not applicable                         |   |
| Part D2 Construction of Exits   |  |   |
| D2.1<br>Application of Part   | Noted                                  |   |
| D2.2<br>Fire-isolated stairways and ramps   | Not applicable                         |   |



| BCA DEEMED-TO-SATISFY<br>PROVISION         | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS   |
|--|--|--|
| D2.3                                       | Not applicable                         |  |
| Non-fire-isolated stairways and            |  |  |
| D2.4                                       | Not applicable                         |  |
| Separation of rising and                   | Not applicable                         |  |
| descending stair flights                   |  |  |
| D2.5                                       | Not applicable                         |  |
| Open access ramps and balconies            |  |  |
| D2.6<br>Smoke lobbies                      | Not applicable                         |  |
| D2.7                                       | To be further detailed                 | Subclause (d):   |
| Installations in exits and paths of travel | at CC stage                            | Any new services or equipment comprising—  (i) electricity meters, distribution boards or ducts; or  (ii) central telecommunications distribution boards or equipment; or  (iii) electrical motors or other motors serving equipment in the building, may be installed in any corridor, hallway, lobby or the like leading to a required exit, if the services or equipment are enclosed by non-combustible construction or a fire- protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure.                |
| D2.8                                       | Not applicable                         |  |
| Enclosure of space under stairs            |  |  |
| and ramps D2.9                             | Noted                                  |  |
| Width of required stairways and            | Noted                                  |  |
| ramps                                      |  |  |
| D2.10<br>Pedestrian ramps                  | Not applicable                         |  |
| D2.11<br>Fire-isolated passageways         | Not applicable                         |  |
| D2.12<br>Roof as open space                | Not applicable                         |  |
| D2.13 Goings and risers                    | Not applicable                         |  |
| D2.14<br>Landings                          | Not applicable                         |  |
| D2.15<br>Thresholds                        | Not applicable                         | There is no indication of the threshold of any doorways incorporating a step or ramp at any point closer to the doorway than the width of the door leaf.   |
| D2.16<br>Barriers to prevent falls         | Not applicable                         |  |
| D2.17<br>Handrails                         | Not applicable                         |  |
| D2.18                                      | Not applicable                         |  |
| Fixed platforms, walkways,                 |  |  |
| stairways and ladders D2.19                | Not applicable                         |  |
| Doorways and doors                         | Not applicable                         |  |
| D2.20                                      | Not applicable                         |  |
| Swinging doors                             |  |  |
| D2.21<br>Operation of latch                | To be further detailed at CC stage     | All new doors in a path of travel to an exit must be readily openable without a key from the side that faces a person seeking egress by a single hand downward action on a single device which is located between 900mm and 1.1 m from the floor and be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35mm and not more than 45mm as per D2.21(a) unless |



| BCA DEEMED-TO-SATISFY<br>PROVISION          | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS   |
|---|--|--|
|   |  | the door is fitted with a fail-safe device which automatically unlocks the door upon the activation of any smoke, or any other detector system deemed suitable in accordance with AS 1670.1 installed throughout the building, as per D2.21(b)(iv).  |
| D2.22<br>Re-entry from fire-isolated exits  | Not applicable                         |  |
| D2.23<br>Signs on doors                     | Not applicable                         |  |
| D2.24 Protection of openable windows        | Not applicable                         |  |
| D2.25<br>Timber stairways: Concession       | Not applicable                         |  |
| Part D3 Access for People with a Disability |  |  |
| D3.1 General building access requirements   | To be further detailed at CC stage     | Disabled access is required to and within all areas on Level 3 normally used by the occupants.   |
| requirements                                |  | New works considerations  New doorways shall comply with the following requirements of AS 1428.1-2009:  Luminance contrast (Clause 13.1);  |
|   |  | <ul> <li>Minimum clear opening of 850mm (Clause 13.2);</li> <li>Circulation spaces (Figure 31 for swinging doors and Figure 32 for sliding doors); and</li> <li>Door controls (Clause 13.5).</li> </ul>  |
|   |  | The new doorways appear to comply with clauses 13.2 and 13.3 of AS 1428.1-2009.  |
|   |  | The new parts shall comply with AS 1428.1-2009, including sections 6, 7 and 13 of this standard (see Annexure 1):  |
|   |  | <ul> <li><u>Section 6</u>: Continuous accessible paths of travel;</li> <li><u>Section 7</u>: Floor or ground surfaces on continuous accessible paths of travel and circulation spaces;</li> </ul>  |
|   |  | <u>Section 13</u> : Doorways widths and circulation space at new doorways;   |
| D3.2  | Not applicable                         | Section 14: Switches and general purpose outlets (power points).  No proposed change to existing building in relation to this clause.  |
| D3.3 Parts of buildings to be accessible    | To be further detailed at CC stage     | Subclause (a): Not applicable. No proposed change to existing building in relation to this clause.   |
|   |  | Subclause (b): Not applicable. No proposed change to existing building in relation to this clause.   |
|   |  | Subclause (c):  (i): Accessways have passing spaces complying with AS 1428.1(i.e. 1.8m x 2m) at maximum 20 m intervals where a direct line of sight is not available (complies).  (ii): Turning spaces with dimensions of 1540mm wide x 2070mm long (as per Clause 6.5.3 AS 1428.1) are provided at the ends of lobbies and corridors. |
|   |  | Subclause (d): An intersection of accessways satisfies the spatial requirements for a passing and turning space.   |
|   |  | Subclause (e): A passing space may serve as a turning space.   |



| BCA DEEMED-TO-SATISFY<br>PROVISION                            | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS  |
|---|--|---|
|   |  | Subclause (g): Clause 7.4.1(a) of AS 1428.1 does not apply and is replaced with 'the pile height or pile thickness shall not exceed 11 mm and the carpet backing thickness shall not exceed 4 mm'.  |
|   |  | Subclause (h): The carpet pile height or pile thickness dimension, carpet backing thickness dimension and their combined dimension shown in Figure 8 of AS 1428.1 do not apply and are replaced with 11 mm, 4 mm and 15 mm respectively.  |
| D3.4<br>Exemptions  | Not applicable                         | min, 4 min and 13 min respectively.   |
| D3.5 Accessible carparking                                    | Not applicable                         |   |
| D3.6<br>Signage   | To be further detailed at CC stage     | Subclause (a): Braille and tactile signage complying with Specification D3.6 must—  (i) Not applicable; (ii) Identify each door required by E4.5 to be provided with an exit sign and state—  (A) "Exit"; and (B) "Level"; and either  (aa) the floor level number; or (bb) a floor level descriptor; or (cc) a combination of (aa) and (bb).  Subclause (f): Noting the existing bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex |
| D3.7<br>Hearing augmentation                                  | Not applicable                         | sanitary facility on Level 2.   |
| D3.8 Tactile indicators                                       | Not applicable                         |   |
| D3.9 Wheelchair seating spaces in Class 9b assembly buildings | Not applicable                         |   |
| D3.10<br>Swimming pools                                       | Not applicable                         |   |
| D3.11<br>Ramps  | Not applicable                         |   |
| D3.12<br>Glazing on an accessway                              | To be further detailed at CC stage     | 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.  |
| SECTION E SERVICES AND EQUIPMENT                              |  |   |
| Part E1 Fire Fighting Equipment                               |  |   |
| E1.3<br>Fire hydrants   | To be confirmed.                       | Subclause (a): The floor area of the building exceeds 500m² and therefore a fire hydrant system must be provided in accordance with E1.3 and AS 2419.1-2005.  |
|   |  | Subclause (b)(ii): Where internal fire hydrants are provided, they must serve only the storey on which they are located.  |



| BCA DEEMED-TO-SATISFY<br>PROVISION        | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS   |
|---|--|--|
|   |  | Coverage: Each internal fire hydrant shall have a single valve-controlled outlet and attack hydrant performance. Internal fire hydrants shall cover only the level on which they are located. All points on a floor shall be within reach of a 10 m hose stream issuing from a nozzle at the end of a 30 m length of hose laid on floor connected to the fire hydrant outlet. The hose shall extend a minimum length of 1 m into the area to which the fire hydrant is providing coverage. |
| E1.4<br>Fire hose reels                   | Not applicable                         | E1.4 does not apply to a Class 5 building.   |
| E1.5<br>Sprinklers                        | Not applicable                         |  |
| E1.6 Portable fire extinguishers          | To be further detailed at CC stage     | As per Table E1.6, portable fire extinguishers complying with AS 2444 are required to be installed to cover:  Class AE or E fire risks associated with emergency services switchboards, as necessary; and  Class A fire risks in normally occupied fire compartments less than 500m² not provided with fire hose reels.  Portable fire extinguishers must be provided in accordance with Table E1.6 of the BCA and must be selected, located and distributed in                            |
|   |  | accordance with Sections 1, 2, 3 and 4 of AS 2444-2001.  |
| E1.7 E1.8 Fire control centres            | Blank clause  Not applicable           |  |
| E1.9 Fire precautions during construction | To be further detailed at CC stage     | In a building under construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit.  |
| E1.10<br>Provision for special hazards    | Not applicable                         |  |
| Part E2 Smoke Hazard Management           |  |  |
| E2.2<br>General requirements              | To be further detailed at CC stage     | If the building is provided with an automatic smoke detection and alarm system, it shall be modified to suit the new fitout / works in accordance with BCA Specification E2.2a and AS 1670.1-2018.   |
| E2.3<br>Provision for special hazards     | Not applicable                         |  |
| Part E3<br>Lift Installations             |  |  |
| E3.1<br>Lift installations                | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| E3.2<br>Stretcher facility in lifts       | Not applicable                         |  |
| E3.3 Warning against use of lifts in fire | Not applicable                         |  |
| E3.4                                      | Not applicable                         |  |
| Emergency lifts E3.5 Landings             | Not applicable                         |  |
| E3.6 Passenger lifts                      | Not applicable                         |  |
| E3.7 Fire service controls                | Not applicable                         |  |
| E3.8 Residential care buildings           | Not applicable                         |  |
| E3.9 Fire service recall control switch   | Not applicable                         |  |



| BCA DEEMED-TO-SATISFY PROVISION                                  | COMPLIES/ DOES NOT COMPLY/         | COMMENTS  |
|--|------------------------------------|---|
| F2 10  | OTHER                              |   |
| E3.10 Lift car fire service drive control switch                 | Not applicable                     |   |
| Part E4 Visibility in an Emergency, Exit Signs and Warning Signs |                                    |   |
| E4.2   | To be further detailed             | The building is provided with an emergency lighting system.   |
| Emergency lighting requirements                                  | at CC stage                        | The emergency lighting system shall be modified to suit the new fitout / works in accordance with E4.2 and AS/NZS 2293.1-2018.  |
| E4.3   | Noted                              | / WORKS III accordance with E4.2 and A3/N23 2293.1-2016.  |
| Measurement of distance  | Noted                              |   |
| E4.4 Design and operation of emergency lighting                  | Noted                              |   |
| E4.5<br>Exit signs   | Not applicable                     | No proposed change to existing building in relation to this clause.   |
| E4.6<br>Direction signs  | To be further detailed at CC stage | Direction signs, complying with E4.8, must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit.  |
| E4.7<br>Class 2 and 3 buildings and Class<br>4 parts: Exemptions | Not applicable                     |   |
| E4.8  Design and operation of exit signs                         | To be further detailed at CC stage | Exit signs shall comply with:  (a) AS/NZS 2293.1-2018; or  (b) For a photoluminescent exit sign, Specification E4.8; and be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building. |
| E4.9 Emergency warning and intercom systems                      | To be further detailed at CC stage | If the building is provided with an emergency warning and intercom system (EWIS), it shall be modified to suit the new fitout / works in accordance with E4.9 and AS 1670.4-2018.   |
| SECTION F<br>HEALTH AND AMENITY                                  |                                    |   |
| Part F1  |                                    |   |
| Pamp and Weatherproofing F1.1 Stormwater drainage                | Not applicable                     | No proposed change to existing building in relation to this clause.   |
| F1.2   | Blank clause                       |   |
| F1.3   | Blank clause                       |   |
| F1.4 External above ground membranes                             | Not applicable                     |   |
| F1.5<br>Roof coverings   | Not applicable                     |   |
| F1.6<br>Sarking  | Not applicable                     |   |
| F1.7 Waterproofing of wet areas in buildings                     | Not applicable                     | No proposed change to existing building in relation to this clause.   |
| F1.8   | Blank clause                       |   |
| F1.9<br>Damp-proofing  | Not applicable                     |   |
| F1.10 Damp-proofing of floors on the ground                      | Not applicable                     |   |
| F1.11<br>Provision of floor wastes                               | Not applicable                     |   |



| BCA DEEMED-TO-SATISFY<br>PROVISION                           | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS   |
|--|--|--|
| F1.12  | Not applicable                         |  |
| Subfloor ventilation<br>F1.13                                | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| Glazed assemblies  |  |  |
| Part F2 Sanitary and Other Facilities                        |  |  |
| F2.1 Facilities in residential buildings                     | Not applicable                         |  |
| F2.2<br>Calculation of number of<br>occupants and facilities | Noted                                  | Subclause (c): In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with a disability may be counted once for each sex.  |
|  |  | Subclause (c): For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary products.   |
| F2.3<br>Facilities in Class 3 to 9 buildings                 | Does not comply                        | The new Level 3 tenancy can accommodate a total of 50 office employees (25 males and 25 females).  |
|  |  | As per Table F2.3, the new Level 3 tenancy requires the following sanitary facilities numbers to accommodate the proposed population of 50 office employees:  • Males (50):  • WCs: 3 (2 provided – does not comply with Table F2.3);  • Urinals: 2 (2 provided – complies);  • Washbasins: 2 (2 provided considering the accessible unisex sanitary compartment washbasin counts once for each sex – complies);  • Females (37):  • WCs: 4 (4 provided – complies);  • Washbasins: 2 (2 provided – complies). |
|  |  | Subclause (e): Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females.   |
| F2.4<br>Accessible sanitary facilities                       | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| F2.5<br>Construction of sanitary<br>compartments             | Not applicable                         | No proposed change to existing building in relation to this clause.  |
| F2.6<br>Interpretation: Urinals and<br>washbasins            | Noted                                  |  |
| F2.7<br>Microbial (legionella) control                       | Deleted in NSW                         |  |
| F2.8<br>Waste management                                     | Not applicable                         |  |
| F2.9 Accessible adult change facilities                      | Not applicable                         |  |
| Part F3<br>Room Heights                                      |  |  |
| F3.1<br>Height of rooms and other spaces                     | To be further detailed at CC stage     | Subclause (b): Ceiling heights shall be not less than 2.4m except in corridors, passageways, or the like where they shall be not less than 2.1m.   |
|  |  | Subclause (f): Ceiling heights in a new bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, store room or the like shall be not less than 2.1 m.   |



| BCA DEEMED-TO-SATISFY PROVISION                             | COMPLIES/<br>DOES NOT COMPLY/<br>OTHER | COMMENTS  |
|---|--|---|
| Part F4   |  |   |
| Light and Ventilation                                       |  |   |
| F4.1<br>Provision of natural light                          | Not applicable                         |   |
| F4.2<br>Methods and extent of natural<br>light              | Not applicable                         |   |
| F4.3<br>Natural light borrowed from<br>adjoining room       | Not applicable                         |   |
| F4.4 Artificial lighting                                    | To be further detailed at CC stage     | Subclause (a):  Artificial lighting must be provided—  in required stairways, passageways, and ramps; and  if natural light of a standard equivalent to that required by F4.2 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in to all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.  Subclause (b):  The artificial lighting output provided— |
| F4.5<br>Ventilation of rooms                                | To be further detailed at CC stage     | The artificial lighting system must comply with AS/NZS 1680.0.  Every office, workroom, sanitary compartment, bathroom, and any other room occupied by a person for any purpose must be provided either with adequate natural ventilation complying with F4.6, or mechanical ventilation complying with AS 1668.2-2012.   |
| F4.6<br>Natural ventilation                                 | Not applicable                         |   |
| F4.7<br>Ventilation borrowed from<br>adjoining room         | Not applicable                         |   |
| F4.8<br>Restriction on location of sanitary<br>compartments | Noted                                  |   |
| F4.9<br>Airlocks  | Not applicable                         |   |
| F4.10   | Blank clause                           |   |
| F4.11<br>Carparks   | Not applicable                         |   |
| F4.12<br>Kitchen local exhaust ventilation                  | Not applicable                         |   |
| Part F5 Sound Transmission and Insulation                   |  |   |
| F5.1<br>Application of Part                                 | Not applicable                         |   |
| Part F6 Condensation management                             |  |   |
| F6.1<br>Application of Part                                 | Not applicable                         |   |
| SECTION G<br>ANCILLARY PROVISIONS                           |  |   |
| Part G1 Minor Structures and Components                     |  |   |



| BCA DEEMED-TO-SATISFY                     | COMPLIES/ DOES NOT COMPLY/ | COMMENTS |
|---|----------------------------|----------|
| PROVISION                                 | OTHER                      |          |
| NSW G1.1                                  | Not applicable             |          |
| Swimming pools                            |                            |          |
| G1.2                                      | Not applicable             |          |
| Refrigerated chambers, strong-            |                            |          |
| rooms and vaults                          | Not and Cookle             |          |
| G1.3<br>Outdoor play spaces               | Not applicable             |          |
|   | Not and Cookle             |          |
| NSW G1.101 Provision for cleaning windows | Not applicable             |          |
| Provision for cleaning windows            |                            |          |
| Part G2                                   |                            |          |
| Boilers, Pressure Vessels,                |                            |          |
| Heating Appliances, Fireplaces,           |                            |          |
| Chimneys and Flues                        |                            |          |
| G2.2                                      | Not applicable             |          |
| Installation of appliances                |                            |          |
| G2.3                                      | Not applicable             |          |
| Open fireplaces                           |                            |          |
| G2.4                                      | Not applicable             |          |
| Incinerator rooms                         |                            |          |
| Part G3                                   |                            |          |
| Atrium Construction                       |                            |          |
| G3.1                                      | Not applicable             |          |
| Application of Part                       | ''                         |          |
|   |                            |          |
| Part G4                                   |                            |          |
| Construction in Alpine Areas              |                            |          |
| G4.1                                      | Not applicable             |          |
| Application of Part                       |                            |          |
| Part G5                                   |                            |          |
| Construction in Bushfire Prone            |                            |          |
| Areas                                     |                            |          |
| G5.1                                      | Not applicable             |          |
| Application of Part                       |                            |          |
|   |                            |          |
| Part G6                                   |                            |          |
| Occupiable outdoor areas                  |                            |          |
| G6.1                                      | Not applicable             |          |
| Application of Part                       |                            |          |



# E. CONCLUSION

This report provided a BCA compliance assessment of the proposed office fitout of Level 3 in the existing multi-storey commercial building at 1 Garigal Road, Belrose, in relation to the proposed new works.

The primary purpose of this report was to identify the non-compliance matters contained in the proposed design against the current DTS Provisions of the BCA Volume One and to provide recommendations to overcome the DTS non-compliances.

If you require any further information, please contact the undersigned.

Signed

**Greg Murrow** 

**Director - Murrow Consulting Pty Ltd** 

MAIBS, MAAC, AMACAA

Grad Dip Build Surv, Dip Access Consulting

NSWFT Registered: Building Surveyor - Unrestricted



## ANNEXURE 1 - "ACCESSWAYS" REQUIREMENTS UNDER AS 1428.1-2009

## **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.

## 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 (see Figure 2).

# 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.

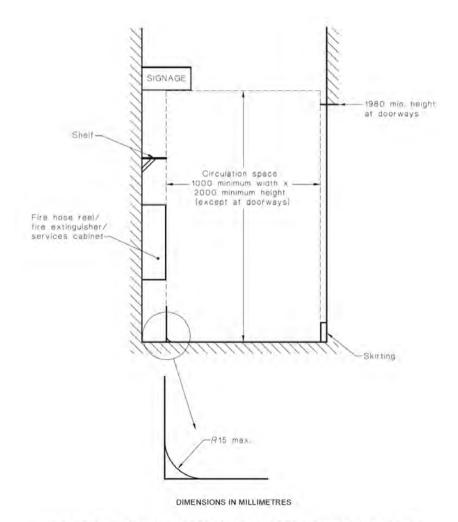


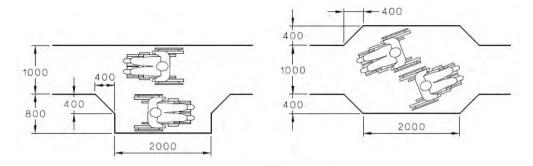
FIGURE 2 CONTINUOUS ACCESSIBLE PATH OF TRAVEL—MINIMUM HEIGHT AND WIDTH



## 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.

NOTE: For examples see Figure 3.



**DIMENSIONS IN MILLIMETRES** 

FIGURE 3 EXAMPLES FOR PASSING SPACE FOR WHEELCHAIRS

## 6.5 Circulation space for wheelchair turn

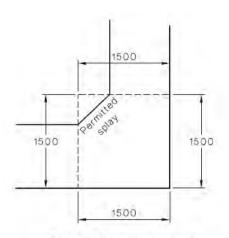
## 6.5.1 60° to 90° turn

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.

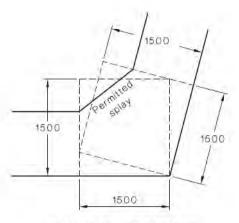
# 6.5.2 30° to <60°

Where the angle of turn is  $30^{\circ}$  to less than  $60^{\circ}$  and the width of the path of travel is less than 1200 mm, a splay of at least  $500 \text{ mm} \times 500 \text{ mm}$  shall be made on the internal corner, as shown in Figure 4.

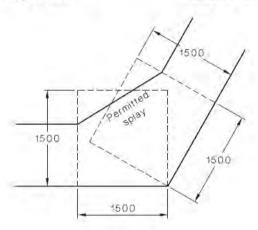




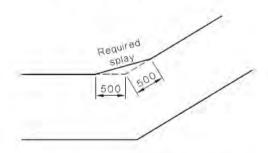
Turn 90° in path of travel Corridor less than 1500 mm wide requires widening at turn



Turn 75° in path of travel Corridor less than 1500 mm wide requires widening at turn



Turn 60° in path of travel Corridor less than 1500 mm wide requires widening at turn



Turn 30° to <60° in path of travel less than 1200 mm wide

## **DIMENSIONS IN MILLIMETRES**

FIGURE 4 SPACE REQUIRED FOR A 30° TO 90° DEGREE TURN



**A**1

## 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.

NOTE: For method of testing luminance contrast, see Appendix B.

# 7 FLOOR OR GROUND SURFACES ON CONTINUOUS ACCESSIBLE PATHS OF TRAVEL AND CIRCULATION SPACES

### 7.1 General

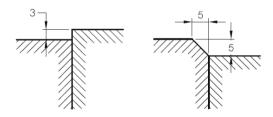
A continuous accessible path of travel and any circulation spaces shall have a slip-resistant surface. The texture of the surface shall be traversable by people who use a wheelchair and those with an ambulant or sensory disability.

### 7.2 Construction tolerances for abutment of surfaces

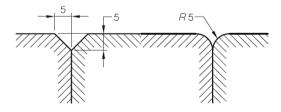
Abutment of surfaces shall have a smooth transition. Design transition shall be 0 mm. Construction tolerances shall be as follows:

- (a)  $0 \pm 3$  mm vertical, as shown in Figure 6(a).
- (b)  $0 \pm 5$  mm, provided the edges have a bevelled or rounded edge to reduce the likelihood of tripping, as shown in Figure 6(b).

Tolerances for raked joint pavers shall be as shown in Figure 7.



(a) Change in level

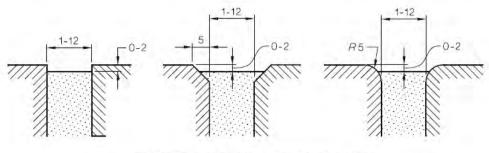


(b) Continuous paving units-flush-jointed with level surfaces

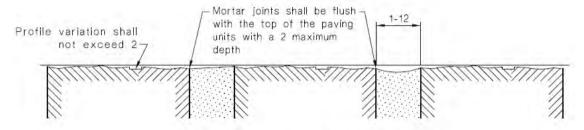
DIMENSIONS IN MILLIMETRES AND ARE MAXIMUM

FIGURE 6 ACCEPTABLE CONSTRUCTION TOLERANCES FOR ABUTMENT OF SURFACES

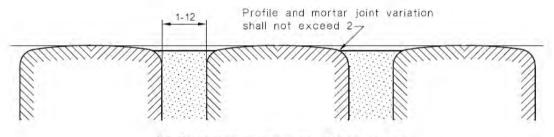




(a) Continuous paving units-Level surface



(b) Continuous paving units-Irregular surfaces



(c) Continuous paving units-Domed surfaces

DIMENSIONS IN MILLIMETRES AND ARE MAXIMUM

FIGURE 7 RAKED JOINT PAVERS

## 7.3 Changes in level

When a vertical change of not more than 5 mm occurs between the abutment of two surfaces along a continuous accessible path of travel, such change in surface level shall comply with the tolerances given in Clause 7.2.

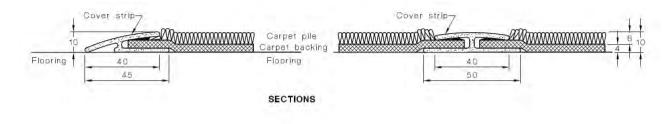
# 7.4 Fixed or recessed floor coverings—Soft floor coverings

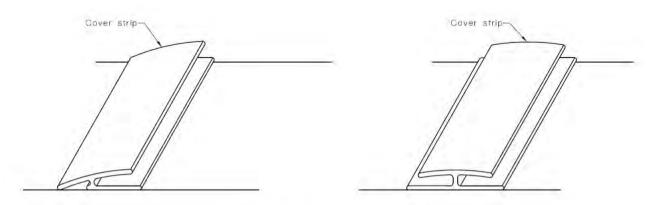
## 7.4.1 Carpets and other soft flexible materials

Where carpets or any soft flexible materials are used on the ground or floor surface—

- the pile height or pile thickness shall not exceed 6 mm and the carpet backing thickness shall not exceed 4 mm;
- (b) exposed edges of floor covering shall be fastened to the floor surface and shall have a trim along the entire length of any exposed edge; and NOTE: An example is given in Figure 8.
- (c) at the leading edges, carpet trims and any soft flexible materials shall have a vertical face no higher than 3 mm or a rounded bevelled edge no higher than 5 mm or above that height a gradient of 1 in 8 up to a total maximum height of 10 mm.







### AXONOMETRIC VIEW

#### **DIMENSIONS IN MILLIMETRES**

FIGURE 8 EXAMPLE OF ABUTTING FLOOR COVERINGS ON A CONTINUOUS ACCESSIBLE PART OF TRAVEL

# 7.4.2 Recessed matting

Matting recessed within a continuous accessible path of travel-

- (a) where of metal and bristle type construction or similar, its surface shall be no more 3 mm if vertical or 5 mm if rounded or bevelled, above or below the surrounding surface; and
- (b) where of a mat or carpet type material, shall have the fully compressed surface level with or above the surrounding surface with a level difference no greater than 3 mm if vertical or 5 mm if rounded or bevelled.

## 7.5 Grates

Grates shall comply with the following:

- (a) Circular openings shall be not greater than 13 mm in diameter.
- (b) Slotted openings shall be not greater than 13 mm wide and be oriented so that the long dimension is transverse to the dominant direction of travel.

NOTE: Where slotted openings are less than 8 mm, the length of the slots may continue across the width of paths of travel.

### 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.

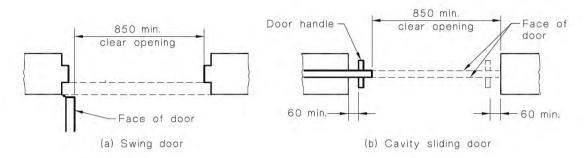
The minimum width of the area of luminance contrast shall be 50 mm.

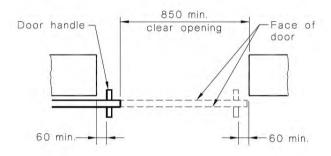


## 13.2 Clear opening of doorways

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.

NOTE: For door controls, see Clause 13.5.





(c) Surface-mounted sliding door

DIMENSIONS IN MILLIMETRES

FIGURE 30 CLEAR OPENING OF DOORWAYS

# 13.3 Circulation spaces at doorways on a continuous accessible path of travel

## 13.3.1 General

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 crossfall not steeper than 1 in 40.

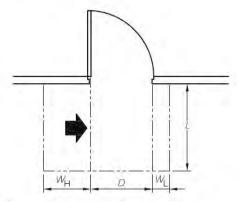
Doorway circulation spaces shall be used in combination to allow access through doorways in both directions, as shown in Figures 31 and 32.

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

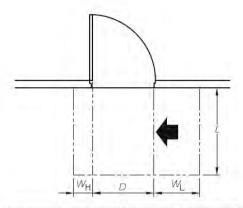
The clear circulation space at doorways with swinging doors is based on the clear opening width of the doorway (D). The clear circulation space shall be not less than the dimensions specified in the tables of Figure 31 for the appropriate clear opening width.





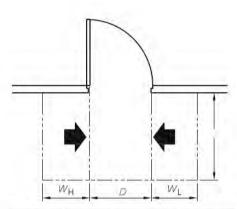
| Dimension D | Dimension<br>L | Dimension<br>W <sub>H</sub> | Dimension W <sub>L</sub> |
|-------------|----------------|-----------------------------|--------------------------|
| 850         | 1220           | 560                         | 340                      |
| 900         | 1185           | 510                         | 340                      |
| 950         | 1160           | 460                         | 340                      |
| 1000        | 1140           | 410                         | 340                      |

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



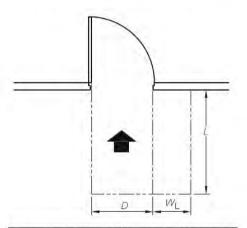
| Dimension<br>D | Dimension L | Dimension<br>W <sub>H</sub> | Dimension<br>W <sub>L</sub> |
|----------------|-------------|-----------------------------|-----------------------------|
| 850            | 1240        | 240                         | 660                         |
| 900            | 1210        | 190                         | 660                         |
| 950            | 1175        | 140                         | 660                         |
| 1000           | 1155        | 90                          | 660                         |

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



| Dimension<br>D | Dimension<br>L | Dimension<br>W <sub>H</sub> | Dimension<br>W <sub>L</sub> |
|----------------|----------------|-----------------------------|-----------------------------|
| 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<br>D | Dimension<br>L | Dimension<br>W <sub>H</sub> | 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

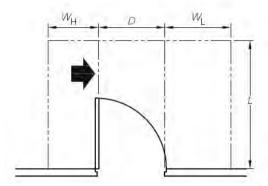
L = Length

 $W_{\rm H}$  = Width—hinge side  $W_{\rm L}$  = Width—latch side  $\Rightarrow$  = Direction of approach = Circulation space

## DIMENSIONS IN MILLIMETRES

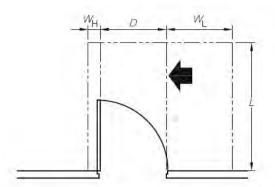
FIGURE 31 (in part) CIRCULATION SPACES AT DOORWAYS WITH SWINGING DOORS





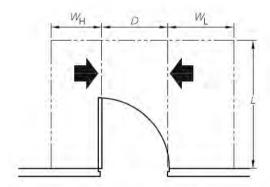
| Dimension<br>D | Dimension<br>4 | Dimension<br>W <sub>H</sub> | Dimension<br>W <sub>L</sub> |
|----------------|----------------|-----------------------------|-----------------------------|
| 850            | 1670           | 660                         | 900                         |
| 900            | 1670           | 610                         | 900                         |
| 950            | 1670           | 560                         | 900                         |
| 1000           | 1670           | 510                         | 900                         |

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



| Dimension<br>D | Dimension<br>L | Dimension<br>W <sub>H</sub> | Dimension<br>W <sub>L</sub> |
|----------------|----------------|-----------------------------|-----------------------------|
| 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<br>D | Dimension<br>L | Dimension<br>W <sub>H</sub> | Dimension<br>W <sub>L</sub> |
|----------------|----------------|-----------------------------|-----------------------------|
| 850            | 1670           | 660                         | 900                         |
| 900            | 1670           | 610                         | 900                         |
| 950            | 1670           | 560                         | 900                         |
| 1000           | 1670           | 510                         | 900                         |

(g) Either side approach, door opens towards user

|     |   |   | +~- | 1  |
|-----|---|---|-----|----|
| 10  | 1 | 1 | Ì   | Ť. |
| 3   |   | 1 |     |    |
| - 7 |   |   |     | 1  |

| Dimension<br>D | Dimension<br>L | Dimension<br>WH | Dimension<br>W <sub>L</sub> |
|----------------|----------------|-----------------|-----------------------------|
| 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

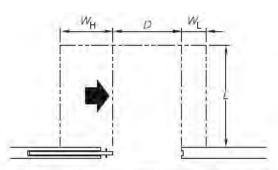
 $W_{\rm H}$  = Width—hinge side  $W_{\rm L}$  = Width—latch side

Direction of approach
 Circulation space

## DIMENSIONS IN MILLIMETRES

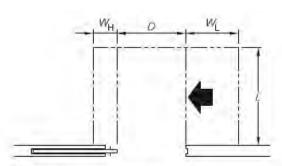
# FIGURE 31 (in part) CIRCULATION SPACES AT DOORWAYS WITH SWINGING DOORS





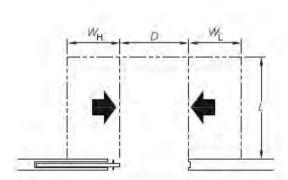
| Dimension<br>D | Dimension<br>L | Dimension<br>W <sub>H</sub> | Dimension<br>W <sub>L</sub> |
|----------------|----------------|-----------------------------|-----------------------------|
| 850            | 1280           | 660                         | 395                         |
| 900            | 1280           | 610                         | 395                         |
| 950            | 1280           | 560                         | 395                         |
| 1000           | 1280           | 510                         | 395                         |

(a) Slide-side approach



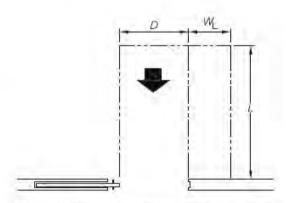
| Dimension<br>D | Dimension<br>L | Dimension<br>W <sub>H</sub> | Dimension<br>W <sub>L</sub> |
|----------------|----------------|-----------------------------|-----------------------------|
| 850            | 1230           | 185                         | 660                         |
| 900            | 1230           | 180                         | 660                         |
| 950            | 1230           | 180                         | 660                         |
| 1000           | 1230           | 180                         | 660                         |

(b) Latch-side approach



| Dimension<br>D | Dimension<br>L | Dimension<br>W <sub>H</sub> | Dimension<br>W <sub>L</sub> |
|----------------|----------------|-----------------------------|-----------------------------|
| 850            | 1280           | 660                         | 660                         |
| 900            | 1280           | 610                         | 660                         |
| 950            | 1280           | 560                         | 660                         |
| 1000           | 1280           | 510                         | 660                         |

(c) Either side approach



| Dimension<br>D | Dimension<br>L | Dimension<br>W <sub>H</sub> | Dimension<br>W <sub>L</sub> |
|----------------|----------------|-----------------------------|-----------------------------|
| 850            | 145.0          | 0                           | 530                         |
| 900            | 1450           | Q                           | 530                         |
| 950            | 1450           | 0                           | 530                         |
| 1000           | 1450           | 0                           | 530                         |

(d) Front approach

## 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 32 CIRCULATION SPACES AT DOORWAYS WITH SLIDING DOORS



# 13.3.3 Sliding doors

## 13.3.3.1 General

The clear circulation space at doorways with sliding 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 in Figure 32 for the appropriate clear opening width.

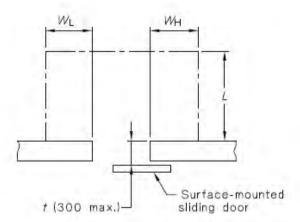
# 13.3.3.2 Cavity sliding doors

Where a sliding door is within the wall cavity, the circulation space at the doorway shall be not less than that given in the tables of Figure 32 for the appropriate clear opening width (D).

### 13.3.3.3 Surface-mounted doors

Where a sliding door is surface-mounted, the circulation space at the doorway shall be as follows:

- (a) The circulation space at the door face shall be not less than that given in the tables of Figure 32.
- (b) The circulation space opposite the door face shall be increased from that given in the tables of Figure 32, by the values given in the Table of Figure 33. When a surface-mounted sliding door is automatic, these increases do not apply.



| Door approach              | Increase from Figure 32                                      |  |  |  |
|----------------------------|--|--|--|--|
| Figure 32(d)               | Add dimensions $t$ to dimensions $W_{\rm L}$ and $W_{\rm H}$ |  |  |  |
| Figure 32(a), 32(b), 32(c) | Add dimensions $t$ to dimensions $L$ , $W_{L}$ and $W_{H}$   |  |  |  |

t=wall thickness to the face of the door

## **DIMENSIONS IN MILLIMETRES**

NOTE: See Clause 13.2 for clear openings of doorways.

FIGURE 33 CALCULATING DIMENSIONS OF THE CIRCULATION SPACE OPPOSITE THE DOOR FACE WHERE A SLIDING DOOR IS SURFACE-MOUNTED



## 13.5 Door controls

## 13.5.1 General

Door controls in, or forming part of, the continuous accessible path of travel shall comply with the requirements of this Clause.

# 13.5.2 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:

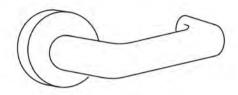
- 1 Figure 35(A) shows an example of a suitable hinged door handle. Figure 35(B) shows an example of a suitable door handle for sliding doors.
- 2 Door handles of 'D' lever type provide an adequate grip for people with hand impairments.
- (b) The clearance between the handle and the back plate or door face at the centre grip section of the handle shall be not less than 35 mm and not more 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 | N  |
|------|----------------------------|----|
| (ii) | To swing or slide the door | 1. |

- (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, as shown in Figure 36.



(a) Isometric view

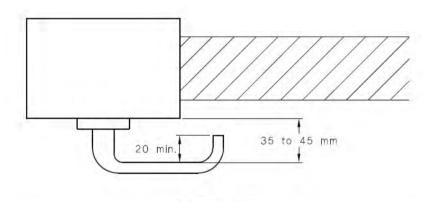
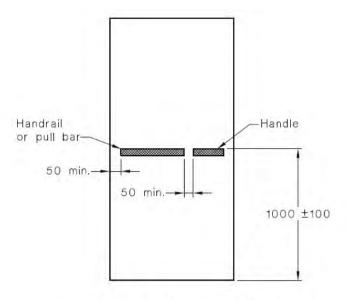


FIGURE 35(A) EXAMPLE OF ACCEPTABLE DOOR HARDWARE FOR HINGED DOORS

(b) Plan view





**DIMENSIONS IN MILLIMETRES** 

FIGURE 36 LOCATIONS FOR DOOR CONTROLS SHOWING CLOSING FACE

## 13.5.3 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 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.

## 13.5.4 Power-operated door controls

Push-button controls shall have a minimum dimension of 25 mm diameter and be proud of the surface and shall activate the door before the button becomes level with the surrounding surface.



# 14 SWITCHES AND GENERAL PURPOSE OUTLETS (POWER POINTS)

## 14.1 General

All switches and controls on an accessible path of travel, other than general purpose outlets, shall be located not less than 900 mm nor more than 1100 mm above the plane of the finished floor and not less than 500 mm from internal corners except where on the architrave on the latch side as shown in Figure 37.

# 14.2 Accessible sole-occupancy units and accessible sanitary facilities

Rocker action and toggle switches shall be provided and have a minimum dimension of 30 mm  $\times$  30 mm. Push-pad switches shall have a minimum dimension of 25 mm in diameter.

General purpose outlets shall be located not less than 600 mm nor more than 1100 mm above the plane of the finished floor and not less than 500 mm from internal corners.

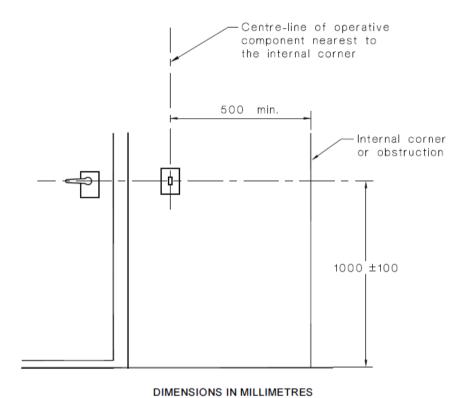


FIGURE 37 HEIGHTS FOR SWITCHES AND DOOR HANDLES

