

Date: 27 June 2023  
Our Ref: P230042

True Wealth Property  
Suite 5, Level 1, 240 Brisbane Rd,  
Arundel Qld 4214  
Att: Mr David Clynch

Dear David,

**RE: 7-29 Stronach Ave, East Maitland  
BCA COMPLIANCE ASSESSMENT**

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

In reviewing the content of this Report, particular attention is drawn to the content of Parts 2, 3 and 4, as: –

- ❑ Part 3 Provides a Key point summary
- ❑ Part 4 summarizes the compliance status of the proposed design in terms of each prescriptive provision of the BCA.


The inclusion of this summary enables an immediate understanding of the compliance status of the proposed design to be obtained.

- ❑ Part 5 contains a detailed analysis of the proposed design, and provides informative commentary & recommendation in respect of each instance of prescriptive non-compliance and area of preliminary only (design) detail, as applicable.

This commentary enables the project team to readily identify and understand the nature and extent of information required within the Construction Certificate application to demonstrate the attainment of BCA compliance.

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

Yours faithfully

A handwritten signature in black ink, appearing to be "Kieran Tobin", with a horizontal line extending to the right.

**Kieran Tobin**  
Director

# BCA COMPLIANCE ASSESSMENT

PREPARED FOR

**True Wealth Property**

REGARDING

**7-29 Stronach Ave, East Maitland**

Prepared By



## REPORT REGISTER

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

<b>Our Reference</b>	<b>Issue No.</b>	<b>Remarks</b>	<b>Issue Date</b>
P230042	1	Design Compliance Report	27 June 2023
Author	Kieran Tobin Senior NCC Consultant Registered Building Surveyor - Fair Trading no 0409 Grad Dip Building Surveying UWS		

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## 1.0 INTRODUCTION

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### 1.1 GENERAL

This “BCA Compliance Assessment” report has been prepared at the request of True Wealth Property and relates to the premises located at 7-29 Stronach Ave, East Maitland.

The project proposal is for construction of a two storey building for Specialist Disability Accommodation.

### 1.2 REPORT BASIS

The content of this report reflects –

- (a) The principles and provisions of BCA 2022, Parts B, C, D, E & F;
- (b) Architectural documentation provided by Arkhi Design and Consulting

Plan Reference	Plan Description	Dated
DA001	Cover Sheet	24/02/23
DA003	Site Plan	24/02/23
DA004	Floor Plan	24/02/23
DA005	Floor Plan	24/02/23
DA006	Elevations	24/02/23
DA007	Electrical Layout Plan	24/02/23

### 1.3 EXCLUSIONS

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

- (a) Structural and services design documentation;
- (b) General building services;
- (c) The individual requirements of service providers (i.e. Telstra, Water Supply, Energy Australia);
- (d) The individual requirements of the Workcover Authority;
- (e) Disability Discrimination Act (DDA);
- (f) Assessment of any structural elements or geotechnical matters relating to the building;
- (g) Consideration of any fire services operations (including hydraulic, electrical or other systems);
- (h) Consideration of energy or water authority requirements;
- (i) Consideration of Council’s local planning policies;
- (j) Environmental or planning issues;
- (k) Requirements of statutory authorities;
- (l) This report has been prepared for the exclusive use of the client referred to on the cover sheet of this report.

We do not warrant or accept liability for the reliance upon or use of this report by any other party.

- (m) The report considers matters of a significant nature only and should not be considered exhaustive.

#### **1.4 REPORT PURPOSE**

The purpose of this report is to identify the extent to which the change of use within the existing building may comply with the relevant prescriptive provisions of BCA 2022, Parts B, C, D, E & F

Assessment of the proposed design considers each prescriptive BCA provision, and identifies such as either: –

- (a) Being complied with; or
- (b) Not being complied with; or
- (c) Requiring the provision further detail with the future Building Permit or other application or
- (d) Not being relevant to the particular building works proposal.

The status of the design, in terms of these four (4) categories, is summarised within Part 3 of this report.

Where prescriptive non-compliance is identified, suitable recommendations to remedy the non-compliance shall be detailed in Part 4.

In instances where preliminary only detail exists, summary of the information required from the project team for inclusion within future applications (i.e. Construction Certificate) shall also be outlined in Part 4.

## 2.0 MATTERS IDENTIFIED / RECOMMENDATIONS

### 2.1 COMPLIANCE PATHWAYS WITHIN THE BCA

Compliance with the NCC is achieved by complying with—

(1) the Governing Requirements of the NCC; and

(2) the *Performance Requirements*.

#### A2.1 Compliance with the Performance Requirements

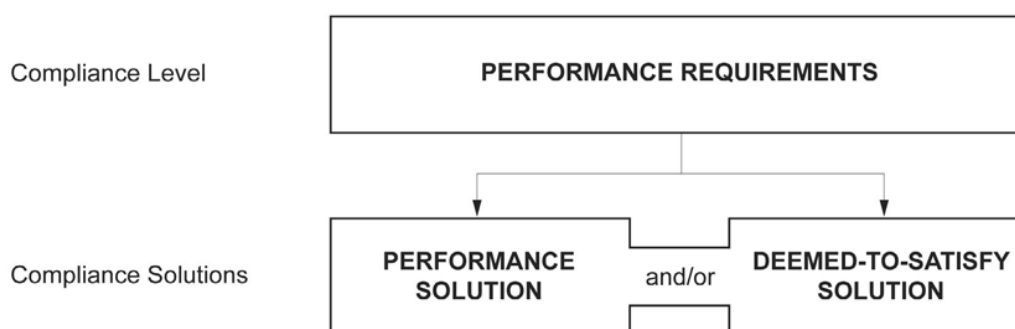
*Performance Requirements* are satisfied by one of the following, as shown in Figure 1:

(1) A *Performance Solution*.

(2) A *Deemed-to-Satisfy Solution*.

(3) A combination of (1) and (2).

**Figure 1: NCC compliance option structure**



### 2.2 KEY COMPLIANCE ISSUES IDENTIFIED

The following table provides a list of key compliance issues within the proposed design.

Key Compliance Requirements requiring Greater detail at CC Application		
	BCA Clause	Comment
1	C2D2	<p>Under the Deemed to Satisfy requirements of the BCA the Building is required to achieve Compliance for Type B Construction</p> <p>It has been identified however that a Performance Solution will be requested from a Fire Safety Engineer to identify relevant compliance for Type C Construction</p> <p>All building elements to achieve the fire resistance levels of Type C Construction as outlined in Specification C1.1 (Refer Clause 3.4 of this report).</p> <p>Architectural Documentation at Complying Development Certificate stage will require a detailed wall schedule to identify the materials and systems used to achieve the required Fire Resistance Levels (FRLs)</p> <p>Details of the separating wall extending to the underside of the roof covering</p> <p>The details must consider compliant Junctions for fire rated finishes</p>

2	C2D2 Specification 5	<p>Technical Compliance Issue</p> <p>The building is presented as a class 3 rather than class 2 due to the nature of the occupants.</p> <p>Converse to the general layout of a class 2 residential building a class 3 building is identified as housing unrelated persons.</p> <p>The building essentially is separated into 4 group homes</p> <p>This renders each bedroom as a Sole Occupancy Unit which in turn requires additional Fire and Acoustic separation within these areas.</p> <p><b>Planning Circular Explanation</b></p> <p>In residential applications, a sole-occupancy unit will typically consist of sleeping facilities, sanitary facilities and a living area. See Figure A.1.1(SOU). In situations where the sleeping facilities are the only areas that are for the exclusive use of the owner or occupier the delineation of the sole-occupancy unit will change. In this instance the bedroom becomes the sole-occupancy unit.</p> <p>Areas that do not comprise a sole-occupancy unit are those intended and available for the use of more than one owner or occupier (what is often called a “common area”). Examples applying to residential type buildings include a laundry; TV room; entertainment room; and kitchen in a boarding house. See Figure A1.1(SOU).</p> <p><b>Note:-</b>  <b>The 1 bedroom units can be considered to be a Sole Occupancy Unit in their entirety</b>  <b>Within the 2 bedroom units each bedroom must be considered to be a sole occupancy unit</b></p>
3	C4D12	Self-closing, tight fitting, solid core door, not less than 35 mm thick are required to - All (internal) Doors
4	D2D5	<p>The Maximum Travel distance is exceeded</p> <p>Travel Distance required</p> <p>Class 2 and 3 buildings — (a)The entrance doorway of any sole-occupancy unit must be not more than— (i)6 m from an exit or from a point from which travel in different directions to 2 exits is available; or (ii)20 m from a single exit serving the storey at the level of egress to a road or open space; and</p> <p>(b)no point on the floor of a room which is not in a sole-occupancy unit must be more than 20 m from an exit or from a point at which travel in different directions to 2 exits is available.</p> <p>Note the travel distance may be extended depending on the Sprinkler system selected for the building</p>
5	Part D4	<p>Building Access</p> <p>External levels and path way gradients are required</p> <p>Further detail is required in regard to the required Accessible car parking</p>
6	E1D2	The Building Requires Fire Hydrant Protection
7	E1D4 E1D6	The Building will require a Sprinkler system throughout
8	Part E3	A Lift Specification is required
9	Part F6	A Window Schedule is required to allow for consideration of compliant Light and Ventilation



10	Part F7	Wall floor and riser sections are required to determine the method of Acoustic separation
11	Part F8	Identify the methods and materials for condensation management
12	Part J	A Section J assessment is required

### 3.0 BUILDING DESCRIPTION

#### 3.1 GENERAL

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

#### 3.1 RISE IN STOREYS (CLAUSE C1.2)

The building is proposed to have a rise in storeys of 2 (two)

#### 2.3 BUILDING CLASSIFICATION (CLAUSE A3.2)

The entire building incorporates the following classifications:-

CLASS	DESCRIPTION
Class 3	Class 3 buildings include the following: (a) A boarding house, guest house, hostel, lodging house or backpacker accommodation. (b) A residential part of a hotel or motel. (c) A residential part of a school. (d) Accommodation for the aged, children, or people with disability. (e) A residential part of a health-care building which accommodates members of staff. (f) A residential part of a detention centre. (g) A residential care building.
Class 10a	1 x Private Garage Covered Outdoor spaces

#### Definition

**Residential care building:** A Class 3, 9a or 9c building which is a place of residence where 10% or more of persons who reside there need physical assistance in conducting their daily activities and to evacuate the building during an emergency (including any aged care building or residential aged care building) but does not include a hospital.

#### 2.4 EFFECTIVE HEIGHT (CLAUSE A1.1)

The building has an effective height Not exceeding 12m.

#### 2.5 TYPE OF CONSTRUCTION (TABLE C1.1)

##### Specification C1.1 - Type B Construction

Building element	
<b>EXTERNAL WALL</b> (including any column and other building element incorporated within it) or other external building element, where the distance from any <i>fire-source feature</i> to which it is exposed is—	
	Class 2
less than 1.5 m	90/ 90/ 90
1.5 to less than 3 m	90/ 60/ 30
3 to less than 9 m	90/ 30/ 30
9 to less than 18 m	90/ 30/—
18 m or more	—/—/—
For non- <i>loadbearing</i> parts—	
less than 1.5 m	—/ 90/ 90
1.5 to less than 3 m	—/ 60/ 30
3 m or more	—/—/—
<b>EXTERNAL COLUMN</b> not incorporated in an <i>external wall</i> , where the distance from any <i>fire-source feature</i> to which it is exposed is—	

For <i>loadbearing</i> columns—	
less than 18 m	90/-/-
18 m or more	-/-/-
For non- <i>loadbearing</i> columns—	
For non- <i>loadbearing</i> columns—	-/-/-
<b>COMMON WALLS and FIRE WALLS—</b>	90/ 90 / 90
<b>INTERNAL WALLS—</b>	
<i>Fire-resisting</i> lift and stair <i>shafts</i> —	
<i>Loadbearing</i>	90/ 90/ 90
<i>Fire-resisting</i> stair <i>shafts</i> —	
Non- <i>loadbearing</i>	-/ 90/ 90
Bounding <i>public corridors</i> , public lobbies and the like—	
<i>Loadbearing</i>	60/ 60/ 60
Non- <i>loadbearing</i>	-/ 60/ 60
Between or bounding <i>sole-occupancy units</i> —	
<i>Loadbearing</i>	60/ 60/ 60
Non- <i>loadbearing</i>	-/ 60/ 60
<b>OTHER LOADBEARING INTERNAL WALLS and COLUMNS—</b>	60/-/-
<b>ROOFS</b>	-/-/-

### 3.5 GENERAL FLOOR AREA LIMITATIONS (TABLE C2.2)

Note – Not applicable to residential portion

Subject to the following maximum fire compartment floor area and volume limits for Construction: –

Building Class		Type A	Type B	Type C
5, 9b, 9c	Max Floor area	8000 m <sup>2</sup>	<b>5,500 m<sup>2</sup></b>	3000 m <sup>2</sup>
	Max Volume	48,000 m <sup>3</sup>	<b>33,000 m<sup>3</sup></b>	18,000 m <sup>3</sup>

### 3.6 PART B1 - STRUCTURAL PROVISIONS

Structural Engineers Details prepared by an Appropriately qualified Structural Engineer will be required within the Construction Certificate Documentation.

Confirmation will be required that the design achieves compliance with the following standards (where relevant):-

- AS 1170.0 – 2002 – General Principles
- AS 1170.1 – 2002 – Certification of Barriers to Prevent Falls (Dead and Live Loads)
- AS 1170.2 – 2011 – Wind Loads
- AS 1170.4 – 2007 – Earthquake Actions
- AS 3700 – 2018 – Masonry Structures
- AS 3600 – 2018 – Concrete Structures
- AS 4100 – 1998 – Steel Structures
- AS 4600 – 2018 – Cold Formed Steel Structures
- AS 2519- 2009 – Piling Design and Installation
- AS 1720.1 – 2010 – Design of Timber Structures
- AS/NZS 1664.1 and 1664.2 – 1997 – Aluminium Construction
- AS 2047 – 2014 – Windows and External Glazed Doors in Buildings
- AS 1288 – 2006 – Glass In Buildings Selection and Installation

## 4.0 BCA ASSESSMENT – SUMMARY

### 4.1 GENERAL

The tables contained within items 3.2 – 3.5 below summarise the compliance status of the proposed architectural design in terms of each prescriptive provision of the Building Code of Australia.

For those instances of either “prescriptive non-compliance” or “preliminary only detail”, a detailed analysis and commentary is provided within Part 4.

### 4.2 SECTION C – FIRE RESISTANCE

BCA reference	Complies	Does not comply	Detail Required	Future FER	Not relevant
C2D1 - Deemed-to-Satisfy Provisions			✓		
C2D2 - Type of construction required				✓	
C2D3 - Calculation of rise in storeys	✓				
C2D4 - Buildings of multiple classification					✓
C2D5 - Mixed types of construction					✓
C2D6 - Two storey Class 2, 3 or 9c buildings					✓
C2D7 - Class 4 parts of buildings					✓
C2D8 - Open spectator stands and indoor sports stadiums					✓
C2D9 - Lightweight construction			✓		
C2D10 - Non-combustible building elements			✓		
C2D11 - Fire hazard properties			✓		
C2D12 - Performance of external walls in fire					✓
C2D13 - Fire-protected timber: Concession			✓		
C2D14- Ancillary elements			✓		
C2D15-Fixing of bonded laminated cladding panels			✓		
C3D3 - General floor area and volume limitations					✓
C3D4 - Large isolated buildings					✓
C3D5 - Requirements for open spaces and vehicular access					✓
C3D6 - Class 9 buildings					✓
C3D7 - Vertical separation of openings in external walls					✓
C3D8 - Separation by fire walls					✓
C3D9 - Separation of classifications in the same storey			✓		
C3D10 - Separation of classifications in different storeys			✓		
C3D11 - Separation of lift shafts					✓
C3D12 - Stairways and lifts in one shaft					✓
C3D13 - Separation of equipment			✓		
C3D14 - Electricity supply system			✓		
C3D15 - Public corridors in Class 2 and 3 buildings					✓
C4D3 - Protection of openings in external walls			✓		
C4D4- Separation of external walls and associated openings in different fire compartments					✓
C4D5- Acceptable methods of protection			✓		
C4D6- Doorways in fire walls					✓
C4D7-Sliding fire doors					✓
C4D8- Protection of doorways in horizontal exits					✓
C4D9- Openings in fire-isolated exits					✓
C4D10- Service penetrations in fire-isolated exits					✓
C4D11- Openings in fire-isolated lift shafts					✓
C4D12- Bounding construction: Class 2 and 3 buildings and Class 4 parts			✓		
C4D13- Openings in floors and ceilings for services			✓		
C4D14- Openings in shafts			✓		
C4D15- Openings for service installations			✓		
C4D16- Construction joints			✓		
C4D17- Columns protected with lightweight construction to achieve an FRL			✓		

### 4.3 SECTION D – ACCESS AND EGRESS

BCA reference	Complies	Does not comply	Detail Required	Not relevant
D2D3 - Number of exits required				✓
D2D4 - When fire-isolated stairways and ramps are required				✓
D2D5 - Exit travel distances		✓		
D2D6 - Distance between alternative exits			✓	
D2D7 - Height of exits, paths of travel to exits and doorways			✓	
D2D8 - Width of exits and paths of travel to exits			✓	
D2D9 - Width of doorways in exits or paths of travel to exits			✓	
D2D10 - Exit width not to diminish in direction of travel				
D2D11 - Determination and measurement of exits and paths of travel to exits			✓	
D2D12 - Travel via fire-isolated exits				✓
D2D13 - External stairways or ramps in lieu of fire-isolated exits				✓
D2D14 - Travel by non-fire-isolated stairways or ramps	✓			
D2D15 - Discharge from exits	✓			
D2D16 - Horizontal exits				✓
D2D17 - Non-required stairways, ramps or escalators				✓
D2D18 - Number of persons accommodated				✓
D2D19 - Measurement of distances				✓
D2D20 - Method of measurement				✓
D2D21 - Plant rooms, lift machine rooms and electricity network substations: Concession				✓
D2D22 - Access to lift pits			✓	
D2D23 - Egress from primary schools				✓
D3D3 - Fire-isolated stairways and ramps				✓
D3D4 - Non-fire-isolated stairways and ramps				✓
D3D5 - Separation of rising and descending stair flights				✓
D3D6 - Open access ramps and balconies				✓
D3D7 - Smoke lobbies				✓
D3D8 - Installations in exits and paths of travel			✓	
D3D9 - Enclosure of space under stairs and ramps				✓
D3D10 - Width of required stairways and ramps				✓
D3D11 - Pedestrian ramps				✓
D3D12 - Fire-isolated passageways				✓
D3D13 - Roof as open space				✓
D3D14 - Goings and risers			✓	
D3D15 - Landings			✓	
D3D16 - Thresholds			✓	
D3D17 - Barriers to prevent falls			✓	
D3D18 - Height of barriers			✓	
D3D19 - Openings in barriers			✓	
D3D20 - Barrier climbability			✓	
D3D21 - Wire barriers				✓
D3D22 - Handrails			✓	
D3D23 - Fixed platforms, walkways, stairways and ladders				✓
D3D24 - Doorways and doors				✓
D3D25 - Swinging doors	✓			
D3D26 - Operation of latch			✓	
D3D27 - Re-entry from fire-isolated exits				✓
D3D28 - Signs on doors				✓
D3D29 - Protection of openable windows			✓	
D3D30 - Timber stairways: Concession				✓
D4D2 -General building access requirements			✓	
D4D3-Access to buildings			✓	
D4D4 -Parts of buildings to be accessible			✓	
D4D5 -Exemptions			✓	
D4D6 -Accessible carparking			✓	
D4D7 -Signage			✓	
D4D8 -Hearing augmentation				✓
D4D9 -Tactile indicators				✓

D4D10- Wheelchair seating spaces in Class 9b assembly buildings				✓
D4D11-Swimming pools				✓
D4D12-Ramps				✓
D4D13-Glazing on an accessway			✓	

#### 4.4 SECTION E – SERVICES AND EQUIPMENT

BCA reference	Complies	Does not comply	Detail Required	Not relevant
E1D2 - Fire hydrants			✓	
E1D3 -Fire hose reels				✓
E1D4 - Sprinklers			✓	
E1D5 - Where sprinklers are required: all classifications				✓
E1D6 - Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings				✓
E1D7 -Where sprinklers are required: Class 3 building used as a residential care building			✓	
E1D8 - Where sprinklers are required: Class 6 building				✓
E1D9 - Where sprinklers are required: Class 7a building, other than an open-deck carpark				✓
E1D10 -Where sprinklers are required: Class 9a health-care building used as a residential care building, Class 9c buildings				✓
E1D11 - Where sprinklers are required: Class 9b buildings				✓
E1D12 - Where sprinklers are required: additional requirements				✓
E1D13 -Where sprinklers are required: occupancies of excessive hazard				✓
E1D14 -Portable fire extinguishers				✓
E1D15 -Fire control centres				✓
E1D16 -Fire precautions during construction			✓	
E1D17 -Provision for special hazards				✓
E2D3 -General requirements			✓	
E2D4 -Fire-isolated exits				✓
E2D5 -Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building				✓
E2D6 -Buildings more than 25 m in effective height: Class 5, 6, 7b, 8 or 9b buildings				✓
E2D7 -Buildings more than 25 m in effective height: Class 9a buildings				✓
E2D8 -Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building			✓	
E2D9 -Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings				✓
E2D10 -Buildings not more than 25 m in effective height: large isolated buildings subject to C3D4				✓
E2D11 -Buildings not more than 25 m in effective height: Class 9a and 9c buildings				✓
E2D12 -Class 7a buildings				✓
E2D13 -Basements (other than Class 7a buildings)				✓
E2D14 -Class 6 buildings – in fire compartments more than 2000 m <sup>2</sup> : Class 6 building (not containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit)				✓
E2D15 -Class 6 buildings – in fire compartments more than 2000 m <sup>2</sup> : Class 6 building (containing an enclosed common walkway or mall)				✓
E2D16 -assembly buildings: nightclubs, discotheques and the like				✓
E2D17 - assembly buildings: exhibition halls				✓
E2D18 - assembly buildings: theatres and public halls				✓
E2D19 -Class 9b – assembly buildings: theatres and public halls (not listed in E2D18) including lecture theatres and cinema/auditorium complexes				✓
E2D20 -Class 9b assembly buildings: other assembly buildings (not listed in E2D16 to E2D19)				✓
E2D21 -Provision for special hazards				✓
E3D2 - Lift installations			✓	
E3D3 - Stretcher facility in lifts				✓
E3D4 - Warning against use of lifts in fire			✓	
E3D5 - Emergency lifts				✓
E3D6 -Landings	✓			
E3D7 -Passenger lift types and their limitations			✓	

E3D8 -Accessible features required for passenger lifts			✓	
E3D9 -Fire service controls				
E3D10 -Residential care buildings				
E3D11 -Fire service recall control switch				
E3D12 -Lift car fire service drive control switch				
E4D2 -Emergency lighting requirements			✓	
E4D3 -Measurement of distance			✓	
E4D4 -Design and operation of emergency lighting			✓	
E4D5 -Exit signs			✓	
E4D6 -Direction signs			✓	
E4D7 -Class 2 and 3 buildings and Class 4 parts: exemptions				✓
E4D8 -Design and operation of exit signs			✓	
E4D9 -Emergency warning and intercom systems				✓



**3.1. SECTION F – HEALTH AND AMENITY**

BCA reference	Complies	Does not comply	Detail required	Not relevant
F1D3 - Stormwater drainage			✓	
F1D4 - Exposed joints			✓	
F1D5 - External waterproofing membranes			✓	
F1D6 - Damp-proofing			✓	
F1D7 - Damp-proofing of floors on the ground			✓	
F1D8 - Subfloor ventilation				✓
F2D2 - Wet area construction			✓	
F2D3 - Rooms containing urinals				✓
F2D4 - Floor wastes			✓	
F3D2 - Roof coverings			✓	
F3D3 - Sarking			✓	
F3D4 - Glazed assemblies			✓	
F3D5 - Wall cladding			✓	
F4D2 - Calculation of number of occupants and facilities				✓
F4D3 - Facilities in Class 3 to 9 buildings				✓
F4D4 - Accessible sanitary facilities			✓	
F4D5 - Accessible unisex sanitary compartments				✓
F4D6 - Accessible unisex showers				✓
F4D7 - Construction of sanitary compartments				✓
F4D8 - Interpretation: urinals and washbasins				✓
F4D9 - Microbial (legionella) control				✓
F4D10 - Waste management				✓
F4D12 - Accessible adult change facilities				✓
F5D2 - Height of rooms and other spaces			✓	
F6D2 Provision of natural light			✓	
F6D3 Methods and extent of natural light			✓	
F6D4 Natural light borrowed from adjoining room				✓
F6D5 Artificial lighting			✓	
F6D6 Ventilation of rooms			✓	
F6D7 Natural ventilation			✓	
F6D8 Ventilation borrowed from adjoining room				✓
F6D9 Restriction on location of sanitary compartments				✓
F6D10 Airlocks				✓
F6D11 Carparks			✓	
F6D12 Kitchen local exhaust ventilation			✓	
F7D3 Determination of airborne sound insulation ratings			✓	
F7D4 Determination of impact sound insulation ratings			✓	
F7D5 Sound insulation rating of floors			✓	
F7D6 Sound insulation rating of walls			✓	
F7D7 Sound insulation rating of internal services			✓	
F7D8 Sound isolation of pumps			✓	

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## 5.0 BCA ASSESSMENT – DETAILED ANALYSIS

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### 5.1 GENERAL

With reference to the “BCA Assessment Summary” contained within Part 3 above, the following detailed analysis and commentary is provided.

This commentary is formulated to enable the design documentation to be further progressed, for the purpose of evidencing the attainment of compliance with the relevant provisions of the BCA.

In our opinion compliance with the Building Code of Australia 2022, Volume 1, can be achieved subject to the implementation of the following details into the Construction documentation.

### 5.2 SECTION C – FIRE RESISTANCE

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
C2D2	<p><b>Type of construction required</b></p> <p>(1)The minimum Type of <i>fire-resisting construction</i> of a building must be determined in accordance with Table C2D2, except as allowed for—</p> <p>(a)certain Class 2, 3 or 9c buildings, in C2D6; and</p> <p>(b)a Class 4 part of a building located on the top <i>storey</i>, in C2D4(2); and</p> <p>(c)<i>open spectator stands</i> and indoor sports stadiums, in C2D8.</p> <p>(2)Each building element must comply with Specification 5 as applicable.</p>	Further Detail will be required within the Construction Certificate documentation
C2D10	<p><b>Non-combustible building elements</b></p> <p>(1)In a building <i>required</i> to be of Type A or B construction, the following building elements and their components must be <i>non-combustible</i>:</p> <p>(a)<i>External walls</i> and <i>common walls</i>, including all components incorporated in them including the facade covering, framing and insulation.</p>	Further Detail will be required within the Construction Certificate documentation

- (b)The flooring and floor framing of lift pits.
- (c)Non-loadbearing *internal walls* where they are *required* to be *fire-resisting*.
- (2)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 in—
  - (a)a building *required* to be of Type A construction; and
  - (b)a building *required* to be of Type B construction, subject to C3D11, in— (i)a Class 2, 3 or 9 building; and
  - (ii)a Class 5, 6, 7 or 8 building if the *shaft* connects more than 2 *storeys*.
- (3)A *loadbearing internal wall* and a *loadbearing fire wall*, including those that are part of a *loadbearing shafts*, must comply with Specification 5.
- (4)The requirements of (1) and (2) do not apply to the following:
  - (a)Gaskets.
  - (b)Caulking.
  - (c)Sealants.
  - (d)Termite management systems.
  - (e)Glass, including laminated glass, and associated adhesives, including tapes.
  - (f)Thermal breaks associated with— (i)glazing systems; or
  - (ii)*external wall* systems, where the thermal breaks— (A)are no larger than necessary to achieve thermal objectives; and
  - (B)do not extend beyond one *storey*; and
  - (C)do not extend beyond one *fire compartment*.
- (g)*Damp-proof courses*.
- (h)Compressible fillers and backing materials, including those associated with articulation joints, closing gaps not wider than 50 mm.
- (i)Isolated— (i)construction packers and shims; or
- (ii)blocking for fixing fixtures; or
- (iii)fixings, including fixing accessories; or

- (iv) acoustic mounts.
- (j) Waterproofing materials applied to the external face, used below ground level and up to 250 mm above ground level.
- (k) Joint trims and joint reinforcing tape and mesh of a width not greater than 50 mm.
- (l) Weather sealing materials, applied to gaps not wider than 50 mm, used within and between concrete elements.
- (m) Wall ties and other masonry components complying with AS 2699 Part 1 and Part 3 as appropriate, and associated with masonry wall construction.
- (n) Reinforcing bars and associated minor elements that are wholly or predominately encased in concrete or grout.
- (o) A paint, lacquer or a similar finish or coating.
- (p) Adhesives, including tapes, associated with stiffeners for cladding systems.
- (q) Fire-protective materials and components *required* for the protection of penetrations.
- (5) The following materials, when entirely composed of itself, are *non-combustible* and may be used wherever a *non-combustible* material is *required*:
  - (a) Concrete.
  - (b) Steel, including metallic coated steel.
  - (c) Masonry, including mortar.
  - (d) Aluminium, including aluminium alloy.
  - (e) Autoclaved aerated concrete, including mortar.
  - (f) Iron.
  - (g) Terracotta.
  - (h) Porcelain.
  - (i) Ceramic.
  - (j) Natural stone.
  - (k) Copper.
  - (l) Zinc.

	<p>(m)Lead.</p> <p>(n)Bronze.</p> <p>(o)Brass.</p> <p>(6)The following materials may be used wherever a <i>non-combustible</i> material is <i>required</i>:</p> <p>(a)Plasterboard.</p> <p>(b)Perforated gypsum lath with a normal paper finish.</p> <p>(c)Fibrous-plaster sheet.</p> <p>(d)Fibre-reinforced cement sheeting.</p> <p>(e)Pre-finished metal sheeting having a <i>combustible</i> surface finish not exceeding 1 mm thickness and where the <i>Spread-of-Flame Index</i> of the product is not greater than 0.</p> <p>(f)<i>Sarking-type materials</i> that do not exceed 1 mm in thickness and have a <i>Flammability Index</i> not greater than 5.</p> <p>(g)Bonded laminated materials where— (i)each lamina, including any core, is <i>non-combustible</i>; and (ii)each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (iii)the <i>Spread-of-Flame Index</i> and the <i>Smoke-Developed Index</i> of the bonded laminated material as a whole do not exceed 0 and 3 respectively; and when located externally, are fixed in accordance with C2D15.</p>	
<b>C2D11</b>	<p><b>Fire hazard properties</b></p> <p>(1)The <i>fire hazard properties</i> of the following internal linings, materials and assemblies within a Class 2 to 9 building must comply with Specification 7: (a)Floor linings and floor coverings.</p> <p>(b)Wall linings and ceiling linings.</p> <p>(c)Air-handling ductwork.</p> <p>(d)Lift cars.</p> <p>(e)In Class 9b buildings used as a theatre, public hall or the like— (i)fixed seating in the audience area</p>	Further Detail will be required within the Construction Certificate documentation

or auditorium; and

(ii) a proscenium curtain *required* by Specification 32.

(f) Escalators, moving walkways and non-*required* non *fire-isolated stairways* or pedestrian ramps subject to Specification 14.

(g) *Sarking-type materials*.

(h) Attachments to floors, ceilings, *internal walls, common walls, fire walls* and to internal linings of *external walls*.

(i) Other materials including insulation materials other than *sarking-type materials*.

(2) Paint or fire-retardant coatings must not be used to achieve compliance with the *required fire hazard properties*.

(3) The requirements of (1) do not apply to a material or assembly if it is— (a) plaster, cement render, concrete, terrazzo, ceramic tile or the like; or

(b) a *fire-protective covering*; or

(c) a timber-framed *window*; or

(d) a solid timber handrail or skirting; or

(e) a timber-faced door; or

(f) an electrical switch, socket-outlet, cover plate or the like; or

(g) a material used for— (i) a roof insulating material applied in continuous contact with a substrate; or

(ii) an adhesive; or

(iii) a *damp-proof course, flashing*, caulking, sealing, ground moisture barrier, or the like; or

(h) a paint, varnish, lacquer or similar finish, other than nitro-cellulose lacquer; or

(i) a clear or translucent roof light of glass fibre-reinforced polyester if— (i) the roof in which it is installed forms part of a single *storey* building *required* to be Type C construction; and

(ii) the material is used as part of the roof covering; and

(iii) it is not closer than 1.5 m from another roof light of the same type; and

(iv) each roof light is not more than 14 m<sup>2</sup> in area; and

(v) the area of the roof lights per 70 m<sup>2</sup> of roof surface is not more than 14 m<sup>2</sup>; or

(j) a face plate or neck adaptor of supply and return air outlets of an air handling system; or

	<p>(k) a face plate or diffuser plate of light fitting and emergency <i>exit</i> signs and associated electrical wiring and electrical components; or</p> <p>(l) a joinery unit, cupboard, shelving, or the like; or</p> <p>(m) an attached non-building fixture and fitting such as— (i) a curtain, blind, or similar decor, other than a proscenium curtain <i>required</i> by Specification 32; and</p> <p>(ii) a whiteboard, <i>window</i> treatment or the like; or</p> <p>(n) timber treads, risers, landings and associated supporting framework installed in accordance with D3D30 where the <i>Spread-of-Flame Index</i> and the <i>Smoke-Developed Index</i> of the timber does not exceed 9 and 8 respectively; or any other material that does not significantly increase the hazards of fire.</p>	
<b>C2D14</b>	<p><b>Ancillary elements</b></p> <p>An <i>ancillary element</i> must not be fixed, installed, attached to or supported by the concealed internal parts or external face of an <i>external wall</i> that is <i>required</i> to be <i>non-combustible</i> unless it is one of the following: (a) An <i>ancillary element</i> that is <i>non-combustible</i>.</p> <p>(b) A gutter, downpipe or other plumbing fixture or fitting.</p> <p>(c) A flashing.</p> <p>(d) A grate, grille or similar cover not more than 2 m<sup>2</sup> in area associated with a building service.</p> <p>(e) An electrical switch, socket-outlet, cover plate or the like.</p> <p>(f) A light fitting.</p> <p>(g) A <i>required</i> sign.</p> <p>(h) A sign other than one provided under (a) or (g) that— (i) achieves a <i>group number</i> of 1 or 2; and</p> <p>(ii) does not extend beyond one <i>storey</i>; and</p> <p>(iii) does not extend beyond one <i>fire compartment</i>; and</p> <p>(iv) is separated vertically from other signs permitted under (h) by at least 2 <i>storeys</i>.</p> <p>(i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that—</p> <p>(i) meets the relevant requirements of Table S7C7 as for an internal element; and</p> <p>(ii) serves a <i>storey</i>— (A) at ground level; or</p> <p>(B) immediately above a <i>storey</i> at ground level; and</p> <p>(iii) does not serve an <i>exit</i>, where it would render the <i>exit</i> unusable in a fire.</p>	Further Detail will be required within the Construction Certificate documentation

	<p>(j)A part of a security, intercom or announcement system.  (k)Wiring.  (l)Waterproofing material installed in accordance with AS 4654.2 and applied to an adjacent floor surface, including vertical upturn, or a roof surface.  (m)Collars, sleeves and insulation associated with service installations.  (n)Screens applied to vents, weepholes and gaps complying with AS 3959.  (o)Wiper and brush seals associated with doors, windows or other openings. A gasket, caulking, sealant or adhesive directly associated with (a) to (o).</p>	
<p><b>C2D15</b></p>	<p><b>Fixing of bonded laminated cladding panels</b>  (1)In a building <i>required</i> to be of Type A or B construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame.  (2)An externally located bonded laminated cladding panel need not comply with (1) if it is one of the following: (a)A laminated glass system.  (b)Layered plasterboard product.  (c)Perforated gypsum lath with a normal paper finish.  (d)Fibrous-plaster sheet.  (e)Fibre-reinforced cement sheeting. A component of a garage door.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>C3D13</b></p>	<p><b>Separation of equipment</b>  [2019: C2.12]  (1)Equipment other than that described in (2) and (3) must be separated from the remainder of the building with construction complying with (4), if that equipment comprises— (a)lift motors and lift control panels; or  (b)emergency generators used to sustain emergency equipment operating in the emergency mode; or  (c)central smoke control plant; or  (d)<i>boilers</i>; or  (e)a <i>battery system</i> installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more.  (2)Equipment need not be separated in accordance with (1) if the equipment comprises— (a)smoke</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>



	<p>control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification 21; or</p> <p>(b)stair pressurising equipment installed in compliance with the relevant provisions of AS 1668.1; or</p> <p>(c)a lift installation without a machine-room; or</p> <p>(d)equipment otherwise adequately separated from the remainder of the building.</p> <p>(3)Separation of on-site fire pumps must comply with the requirements of AS 2419.1.</p> <p>(4)Separating construction must have— (a)except as provided by (b)— (i)an FRL as <i>required</i> by Specification 5, but not less than 120/120/120; and</p> <p>(ii)any doorway protected with a <i>self-closing</i> fire door having an FRL of not less than –/120/30; or when separating a lift <i>shaft</i> and lift motor room, an FRL not less than 120/–/–.</p>	
<b>C3D14</b>	<p><b>Electricity supply system</b></p> <p>(1)An electricity substation located within a building must— (a)be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and</p> <p>(b)have any doorway in that construction protected with a <i>self-closing</i> fire door having an FRL of not less than –/120/30.</p> <p>(2)A main switchboard located within the building which sustains emergency equipment operating in the emergency mode must— (a)be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and</p> <p>(b)have any doorway in that construction protected with a <i>self-closing</i> fire door having an FRL of not less than –/120/30.</p> <p>(3)Subject to (4), electrical conductors must— (a)have a classification in accordance with AS/NZS 3013 of not less than— (i)if located in a position that could be subject to damage by motor vehicles — WS53W; or</p> <p>(ii)otherwise — WS52W; or</p> <p>(b)be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120.</p> <p>(4)The requirements of (3) only apply to electrical conductors located within a building that supply—</p> <p>(a)a substation located within the building which supplies a main switchboard covered by (2); or</p> <p>(b)a main switchboard covered by (2).</p> <p>(5)Where emergency equipment is <i>required</i> in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be constructed so that emergency</p>	Further Detail will be required within the Construction Certificate documentation

	<p>equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of a fault from the non-emergency equipment switchgear.</p> <p>(6)For the purposes of (5), emergency equipment includes but is not limited to the following: (a)Fire hydrant booster pumps.</p> <p>(b)Pumps for <i>automatic</i> sprinkler systems, water spray, chemical fluid suppression systems or the like.</p> <p>(c)Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building.</p> <p>(d)Air handling systems designed to exhaust and control the spread of fire and smoke.</p> <p>(e)Emergency lifts.</p> <p>(f)Control and indicating equipment. Emergency warning and intercom systems.</p>	
<p><b>C4D3</b></p>	<p><b>Protection of openings in external walls</b></p> <p>(1)Subject to (2), openings in an <i>external wall</i> that is <i>required</i> to have an FRL must be protected in accordance with C4D5, and if wall-wetting sprinklers are used they must be located externally.</p> <p>(2)The requirements of (1) only apply if the distance between the opening and the <i>fire-source feature</i> to which it is exposed is less than—</p> <p>(a)3 m from a side or rear boundary of the allotment; or</p> <p>(b)6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a <i>storey</i> at or near ground level; or</p> <p>(c)6 m from another building on the allotment that is not Class 10.</p> <p>(3)Openings in an <i>external wall</i> that is <i>required</i> to have an FRL, if <i>required</i> to be protected under (1), must not occupy more than 1/3 of the area of the <i>external wall</i> of the <i>storey</i> in which it is located unless they are in a Class 9b building used as an <i>open spectator stand</i>.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>C4D5</b></p>	<p><b>Acceptable methods of protection</b></p> <p>(1)Where protection is <i>required</i>, doorways, <i>windows</i> and other openings must be protected as follows:</p> <p>(a)Doorways— (i)internal or external wall-wetting sprinklers as appropriate used with doors that are <i>self-closing</i> or <i>automatic</i> closing; or</p> <p>(ii)–/60/30 fire doors that are <i>self-closing</i> or <i>automatic</i> closing.</p> <p>(b)<i>Windows</i>— (i)internal or external wall-wetting sprinklers as appropriate used with <i>windows</i> that are <i>automatic</i> closing or permanently fixed in the closed position; or</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

	<p>(ii)–/60/– fire <i>windows</i> that are <i>automatic</i> closing or permanently fixed in the closed position; or                  (iii)–/60/– <i>automatic</i> closing fire shutters.                  Other openings—                  excluding voids — internal or external wall-wetting sprinklers, as appropriate; or                  (ii)construction having an FRL not less than –/60/–.                  (2)Fire doors, fire <i>windows</i> and fire shutters must comply with Specification 12.</p>	
<p><b>C4D13</b></p>	<p><b>Openings in floors and ceilings for services</b>                  (1)Where a service passes through— (a)a floor that is required to have an FRL with respect to integrity and insulation; or                  (b)a ceiling required to have a resistance to the incipient spread of fire, the service must be installed in accordance with (2).                  (2)A service must be protected— (a)in a building of Type A construction, by a shaft complying with Specification 5; or                  (b)in a building of Type B or C construction, by a shaft that will not reduce the fire performance of the building elements it penetrates; or                  (c)in accordance with C4D15.                  (3)Where a service passes through a floor which is required to be protected by a fire-protective covering, the penetration must not reduce the fire performance of the covering.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>C4D14</b></p>	<p><b>Openings in shafts</b>                  In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be protected by— (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 if the shaft is a garbage shaft — a door or hopper of non-combustible construction.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>C3D15</b></p>	<p><b>Openings for service installations</b>                  (1)The requirements of (2) apply where an electrical, electronic, plumbing, mechanical</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

ventilation, air-conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire.

(2) An installation mentioned in (1) must comply with any one of the following: (a) Tested systems — the following applies: (i) The service, building element and any protection method at the penetration— (A) are 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 and has achieved the required FRL or resistance to the incipient spread of fire; or

(B) differ from a prototype assembly of the service, building element and protection method in accordance with Section 4 of AS 4072.1.

(ii) It complies with (i) except for the insulation criteria relating to the service if— (A) the service is a pipe system comprised entirely of metal (excluding pipe seals or the like); and (B) any combustible building element is not located within 100 mm of the service for a distance of 2 m from the penetration; and

(C) combustible material is not able to be located within 100 mm of the service for a distance of 2 m from the penetration; and

(D) it is not located in a required exit.

(iii) The determination of the required FRL must be confirmed in a report from an Accredited Testing Laboratory in accordance with Specifications 1 and 2.

(b) Ventilation and air-conditioning — in the case of ventilating or air-conditioning ducts or equipment, the installation is in accordance with AS 1668.1.

(c) Compliance with Specification 13 — the following applies: (i) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like) and is installed in accordance with Specification 13 and it— of fire; and penetrates a wall, floor or ceiling, but not a ceiling required to have a (A) resistance to the incipient spread

(B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts; and

(C) does not contain a flammable or combustible liquid or gas.

	<p>(ii)The service is sanitary plumbing installed in accordance with Specification 13 and it— (A)is of metal or UPVC pipe; and          (B)penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and          (C)is in a sanitary compartment separated from other parts of the building by walls with the FRL required by Specification 5 for a stair shaft in the building and a self-closing –/60/30 fire door.          (iii)The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification 13 and it— of fire; and penetrates a wall, floor or ceiling, but not a ceiling required to have a (A)resistance to the incipient spread          (B)connects not more than 2 fire compartments in addition to any fire-resisting service shafts. The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification 13.</p>	
<p><b>C3D16</b></p>	<p><b>Construction joints</b>          (1)Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner— (a)identical with a prototype tested in accordance with AS 4072.1 and AS 1530.4 to achieve the required FRL; or          (b)that differs from a prototype in accordance with Section 4 of AS 4072.1 and achieves the required FRL.          (2)The determination of the required FRL must be confirmed in a report from an Accredited Testing Laboratory in accordance with Specifications 1 and 2.          (3)The requirements of (1) do not apply where joints, spaces and the like between fire-protected timber elements are provided with cavity barriers in accordance with Specification 9.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>C3D17</b></p>	<p><b>Columns protected with lightweight construction to achieve an FRL</b>          A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

**5.3 SECTION D – ACCESS AND EGRESS**

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
D2D6	<p><b>Distance between alternative exits</b>  <i>Exits</i> that are <i>required</i> as alternative means of egress must be— (a)distributed as uniformly as practicable within or around the <i>storey</i> served and in positions where unobstructed access to at least 2 <i>exits</i> is readily available from all points on the floor including lift lobby areas; and                      (b)not less than 9 m apart; and                      (c)not more than— (i)in a Class 2 or 3 building — 45 m apart; or                      (ii)in a Class 9a <i>health-care building</i>, if such <i>required exit</i> serves a <i>patient care area</i> — 45 m apart; or                      (iii)in all other cases — 60 m apart; and                      located so that alternative paths of travel do not converge such that they become less than 6 m apart.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
D2D7	<p><b>Height of exits, paths of travel to exits and doorways</b>                      [2019: D1.6(a)]                      In a <i>required exit</i> or path of travel to an <i>exit</i> the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
D2D8	<p><b>Width of exits and paths of travel to exits</b>                      [2019: D1.6(b), (c), (d) and (e)]                      (1)The unobstructed width of each <i>required exit</i> or path of travel to an <i>exit</i>, except for ladders provided in accordance with D2D21, D3D23 or I3D5, and doorways, must be not less than—                      (a)1 m; or <i>area</i> or <i>ward area</i>; and 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a (b)<i>treatment</i>                      (c)in a <i>public corridor</i> in a Class 9c <i>aged care building</i>, notwithstanding (2) and (3)— (i)1.5 m; and</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

	<p>(ii) 1.8 m for the full width of the doorway, providing access into a <i>sole-occupancy unit</i> or communal bathroom.</p> <p>(2) If the <i>storey, mezzanine</i> or <i>open spectator stand</i> accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width of each <i>required exit</i> or path of travel to an <i>exit</i>, except for doorways, must be not less than— (a) 1 m plus 250 mm for each 25 persons (or part) in excess of 100; or 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a (b) <i>treatment area</i> or <i>ward area</i>.</p> <p>(3) If the <i>storey, mezzanine</i> or <i>open spectator stand</i> accommodates more than 200 persons, the aggregate unobstructed width of each <i>required exit</i> or path of travel to an <i>exit</i>, except for doorways, must be not less than— (a) 2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or</p> <p>(b) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200.</p> <p>(4) In an <i>open spectator stand</i> which accommodates more than 2000 persons, the aggregate unobstructed width of each <i>required exit</i> or path of travel to an <i>exit</i>, except for doorways, must be not less than 17 m plus a width (in metres) equal to the number in excess of 2000 divided by 600.</p>	
<b>D2D9</b>	<p><b>Width of doorways in exits or paths of travel to exits</b></p> <p>In a <i>required exit</i> or path of travel to an <i>exit</i>, the unobstructed width of a doorway must be not less than— (a) in <i>patient care areas</i> through which patients would normally be transported in beds— (i) if the doorway provides access to, or from, a corridor of width— (A) less than 2.2 m — 1200 mm; or</p> <p>(B) 2.2 m or greater — 1070 mm; and</p> <p>(ii) where the doorway referred to in (i) is fitted with two leaves and one leaf is secured in the closed position in accordance with D3D26(3)(e), the other leaf must permit an unobstructed opening not less than 800 mm wide; or</p> <p>(b) in <i>patient care areas</i> in a <i>horizontal exit</i> — 1250 mm; or</p> <p>(c) the unobstructed width of each <i>exit</i> provided to comply with D2D8(1), (2), (3) or (4),</p>	Further Detail will be required within the Construction Certificate documentation

	<p>minus 250 mm; or            (d)in a Class 9c building, 800 mm, except— (i)in <i>resident use areas</i> the minimum unobstructed width must be 870 mm; and            (ii)for doorways leading from a <i>public corridor</i> to a <i>sole-occupancy unit</i> the minimum unobstructed width must be 1070 mm; and            (iii)where the doorway is fitted with two leaves and one leaf is secured in the closed position in accordance with D3D26(3)(e), the other leaf must permit an unobstructed opening not less than 870 mm wide in <i>resident use areas</i> and 800 mm wide in <i>non-resident use area</i>; or in any other case except where it opens to a <i>sanitary compartment</i> or bathroom — 750 mm wide.</p>	
<p><b>D2D10</b></p>	<p><b>Exit width not to diminish in direction of travel</b>            The unobstructed width of a <i>required exit</i> must not diminish in the direction of travel to a road or <i>open space</i>, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>D2D11</b></p>	<p><b>Determination and measurement of exits and paths of travel to exits</b>            For the purposes of D2D7 to D2D10 the following apply: (a)The <i>required</i> width of a stairway or ramp in a <i>required exit</i> or path of travel to an <i>exit</i> must— (i)be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and            (ii)extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing.            (b)To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18.</p>	<p>For Reference</p>



<b>D2D22</b>	<p><b>Access to lift pits</b></p> <p>Access to lift pits must— (a)where the pit depth is not more than 3 m, be through the lowest landing doors; or</p> <p>(b)where the pit depth is more than 3 m, be provided through an access doorway complying with the following: (i)In lieu of D2D7 to D2D11, the doorway must be level with the pit floor and not be less than 600 mm wide by 1980 mm high clear opening, which may be reduced to 1500 mm where it is necessary to comply with (ii).</p> <p>(ii)No part of the lift car or platform must encroach on the pit doorway entrance when the car is on a fully compressed buffer.</p> <p>(iii)Access to the doorway must be by a stairway complying with AS 1657.</p> <p>(iv)In lieu of D3D26, doors fitted to the doorway must be— (A)of the horizontal sliding or outwards opening hinged type; and</p> <p>(B)self-closing and self-locking from the outside; and</p> <p>(C)marked on the landing side with the letters not less than 35 mm high:</p> <p><b>DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES</b></p>	Further Detail will be required within the Construction Certificate documentation
<b>D3D8</b>	<p><b>Installations in exits and paths of travel</b></p> <p>(1)Access to service <i>shafts</i> and services other than to fire-fighting or detection equipment as permitted in the <i>Deemed-to-Satisfy Provisions</i> of Section E, must not be provided from a <i>fire-isolated stairway, fire-isolated passageway or fire-isolated ramp</i>.</p> <p>(2)An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like, must not be located in any part of a <i>required exit</i> or any corridor, hallway, lobby or the like leading to a <i>required exit</i>.</p> <p>(3)Gas or other fuel services must not be installed in a <i>required exit</i>.</p> <p>(4)Except for in a fire-isolated <i>exit</i> specified in (1), services or equipment enclosed in accordance with (5) may be installed in a <i>required exit</i>, or in any corridor, hallway, lobby or</p>	Further Detail will be required within the Construction Certificate documentation

	<p>the like leading to a <i>required exit</i>, where that service or equipment comprises— (a)electricity meters, distribution boards or ducts; or</p> <p>(b)central telecommunications distribution boards or equipment; or</p> <p>(c)electrical motors or other motors serving equipment in the building.</p> <p>(5)An enclosure for the purposes of (4) must be suitably sealed against smoke spreading from the enclosure and be— (a)<i>non-combustible</i> construction; or</p> <p>(b)a <i>fire-protective covering</i>.</p> <p>(6)Electrical wiring may be installed in a fire-isolated <i>exit</i> if the wiring is associated with—</p> <p>(a)a lighting, detection, or pressurisation system serving the <i>exit</i>; or</p> <p>(b)a security, surveillance or management system serving the <i>exit</i>; or</p> <p>(c)an intercommunication system or an audible or visual alarm system in accordance with D3D27; or the monitoring of hydrant or sprinkler isolating valves.</p>	
<b>D3D14</b>	<p><b>Goings and risers</b></p> <p>(1)A stairway must have— (a)not more than 18 and not less than 2 risers in each <i>flight</i>; and</p> <p>(b)going (G), riser (R) and quantity (2R + G) in accordance with Table D3D14, except as permitted by (2) and (3); and</p> <p>(c)constant goings and risers throughout each <i>flight</i>, except as permitted by (2) and (3), and the dimensions of goings (G) and risers (R) in accordance with (1)(b) are considered constant if the variation between— (i)adjacent risers, or between adjacent goings, is no greater than 5 mm; and</p> <p>(ii)the largest and smallest riser within a <i>flight</i>, or the largest and smallest going within a <i>flight</i>, does not exceed 10 mm; and</p> <p>(d)risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and</p> <p>(e)treads which have—</p> <p>(i)a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or</p>	Further Detail will be required within the Construction Certificate documentation

	<p>(ii) a nosing strip with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; and</p> <p>(f) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 <i>storeys</i>; and</p> <p>(g) in a Class 9b building, not more than 36 risers in consecutive <i>flights</i> without a change in direction of at least 30°; and</p> <p>(h) in the case of a <i>required</i> stairway, no winders in lieu of a landing.</p> <p>(2) In the case of a <i>non-required</i> stairway— (a) the stairway must have— (i) not more than 3 winders in lieu of a quarter <i>landing</i>; and</p> <p>(ii) not more than 6 winders in lieu of a half <i>landing</i>; and</p> <p>(b) the going of all straight treads must be constant throughout the same <i>flight</i> and the dimensions of goings (G) is considered constant if the variation between— (i) adjacent goings, is no greater than 5 mm; and</p> <p>(ii) the largest and smallest going within a <i>flight</i>, does not exceed 10 mm; and</p> <p>(c) the going of all winders in lieu of a quarter or half <i>landing</i> may vary from the going of the straight treads within the same <i>flight</i> provided that the going of all such winders is constant.</p> <p>(3) Where a stairway discharges to a sloping public walkway or public road— (a) the riser (R) may be reduced to account for the slope of the walkway or road; and the quantity (2R+G) may vary at that location.</p>	
<p><b>D3D15</b></p>	<p><b>Landings</b></p> <p>In a stairway— (a) <i>landings</i> having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each <i>flight</i> and each <i>landing</i> must— (i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the <i>landing</i>; and</p> <p>(ii) have— (A) a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or D3D15 when tested in accordance with AS 4586, where the edge leads to a <i>flight</i> below; and a strip at the edge of the <i>landing</i> with a slip-resistance classification not less than that listed in (B) Table</p> <p>(b) in a Class 9a building— (i) the area of any <i>landing</i> must be sufficient to move a stretcher, 2</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

m long and 600 mm wide, at a gradient not more than the gradient of the stairs, with at least one end of the stretcher on the *landing* while changing direction between *flights*; or  
 (ii) the stair must have a change of direction of 180°, and the *landing* a clear width of not less than 1.6 m and a clear length of not less than 2.7 m.

**Table D3D15: Slip-resistance classification**

Application	Dry Surface conditions	Wet surface conditions
Ramp steeper than 1:14	P4 or R11	P5 or R12
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11
Tread or <i>landing</i> surface	P3 or R10	P4 or R11
Nosing or <i>landing</i> edge strip	P3	P4

**D3D16**

**Thresholds**

The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless— (a) in *patient care areas* in a Class 9a *health-care building*, the door sill is not more than 25 mm above the finished floor level to which the doorway opens; or  
 (b) in *resident use areas* in a Class 9c building, a ramp is provided with a maximum gradient of 1:8 for a maximum height of 25 mm over the threshold; or  
 (c) in a building *required* to be *accessible* by Part D4, the doorway— (i) opens to a road or *open space*; and  
 (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or  
 (d) in other cases— (i) the doorway opens to a road or *open space*, external stair landing or external balcony; and  
 (ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.

Further Detail will be required within the Construction Certificate documentation

<b>D3D17</b>	<b>Barriers to prevent falls</b> (1)A continuous barrier must be provided along the side of— (a)a roof to which general access is provided; and (b)a stairway or ramp; and (c)a floor, corridor, hallway, balcony, deck, verandah, <i>mezzanine</i> , access bridge or the like; and (d)any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath. (2)The requirements of (1) do not apply to— (a)the perimeter of a <i>stage</i> , rigging loft, loading dock or the like; or (b)areas referred to in D3D23; or (c)a retaining wall unless the retaining wall forms part of, or is directly associated with a delineated path of access to a building from the road, or a delineated path of access between buildings; or (d)a barrier provided to an openable window covered by D3D29. (3)A barrier <i>required</i> by (1) must be constructed in accordance with D3D18, D3D19, D3D20 and, if a wire barrier is used, D3D21.	Further Detail will be required within the Construction Certificate documentation
<b>D3D18</b>	<b>Height of barriers</b> (1)The height of a barrier <i>required</i> by D3D17 must be not less than the following: (a)For stairways or ramps with a gradient of 1:20 or steeper — 865 mm. (b)For <i>landings</i> to a stair or ramp where the barrier is provided along the inside edge of the <i>landing</i> and does not exceed 500 mm in length — 865 mm. (c)In front of fixed seating on a <i>mezzanine</i> or balcony within an auditorium in a Class 9b building, where the horizontal projection extends not less than 1 m outwards from the top of the barrier — 700 mm. (d)For all other locations — 1 m. (2)For a barrier provided under (1) — (a)barrier heights are measured vertically from the surface beneath, except that for stairways	Further Detail will be required within the Construction Certificate documentation

	<p>the height must be measured above the nosing line of the stair treads; and</p> <p>(b) a transition zone may be incorporated where the barrier height changes from 865 mm on a stair <i>flight</i> or ramp to 1 m at a <i>landing</i> or floor.</p>	
<b>D3D19</b>	<p><b>Openings in barriers</b></p> <p>(1) Except where allowed by (2), openings in a <i>required</i> barrier must not allow a 125 mm sphere to pass through.</p> <p>(2) In a <i>fire-isolated stairway</i>, <i>fire-isolated ramp</i> or other area used primarily for emergency purposes, openings in a <i>required</i> barrier— (a) must not allow a 300 mm sphere to pass through; or</p> <p>(b) where rails are used— (i) a 150 mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail and the floor of the <i>landing</i>, balcony or the like; and</p> <p>(ii) the opening between rails must not be more than 460 mm.</p> <p>(3) In Class 7 (other than <i>carparks</i>) and Class 8 buildings, openings in a <i>required</i> barrier— (a) must not allow a 300 mm sphere to pass through; or</p> <p>(b) where rails are used— (i) a 150 mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail and the floor of the <i>landing</i>, balcony or the like; and</p> <p>(ii) the opening between the rails must not be more than 460 mm.</p> <p>(4) The requirements of (2) do not apply to external stairways, external ramps, or <i>fire-isolated stairways</i> or <i>fire-isolated ramps</i> serving Class 9b <i>early childhood centres</i>.</p> <p>(5) For a barrier provided under (1), the maximum 125 mm barrier opening for a stairway, such as a non <i>fire-isolated stairway</i>, is measured above the nosing line of the stair treads.</p> <p>(6) Where a <i>required</i> barrier is fixed to the vertical face forming an edge of a <i>landing</i>, balcony, deck, stairway or the like, the opening formed between the barrier and the face must not exceed 40 mm.</p> <p>(7) For the purposes of (6), the opening is measured horizontally from the edge of the trafficable surface to the nearest internal face of the barrier.</p>	Further Detail will be required within the Construction Certificate documentation

<b>D3D20</b>	<b>Barrier climbability</b> [2019: Table D2.16a] (1)A barrier <i>required</i> by D3D17, located on a floor more than 4 m above the surface beneath, must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150 mm and 760 mm above the floor. (2)The requirements of (1) do not apply to— (a) <i>fire-isolated stairways, fire-isolated ramps</i> and other areas used primarily for emergency purposes, other than— (i)external stairways; and (ii)external ramps; and Class 7 (other than <i>carparks</i> ) and Class 8 buildings.	Further Detail will be required within the Construction Certificate documentation
<b>D3D22</b>	<b>Handrails</b> (1)Except for handrails referred to in D3D23, and subject to (2), handrails must— (a)be located along at least one side of the ramp or <i>flight</i> ; and (b)be located along each side if the total width of the stairway or ramp is 2 m or more; and (c)in a Class 9b building used as a primary <i>school</i> or a building that contains an <i>early childhood centre</i> — (i)have one handrail fixed at a height of not less than 865 mm; and (ii)in addition to (i), have a handrail— (A)fixed at a height between 665 mm and 750 mm in a primary <i>school</i> ; and (B)with a cross-sectional dimension not less than 16 mm and not greater than 45 mm as measured in any direction across its centre, fixed at a height between 450 mm and 700 mm in a Class 9b <i>early childhood centre</i> ; and (d)in any other case, be fixed at a height of not less than 865 mm; and (e)be continuous between stair <i>flight</i> landings and have no obstruction on or above them that will tend to break a hand-hold; and (f)in a <i>required exit</i> serving an area <i>required</i> to be <i>accessible</i> , be designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail <i>required</i> by (1)(c)(ii).	Further Detail will be required within the Construction Certificate documentation

	<p>(2)The height <i>required</i> by (1)(c) and (d) is measured above the nosings of stair treads and the floor surface of the ramp, landing or the like.</p> <p>(3)Handrails— (a)in a Class 9a <i>health-care building</i> must be provided along at least one side of every passageway or corridor used by patients, and must be— (i)fixed not less than 50 mm clear of the wall; and</p> <p>(ii)where practicable, continuous for their full length; and</p> <p>(b)in a Class 9c <i>aged care building</i> must be provided along both sides of every passageway or corridor used by residents, and must be— (i)fixed not less than 50 mm clear of the wall; and</p> <p>(ii)where practicable, continuous for their full length.</p> <p>(4)Handrails <i>required</i> to assist people with a disability must be provided in accordance with D4D4.</p> <p>(5)Handrails to a stairway or ramp within a <i>sole-occupancy unit</i> in a Class 2 or 3 building or Class 4 part of a building must— (a)be located along at least one side of the <i>flight</i> or ramp; and</p> <p>(b)be located along the full length of the <i>flight</i> or ramp, except in the case where a handrail is associated with a barrier, the handrail may terminate where the barrier terminates; and</p> <p>(c)have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads or the floor surface of the ramp; and</p> <p>(d)have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like.</p> <p>(6)The requirements of (5) do not apply to— (a)handrails referred to in D3D23; or</p> <p>(b)a stairway or ramp providing a change in elevation of less than 1 m; or</p> <p>(c)a landing; or a winder where a newel post is installed to provide a handhold.</p>	
<b>D3D26</b>	<b>Operation of latch</b> <p>(1)A door in a <i>required exit</i>, forming part of a <i>required exit</i> or in the path of travel to a <i>required exit</i> must be readily openable without a key from the side that faces a person seeking</p>	Further Detail will be required within the Construction Certificate documentation



egress, by— (a) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area *required* to be *accessible* by Part D4— (i) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and

(ii) 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 35 mm and not more than 45 mm; or

(b) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor.

(2) Where the latch operation device referred to in (1)(b) is not located on the door leaf itself— (a) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located— (i) not less than 500 mm from an internal corner; and

(ii) for a hinged door, between 1 m and 2 m from the door leaf in any position; and

(iii) for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position; and

(b) braille and tactile signage complying with S15C3 and S15C6 must identify the latch operation device.

(3) The requirements of (1) and (2) do not apply to a door that— (a) serves a vault, strong-room, *sanitary compartment*, or the like; or

(b) serves only, or is within— (i) a *sole-occupancy unit* in a Class 2 building or a Class 4 part of a building; or

(ii) a *sole-occupancy unit* in a Class 3 building (other than an entry door to a *sole-occupancy unit* of a boarding house, guest house, hostel, lodging house or backpacker accommodation); or

(iii) a *sole-occupancy unit* with a *floor area* not more than 200 m<sup>2</sup> in a Class 5, 6, 7 or 8 building; or

(iv) a space which is otherwise inaccessible to persons at all times when the door is locked; or

(c) complies with (4) and serves— (i) Australian Government Security Zones 4 or 5; or

- (ii) the secure parts of a bank, *detention centre*, mental health facility, *early childhood centre* or the like; or
- (d) is fitted with a fail-safe device which *automatically* unlocks the door upon the activation of any sprinkler system (other than a FPAA101D system) complying with Specification 17 or smoke, or any other detector system deemed suitable in accordance with AS 1670.1 installed throughout the building, and is readily openable when unlocked; or
- (e) is in a Class 9a or 9c building and— (i) is one leaf of a two-leaf door complying with D2D9(1)(a) or D2D9(1)(d) provided that it is not held closed by a locking mechanism and is readily openable; and
- (ii) the door is not *required* to be a fire door or smoke door.
- (4) A door referred to in (3)(c) must be able to be immediately unlocked— (a) by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or
- (b) by hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire.
- (5) The requirements of (1) and (2) do not apply in a Class 9b building (other than a *school*, an *early childhood centre* or a building used for religious purposes) to a door in a *required exit*, forming part of a *required exit* or in the path of travel to a *required exit* serving a *storey* or room accommodating more than 100 persons, determined in accordance with D2D18, in which case it must be readily openable— (a) without a key from the side that faces a person seeking egress; and
- (b) by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor; and
- (c) where a two-leaf door is fitted, the provisions of (a) and (b) need only apply to one door leaf if the appropriate requirements of D2D9 are satisfied by the opening of that one leaf.

**D3D29**

**Protection of openable windows**

(1)A window opening must be provided with protection, if the floor below the window is 2 m or more above the surface beneath in— (a)a bedroom in a Class 2 or 3 building or Class 4 part of a building; or

(b)a Class 9b *early childhood centre*.

(2)Where the lowest level of the window opening is less than 1.7 m above the floor, a window opening covered by (1) must comply with the following: (a)The openable portion of the window must be protected with— (i)a device capable of restricting the window opening; or

(ii)a screen with secure fittings.

(b)A device or screen *required* by (a) must— (i)not permit a 125 mm sphere to pass through the window opening or screen; and

(ii)resist an outward horizontal action of 250 N against the— (A>window restrained by a device; or

(B)screen protecting the opening; and

(iii)have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.

(3)A barrier with a height not less than 865 mm above the floor is *required* to an openable window— (a)in addition to window protection, when a child resistant release mechanism is *required* by (2)(b)(iii); and

(b)where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (1).

(4)A barrier covered by (3) except for (5) must not— (a)permit a 125 mm sphere to pass through it; and

(b)have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.

(5)A barrier *required* by (3) to an openable window in— (a)*fire-isolated stairways, fire-isolated ramps* and other areas used primarily for emergency purposes, excluding external

Further Detail will be required within the Construction Certificate documentation

	<p>stairways and external ramps; and                  (b)Class 7 (other than <i>carparks</i>) and Class 8 buildings and parts of buildings containing those classes,</p>	
<p><b>D3D30</b></p>	<p><b>Timber stairways: Concession</b>                  (1)Notwithstanding D3D3(a), timber treads, risers, landings and associated supporting framework within a <i>required fire-isolated stairway</i> or <i>fire-isolated passageway</i> may be constructed from <i>fire-protected timber</i> in accordance with C2D13— (a)if the timber— (i)has a finished thickness of not less than 44 mm; and                  (ii)has an average density of not less than 800 kg/m<sup>3</sup> at a moisture content of 12%; and                  (b)subject to— (i)the building being protected throughout by a sprinkler system (other than a FPAA101D system) complying with Specification 17 which extends to within the fire-isolated enclosure; and                  (ii)fire protection being provided to the underside of stair <i>flights</i> and landings located immediately above a landing level which— (A)is at or near the level of egress; or                  (B)provides direct access to a carpark.                  (2)Fire protection required by (1) must be not less than one layer of 13 mm fire-protective grade plasterboard fixed in accordance with the system requirements for a <i>fire-protective covering</i>.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>D4D2</b></p>	<p><b>General building access requirements</b>                  (1)Buildings and parts of buildings must be <i>accessible</i> as <i>required</i> by this clause, unless exempted by D4D5.                  (2)Access requirements for a Class 1b building are as follows:                  Dwellings located on one allotment and used for short-term holiday accommodation — in accordance with (a)Table                  (b)A boarding house, bed and breakfast, guest house, hostel or the like, other than those described in (a) — to and within— (i)1 bedroom and associated sanitary facilities; and                  (ii)not less than 1 of each type of room or space for use in common by the residents or guests,</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

including a cooking facility, sauna, gymnasium, *swimming pool*, laundry, games room, eating area, or the like; and

(iii) rooms or spaces for use in common by all residents on a floor to which access by way of a ramp complying with AS 1428.1 or a passenger lift is provided.

(3) For the purposes of (2)(a), a community or strata-type subdivision or development is considered to be on a single allotment.

(4) For a Class 2 building, common areas are to be *accessible* as follows: From a pedestrian entrance *required* to be *accessible* to at least 1 floor containing *sole-occupancy units* and to the entrance doorway of each *sole-occupancy unit* located on that level.

(b) To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, *swimming pool*, common laundry, games room, individual shop, eating area, or the like.

(c) Where a ramp complying with AS 1428.1 or a passenger lift is installed— (i) to the entrance doorway of each *sole-occupancy unit*; and

(ii) to and within rooms or spaces for use in common by the residents.

(d) The requirements of (c) only apply where the space referred to in (c)(i) or (ii) is located on the levels served by the lift or ramp.

(5) For a Class 3 building, access requirements are as follows: (a) Common areas: (i) From a pedestrian entrance *required* to be *accessible* to at least 1 floor containing *sole-occupancy units* and to the entrance doorway of each *sole-occupancy unit* located on that level.

(ii) a cooking facility, sauna, gymnasium, *swimming pool*, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like.

(iii) Where a ramp complying with AS 1428.1 or a passenger lift is installed— (A) to the entrance doorway of each *sole-occupancy unit*; and

(B) to and within rooms or spaces for use in common by the residents.

(iv) The requirements of (iii) only apply where the space referred to in (A) and (B) are located on the levels served by the lift or ramp.

- (b) *Sole-occupancy units* — in accordance with Table D4D2b.
- (6) For Class 5, 6, 7b, 8 and 9a buildings, access must be provided to and within all areas normally used by the occupants.
- (7) For a Class 7a building, access must be provided to and within any level containing *accessible* carparking spaces.
- (8) For a Class 9b building, access requirements are as follows: (a) *Schools* and *early childhood centres* — to and within all areas normally used by the occupants.
- (b) An *assembly building*, not being a *school* or *early childhood centre*—to and within—
- (i) wheelchair seating spaces provided in accordance with D4D10; and
- (ii) all other areas normally used by the occupants, except that access need not be provided to tiers or platforms of seating areas that do not contain wheelchair seating spaces.
- (9) For a Class 9c building, access requirements are as follows: (a) Common areas: (i) From a pedestrian entrance required to be *accessible* to at least 1 floor containing *sole-occupancy units* and to the entrance doorway of each *sole-occupancy unit* located on that level.
- (ii) To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, *swimming pool*, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like.
- (iii) Where a ramp complying with AS 1428.1 or a passenger lift is installed— (A) to the entrance doorway of each *sole-occupancy unit*; and
- (B) to and within rooms or spaces for use in common by the residents.
- (iv) The requirements of (iii) only apply where the space referred to in (A) and (B) are located on the levels served by the lift or ramp.
- (b) *Sole-occupancy units* — in accordance with Table D4D2b.
- (10) For a Class 10 building, access requirements are as follows: (a) For a Class 10a non-habitable building located in an *accessible* area intended for use by the public and containing a sanitary facility, change room facility or shelter, to and within— an *accessible* sanitary facility; and

	<p>(ii) a change room facility; and (iii) a public shelter or the like. (b) For Class 10b <i>swimming pools</i>, to and into <i>swimming pools</i> with a total perimeter greater than 40 m, associated with a Class 1b, 2, 3, 5, 6, 7, 8 or 9 building that is <i>required</i> to be <i>accessible</i>, but not <i>swimming pools</i> for the exclusive use of occupants of a Class 1b building or a <i>sole-occupancy unit</i> in a Class 2 or Class 3 building.</p>	
<b>D4D3</b>	<p><b>Access to buildings</b></p> <p>(1) An <i>accessway</i> must be provided to a building <i>required</i> to be <i>accessible</i>— (a) from the main points of a pedestrian entry at the allotment boundary; and (b) from another <i>accessible</i> building connected by a pedestrian link; and from any <i>required accessible</i> carparking space on the allotment.</p> <p>(2) In a building <i>required</i> to be <i>accessible</i>, an <i>accessway</i> must be provided through the principal pedestrian entrance, and— (a) through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and (b) in a building with a total <i>floor area</i> more than 500 m<sup>2</sup>, a pedestrian entrance which is not <i>accessible</i> must not be located more than 50 m from an <i>accessible</i> pedestrian entrance, except for pedestrian entrances serving only areas exempted by D4D5.</p> <p>(3) Where a pedestrian entrance <i>required</i> to be <i>accessible</i> has multiple doorways— (a) if the pedestrian entrance consists of not more than 3 doorways — not less than 1 of those doorways must be <i>accessible</i>; and (b) if a pedestrian entrance consists of more than 3 doorways — not less than 50% of those doorways must be <i>accessible</i>.</p> <p>(4) For the purposes of (3)— (a) an <i>accessible</i> pedestrian entrance with multiple doorways is considered to be one pedestrian entrance where— (i) all doorways serve the same part or parts of the building; and (ii) the distance between each doorway is not more than the width of the widest doorway at that pedestrian entrance (see Figure D4D3); and (b) a doorway is considered to be the clear, unobstructed opening created by the opening of one or more door leaves (see Figure D4D3).</p>	Further Detail will be required within the Construction Certificate documentation

	<p>(5)Where a doorway on an <i>accessway</i> has multiple leaves, (except an automatic opening door) one of those leaves must have a clear opening width of not less than 850 mm in accordance with AS 1428.1.</p>	
<b>D4D4</b>	<p><b>Parts of buildings to be accessible</b> In a building <i>required</i> to be <i>accessible</i>— (a)every ramp and stairway, except for ramps and stairways in areas exempted by D4D5, must comply with— (i)for a ramp, except a <i>fire-isolated ramp</i>, clause 10 of AS 1428.1; and (ii)for a stairway, except a <i>fire-isolated stairway</i>, clause 11 of AS 1428.1; and (iii)for a <i>fire-isolated stairway</i>, clause 11.1(f) and (g) of AS 1428.1; and (b)every passenger lift must comply with E3D7; and (c)<i>accessways</i> must have— (i)passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an <i>accessway</i> where a direct line of sight is not available; and (ii)turning spaces complying with AS 1428.1— within 2 m of the end of <i>accessways</i> where it is not possible to continue travelling along the <i>accessway</i>; and (B)at maximum 20 m intervals along the <i>accessway</i>; and (d)an intersection of <i>accessways</i> satisfies the spatial requirements for a passing and turning space; and (e)a passing space may serve as a turning space; and (f)a ramp complying with AS 1428.1 or a passenger lift need not be provided to serve a <i>storey</i> or level other than the entrance <i>storey</i> in a Class 5, 6, 7b or 8 building— (i)containing not more than 3 <i>storeys</i>; and (ii)with a <i>floor area</i> for each <i>storey</i>, excluding the entrance <i>storey</i>, of not more than 200 m<sup>2</sup>; and (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’; and (h)the carpet pile height or pile thickness dimension, carpet backing thickness dimension and</p>	Further Detail will be required within the Construction Certificate documentation



	<p>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.</p>	
<p><b>D4D5</b></p>	<p><b>Exemptions</b>                  The following areas are not <i>required</i> to be <i>accessible</i>: (a)An area where access would be inappropriate because of the particular purpose for which the area is used.                  (b)An area that would pose a health or safety risk for people with a disability. Any path of travel providing access only to an area exempted by (a) or (b).</p>	<p>In our opinion store rooms cot rooms and the kitchen achieve a concession under this clause</p>
<p><b>D4D6</b></p>	<p><b>Accessible carparking</b>                  (1)<i>Accessible</i> carparking spaces— (a)subject to (b), must be provided in accordance with (2) in— (i)a Class 7a building <i>required</i> to be <i>accessible</i>; and                  (ii)a carparking area on the same allotment as a building <i>required</i> to be <i>accessible</i>; and                  (b)need not be provided in a Class 7a building or a carparking area where a parking service is provided and direct access to any of the carparking spaces is not available to the public; and                  (c)subject to (d), must comply with AS/NZS 2890.6; and                  (d)need not be identified with signage where there is a total of not more than 5 carparking spaces, so as to restrict the use of the carparking space only for people with a disability.                  (2)For each Class of building to which the <i>carpark</i> or carparking area is associated, the number of <i>accessible</i> carparking spaces <i>required</i> is as follows: (a)Class 1b and 3 buildings:                  (i)For a boarding house, guest house, hostel, lodging house, backpackers’ accommodation, or the residential part of a hotel or motel, the number of <i>accessible</i> carparking spaces <i>required</i> is to be calculated by multiplying the total number of carparking spaces by the percentage of —                  (A)<i>accessible sole-occupancy units</i> to the total number of <i>sole-occupancy units</i>; or                  (B)<i>accessible</i> bedrooms to the total number of bedrooms.                  (ii)For the purposes of (i), the calculated number is taken to the next whole figure.                  (iii)For a residential part of a <i>school</i>, accommodation for the aged, disabled or children, residential part of a <i>health-care building</i> which accommodates members of staff or the residential part of a <i>detention centre</i> —</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

	<p>1 <i>accessible</i> space for every 100 carparking spaces or part thereof.</p> <p>(b)Class 5, 7, 8 or 9c buildings — 1 <i>accessible</i> space for every 100 carparking spaces or part thereof.</p> <p>(c)Class 6 buildings— (i)with up to 1000 carparking spaces — 1 <i>accessible</i> space for every 50 carparking spaces or part thereof; and</p> <p>(ii)for each additional 100 carparking spaces or part thereof in excess of 1000 carparking spaces — 1 <i>accessible</i> space.</p> <p>(d)Class 9a buildings: (i)For a hospital (non-outpatient area) — 1 <i>accessible</i> space for every 100 carparking spaces or part thereof.</p> <p>(ii)For a hospital (outpatient area)— (A)with up to 1000 carparking spaces — 1 <i>accessible</i> space for every 50 carparking spaces or part thereof; and</p> <p>(B)for each additional 100 carparking spaces or part thereof in excess of 1000 carparking spaces — 1 <i>accessible</i> space.</p> <p>(iii)For a nursing home — 1 <i>accessible</i> space for every 100 carparking spaces or part thereof.</p> <p>(iv)For a clinic or day surgery not forming part of a hospital — 1 <i>accessible</i> space for every 50 carparking spaces or part thereof.</p> <p>(e)Class 9b buildings: (i)For a <i>school</i> — 1 <i>accessible</i> space for every 100 carparking spaces or part thereof.</p> <p>(ii)For other <i>assembly buildings</i>— (A)with up to 1000 carparking spaces — 1 <i>accessible</i> space for every 50 carparking spaces or part thereof; and</p> <p>(B)for each additional 100 carparking spaces or part thereof in excess of 1000 carparking spaces — 1 <i>accessible</i> space.</p>	
<p><b>D4D7</b></p>	<p><b>Signage</b></p> <p>(1)In a building <i>required</i> to be <i>accessible</i>— (a)braille and tactile signage complying with Specification 15 must— (i)incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 and identify each— <i>occupancy unit</i> in a Class 3 or Class 9c building; and sanitary facility, except a sanitary facility associated with a bedroom in</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

a Class 1b building or a (A)*sole-*  
(B)space with a hearing augmentation system; and  
(ii)identify each door *required* by E4D5 to be provided with an *exit* sign and state—  
(A)“Exit”; and  
(B)“Level”; and  
(C)the floor level number or floor level descriptor, or a combination of the two.  
(b)signage including the international symbol for deafness in accordance with AS 1428.1 must be provided within a room containing a hearing augmentation system identifying—  
(i)the type of hearing augmentation; and  
(ii)the area covered within the room; and  
(iii)if receivers are being used and where the receivers can be obtained; and  
(c)signage in accordance with AS 1428.1 must be provided for *accessible* unisex sanitary facilities to identify if the facility is suitable for left or right handed use; and  
(d) signage to identify an ambulant *accessible* sanitary facility in accordance with AS 1428.1 must be located on the door of the facility; and  
(e)where a pedestrian entrance is not *accessible*, directional signage incorporating the international symbol of access, in accordance with AS 1428.1, must be provided to direct a person to the location of the nearest *accessible* pedestrian entrance; and  
(f)where a bank of sanitary facilities is not provided with an *accessible* unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be placed at the location of the sanitary facilities that are not *accessible*, to direct a person to the location of the nearest *accessible* unisex sanitary facility.  
(2)In a building that is subject F4D12 and is *required* to be *accessible*, directional signage complying with Specification 15 to direct a person to the location of the nearest *accessible* adult change facility within that building must be provided at the location of each— (a)bank of sanitary facilities; and *accessible* unisex sanitary facility, other than one that incorporates

	<p>an <i>accessible</i> adult change facility.</p>	
<p><b>D4D9</b></p>	<p><b>Tactile indicators</b>            (1)For a building <i>required</i> to be <i>accessible</i>, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching— (a)a stairway, other than a <i>fire-isolated stairway</i>; and            (b)an escalator; and a passenger conveyor or moving walk; and            (d)a ramp other than a <i>fire-isolated ramp</i>, step ramp, kerb ramp or <i>swimming pool</i> ramp; and            (e)in the absence of a suitable barrier— (i)an overhead obstruction less than 2 m above floor level, other than a doorway; and            (ii)an <i>accessway</i> meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D4D5, if there is no kerb or kerb ramp at that point,            except for areas exempted by D4D5.            (2)Tactile ground surface indicators <i>required</i> by (1) must comply with sections 1 and 2 of AS/NZS 1428.4.1.            (3)A hostel for the aged, nursing home for the aged, a <i>residential aged care building</i>, Class 3 accommodation for the aged, Class 9a <i>health-care building</i> or a Class 9c <i>aged care building</i> need not comply with (1)(a) and (d) if handrails incorporating a raised dome button in accordance with AS/NZS 1428.4.1 are provided to warn people who are blind or have a vision impairment that they are approaching a stairway or ramp.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>D4D13</b></p>	<p><b>Glazing on an accessway</b>            On an <i>accessway</i>, 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.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

**5.4 SECTION E – – SERVICES AND EQUIPMENT**

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
E1D2	<p><b>Fire hydrants</b></p> <p>(1)A fire hydrant system must be provided to serve a building—</p> <p>(a)having a total <i>floor area</i> greater than 500 m<sup>2</sup>; and</p> <p>(b)where a <i>fire brigade station</i> is— (i)no more than 50 km from the building as measured along roads; and</p> <p>(ii)equipped with equipment capable of utilising a fire hydrant.</p> <p>(2)The fire hydrant system must be installed in accordance with AS 2419.1.</p> <p>(3)Notwithstanding (2), a Class 8 <i>electricity network substation</i> need not comply with clause 4.2 of AS 2419.1 if— (a)it cannot be connected to a town main supply; and</p> <p>(b)one hour water storage is provided for fire-fighting.</p> <p>(4)Where internal fire hydrants are provided, they must serve only the <i>storey</i> on which they are located except that a <i>sole-occupancy unit</i>—</p> <p>(a)in a Class 2 or 3 building or Class 4 part of a building may be served by a single fire hydrant located at the level of egress from that <i>sole-occupancy unit</i>; or</p> <p>(b)of not more than 2 <i>storeys</i> in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hydrant located at the level of egress from that <i>sole-occupancy unit</i> provided the fire hydrant can provide coverage to the whole of the <i>sole-occupancy unit</i>.</p>	Further Detail will be required within the Construction Certificate documentation
E1D4	<p><b>Sprinklers</b></p> <p>A sprinkler system must— (a)be installed in a building or part of a building when <i>required</i> by E1D5 to E1D12 as applicable; and</p> <p>(b)comply with Specification 17 and Specification 18 as applicable.</p>	For Reference
E1D7	<p><b>Where sprinklers are required: Class 3 building used as a residential care building</b></p> <p>Sprinklers are <i>required</i> throughout a building containing— (a)a Class 3 part used as a <i>residential care building</i>; and any <i>fire compartment</i> containing a Class 3 part used for residential care.</p>	Further Detail will be required within the Construction Certificate documentation

<p><b>E1D16</b></p>	<p><b>Fire precautions during construction</b>            In a building under construction— (a)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 <i>storey</i> adjacent to each <i>required exit</i> or temporary stairway or <i>exit</i>; and            (b)after the building has reached an <i>effective height</i> of 12 m— (i)the <i>required</i> fire hydrants and fire hose reels must be operational in at least every <i>storey</i> that is covered by the roof or the floor structure above, except the 2 uppermost <i>storeys</i>; and            any <i>required</i> booster connections must be installed.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>E2D3</b></p>	<p><b>General requirements</b>            (1)An air-handling system which does not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one <i>fire compartment</i> to another <i>fire compartment</i> or operates in a manner that may unduly contribute to the spread of smoke from one <i>fire compartment</i> to another <i>fire compartment</i> must, subject to (2), be designed and installed— (a)to operate as a smoke control system in accordance with AS 1668.1; or            (b)such that it— <i>compartments</i> served; and incorporates smoke dampers where the air-handling ducts penetrate any elements separating the (i)<i>fire</i>            (ii)is arranged such that the air-handling system is shut down and the smoke dampers are activated to close <i>automatically</i> by smoke detectors complying with clause 7.5 of AS 1670.1.            (2)For the purposes of (1), each <i>sole-occupancy unit</i> in a Class 2 or 3 building is treated as a separate <i>fire compartment</i>.            (3)Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one <i>fire compartment</i> (other than a <i>carpark</i> ventilation system) and not forming part of a smoke hazard management system must comply with these Sections of the Standard.            (4)A smoke detection system must be installed in accordance with S20C6 to operate AS 1668.1 systems that are provided for zone pressurisation and <i>automatic</i> air pressurisation for fire-isolated <i>exits</i>.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>E2D8</b></p>	<p><b>Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building</b></p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

	<p>In a Class 2 and 3 building or part of a building, or Class 4 part of a building, if the building is not more than 25 m in <i>effective height</i>— (a)it must be provided with an <i>automatic</i> smoke detection and alarm system complying with Specification 20; and</p> <p>(b)where a <i>required fire-isolated stairway</i> serving the Class 2 or 3 parts also serves one or more <i>storeys</i> of Class 5, 6, 7 (other than an <i>open-deck carpark</i>), 8 or 9b parts— (i)the <i>fire-isolated stairway</i>, including any associated <i>fire-isolated passageway</i> or <i>fire-isolated ramp</i>, must be provided with an <i>automatic</i> air pressurisation system for fire-isolated <i>exits</i> in accordance with AS 1668.1; or</p> <p>(ii)the Class 5, 6, 7 (other than an <i>open-deck carpark</i>), 8 and 9b parts must be provided with— (A)an <i>automatic</i> smoke detection and alarm system complying with Specification 20; or</p> <p>(B)a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17; and</p> <p>(c)where a <i>required fire-isolated stairway</i> serving the Class 4 part also serves one or more <i>storeys</i> of Class 5, 6, 7 (other than an <i>open-deck carpark</i>), 8 or 9b parts—</p> <p>(i)a system complying with (b)(i) or (b)(ii) must be installed; or</p> <p>(ii)a smoke alarm or detector system complying with Specification 20 must be provided except that alarms or detectors need only be installed adjacent to each doorway into each <i>fire-isolated stairway</i> (set back horizontally from the doorway by a distance of not more than 1.5</p>	
<p><b>E3D2</b></p>	<p><b>Lift installations</b>  <i>An electric passenger lift</i> installation and an <i>electrohydraulic passenger lift</i> installation must comply with Specification 24.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>E3D4</b></p>	<p><b>Warning against use of lifts in fire</b>  (1)A warning sign must be displayed where it can be readily seen near every call button for a passenger lift or group of lifts throughout a building.  (2)The requirements of (1) do not apply to a small lift such as a dumb-waiter or the like that is for the transport of goods only.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

	<p>(3)Each warning sign <i>required</i> by (1) must comply with the details and dimensions of Figure E3D4 and consist of—</p> <p>(a)incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or letters incised or inlaid directly into the surface of the material forming the wall.</p>	
<b>E3D7</b>	<p><b>Passenger lift types and their limitations</b></p> <p>(1)In an <i>accessible</i> building, every passenger lift must be one of the following lift types, subject to the limitations (if any) of each lift type: (a)There are no limitations on the use of <i>electric passenger lifts, electrohydraulic passenger lifts or inclined lifts</i>.</p> <p>(b)<i>Stairway platform lifts</i> must not— (i)be used to serve a space in a building accommodating more than 100 persons calculated according to D2D18; or</p> <p>(ii)be used in a high traffic public use area such as a theatre, cinema, auditorium, transport interchange, shopping centre or the like; or</p> <p>(iii)be used where it is possible to install another type of passenger lift; or</p> <p>(iv)connect more than 2 <i>storeys</i>; or</p> <p>(v)where more than 1 stairway lift is installed, serve more than 2 consecutive <i>storeys</i>; or</p> <p>(vi)when in the folded position, encroach on the minimum width of a stairway <i>required</i> by D2D8 to D2D11.</p> <p>(c)A <i>low-rise platform lift</i> must not travel more than 1000 mm.</p> <p>(d)A <i>low-rise, low-speed constant pressure lift</i> must not— (i)for an enclosed type, travel more than 4 m; or</p> <p>(ii)for an unenclosed type, travel more than 2 m; or</p> <p>(iii)be used in a high traffic public use areas in buildings such as a theatre, cinema, auditorium, transport interchange, shopping complex or the like.</p> <p>(e)A <i>small-sized, low-speed automatic lift</i> must not travel more than 12 m.</p>	Further Detail will be required within the Construction Certificate documentation



	<p>(2)A passenger lift referred to in (1) must not rely on a constant pressure device for its operation if the lift car is fully enclosed.</p>	
<b>E3D8</b>	<p><b>Accessible features required for passenger lifts</b> In an <i>accessible</i> building, every passenger lift must have the following features where applicable: (a)A handrail complying with the provisions for a mandatory handrail in AS 1735.12 for all lifts except— (i)a <i>stairway platform lift</i>; and (ii)a <i>low-rise platform lift</i>.</p> <p>(b)Lift floor dimensions of not less than 1400 mm wide x 1600 mm deep for all lifts which travel more than 12 m.</p> <p>(c)Lift floor dimensions of not less than 1100 mm wide x 1400 mm deep for all lifts which travel not more than 12 m, except a <i>stairway platform lift</i>.</p> <p>(d)Lift floor dimensions of not less than 810 mm wide x 1200 mm deep for a <i>stairway platform lift</i>. Minimum clear door opening complying with AS 1735.12 for all lifts except a <i>stairway platform lift</i>.</p> <p>(f)Passenger protection system complying with AS 1735.12 for all lifts with power-operated doors.</p> <p>(g)Lift landing doors at the upper landing for all lifts except a <i>stairway platform lift</i>.</p> <p>(h)Lift car and landing control buttons complying with AS 1735.12 for all lifts except— (i)a <i>stairway platform lift</i>; and (ii)a <i>low-rise platform lift</i>.</p> <p>(i)Lighting in accordance with AS 1735.12 for all enclosed lift cars.</p> <p>(j)For all lifts serving more than 2 levels— (i)automatic audible information within the lift car to identify the level each time the car stops; and (ii)audible and visual indication at each lift landing to indicate the arrival of the lift car; and (iii)audible information and audible indication <i>required</i> by (i) and (ii) is to be provided in a range of between 20 - 80 dB(A) at a maximum frequency of 1500 Hz.</p>	Further Detail will be required within the Construction Certificate documentation

	<p>(k)Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received, for all lifts except a <i>stairway platform lift</i>.</p>	
<p><b>E4D2</b></p>	<p><b>Emergency lighting requirements</b>  An emergency lighting system must be installed— (a)in every <i>fire-isolated stairway, fire-isolated passageway or fire-isolated ramp</i>; and  (b)in every <i>storey</i> of a Class 5, 6, 7, 8 or 9 building where the <i>storey</i> has an area more than 300 m<sup>2</sup>— (i)in every passageway, corridor, hallway, or the like, that is part of the path of travel to an <i>exit</i>; and  (ii)in any room having a <i>floor area</i> more than 100 m<sup>2</sup> that does not open to a corridor or space that has emergency lighting or to a road or <i>open space</i>; and  (iii)in any room having a <i>floor area</i> more than 300 m<sup>2</sup>; and  (c)in every passageway, corridor, hallway, or the like, having a length of more than 6 m from the entrance doorway of any <i>sole-occupancy unit</i> in a Class 2 or 3 building or Class 4 part of a building to the nearest doorway opening directly to— (i)a <i>fire-isolated stairway, fire-isolated passageway or fire-isolated ramp</i>; or  (ii)an external stairway serving instead of a <i>fire-isolated stairway</i> under D2D13; or  (iii)an external balcony leading to a <i>fire-isolated stairway, fire-isolated passageway or fire-isolated ramp</i>; or  (iv)a road or <i>open space</i>; and  (d)in every <i>required non-fire-isolated stairway</i>; and  (e)in a <i>sole-occupancy unit</i> in a Class 5, 6 or 9 building if— (i)the <i>floor area</i> of the unit is more than 300 m<sup>2</sup>; and  (ii)an <i>exit</i> from the unit does not open to a road or <i>open space</i> or to an external stairway, passageway, balcony or ramp, leading directly to a road or <i>open space</i>; and  (f)in every room or space to which there is public access in every <i>storey</i> in a Class 6 or 9b building if— (i)the <i>floor area</i> in that <i>storey</i> is more than 300 m<sup>2</sup>; or</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

	<p>(ii)any point on the floor of that <i>storey</i> is more than 20 m from the nearest doorway leading directly to a stairway, ramp, passageway, road or <i>open space</i>; or</p> <p>(iii)egress from that <i>storey</i> involves a vertical rise within the building of more than 1.5 m, or any vertical rise if the <i>storey</i> concerned does not admit sufficient light; or</p> <p>(iv)the <i>storey</i> provides a path of travel from any other <i>storey required</i> by (i), (ii) or (iii) to have emergency lighting; and</p> <p>(g)in a Class 9a <i>health-care building</i>— (i)in every passageway, corridor, hallway, or the like, serving a <i>treatment area</i> or a <i>ward area</i>; and</p> <p>(ii)in every room having a <i>floor area</i> of more than 120 m<sup>2</sup> in a <i>patient care area</i>; and</p> <p>(h)in every Class 9c building excluding within <i>sole-occupancy units</i>; and in every <i>required</i> fire control centre.</p>	
<p><b>E4D3</b></p>	<p><b>Measurement of distance</b> Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>E4D4</b></p>	<p><b>Design and operation of emergency lighting</b> Every <i>required</i> emergency lighting system must comply with AS/NZS 2293.1.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>E4D5</b></p>	<p><b>Exit signs</b> An <i>exit</i> sign must be clearly visible to persons approaching the <i>exit</i>, and must be installed on, above or adjacent to each— (a)door providing direct egress from a <i>storey</i> to— (i)an enclosed stairway, passageway or ramp serving as a <i>required exit</i>; and</p> <p>(ii)an external stairway, passageway or ramp serving as a <i>required exit</i>; and</p> <p>(iii)an external access balcony leading to a <i>required exit</i>; and</p> <p>(b)door from an enclosed stairway, passageway or ramp at every level of discharge to a road or <i>open space</i>; and</p> <p>(c)<i>horizontal exit</i>; and</p> <p>(d)door serving as, or forming part of, a <i>required exit</i> in a <i>storey required</i> to be provided with emergency lighting in accordance with E4D2.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

<b>E4D6</b>	<b>Direction signs</b> If an <i>exit</i> is not readily apparent to persons occupying or visiting the building then <i>exit</i> signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a <i>required exit</i> .	Further Detail will be required within the Construction Certificate documentation
<b>E4D8</b>	<b>Design and operation of exit signs</b> Every <i>required exit</i> sign must— (a)comply with— (i)AS/NZS 2293.1; or (ii)for a photoluminescent <i>exit</i> sign, Specification 25; and (b)be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	Further Detail will be required within the Construction Certificate documentation

**5.5 SECTION F – HEALTH AND AMENITY**

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
<b>F1D3</b>	<p><b>Stormwater drainage</b> Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3.</p>	Further Detail will be required within the Construction Certificate documentation
<b>F1D4</b>	<p><b>Exposed joints</b> [New for 2022] Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must— (a) be protected in accordance with Section 2.9 of AS 4654.2; and (b) not be located beneath or run through a planter box, water feature or similar part of the building.</p>	Further Detail will be required within the Construction Certificate documentation
<b>F1D5</b>	<p><b>External waterproofing membranes</b> A roof, balcony, podium or similar horizontal surface part of a building must be provided with a <i>waterproofing membrane</i>— (a) consisting of materials complying with AS 4654.1; and designed and installed in accordance with AS 4654.2.</p>	Further Detail will be required within the Construction Certificate documentation
<b>F1D6</b>	<p><b>Damp-proofing</b> (1) Except for a building covered by (3), moisture from the ground must be prevented from reaching— (a) the lowest floor timbers and the walls above the lowest floor joists; and (b) the walls above the <i>damp-proof course</i>; and (c) the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. (2) Where a <i>damp-proof course</i> is provided, it must consist of— (a) a material that complies with AS/NZS 2904; or</p>	Further Detail will be required within the Construction Certificate documentation

	<p>(b)impervious sheet material in accordance with AS 3660.1.</p> <p>(3)The following buildings need not comply with (1):</p> <p>(a)A Class 7 or 8 building where in the particular case there is no necessity for compliance.</p> <p>(b)A garage, tool shed, <i>sanitary compartment</i>, or the like, forming part of a building used for other purposes. <i>An open spectator stand or open-deck carpark.</i></p>	
<b>F1D7</b>	<p><b>Damp-proofing of floors on the ground</b></p> <p>(1)If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870.</p> <p>(2)The requirements of (1) do not apply where—</p> <p>(a)weatherproofing is not <i>required</i>; or the floor is the base of a stair, lift or similar <i>shaft</i> which is adequately drained by gravitation or mechanical means.</p>	Further Detail will be required within the Construction Certificate documentation
<b>F2D2</b>	<p><b>Wet area construction</b></p> <p>(1)In a Class 2 and 3 building and a Class 4 part of a building, building elements in <i>wet areas</i> must—</p> <p>(a)be <i>water resistant</i> or <i>waterproof</i> in accordance with Specification 26; and</p> <p>(b)comply with AS 3740.</p> <p>(2)In a Class 5, 6, 7, 8 or 9 building, building elements in a bathroom or shower room, a slop hopper or sink compartment, a laundry or <i>sanitary compartment</i> must—</p> <p>(a)be <i>water resistant</i> or <i>waterproof</i> in accordance with Specification 26; and</p> <p>(b)comply with AS 3740, as if they were in a Class 2 or 3 building or a Class 4 part of a building.</p>	Further Detail will be required within the Construction Certificate documentation
<b>F2D4</b>	<p><b>Floor wastes</b></p> <p>(1)In a Class 2 or 3 building or Class 4 part of a building, a bathroom or laundry located at any level above a <i>sole-occupancy unit</i> or public space must have a <i>floor waste</i>.</p> <p>(2)Where a <i>floor waste</i> is installed—</p> <p>(a)the minimum continuous fall of a floor plane to the waste must be 1:80; and the maximum continuous fall of a floor plane to the waste must be 1:50.</p>	Further Detail will be required within the Construction Certificate documentation

<b>F3D1</b>	<b>Deemed-to-Satisfy Provisions</b> (1)Where a <i>Deemed-to-Satisfy Solution</i> is proposed, <i>Performance Requirement F3P1</i> is satisfied by complying with F3D2 to F3D5. (2)Where a <i>Performance Solution</i> is proposed, the relevant <i>Performance Requirements</i> must be determined in accordance with A2G2(3) and A2G4(3) as applicable. A roof must be covered with— (a)roof tiles complying with AS 2049, fixed in accordance with AS 2050; or (b)metal sheet roofing complying with AS 1562.1; or (c)plastic sheet roofing designed and installed in accordance with AS 1562.3; or (d)terracotta, fibre-cement and timber slates and shingles designed and installed in accordance with AS 4597, except in cyclonic areas; or an external waterproofing <i>membrane</i> complying with F1D5.	Further Detail will be required within the Construction Certificate documentation
<b>F3D3</b>	<b>Sarking</b> <i>Sarking-type material</i> used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2.	Further Detail will be required within the Construction Certificate documentation
<b>F3D4</b>	<b>Glazed assemblies</b> (1)Subject to (2) and (3), the following glazed assemblies in an <i>external wall</i> , must comply with AS 2047 requirements for resistance to water penetration: (a)Windows. (b)Sliding and swinging glazed doors with a frame, including French and bi-fold doors with a frame. (c)Adjustable louvres. (d)Shopfronts. (e)Window walls with one piece framing. (2)The following buildings need not comply with (1): (a)A Class 7 or 8 building where in the particular case there is no necessity for compliance. (b)A garage, tool shed, <i>sanitary compartment</i> , or the like, forming part of a building used for	Further Detail will be required within the Construction Certificate documentation

	<p>other purposes, except where the construction of the garage, tool shed, <i>sanitary compartment</i> or the like contributes to the weatherproofing of the other part of the building.</p> <p>(c)An <i>open spectator stand</i> or <i>open-deck carpark</i>.</p> <p>(3)The following glazed assemblies need not comply with (1): (a)All glazed assemblies not in an <i>external wall</i>.</p> <p>(b)Revolving doors.</p> <p>(c)Fixed louvres.</p> <p>(d)Skylights, roof lights and windows in other than the vertical plane.</p> <p>(e)Sliding and swinging glazed doors without a frame.</p> <p>(f)Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047.</p> <p>(g)Second-hand windows, re-used windows and recycled windows. Heritage windows.</p>	
<p><b>F3D5</b></p>	<p><b>Wall cladding</b></p> <p>(1)External wall cladding must comply with one or a combination of the following:</p> <p>(a)Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700.</p> <p>(b)Autoclaved aerated concrete: AS 5146.3.</p> <p>(c)Metal wall cladding: AS 1562.1.</p> <p>(2)The following buildings need not comply with (1): (a)A Class 7 or 8 building where in the particular case there is no necessity for compliance.</p> <p>(b)A garage, tool shed, <i>sanitary compartment</i>, or the like, forming part of a building used for other purposes, except where the construction of the garage, tool shed, <i>sanitary compartment</i> or the like contributed to the weatherproofing of another part of the building that is <i>required</i> to be weatherproofed. An <i>open spectator stand</i> or <i>open deck carpark</i>.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>F4D5</b></p>	<p><b>Accessible sanitary facilities</b></p> <p>In a building <i>required</i> to be <i>accessible</i>— (a)<i>accessible</i> unisex <i>sanitary compartments</i> must be</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>



	<p>provided in <i>accessible</i> parts of the building in accordance with F4D6; and</p> <p>(b)<i>accessible</i> unisex showers must be provided in accordance with F4D7; and</p> <p>(c)at each bank of toilets where there is one or more toilets in addition to an <i>accessible</i> unisex <i>sanitary compartment</i> at that bank of toilets, not less than one <i>sanitary compartment</i> suitable for a person with an ambulant disability for use by males and one <i>sanitary compartment</i> suitable for a person with an ambulant disability for use by females, must be provided; and</p> <p>(d)an <i>accessible</i> unisex <i>sanitary compartment</i> must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary products; and</p> <p>(e)the circulation spaces, fixtures and fittings of all <i>accessible</i> sanitary facilities provided in accordance with F4D6 and F4D7 must comply with the requirements of AS 1428.1; and</p> <p>(f)an <i>accessible</i> unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and</p> <p>(g)where two or more of each type of <i>accessible</i> unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible; and</p> <p>(h)where male sanitary facilities are provided at a separate location to female sanitary facilities, <i>accessible</i> unisex sanitary facilities are only <i>required</i> at one of those locations; and</p> <p>(i)an <i>accessible</i> unisex <i>sanitary compartment</i> or an <i>accessible</i> unisex shower need not be provided on a <i>storey</i> or level that is not <i>required</i> by D4D4(f) to be provided with a passenger lift or ramp complying with AS 1428.1.</p>	
<b>F5D2</b>	<b>Height of rooms and other spaces</b> <p>(1)The height of rooms and other spaces in a Class 2 or 3 building or Class 4 part of a building must be not less than—</p> <p>(a)for a kitchen, laundry, or the like — 2.1 m; and</p> <p>(b)for a corridor, passageway or the like — 2.1 m; and</p> <p>(c)for a <i>habitable room</i> excluding a kitchen — 2.4 m; and</p>	Further Detail will be required within the Construction Certificate documentation

- (d) in a *habitable room*, or space within a *habitable room*, with a sloping ceiling or projections below the ceiling line— (i) in an attic — a height of not less than 2.2 m for not less than two-thirds of the *floor area* of the room or space; and
- (ii) in other rooms — a height of not less than 2.4 m for not less than two-thirds of the *floor area* of the room or space; and
- (e) in a *habitable room*, or space within a *habitable room*, with a sloping ceiling or projections below the ceiling line — a height of not less than 2.1 m for not less than two-thirds of the *floor area* of the room or space.
- (2) For the purposes of (1), when calculating the *floor area* of a room or space, any part that has a ceiling height of less than 1.5 m is not included.
- (3) The height of rooms and other spaces in a Class 5, 6, 7 or 8 building must be not less than—
- (a) except as allowed in (b) and (8) — 2.4 m; and
- (b) a corridor, passageway, or the like — 2.1 m.
- (4) The height of rooms and other spaces in a Class 9a *health-care building* must be not less than—
- (a) for a *patient care area* — 2.4 m; and
- (b) for an operating theatre or delivery room — 3 m; and
- (c) for a treatment room, clinic, waiting room, passageway, corridor, or the like — 2.4 m.
- (5) The height of rooms and other spaces in a Class 9b building must be not be less than—
- (a) for a *school* classroom or other *assembly building* or part that accommodates not more than 100 persons — 2.4 m; and
- (b) for a theatre, public hall or other *assembly building* or part that accommodates more than 100 persons — 2.7 m; and
- (c) for a corridor— (i) that serves an *assembly building* or part that accommodates not more than 100 persons — 2.4 m; or
- (ii) that serves an *assembly building* or part that accommodates more than 100 persons — 2.7 m.

	<p>(6)For the purposes of (5) the number of persons accommodated must be calculated according to D2D18.</p> <p>(7)The height of rooms and other spaces in a Class 9c building must be not be less than—</p> <p>(a)for a kitchen, laundry, or the like — 2.1 m; and</p> <p>(b)for a corridor, passageway or the like — 2.4 m; and</p> <p>(c)for a <i>habitable room</i> excluding a kitchen — 2.4 m.</p> <p>(8)The height of rooms and other spaces in any building must be not be less than— (a)for a bathroom, shower room, <i>sanitary compartment</i>, other than an <i>accessible</i> adult change facility, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and</p> <p>(b)for a commercial kitchen — 2.4 m; and</p> <p>(c)above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like; and for a <i>required accessible</i> adult change facility — 2.4 m.</p>	
<p><b>F6D2</b></p>	<p><b>Provision of natural light</b>  Natural light must be provided in:</p> <p>(a)A Class 2 building and a Class 4 parts of a building — to all <i>habitable rooms</i>.</p> <p>(b)A Class 3 building — to all bedrooms and dormitories.</p> <p>(c)Class 9a and 9c buildings — to all rooms used for sleeping purposes.</p> <p>(d)A Class 9b building — to all general purpose classrooms in primary or secondary <i>schools</i> and all playrooms or the like for the use of children in an <i>early childhood centre</i>.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>F6D3</b></p>	<p><b>Methods and extent of natural light</b>  (1)<i>Required</i> natural light must be provided by—</p> <p>(a)<i>windows</i>, excluding <i>roof lights</i>, that— (i)have an aggregate light transmitting area</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

	<p>measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the <i>floor area</i> of the room; and</p> <p>(ii)are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or</p> <p>(b)<i>roof lights</i>, that— (i)have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the <i>floor area</i> of the room; and</p> <p>(ii)are open to the sky; or a proportional combination of <i>windows</i> and <i>roof lights required</i> by (a) and (b).</p> <p>(2)Except in a Class 9c <i>aged care building</i>, in a Class 2, 3 or 9 building or Class 4 part of a building, a <i>required window</i> that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of—</p> <p>(a)generally — 1 m; and</p> <p>(b)in a <i>patient care area</i> or other room used for sleeping purposes in a Class 9a building — 3 m; and</p> <p>(c)50% of the square root of the exterior height of the wall in which the <i>window</i> is located, measured in metres from its sill.</p> <p>(3)In a Class 9c <i>aged care building</i>, a <i>required window</i> must be transparent and located—</p> <p>(a)in an <i>external wall</i> with the <i>window</i> sill not more than 1 m above the floor level; and</p> <p>(b)where the <i>window</i> faces an adjoining allotment, another building or another wall of the same building, it must not be less than a horizontal distance of 3 m from the adjoining allotment, other building or wall.</p> <p>(4)In a Class 9b <i>early childhood centre</i>, the sills of 50% of <i>windows</i> in children’s rooms must be located not more than 500 mm above the floor level.</p>	
<p><b>F6D5</b></p>	<p><b>Artificial lighting</b></p> <p>(1)Artificial lighting must be provided— (a)in <i>required</i> stairways, passageways, and ramps; and</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

	<p>(b)if natural light of a standard equivalent to that <i>required</i> by F6D3 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— (i)a Class 4 part of a building — to <i>sanitary compartments</i>, bathrooms, shower rooms, airlocks and laundries; and (ii)a Class 2 building — to <i>sanitary compartments</i>, bathrooms, shower rooms, airlocks, laundries, common stairways and other spaces used in common by the occupants of the building; and (iii)Class 3, 5, 6, 7, 8 and 9 buildings — to all rooms that are frequently occupied, all spaces <i>required</i> to be <i>accessible</i>, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress. (2)The artificial lighting system must comply with AS/NZS 1680.0. (3)The system may provide a lesser level of illumination to the following spaces during times when the level of lighting would be inappropriate for the use: (a)A theatre, cinema or the like, when performances are in progress, with the exception of aisle lighting <i>required</i> by Part II. (b)A museum, gallery or the like, where sensitive displays require low lighting levels. (c)A discotheque, nightclub or the like, where to create an ambience and character for the space, low lighting levels are used.</p>	
<p><b>NSW F6D6</b></p>	<p><b>Ventilation of rooms</b> <i>A habitable room</i>, office, shop, factory, workroom, <i>sanitary compartment</i>, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have— (a)natural ventilation complying with F6D7; or a mechanical ventilation or air-conditioning system complying with AS 1668.2.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>F6D7</b></p>	<p><b>Natural ventilation</b> (1)Natural ventilation provided in accordance with F6D6(a) must consist of openings, <i>windows</i>, doors or other devices which can be opened— (a)with a ventilating area not less</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

	<p>than 5% of the <i>floor area</i> of the room <i>required</i> to be ventilated; and</p> <p>(b)open to— (i)a suitably sized court, or space open to the sky; or</p> <p>(ii)an open verandah, carport, or the like; or</p> <p>(iii)an adjoining room in accordance with F6D8.</p> <p>(2)The requirements of (1)(a) do not apply to a Class 8 <i>electricity network substation</i>.</p>	
<p><b>F7D3</b></p>	<p><b>Determination of airborne sound insulation ratings</b></p> <p>A form of construction <i>required</i> to have an airborne sound insulation rating must— (a)have the <i>required</i> value for weighted sound reduction index (R<sub>w</sub>) or weighted sound reduction index with spectrum adaptation term (R<sub>w</sub> + C<sub>tr</sub>) determined in accordance with AS/NZS ISO 717.1 using results from laboratory measurements; or comply with Specification 28.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>
<p><b>F7D4</b></p>	<p><b>Determination of impact sound insulation ratings</b></p> <p>(1)A floor in a building <i>required</i> to have an impact sound insulation rating must— (a)have the <i>required</i> value for weighted normalised impact sound pressure level (L<sub>n,w</sub>) determined in accordance with AS ISO 717.2 using results from laboratory measurements; or</p> <p>(b)comply with Specification 28.</p> <p>(2)A wall in a building <i>required</i> to have an impact sound insulation rating must— (a)for a Class 2 or 3 building be of discontinuous construction and</p> <p>(b)for a Class 9c building, must— (i)for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or</p> <p>(ii)be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Specification 29 than a wall listed in S28C4 to S28C7.</p> <p>(3)For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and— (a)for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and for other than masonry, there is no mechanical linkage between leaves except at the periphery.</p>	<p>Further Detail will be required within the Construction Certificate documentation</p>

<b>F7D5</b>	<b>Sound insulation rating of floors</b> (1)A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w}$ (impact) not more than 62 if it separates— (a) <i>sole-occupancy units</i> ; or (b)a <i>sole-occupancy unit</i> from a plant room, lift <i>shaft</i> , stairway, <i>public corridor</i> , public lobby or the like, or parts of a different classification. (2)A floor in a Class 9c building separating <i>sole-occupancy units</i> must have an $R_w$ not less than 45.	Further Detail will be required within the Construction Certificate documentation
<b>F7D6</b>	<b>Sound insulation rating of walls</b> (1)A wall in a Class 2 or 3 building must— (a)have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates <i>sole-occupancy units</i> ; and (b)have an $R_w$ (airborne) not less than 50, if it separates a <i>sole-occupancy unit</i> from a plant room, lift <i>shaft</i> , stairway, <i>public corridor</i> , public lobby or the like, or parts of a different classification; and (c)comply with F7D4(2) if it separates— (i)a bathroom, <i>sanitary compartment</i> , laundry or kitchen in one <i>sole-occupancy unit</i> from a <i>habitable room</i> (other than a kitchen) in an adjoining unit; or (ii)a <i>sole-occupancy unit</i> from a plant room or lift <i>shaft</i> . (2)A door may be incorporated in a wall in a Class 2 or 3 building that separates a <i>sole-occupancy unit</i> from a stairway, <i>public corridor</i> , public lobby or the like, provided the door assembly has an $R_w$ not less than 30. (3)A wall in a Class 9c building must have an $R_w$ not less than 45 if it separates— (a) <i>sole-occupancy units</i> ; or (b)a <i>sole-occupancy unit</i> from a kitchen, bathroom, <i>sanitary compartment</i> (not being an associated ensuite), laundry, plant room or utilities room. (4)In addition to (3), a wall separating a <i>sole-occupancy unit</i> in a Class 9c building from a kitchen or laundry must comply with F7D4(2). (5)Where a wall <i>required</i> to have sound insulation has a floor above, the wall must continue to— (a)the underside of the floor above; or	Further Detail will be required within the Construction Certificate documentation

	<p>(b)a ceiling that provides the sound insulation <i>required</i> for the wall.</p> <p>(6)Where a wall <i>required</i> to have sound insulation has a roof above, the wall must continue to— (a)the underside of the roof above; or a ceiling that provides the sound insulation <i>required</i> for the wall.</p>	
<b>F7D7</b>	<p><b>Sound insulation rating of internal services</b></p> <p>(1)If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one <i>sole-occupancy unit</i>, the duct or pipe must be separated from the rooms of any <i>sole-occupancy unit</i> by construction with an <math>R_w + C_{tr}</math> (airborne) not less than— (a)40 if the adjacent room is a <i>habitable room</i> (other than a kitchen); or</p> <p>(b)25 if the adjacent room is a kitchen or non-<i>habitable room</i>.</p> <p>(2)If a stormwater pipe passes through a <i>sole-occupancy unit</i>, it must be separated in accordance with (1)(a) and (b).</p>	Further Detail will be required within the Construction Certificate documentation
<b>F7D8</b>	<p><b>Sound isolation of pumps</b></p> <p>A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.</p>	Further Detail will be required within the Construction Certificate documentation

**Author**

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