Date: 4 September 2025
Our Ref: P250113

Mr Warwick Lynch
48 Middle St
McMahons Point NSW 2060

Dear Warwick,

RE: 46 Pitt Rd, North Curl Curl
BCA COMPLIANCE ASSESSMENT

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 Crown 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

Kieran Tobin
Director

BCA COMPLIANCE ASSESSMENT

PREPARED FOR

Mr Warwick Lynch

REGARDING
46 Pitt Rd, North Curl Curl

Prepared By

BCA vision

REPORT REGISTER

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

Our Reference	Issue No.	Remarks	Issue Date
P250113	1	Design Compliance Report	4 September 2025
Author		Kieran Tobin Senior NCC Consultant Registered Building Surveyor - Fair Trading no 0409 Grad Dip Building Surveying UWS	

CONTENTS PAGE

1.0 INTRODUCTION

1.1 GENERAL

This "BCA Compliance Assessment" report has been prepared at the request of Mr Warwick Lynch, and relates to the premises located at 46 Pitt Rd, North Curl Curl.

The project proposal is for construction of a new three storey residential unit building and carpark.

1.2 REPORT BASIS

The content of this report reflects –

(a) The principles and provisions of BCA 2022 (amendment 2), Parts B, C, D, E & F;

(b) Architectural documentation provided by Action Plans

Plan Reference	Plan Description	Dated
DA00	Cover	03/09/25
DA01	Notation	03/09/25
DA03	Site Analysis	03/09/25
DA04	Site / Roof / Sediment Erosion / Waste Management / Stormwater Concept Plan	03/09/25
DA05	Existing Ground Floor Plan	03/09/25
DA06	Lower Ground Floor Plan (Entry)	03/09/25
DA07	Proposed Ground Floor Plan	03/09/25
DA08	Proposed First Floor Plan	03/09/25
DA09	Proposed Roof Plan	03/09/25
DA10	North / East Elevation	03/09/25
DA11	South / West Elevation	03/09/25
DA12	West Elevation	03/09/25
DA13	Long Section Aa	03/09/25
DA14	Long Section Bb	03/09/25
DA15	Cross Section Aa	03/09/25
DA16	Cross Section Bb & Long Section Driveway	03/09/25
DA17	Area Calculations	03/09/25
DA18	Door Schedule	03/09/25
DA19	Windows Schedule	03/09/25
DA20	Sample Board	03/09/25
DA24	Basix Commitments	03/09/25

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, including any;
(g) Consideration of any fire services operations (including hydraulic, electrical or other systems);
(h) Assessment of plumbing and drainage installations, including stormwater;
(i) Assessment of mechanical plant operations, electrical systems or security systems;
(j) Heritage significance;
(k) Consideration of energy or water authority requirements;
(l) Consideration of Council's local planning policies;
(m) Environmental or planning issues;
(n) Requirements of statutory authorities;
(o) Sections G, H, J or I of the BCA are not considered;
(p) 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 anyother party.
(q) The report considers matters of a significant nature only and should not be considered exhaustive.
(r) The report does not consider structural adequacy of the building.

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 (Amendment 2), 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) Perf – The building element or requirement will be the subject of a Performance Assessment Report
(e) 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. Crown Certificate) shall also be outlined in Part 4.

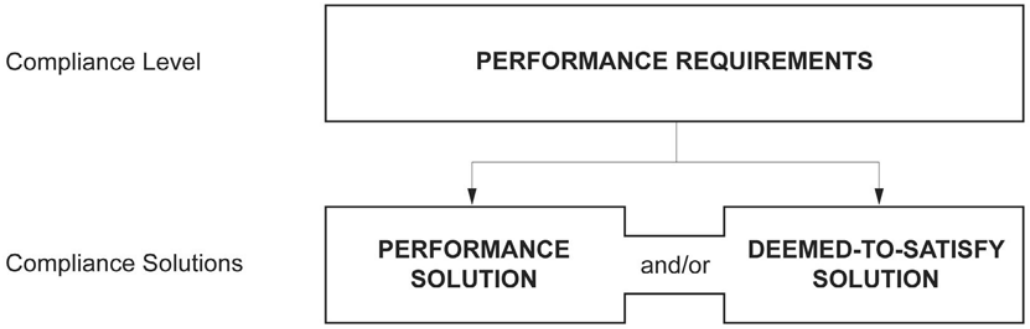
2.0 MATTERS IDENTIFIED / RECOMMENDATIONS

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.

Deemed-To-Satisfy Compliance – Key Considerations		
Item No.	**BCA Clause**	**Comment**
1.	C2D14	**Attachments to building –** **Requirements for non-combustibility** All attachments to the external walls of the building are required to be non combustible. It is noted that a feature cladding is proposed to be timber which represents a non compliance.
2.	C3D7	Vertical Protection of Openings Vertical Protection of Openings is not currently possible to the following windows (due to sill height):- - West side window W209 - West side window W211
3.	C4D3 C4D5	Protection of Openings Door and window Openings within 3m of the side (east and west)

		property boundaries (regardless of Orientation) will require protection in accordance with clause C4D5
4.	D2D5 D3D25	Egress Travel Distance The garage Door is excluded as an exit door by Clause D3D25, in this regard the egress travel distance form the worst affected part of the garage to the Exit door (swing door at LGF to Porch) exceeds the maximum 20m.
5.	D3D25	Exit Door Operation The swing door at LGF to Porch is required to swing outward in the direction of egress
6.	D2D8	Width of Egress Egress width in the following locations is less than the required minimum 1000mm:- - The pathway to the street - The Internal egress stair the stair must be compliant with AS 1428.1 – 2021 – in this regard the stair must be widened to allow for hand rails to each side and a clear width between hand rails of 1000mm We suggest a wall to wall width of 1.2m minimum
7.	E1D13 J9D4	**EV Charging** Provision within the MSB is required for EV Charging In addition current NSW Fire and Rescue advice requires that preparation for future EV Charging is required EV Charging is identified as an Excessive Hazard – requiring sprinkler protection The method of future protecting the building requires qualification

2.3 ADDITIONAL PRE CC DOCUMENTATION

The following table provides a list of additional items which may be required by the PCA:-

Seq	Requirement
1.	**Architectural** Regulated Design Certificate ***Additional Design Details required:-*** **Entry Walkway, Stair Sections hand rail and Balustrade sections** Note the stair must be compliant with AS 1428.1 – 2021 – in this regard the stair must be widened to allow for hand rails to each side and a clear width between hand rails of 1000mm We suggest a wall to wall width of 1.2m minimum **Fire Resistance** Qualification is required in regard to the wall systems to identify the Fire Resistance levels provided - External walls Floor Separation System Riser Shafts Lift Shaft

Posts to balconies

Fire Resistance - General

All building elements to achieve the fire resistance levels of TypeA Construction as outlined in Specification 5 (Refer Clause 3.4 of this report).

Sectional Wall details will be required to clarify the FRLs required have been achieved

Residential Portion

External Walls

Distance from Boundary	FRL
less than 1.5 m	90/ 90/ 90
1.5 to less than 3 m	90/ 60/ 60
3 m or more	90/ 60/ 30

External posts/Columns – FRL 90 minutes

Walls between sole Occupancies and common areas – 90/90/90

Floors between Residential Units – 90/90/90

Separation to Other elements

Car park

- Wall between Carpark and Residential portion 120/120/120 (self closing -/120/30 fire door required)
- Exposed external Columns 120/120/120
- Slab between car park and residential 120/120/120

MSB

-120/120/120

Lift Shaft

- 90/90/90 – with a -/60/- door on each level

Vertical Protection of Openings

Details identifying either
a 60/60/60 vertical spandrel panel between windows or
a Horizontal projection (balcony) 1.1m deep, 450 either side of opening and FRL 60/60/60

Acoustic

Qualification is required in regard to the wall systems to identify the Acoustic levels provided -

Floor System

Riser Shafts

Lift Shaft

Condensation Management

External wall construction

(1)Where a pliable building membrane is installed in an external wall, it must—
(a)comply with AS 4200.1; and
(b)be installed in accordance with AS 4200.2; and
(c)be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building.
(2)Where a pliable building membrane, sarking-type material or insulation layer is installed on the exterior side of the primary insulation layer of an external wall it must

	have a vapour permeance of not less than— (a)in climate zones 4 and 5, 0.143 µg/N.s; and (b)in climate zones 6, 7 and 8, 1.14 µg/N.s. (3)Except for single skin masonry or single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity. - Confirm Mechanical Ventilation systems capacity An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of— (a)25 L/s for a bathroom or sanitary compartment; and (b)40 L/s for a kitchen or laundry.
2.	Fire Hazard Certificates for floor linings Fire test Certificates are required for floor linings (other than non combustible tile, concrete etc)
3.	Copy of Structural Engineers Design Compliance Certificate and Services Plans Structural Engineers Design Compliance Certificate Confirm compliance with:- AS 3600 Concrete Structures AS 3700 Masonry Structures AS 1684 Timber Framed Construction
4.	Cladding Insulation and Sarking The following elements and their components are required to be non-combustible: • • External walls and common walls, including all components incorporated in them including the façade covering, framing and insulation. • • Non-loadbearing internal walls where they are required to be fire-resisting. Buildings of type A construction to have external walls including all components incorporated in them including the facade covering, framing and insulation to be non-combustible. Details to be provided with the application for CC. Evidence of suitability under BCA A5.2 via the following; a) a current CodeMark certificate, b) a current certificate of Accreditation, c) a report issued by an Accredited Testing Laboratory, or a certificate or report from a professional engineer for each non-combustible building element.
5.	Provide AS 1530.1 Fire Test Certificate for building attachments
6.	Mechanical Regulated Design Certificate Copy of Final Mechanical Services Engineers Design Compliance Certificate and Services Plans
7.	Hydraulic Regulated Design Certificate Copy of Final Hydraulic Services Engineers Design Compliance Certificate and Services Plans Note the Certificate must reference compliance with Clause E12D2, AS 2419.1 – 2021 Clause E1D13 and Sprinkler Systems (if EV Charging is required in the future) Clause E1D14 and AS 2444
8.	Civil Stormwater

	Regulated Design Certificate Copy of Final Civil Stormwater Services Engineers Design Compliance Certificate and Services Plans
9.	Electrical Regulated Design Certificate Electrical Services Plans Copy of Electrical Services Engineers Design Compliance Certificate Confirm compliance with *Automatic Smoke Detection and Alarm System* Part E2 of the BCA and Specification 20 AS 3786-2014; AS 1670 - 2018 *Emergency Lighting and Exit Signs* BCA Part E4 of the BCA, and the relevant provisions of AS/NZS 2293.1-2018. Artificial Lighting AS/NZS 1680.0.
10.	Vertical Transport Lift Services Plans Regulated Design Certificate Lift Specification and Lift Certificate confirming compliance with AS 1735 and Part E3 of the BCA
11.	Weatherproofing Report - External wall Weatherproofing and Non Combustibility - Roof Weatherproofing - Waterproofing to External areas
12.	Energy Efficiency Provide a BASIX Certificate Provide a NatHERs Assessment A Section J Assessment Report is required to address:- Fabric between the car park and the residence Part J6 – Air Conditioning and Mechanical Ventilation Part J7 – Artificial Lighting and Power

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 C2D3)

The building has a rise in storeys of three (3).

3.2 BUILDING CLASSIFICATION (CLAUSE A3.2)

The Building will contain the following classifications

Class	Description
2	Class 2 building is a building containing two or more sole-occupancy units
7a	A carpark.

Note: - the storage area within LGF is approximately 9.6m2, representing less than 10% of the floor area

BCA Excerpt - Exemptions

(1)For A6G1(1) where a part of a building has been designed, constructed or adapted for a different purpose and is less than 10% of the floor area of the storey it is situated on, the classification of the other part of the storey may apply to the whole storey.

3.3 Effective Height

The buildings have an effective less than 12m (approx. 5.3m)

3.4 TYPE OF CONSTRUCTION (CLAUSE C2D2, TABLE 5)

Specification 5 - Type A Construction

Table SFC1 TYPE A CONSTRUCTION: FRL OF BUILDING ELEMENTS

Building element	Class of building — FRL: (in minutes)			
	Structural adequacy/ Integrity/ Insulation			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any *fire-source feature* to which it is exposed is—				
For *loadbearing* parts—				
less than 1.5 m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 60	120/ 90/ 90	180/180/120	240/240/180
3 m or more	90/ 60/ 30	120/ 60/ 30	180/120/ 90	240/180/ 90
For non- *loadbearing* parts—				
less than 1.5 m	–/ 90/ 90	–/120/120	–/180/180	–/240/240
1.5 to less than 3 m	–/ 60/ 60	–/ 90/ 90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an *external wall*—				
For *loadbearing* columns—				
	90/–/–	120/–/–	180/–/–	240/–/–
For non- *loadbearing* columns—				
	–/–/–	–/–/–	–/–/–	–/–/–

Building element	Class of building — FRL: (in minutes)			
	Structural adequacy/ Integrity/ Insulation			
	2, 3 or 4 part	**5, 7a or 9**	**6**	**7b or 8**
COMMON WALLS and FIRE WALLS—	90/ 90/ 90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS—				
Fire-resisting lift and stair *shafts*—				
Loadbearing	90/ 90/ 90	120/120/120	180/120/120	240/120/120
Non- *loadbearing*	–/ 90/ 90	–/120/120	–/120/120	–/120/120
Bounding *public corridors*, public lobbies and the like—				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non- *loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*—				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non- *loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like *shafts* not used for the discharge of hot products of combustion—				
Loadbearing	90/ 90/ 90	120/ 90/ 90	180/120/120	240/120/120
Non- *loadbearing*	–/ 90/ 90	–/ 90/ 90	–/120/120	–/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES				
and COLUMNS—	90/–/–	120/–/–	180/–/–	240/–/–
FLOORS	90/ 90/ 90	120/120/120	180/180/180	240/240/240
ROOFS	90/ 60/ 30	120/ 60/ 30	180/ 60/ 30	240/ 90/ 60

3.5 GENERAL FLOOR AREA LIMITATIONS (TABLE C3D3)

Note
– Not applicable to residential portion

The building is approximately 600m2 for purposes of Essential Services

- The carpark complies with the floor area and volume requirements

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

Table C2.2 – Maximum size of Fire Compartments		
Building Class		**Type A**
5, 9b, 9c	Max Floor area Max Volume	**8000 m²** **48,000 m³**
6, 7, 8 or 9a	Max Floor area Max Volume	**5000 m²** **30,000 m³**

3.6 SECTION J – ENERGY EFFICIENCY

The Building resides within Climate Zone 5

3.7 PART B1 - STRUCTURAL PROVISIONS

Structural Engineers Details prepared by an Appropriately qualified Structural Engineer will be required within the Crown 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
- A building in a *flood hazard area* must comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.

4.0 BCA ASSESSMENT – SUMMARY

4.1 GENERAL

The tables contained within items 4.2 – 4.5 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	Not relevant
C2D2 - Deemed-to-Satisfy Provisions			✓	
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			✓	
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 m2: 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 m2: 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				✓

4.5 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			✓	

5.0 BCA ASSESSMENT – DETAILED ANALYSIS

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,Parts C, D, E and F 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	**Type of construction required** (1)The minimum Type of *fire-resisting construction* of a building must be determined in accordance with Table C2D2, except as allowed for— (a)certain Class 2, 3 or 9c buildings, in C2D6; and (b)a Class 4 part of a building located on the top *storey*, in C2D4(2); and (c)*open spectator stands* and indoor sports stadiums, in C2D8. (2)Each building element must comply with Specification 5 as applicable.	Further Detail is required within the Construction Documentation
C2D9	**Type of construction required** (1)The minimum Type of *fire-resisting construction* of a building must be determined in accordance with Table C2D2, except as allowed for— (a)certain Class 2, 3 or 9c buildings, in C2D6; and (b)a Class 4 part of a building located on the top *storey*, in C2D4(2); and	Further Detail is required within the Construction Documentation

	(c)*open spectator stands* and indoor sports stadiums, in C2D8. (2)Each building element must comply with Specification 5 as applicable.	
C2D10	**Non-combustible building elements** (1)In a building *required* to be of Type A or B construction, the following building elements and their components must be *non-combustible*: (a)*External walls* and *common walls*, including all components incorporated in them including the facade covering, framing and insulation. (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*.	Further Detail is required within the Construction Documentation

	(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. (m)Lead. (n)Bronze. (o)Brass. (6)The following materials may be used wherever a *non-combustible* material is *required*: (a)Plasterboard. (b)Perforated gypsum lath with a normal paper finish. (c)Fibrous-plaster sheet. (d)Fibre-reinforced cement sheeting. (e)Pre-finished metal sheeting having a *combustible* surface finish not exceeding 1 mm thickness and where the *Spread-of-Flame Index* of the product is not greater than 0. (f)*Sarking-type materials* that do not exceed 1 mm in thickness and have a *Flammability Index* not greater than 5. (g)Bonded laminated materials where— (i)each lamina, including any core, is *non-combustible*; 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 *Spread-of-Flame Index* and the *Smoke-Developed Index* 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.	
C2D11	**Fire hazard properties** (1)The *fire hazard properties* of the following internal linings, materials and assemblies within a Class 2	Further Detail is required within the Construction Documentation

	to 9 building must comply with Specification 7: (a)Floor linings and floor coverings. (b)Wall linings and ceiling linings. (c)Air-handling ductwork. (d)Lift cars. (e)In Class 9b buildings used as a theatre, public hall or the like— (i)fixed seating in the audience area 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 m2 in area; and (v)the area of the roof lights per 70 m2 of roof surface is not more than 14 m2; or (j)a face plate or neck adaptor of supply and return air outlets of an air handling system; or (k)a face plate or diffuser plate of light fitting and emergency *exit* signs and associated electrical wiring and electrical components; or (l)a joinery unit, cupboard, shelving, or the like; or (m)an attached non-building fixture and fitting such as— (i)a curtain, blind, or similar decor, other than a proscenium curtain *required* by Specification 32; and (ii)a whiteboard, *window* treatment or the like; or (n)timber treads, risers, landings and associated supporting framework installed in accordance with D3D30 where the *Spread-of-Flame Index* and the *Smoke-Developed Index* of the timber does not exceed 9 and 8 respectively; or any other material that does not significantly increase the hazards of fire.	
C2D13	**Fire-protected timber: Concession** *Fire-protected timber* may be used wherever an element is *required* to be *non-combustible*, provided— (a)the building is— (i)a separate building; or (ii)a part of a building— (A)which only occupies part of a *storey*, and is separated from the remaining part by a *fire wall*; or (B)which is located above or below a part not containing *fire-protected timber* and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a *fire wall* for the lower *storey*; and (b)the building has an *effective height* of not more than 25 m; and (c)the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification 17; and (d)any insulation installed in the cavity of the timber building element to have an FRL is *non-combustible*; and cavity barriers are provided in accordance with Specification 9.	Further Detail is required within the Construction Documentation
C2D14	**Ancillary elements** An *ancillary element* must not be fixed, installed, attached to or supported by the concealed internal	**Attachments to building –**

	parts or external face of an *external wall* that is *required* to be *non-combustible* unless it is one of the following: (a)An *ancillary element* that is *non-combustible*. (b)A gutter, downpipe or other plumbing fixture or fitting. (c)A flashing. (d)A grate, grille or similar cover not more than 2 m2 in area associated with a building service. (e)An electrical switch, socket-outlet, cover plate or the like. (f)A light fitting. (g)A *required* sign. (h)A sign other than one provided under (a) or (g) that— (i)achieves a *group number* of 1 or 2; and (ii)does not extend beyond one *storey*; and (iii)does not extend beyond one *fire compartment*; and (iv)is separated vertically from other signs permitted under (h) by at least 2 *storeys*. (i)An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that— (i)meets the relevant requirements of Table S7C7 as for an internal element; and (ii)serves a *storey*— (A)at ground level; or (B)immediately above a *storey* at ground level; and (iii)does not serve an *exit*, where it would render the *exit* unusable in a fire. (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).	**Requirements for non-combustibility** All attachments to the external walls of the building are required to be non combustible. It is noted that a feature cladding is proposed to be timber which represents a non compliance.
C2D15	**Fixing of bonded laminated cladding panels** (1)In a building *required* 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	Further Detail is required within the Construction Documentation

	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.	
C3D7	**Vertical separation of openings in external walls** (1)If in a building of Type A construction, any part of a *window* or other opening in an *external wall* is above another opening in the *storey* next below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by— (a)a spandrel which— (i)is not less than 900 mm in height; and (ii)extends not less than 600 mm above the upper surface of the intervening floor; and (iii)is of *non-combustible* material having an FRL of not less than 60/60/60; or (b)part of a *curtain wall* or *panel wall* that complies with (a); or *combustible* material that will withstand thermal expansion and structural movement of the walling without the loss of seal against fire and smoke; or construction that complies with (a) behind a *curtain wall* or *panel wall* and has any gaps packed with a (c)*non-* (d)a slab or other horizontal construction that— (i)projects outwards from the external face of the wall not less than 1100 mm; and (ii)extends along the wall not less than 450 mm beyond the openings concerned; and (iii)is *non-combustible* and has an FRL of not less than 60/60/60. (2)The requirements of (1) do not apply to— (a)an *open-deck carpark*; or (b)an *open spectator stand*; or (c)a building which has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17 installed throughout; or (d)openings within the same stairway; or	Vertical Protection of Openings Vertical Protection of Openings is not currently possible to the following windows (due to sill height):- - West side window W209 - West side window W211

	(e)openings in *external walls* where the floor separating the *storeys* does not require an FRL with respect to *integrity* and *insulation*. (3)For the purposes of C3D7, *window* or other opening means that part of the *external wall* of a building that does not have an FRL of 60/60/60 or greater.	
C3D8	**Separation by fire walls** (1)Construction — A fire wall must be constructed in accordance with the following: (a)The fire wall has the relevant FRL prescribed by Specification 5 for each of the adjoining parts, and if these are different, the greater FRL, except where S5C18(c), S5C21(3) and S5C25(1) permit a lower FRL on the carpark side. (b)Any openings in a fire wall must not reduce the FRL required by Specification 5 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C4. (c)Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire-resisting performance of the fire wall is maintained. (2)Separation of buildings — A part of a building separated from the remainder of the building by a fire wall may be treated as a separate building for the purposes of the Deemed-to-Satisfy Provisions of Sections C, D and E if it is constructed in accordance with (1) and the following: (a)The fire wall extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building. (b)The fire wall is carried through to the underside of the roof covering. (c)Where the roof of one of the adjoining parts is lower than the roof of the other part, the fire wall extends to the underside of— (i)the covering of the higher roof, or not less than 6 m above the covering of the lower roof; or (ii)the lower roof if it has an FRL not less than that of the fire wall and no openings closer than 3 m to any wall above the lower roof; or (iii)the lower roof if its covering is non-combustible and the lower part has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. (3)Separation of fire compartments — A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in	Further Detail is required within the Construction Documentation

	accordance with (a) and the fire wall extends to the underside of— (a)a floor having an FRL required for a fire wall; or the roof covering.	
C3D9	**Separation of classifications in the same storey** (1)If a building has parts of different classifications located alongside one another in the same storey— (a)each building element in that storey must have the higher FRL prescribed in Specification 5 for that element for the classifications concerned; or (b)the parts must be separated in that storey by a fire wall. (2)A fire wall required by (1)(b) must have the FRL prescribed in accordance with Specification 5 as applicable for that element for the Type of construction and the classifications concerned. (3)For the purposes of (2), the FRL in Specification 5 must be either— (a)the higher FRL prescribed in Table S5C11d or S5C21d; or (b)the FRL prescribed in Table S5C24c. (4)For the purposes of (1), where one part is a carpark complying with S5C19, S5C22 or S5C25, the parts may be separated by a fire wall complying with S5C19, S5C22 or as appropriate	Further Detail is required within the Construction Documentation
C3D10	**Separation of classifications in different storeys** If parts of different classification are situated one above the other in adjoining *storeys* they must be separated as follows: (a)Type A construction — The floor between the adjoining parts must have an FRL of not less than that prescribed in Specification 5 for the classification of the lower *storey*. (b)Type B or C construction — If one of the adjoining parts is of Class 2, 3 or 4, the floor separating the part from the *storey* below must— (i)be a floor/ceiling system incorporating a ceiling which has a *resistance to the incipient spread of fire* to the space above itself of not less than 60 minutes; or (ii)have an FRL of at least 30/30/30; or (iii)have a *fire-protective covering* on the underside of the floor, including beams incorporated in it, if the floor is *combustible* or of metal.	Further Detail is required within the Construction Documentation
C3D11	**Separation of lift shafts** (1)Any lift connecting more than 2 *storeys*, or more than 3 *storeys* if the building is sprinklered, (other than lifts which are wholly within an *atrium*) must be separated from the remainder of the building by	Further Detail is required within the Construction Documentation

	enclosure in a *shaft* in which— in a building *required* to be of Type A construction — the walls have the relevant FRL prescribed by (a)Specification (b)in a building *required* to be of Type B construction — the walls— (i)if *loadbearing*, have the relevant FRL prescribed by Tables S5C21a to S5C21f of Specification 5; or (ii)if non-*loadbearing*, be of *non-combustible* construction. (2)Any lift in a *patient care area* in a Class 9a *health-care building* or a *resident use area* in Class 9c building must be separated from the remainder of the building by a *shaft* having an FRL of not less than— (a)in a building of Type A or B construction — 120/120/120; or (b)in a building of Type C construction — 60/60/60. (3)An emergency lift must be contained within a *fire-resisting shaft* having an FRL of not less than 120/120/120. (4)Openings for lift landing doors and services must be protected in accordance with the *Deemed-to-Satisfy Provisions* of Part C4.	
C3D13	**Separation of equipment** [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)*boilers*; or (e)a *battery system* 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 control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification 21; or (b)stair pressurising equipment installed in compliance with the relevant provisions of AS 1668.1; or (c)a lift installation without a machine-room; or (d)equipment otherwise adequately separated from the remainder of the building. (3)Separation of on-site fire pumps must comply with the requirements of AS 2419.1.	Further Detail is required within the Construction Documentation

	(4)Separating construction must have— (a)except as provided by (b)— (i)an FRL as *required* by Specification 5, but not less than 120/120/120; and (ii)any doorway protected with a *self-closing* fire door having an FRL of not less than –/120/30; or when separating a lift *shaft* and lift motor room, an FRL not less than 120/–/–.	
C3D14	**Electricity supply system** (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 (b)have any doorway in that construction protected with a *self-closing* fire door having an FRL of not less than –/120/30. (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 (b)have any doorway in that construction protected with a *self-closing* fire door having an FRL of not less than –/120/30. (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 (ii)otherwise — WS52W; or (b)be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120. (4)The requirements of (3) only apply to electrical conductors located within a building that supply— (a)a substation located within the building which supplies a main switchboard covered by (2); or (b)a main switchboard covered by (2). (5)Where emergency equipment is *required* in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be constructed so that emergency 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. (6)For the purposes of (5), emergency equipment includes but is not limited to the following: (a)Fire hydrant booster pumps. (b)Pumps for *automatic* sprinkler systems, water spray, chemical fluid suppression systems or the like. (c)Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building.	Further Detail is required within the Construction Documentation

	(d)Air handling systems designed to exhaust and control the spread of fire and smoke. (e)Emergency lifts. (f)Control and indicating equipment. Emergency warning and intercom systems.	
C4D6	**Doorways in fire walls** (1)The aggregate width of openings for doorways in a fire wall, which are not part of a horizontal exit, must not exceed ½ of the length of the fire wall, and each doorway must be protected by— (a)2 fire doors or fire shutters, one on each side of the doorway, each of which has an FRL of not less than ½ that required by Specification 5 for the fire wall except that each door or shutter must have an insulation level of at least 30; or (b)a fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (a); or (c)a single fire door or fire shutter which has an FRL of not less than that required by Specification 5 for the fire wall except that each door or shutter must have an insulation level of at least 30. (2)A fire door or fire shutter required by (1)(a), (b) or (c) must be self-closing, or automatic closing in accordance with (3) and (4). (3)The automatic closing operation required by (2) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located on each side of the fire wall not more than 1.5 m horizontal distance from the opening. (4)Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic closing operation.	Further Detail is required within the Construction Documentation
C4D11	**Openings in fire-isolated lift shafts** (1)Doorways — If a lift *shaft* is *required* to be fire-isolated, an entrance doorway to that *shaft* must be protected by –/60/– fire doors that— (a)comply with AS 1735.11; and	Further Detail is required within the Construction Documentation

	(b)are set to remain closed except when discharging or receiving passengers, goods or vehicles. (2)Lift indicator panels — A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift *shaft* must be backed by construction having an FRL of not less than –/60/60 if it exceeds 35 000 mm2 in area.	
C4D12	**Bounding construction: Class 2 and 3 buildings and Class 4 parts** (1)A doorway in a Class 2 or 3 building must be protected if it provides access from a *sole-occupancy unit* to— (a)a *public corridor*, public lobby, or the like; or (b)a room not within a *sole-occupancy unit*; or (c)the landing of an internal non *fire-isolated stairway* that serves as a *required exit*; or (d)another *sole-occupancy unit*. (2)A doorway in a Class 2 or 3 building must be protected if it provides access from a room not within a *sole-occupancy unit* to— (a)a *public corridor*, public lobby, or the like; or (b)the landing of an internal non *fire-isolated stairway* that serves as a *required exit*. (3)A doorway in a Class 4 part of a building must be protected if it provides access to any other internal part of the building. *NSW C4D12(4)* (4)Except as provided in (5), protection for a doorway must be at least— (a)in a building of Type A construction — a *self-closing* –/60/30 fire door; and (b)in a building of Type B or C construction — a *self-closing*, tight fitting, solid core door, not less than 35 mm thick. (5)In a Class 3 building used as a *residential care building* protected with a sprinkler system complying with Specification 17, protection for a doorway must be at least— (a)a tight fitting, solid core door not less than 35 mm thick if the building is divided into *floor areas* not exceeding 500 m2 with smoke proof walls complying with S11C2; or (b)a tight fitting, solid core door not less than 35 mm thick fitted with a *self-closing* device, a delayed closing device or an *automatic* closing device. (6)Other openings in *internal walls* which are *required* to have an FRL with respect to *integrity* and *insulation* must not reduce the *fire-resisting* performance of the wall.	Further Detail is required within the Construction Documentation

	(7)A door *required* by (4) or (5) may be *automatic*-closing in accordance with the following: (a)The *automatic*-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located not more than 1.5 m horizontal distance from the approach side of the doorway. (b)Where any other *required* suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system must also initiate the *automatic*-closing operation. (8)The requirements of (9) apply in a Class 2 or 3 building where a path of travel to an *exit*— (a)does not provide a person seeking egress with a choice of travel in different directions to alternative *exits*; and (b)is along an open balcony, landing or the like; and (c)passes an *external wall* of— (i)another *sole-occupancy unit*; or (ii)a room not within a *sole-occupancy unit*. (9)The *external wall* mentioned in (8)(c) must— (a)be constructed of concrete or masonry, or be lined internally with a *fire-protective covering*; and (b)have any doorway fitted with a *self-closing*, tight-fitting solid core door not less than 35 mm thick; and (c)have any *windows* or other openings— protected internally in accordance with C4D5	
C4D13	**Openings in floors and ceilings for services** (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	Further Detail is required within the Construction Documentation

	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.	

5.3 SECTION D – ACCESS AND EGRESS

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
D2D5	**Exit travel distances** [2019: D1.4] (1)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 (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. (2)Class 4 parts of a building — The entrance doorway to any Class 4 part of a building must be not more than 6 m from an exit or a point from which travel in different directions to 2 exits is available. (3)Class 5, 6, 7, 8 or 9 buildings — Subject to (4), (5) and (6)— (a)no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m	Egress Travel Distance The garage Door is excluded as an exit door by Clause D3D25, in this regard the egress travel distance form the worst affected part of the garage to the Exit door (swing door at LGF to Porch) exceeds the maximum 20m.
D2D7	**Height of exits, paths of travel to exits and doorways** [2019: D1.6(a)] In a required exit or path of travel to an exit 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.	Further Detail is required within the Construction Documentation
D2D8	**Width of exits and paths of travel to exits** [2019: D1.6(b), (c), (d) and (e)] (1)The unobstructed width of each required exit or path of travel to an exit, except for ladders provided in accordance with D2D21, D3D23 or I3D5, and doorways, must be not less than 1m	Width of Egress Egress width in the following locations is less than the required minimum 1000mm:- - The pathway to the street - The Internal egress stair

		the stair must be compliant with AS 1428.1 – 2021 – in this regard the stair must be widened to allow for hand rails to each side and a clear width between hand rails of 1000mm We suggest a wall to wall width of 1.2m minimum
D2D10	**Exit width not to diminish in direction of travel** [2019: D1.6(g)] The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).	Further Detail is required within the Construction Documentation
D2D22	**Access to lift pits** Access to lift pits must— (a)where the pit depth is not more than 3 m, be through the lowest landing doors; or (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). (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. (iii)Access to the doorway must be by a stairway complying with AS 1657. (iv)In lieu of D3D26, doors fitted to the doorway must be— (A)of the horizontal sliding or outwards opening hinged type; and (B)self-closing and self-locking from the outside; and (C)marked on the landing side with the letters not less than 35 mm high:	Further Detail is required within the Construction Documentation

	DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES	
D3D8	**Installations in exits and paths of travel** (1)Access to service *shafts* and services other than to fire-fighting or detection equipment as permitted in the *Deemed-to-Satisfy Provisions* of Section E, must not be provided from a *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp*. (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 *required exit* or any corridor, hallway, lobby or the like leading to a *required exit*. (3)Gas or other fuel services must not be installed in a *required exit*. (4)Except for in a fire-isolated *exit* specified in (1), services or equipment enclosed in accordance with (5) may be installed in a *required exit*, or in any corridor, hallway, lobby or the like leading to a *required exit*, where that service or equipment comprises— (a)electricity meters, distribution boards or ducts; or (b)central telecommunications distribution boards or equipment; or (c)electrical motors or other motors serving equipment in the building. (5)An enclosure for the purposes of (4) must be suitably sealed against smoke spreading from the enclosure and be— (a)*non-combustible* construction; or (b)a *fire-protective covering*. (6)Electrical wiring may be installed in a fire-isolated *exit* if the wiring is associated with— (a)a lighting, detection, or pressurisation system serving the *exit*; or (b)a security, surveillance or management system serving the *exit*; or (c)an intercommunication system or an audible or visual alarm system in accordance with D3D27; or the monitoring of hydrant or sprinkler isolating valves.	Further Detail is required within the Construction Documentation
D3D9	**Enclosure of space under stairs and ramps** (1)Fire-isolated stairways and ramps — If the space below a *required fire-isolated stairway* or	For reference

	fire-isolated ramp is within the fire-isolated *shaft*, it must not be enclosed to form a cupboard or similar enclosed space. (2)Non fire-isolated stairways and ramps — The space below a *required* non *fire-isolated stairway* (including an external stairway) or non *fire-isolated ramp* must not be enclosed to form a cupboard or other enclosed space unless— (a)the enclosing walls and ceilings have an FRL of not less than 60/60/60; and any access doorway to the enclosed space is fitted with a *self-closing* –/60/30 fire door	
D3D14	**Goings and risers** [2019: D2.13] (1)A stairway must have— (a)not more than 18 and not less than 2 risers in each flight; and (b)going (G), riser (R) and quantity (2R + G) in accordance with Table D3D14, except as permitted by (2) and (3); and (c)constant goings and risers throughout each flight, 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 (ii)the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and (d)risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and (e)treads which have— (i)a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or (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 (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 storeys	Further Detail is required within the Construction Documentation

D3D15

Landings

[2019: D2.14]

In a stairway— (a)landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing 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 landing; and

(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 flight below; and a strip at the edge of the landing with a slip-resistance classification not less than that listed in (B)Table

(b)in a Class 9a building— (i)the area of any landing must be sufficient to move a stretcher, 2 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 *landing* surface	P3 or R10	P4 or R11
Nosing or *landing* edge strip	P3	P4

Further Detail is required within the Construction Documentation

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

Further Detail is required within the Construction Documentation

	(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.	
D3D17	**Barriers to prevent falls** (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, *mezzanine*, 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 *stage*, 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 *required* by (1) must be constructed in accordance with D3D18, D3D19, D3D20 and, if a wire barrier is used, D3D21.	Further Detail is required within the Construction Documentation
D3D18	**Height of barriers** (1)The height of a barrier *required* by D3D17 must be not less than the following: (a)For stairways or ramps with a gradient of 1:20 or steeper — 865 mm.	Further Detail is required within the Construction Documentation

	(b)For *landings* to a stair or ramp where the barrier is provided along the inside edge of the *landing* and does not exceed 500 mm in length — 865 mm. (c)In front of fixed seating on a *mezzanine* 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 the height must be measured above the nosing line of the stair treads; and (b)a transition zone may be incorporated where the barrier height changes from 865 mm on a stair *flight* or ramp to 1 m at a *landing* or floor.	
D3D19	**Openings in barriers** (1)Except where allowed by (2), openings in a *required* barrier must not allow a 125 mm sphere to pass through. (2)In a *fire-isolated stairway*, *fire-isolated ramp* or other area used primarily for emergency purposes, openings in a *required* barrier— (a)must not allow a 300 mm sphere to pass through; or (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 *landing*, balcony or the like; and (ii)the opening between rails must not be more than 460 mm. (3)In Class 7 (other than *carparks*) and Class 8 buildings, openings in a *required* barrier— (a)must not allow a 300 mm sphere to pass through; or (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 *landing*, balcony or the like; and (ii)the opening between the rails must not be more than 460 mm.	Further Detail is required within the Construction Documentation

	(4)The requirements of (2) do not apply to external stairways, external ramps, or *fire-isolated stairways* or *fire-isolated ramps* serving Class 9b *early childhood centres*. (5)For a barrier provided under (1), the maximum 125 mm barrier opening for a stairway, such as a non *fire-isolated stairway*, is measured above the nosing line of the stair treads. (6)Where a *required* barrier is fixed to the vertical face forming an edge of a *landing*, balcony, deck, stairway or the like, the opening formed between the barrier and the face must not exceed 40 mm. (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.	
D3D20	**Barrier climbability** [2019: Table D2.16a] (1)A barrier *required* 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)*fire-isolated stairways*, *fire-isolated ramps* and other areas used primarily for emergency purposes, other than— (i)external stairways; and (ii)external ramps; and Class 7 (other than *carparks*) and Class 8 buildings.	Further Detail is required within the Construction Documentation
D3D22	**Handrails** (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 *flight*; 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 *school* or a building that contains an *early childhood centre*— (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 *school*; and	Further Detail is required within the Construction Documentation

	(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 *early childhood centre*; and (d)in any other case, be fixed at a height of not less than 865 mm; and (e)be continuous between stair *flight* landings and have no obstruction on or above them that will tend to break a hand-hold; and (f)in a *required exit* serving an area *required* to be *accessible*, be designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail *required* by (1)(c)(ii). (2)The height *required* by (1)(c) and (d) is measured above the nosings of stair treads and the floor surface of the ramp, landing or the like. (3)Handrails— (a)in a Class 9a *health-care building* 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 (ii)where practicable, continuous for their full length; and (b)in a Class 9c *aged care building* 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 (ii)where practicable, continuous for their full length. (4)Handrails *required* to assist people with a disability must be provided in accordance with D4D4. (5)Handrails to a stairway or ramp within a *sole-occupancy unit* 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 *flight* or ramp; and (b)be located along the full length of the *flight* or ramp, except in the case where a handrail is associated with a barrier, the handrail may terminate where the barrier terminates; and (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	

	(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. (6)The requirements of (5) do not apply to— (a)handrails referred to in D3D23; or (b)a stairway or ramp providing a change in elevation of less than 1 m; or (c)a landing; or a winder where a newel post is installed to provide a handhold.	
D3D24	**D3D24 Doorways and doors** A doorway serving as a required exit or forming part of a required exit, or a doorway in a patient care area of a Class 9a health-care building— (a)must not be fitted with a revolving door; and (b)must not be fitted with a roller shutter or tilt-up door unless— (i)it serves a Class 6, 7 or 8 building or part with a floor area not more than 200 m2; and (ii)the doorway is the only required exit from the building or part; and (iii)it is held in the open position while the building or part is lawfully occupied; and (c)must not be fitted with a sliding door unless— (i)it leads directly to a road or open space; and (ii)the door is able to be opened manually under a force of not more than 110 N; and (d)if fitted with a door which is power-operated— (i)it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and (ii)if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.	For reference
D3D25	**Swinging doors** (1)A swinging door in a required exit or forming part of a required exit— (a)must not encroach— (i)at any part of its swing by more than 500 mm on the required width (including	The Lower Ground Floor Common door (to the Porch) is required to open outward in the direction of egress

	any landings) of a required stairway, ramp or passageway if it is likely to impede the path of travel of the people already using the exit; and (ii)when fully open, by more than 100 mm on the required width of the required exit; and (b)must swing in the direction of egress unless— (i)it serves a building or part with a floor area not more than 200 m2, it is the only required exit from the building or part and it is fitted with a device for holding it in the open position; or (ii)it serves a sanitary compartment or airlock (in which case it may swing in either direction); and (c)must not otherwise impede the path or direction of egress. (2)The measurement of encroachment referred to in (1)(a) in each case is to include door handles or other furniture or attachments to the door.	Further Detail is required within the Construction Documentation
D3D26	**Operation of latch** (1)A door in a *required exit*, forming part of a *required exit* or in the path of travel to a *required exit* must be readily openable without a key from the side that faces a person seeking 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	Further Detail is required within the Construction Documentation

	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 m2 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.	
D3D28	**Signs on doors** (1)A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to, in accordance with (2)— (a)a *required— occupancy unit* in a Class 2 or 3 building or Class 4 part of a building; and fire door providing direct access to a fire-isolated *exit*, except a door providing direct egress from a (i)*sole-* (ii)smoke door; and (b)any door which is a— (i)fire door forming part of a *horizontal exit*; and (ii)smoke door that swings in both directions; and (iii)door leading from a fire isolated *exit* to a road or *open space*. (2)A sign *required* by (1)(a) must be fixed on the side of the door that faces a person seeking egress and, if the door is fitted with a device for holding it in the open position, either a sign must be fixed on the wall adjacent to the doorway, or signs must be fixed to both sides of the door. (3)A sign *required* by (1)(b) must be fixed on each side of the door.	Further Detail is required within the Construction Documentation

	(4)A sign referred to in (1) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state the following: (a)For an *automatic* door held open by an *automatic* hold-open device— **FIRE SAFETY DOOR — DO NOT OBSTRUCT** (a)For a *self-closing* door— **FIRE SAFETY DOOR** **DO NOT OBSTRUCT** **DO NOT KEEP OPEN** (a)For a door discharging from a fire-isolated *exit*— **FIRE SAFETY DOOR — DO NOT OBSTRUCT**	
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	Further Detail is required within the Construction Documentation

	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 stairways and external ramps; and (b)Class 7 (other than *carparks*) and Class 8 buildings and parts of buildings containing those classes,	
D4D2	**General building access requirements** (1)Buildings and parts of buildings must be *accessible* as *required* 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, 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	Further Detail is required within the Construction Documentation

	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 (ii)a change room facility; and (iii)a public shelter or the like. (b)For Class 10b *swimming pools*, to and into *swimming pools* with a total perimeter greater than 40 m, associated with a Class 1b, 2, 3, 5, 6, 7, 8 or 9 building that is *required* to be *accessible*, but not *swimming pools* for the exclusive use of occupants of a Class 1b building or a *sole-occupancy unit* in a Class 2 or Class 3 building.	

D4D3	**Access to buildings** (1)An *accessway* must be provided to a building *required* to be *accessible*— (a)from the main points of a pedestrian entry at the allotment boundary; and (b)from another *accessible* building connected by a pedestrian link; and from any *required accessible* carparking space on the allotment. (2)In a building *required* to be *accessible*, an *accessway* must be provided through the principal pedestrian entrance, and— (a)through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and (b)in a building with a total *floor area* more than 500 m2, a pedestrian entrance which is not *accessible* must not be located more than 50 m from an *accessible* pedestrian entrance, except for pedestrian entrances serving only areas exempted by D4D5. (3)Where a pedestrian entrance *required* to be *accessible* has multiple doorways— (a)if the pedestrian entrance consists of not more than 3 doorways — not less than 1 of those doorways must be *accessible*; and (b)if a pedestrian entrance consists of more than 3 doorways — not less than 50% of those doorways must be *accessible*. (4)For the purposes of (3)— (a)an *accessible* 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). (5)Where a doorway on an *accessway* has multiple leaves, (except an automatic opening door) one of those leaves must have a clear opening width of not less than 850 mm in accordance with AS 1428.1.	Further Detail is required within the Construction Documentation
D4D4	**Parts of buildings to be accessible** In a building *required* to be *accessible*— (a)every ramp and stairway, except for ramps and stairways in areas exempted by D4D5, must comply with— (i)for a ramp, except a *fire-*	For reference

	isolated ramp, clause 10 of AS 1428.1; and (ii)for a stairway, except a *fire-isolated stairway*, clause 11 of AS 1428.1; and (iii)for a *fire-isolated stairway*, clause 11.1(f) and (g) of AS 1428.1; and (b)every passenger lift must comply with E3D7; and (c)*accessways* must have— (i)passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an *accessway* where a direct line of sight is not available; and (ii)turning spaces complying with AS 1428.1— within 2 m of the end of *accessways* where it is not possible to continue travelling along the *accessway*; and (B)at maximum 20 m intervals along the *accessway*; and (d)an intersection of *accessways* 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 *storey* or level other than the entrance *storey* in a Class 5, 6, 7b or 8 building— (i)containing not more than 3 *storeys*; and (ii)with a *floor area* for each *storey*, excluding the entrance *storey*, of not more than 200 m2; 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 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.	
D4D5	**Exemptions** The following areas are not *required* to be *accessible*: (a)An area where access would be inappropriate because of the particular purpose for which the area is used.	For reference

	(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).	
D4D7	**Signage** (1)In a building *required* to be *accessible*— (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— *occupancy unit* in a Class 3 or Class 9c building; and sanitary facility, except a sanitary facility associated with a bedroom in 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	Further Detail is required within the Construction Documentation

	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 an *accessible* adult change facility.	
D4D9	**Tactile indicators** (1)For a building *required* to be *accessible*, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching— (a)a stairway, other than a *fire-isolated stairway*; and (b)an escalator; and a passenger conveyor or moving walk; and (d)a ramp other than a *fire-isolated ramp*, step ramp, kerb ramp or *swimming pool* ramp; and (e)in the absence of a suitable barrier— (i)an overhead obstruction less than 2 m above floor level, other than a doorway; and (ii)an *accessway* 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 *required* 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 *residential aged care building*, Class 3 accommodation for the aged, Class 9a *health-care building* or a Class 9c *aged care building* need not comply with (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.	Further Detail is required within the Construction Documentation
D4D13	**Glazing on an accessway**	Further Detail is required within the

	On an *accessway*, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.	Construction Documentation

5.4 SECTION E – SERVICES AND EQUIPMENT

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
E1D2	**Fire hydrants** (1)A fire hydrant system must be provided to serve a building— (a)having a total *floor area* greater than 500 m2; and (b)where a *fire brigade station* is— (i)no more than 50 km from the building as measured along roads; and (ii)equipped with equipment capable of utilising a fire hydrant. (2)The fire hydrant system must be installed in accordance with AS 2419.1. (3)Notwithstanding (2), a Class 8 *electricity network substation* need not comply with clause 4.2 of AS 2419.1 if— (a)it cannot be connected to a town main supply; and (b)one hour water storage is provided for fire-fighting. (4)Where internal fire hydrants are provided, they must serve only the *storey* on which they are located except that a *sole-occupancy unit*— (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 *sole-occupancy unit*; or (b)of not more than 2 *storeys* 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 *sole-occupancy unit* provided the fire hydrant can provide coverage to the whole of the *sole-occupancy unit*.	Further Detail is required within the Construction Documentation
E1D14	**Portable fire extinguishers** [2019: E1.6 and Table E1.6] (1)Portable fire extinguishers must be— (a)provided as listed in (3) and (4); and (b)for a Class 2, 3 or 5 building or Class 4 part of a building, provided— (i)to serve the whole Class 2, 3 or 5 building or Class 4 part of a building where one or more internal fire hydrants are installed; or (ii)where internal fire hydrants are not installed, to serve any *fire compartment* with a *floor area* greater than 500 m2, and for the purposes of this clause, a *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part of a building is considered to be a *fire compartment*; and	Further Detail is required within the Construction Documentation

	(c)subject to (2), selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444. (2)Portable fire extinguishers provided in a Class 2 or 3 building or Class 4 part of a building must be— (a)an ABE type fire extinguisher; and (b)a minimum size of 2.5 kg; and (c)distributed outside a *sole-occupancy unit*— (i)to serve only the *storey* at which they are located; and (ii)so that the travel distance from the entrance doorway of any *sole-occupancy unit* to the nearest fire extinguisher is not more than 10 m. (3)In Class 2 to 9 buildings (except within *sole-occupancy units* of a Class 9c building), portable fire extinguishers must be provided as follows: (a)To cover Class AE or E fire risks associated with emergency services switchboards. (b)To cover Class F fire risks involving cooking oils and fats in kitchens. (c)To cover Class B fire risks in locations where flammable liquids in excess of 50 litres are stored or used (not including that held in fuel tanks of vehicles). (d)To cover Class A fire risks in normally occupied *fire compartments* less than 500 m2 not provided with fire hose reels (excluding *open-deck carparks*). (e)To cover Class A fire risks in classrooms and associated corridors in primary and secondary schools not provided with fire hose reels. (f)To cover Class A fire risks associated with a Class 2, 3 or 5 building or Class 4 part of a building. (4)In addition to the requirements of (3), portable fire extinguishers must be provided to cover Class A and E fire risks in the following occupancies in buildings, or parts of a building: (a)A Class 9a *health-care building*, including a Class 9a building used as a *residential care building*. (b)Class 3 parts of detention and correctional occupancies.	

	(c)Class 3 accommodation for children, aged persons and people with disabilities, including a Class 3 building used as a *residential care building*. (d)A Class 9c building. (5)For the purposes of (3) and (4): (a)Fire risks are defined in accordance with AS 2444. (b)An emergency services switchboard is one which sustains emergency equipment operating in the emergency mode. (c)A Class E fire extinguisher need only be located at each nurses' station, supervisors' station or the like. (d)Additional extinguishers may be required to cover fire risks in relation to special hazards provided for in E1D17. *units*, however portable fire extinguishers are not required to be located within a *sole-occupancy unit* unless the *sole-occupancy unit* has a *floor area* greater than 500 m2. The fire risks in a Class 2 or 3 building or Class 4 part of a building must include risks within any (e)*sole-occupancy*	
E1D13	**E1D13 Where sprinklers are required: occupancies of excessive hazard** [2019: Table E1.5 (Note 4)] (1)In occupancies of excessive hazard, sprinklers are required in fire compartments where either of the following apply: (a)A floor area of more than 2 000 m2. (b)A volume of more than 12 000 m3. (2)For the purposes of (1), occupancies of excessive fire hazard comprise buildings which contain— (a)hazardous processes or storage including the following: (i)Aircraft hangars. (ii)Cane furnishing manufacture, processing and storage. (iii)Fire-lighter and fireworks manufacture and warehousing. (iv)Foam plastic and foam plastic goods manufacture, processing and warehousing e.g. furniture factory. (v)Hydrocarbon based sheet product, manufacture, processing and warehousing e.g. vinyl floor coverings. (vi)Woodwool and other flammable loose fibrous material manufacture.	EV Charging Provision within the MSB is required for EV Charging In addition current NSW Fire and Rescue advice requires that preparation for future EV Charging is required EV Charging is identified as an Excessive Hazard – requiring sprinkler protection The method of future protecting the building requires qualification

	(b)combustible goods with an aggregate volume exceeding 1000 m3 and stored to a height greater than 4 m including the following: (i)Aerosol packs with flammable contents. (ii)Carpets and clothing. (iii)Electrical appliances. (iv)Combustible compressed fibreboards (low and high density) and plywoods. (v)Combustible cartons, irrespective of content. (vi)Esparto and other fibrous combustible material. (vii)Furniture including timber, cane and composite, where foamed rubber or plastics are incorporated. (viii)Paper storage (all forms of new or waste) e.g. bales, sheet, horizontal or vertical rolls, waxed coated or processed. (ix)Textiles raw and finished, e.g. rolled cloth, clothing and manchester. (x)Timber storage including sheets, planks, boards, joists and cut sizes. (xi)Vinyl, plastic, foamed plastic, rubber and other combustible sheets, offcuts and random pieces and rolled material storage, e.g. carpet, tar paper, linoleum, wood veneer and foam mattresses. All materials having wrappings or preformed containers of foamed plastics.	
E1D16	**Fire precautions during construction** 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 *storey* adjacent to each *required exit* or temporary stairway or *exit*; and (b)after the building has reached an *effective height* of 12 m— (i)the *required* fire hydrants and fire hose reels must be operational in at least every *storey* that is covered by the roof or the floor structure above, except the 2 uppermost *storeys*; and any *required* booster connections must be installed.	Further Detail is required within the Construction Documentation
E2D3	**General requirements** (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 *fire compartment* to another *fire compartment* or operates in a manner that may unduly contribute to the spread of	Further Detail is required within the Construction Documentation

	smoke from one *fire compartment* to another *fire compartment* 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— *compartments* served; and incorporates smoke dampers where the air-handling ducts penetrate any elements separating the (i)*fire* (ii)is arranged such that the air-handling system is shut down and the smoke dampers are activated to close *automatically* by smoke detectors complying with clause 7.5 of AS 1670.1. (2)For the purposes of (1), each *sole-occupancy unit* in a Class 2 or 3 building is treated as a separate *fire compartment*. (3)Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one *fire compartment* (other than a *carpark* 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 *automatic* air pressurisation for fire-isolated *exits*.	
E2D8	**Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building** 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 *effective height*— (a)it must be provided with an *automatic* smoke detection and alarm system complying with Specification 20; and (b)where a *required fire-isolated stairway* serving the Class 2 or 3 parts also serves one or more *storeys* of Class 5, 6, 7 (other than an *open-deck carpark*), 8 or 9b parts— (i)the *fire-isolated stairway*, including any associated *fire-isolated passageway* or *fire-isolated ramp*, must be provided with an *automatic* air pressurisation system for fire-isolated *exits* in accordance with AS 1668.1; or (ii)the Class 5, 6, 7 (other than an *open-deck carpark*), 8 and 9b parts must be provided with— (A)an *automatic* smoke detection and alarm system complying with Specification 20; or	Further Detail is required within the Construction Documentation

	(B)a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17; and (c)where a *required fire-isolated stairway* serving the Class 4 part also serves one or more *storeys* of Class 5, 6, 7 (other than an *open-deck carpark*), 8 or 9b parts— (i)a system complying with (b)(i) or (b)(ii) must be installed; or (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 *fire-isolated stairway* (set back horizontally from the doorway by a distance of not more than 1.5 m) to initiate a building occupant warning system for the Class 4 part.	
E2D9	**Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings** (1)A building not more than 25 m in effective height that— (a)is a Class 5 or 9b school building or part of a building having a rise in storeys of more than 3; or (b)is Class 6, 7b, 8 or 9b building (other than a school) or part of a building having a rise in storeys of more than 2; or (c)has a rise in storeys of more than 2, and contains— (i)a Class 5 or 9b school part; and (ii)a Class 6, 7b, 8 or 9b (other than a school) part, must meet the requirements of (2). (2)A building referred to in (1) must be provided with— (a)in each required fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp, an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1; or (b)a zone pressurisation system between vertically separated fire compartments in accordance with AS 1668.1, if the building has more than one fire compartment; or (c)an automatic smoke detection and alarm system complying with Specification 20; or (d)a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. (3)For the purposes of (2), vertically separated fire compartments are fire compartments above and below each other, and not fire compartments within the same storey.	Further Detail is required within the Construction Documentation
E2D12	**Class 7a buildings** [2019: Table E2.2a]	Further Detail is required within the Construction Documentation

	A Class 7a building, including a basement, provided with a mechanical ventilation system in accordance with AS 1668.2, must comply with clause 5.5 of AS 1668.1.	
E3D2	**Lift installations** An *electric passenger lift* installation and an *electrohydraulic passenger lift* installation must comply with Specification 24.	Further Detail is required within the Construction Documentation
E3D4	**Warning against use of lifts in fire** (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. (3)Each warning sign *required* by (1) must comply with the details and dimensions of Figure E3D4 and consist of— (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.	Further Detail is required within the Construction Documentation
E3D7	**Passenger lift types and their limitations** (1)In an *accessible* 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 *electric passenger lifts*, *electrohydraulic passenger lifts* or *inclined lifts*. (b)*Stairway platform lifts* must not— (i)be used to serve a space in a building accommodating more than 100 persons calculated according to D2D18; or (ii)be used in a high traffic public use area such as a theatre, cinema, auditorium, transport interchange, shopping centre or the like; or (iii)be used where it is possible to install another type of passenger lift; or (iv)connect more than 2 *storeys*; or	Further Detail is required within the Construction Documentation

	(v)where more than 1 stairway lift is installed, serve more than 2 consecutive *storeys*; or (vi)when in the folded position, encroach on the minimum width of a stairway *required* by D2D8 to D2D11. (c)A *low-rise platform lift* must not travel more than 1000 mm. (d)A *low-rise, low-speed constant pressure lift* must not— (i)for an enclosed type, travel more than 4 m; or (ii)for an unenclosed type, travel more than 2 m; or (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. (e)A *small-sized, low-speed automatic lift* must not travel more than 12 m. (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.	
E3D8	**Accessible features required for passenger lifts** In an *accessible* 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 *stairway platform lift*; and (ii)a *low-rise platform lift*. (b)Lift floor dimensions of not less than 1400 mm wide x 1600 mm deep for all lifts which travel more than 12 m. (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 *stairway platform lift*. (d)Lift floor dimensions of not less than 810 mm wide x 1200 mm deep for a *stairway platform lift*. Minimum clear door opening complying with AS 1735.12 for all lifts except a *stairway platform lift*. (f)Passenger protection system complying with AS 1735.12 for all lifts with power-operated doors.	Further Detail is required within the Construction Documentation

	(g)Lift landing doors at the upper landing for all lifts except a *stairway platform lift*. (h)Lift car and landing control buttons complying with AS 1735.12 for all lifts except— (i)a *stairway platform lift*; and (ii)a *low-rise platform lift*. (i)Lighting in accordance with AS 1735.12 for all enclosed lift cars. (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 *required* by (i) and (ii) is to be provided in a range of between 20 - 80 dB(A) at a maximum frequency of 1500 Hz. (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 *stairway platform lift*.	
E4D2	**Emergency lighting requirements** An emergency lighting system must be installed— (a)in every *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp*; and (b)in every *storey* of a Class 5, 6, 7, 8 or 9 building where the *storey* has an area more than 300 m2— (i)in every passageway, corridor, hallway, or the like, that is part of the path of travel to an *exit*; and (ii)in any room having a *floor area* more than 100 m2 that does not open to a corridor or space that has emergency lighting or to a road or *open space*; and (iii)in any room having a *floor area* more than 300 m2; and (c)in every passageway, corridor, hallway, or the like, having a length of more than 6 m from the entrance doorway of any *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part of a building to the nearest doorway opening directly to— (i)a *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp*; or	Further Detail is required within the Construction Documentation

	(ii)an external stairway serving instead of a *fire-isolated stairway* under D2D13; or (iii)an external balcony leading to a *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp*; or (iv)a road or *open space*; and (d)in every *required* non-*fire-isolated stairway*; and (e)in a *sole-occupancy unit* in a Class 5, 6 or 9 building if— (i)the *floor area* of the unit is more than 300 m2; and (ii)an *exit* from the unit does not open to a road or *open space* or to an external stairway, passageway, balcony or ramp, leading directly to a road or *open space*; and (f)in every room or space to which there is public access in every *storey* in a Class 6 or 9b building if— (i)the *floor area* in that *storey* is more than 300 m2; or (ii)any point on the floor of that *storey* is more than 20 m from the nearest doorway leading directly to a stairway, ramp, passageway, road or *open space*; or (iii)egress from that *storey* involves a vertical rise within the building of more than 1.5 m, or any vertical rise if the *storey* concerned does not admit sufficient light; or (iv)the *storey* provides a path of travel from any other *storey required* by (i), (ii) or (iii) to have emergency lighting; and (g)in a Class 9a *health-care building*— (i)in every passageway, corridor, hallway, or the like, serving a *treatment area* or a *ward area*; and (ii)in every room having a *floor area* of more than 120 m2 in a *patient care area*; and (h)in every Class 9c building excluding within *sole-occupancy units*; and in every *required* fire control centre.	
E4D3	**Measurement of distance** Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.	Further Detail is required within the Construction Documentation
E4D4	**Design and operation of emergency lighting** Every *required* emergency lighting system must comply with AS/NZS 2293.1.	Further Detail is required within the Construction Documentation
E4D5	**Exit signs**	Further Detail is required within the

	An *exit* sign must be clearly visible to persons approaching the *exit*, and must be installed on, above or adjacent to each— (a)door providing direct egress from a *storey* to— (i)an enclosed stairway, passageway or ramp serving as a *required exit*; and (ii)an external stairway, passageway or ramp serving as a *required exit*; and (iii)an external access balcony leading to a *required exit*; and (b)door from an enclosed stairway, passageway or ramp at every level of discharge to a road or *open space*; and (c)*horizontal exit*; and (d)door serving as, or forming part of, a *required exit* in a *storey required* to be provided with emergency lighting in accordance with E4D2.	Construction Documentation
E4D6	**Direction signs** If an *exit* is not readily apparent to persons occupying or visiting the building then *exit* signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a *required exit*.	Further Detail is required within the Construction Documentation
E4D8	**Design and operation of exit signs** Every *required exit* sign must— (a)comply with— (i)AS/NZS 2293.1; or (ii)for a photoluminescent *exit* 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 is required within the Construction Documentation

5.5 SECTION F – HEALTH AND AMENITY

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
F1D3	**Stormwater drainage** Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3.	Further Detail is required within the Construction Documentation
F1D4	**Exposed joints** [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.	Further Detail is required within the Construction Documentation
F1D5	**External waterproofing membranes** A roof, balcony, podium or similar horizontal surface part of a building must be provided with a *waterproofing membrane*— (a)consisting of materials complying with AS 4654.1; and designed and installed in accordance with AS 4654.2.	Further Detail is required within the Construction Documentation
F1D6	**Damp-proofing** (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 *damp-proof course*; and (c)the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. (2)Where a *damp-proof course* is provided, it must consist of— (a)a material that complies with AS/NZS 2904; or	Further Detail is required within the Construction Documentation

	(b)impervious sheet material in accordance with AS 3660.1. (3)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, *sanitary compartment*, or the like, forming part of a building used for other purposes. An *open spectator stand* or *open-deck carpark*.	
F1D7	**Damp-proofing of floors on the ground** (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. (2)The requirements of (1) do not apply where— (a)weatherproofing is not *required*; or the floor is the base of a stair, lift or similar *shaft* which is adequately drained by gravitation or mechanical means.	Further Detail is required within the Construction Documentation
F2D2	**Wet area construction** (1)In a Class 2 and 3 building and a Class 4 part of a building, building elements in *wet areas* must— (a)be *water resistant* or *waterproof* in accordance with Specification 26; and (b)comply with AS 3740. (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 *sanitary compartment* must— (a)be *water resistant* or *waterproof* in accordance with Specification 26; and (b)comply with AS 3740, as if they were in a Class 2 or 3 building or a Class 4 part of a building.	Further Detail is required within the Construction Documentation
F2D4	**Floor wastes** (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 *sole-occupancy unit* or public space must have a *floor waste*. (2)Where a *floor waste* is installed— (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.	Further Detail is required within the Construction Documentation

F3D1	**Deemed-to-Satisfy Provisions** (1)Where a *Deemed-to-Satisfy Solution* is proposed, *Performance Requirement* F3P1 is satisfied by complying with F3D2 to F3D5. (2)Where a *Performance Solution* is proposed, the relevant *Performance Requirements* 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 *membrane* complying with F1D5.	Further Detail is required within the Construction Documentation
F3D3	**Sarking** *Sarking-type material* used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2.	Further Detail is required within the Construction Documentation
F3D4	**Glazed assemblies** (1)Subject to (2) and (3), the following glazed assemblies in an *external wall*, 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, *sanitary compartment*, or the like, forming part of a building used for	Further Detail is required within the Construction Documentation

	other purposes, except where the construction of the garage, tool shed, *sanitary compartment* or the like contributes to the weatherproofing of the other part of the building. (c)An *open spectator stand* or *open-deck carpark*. (3)The following glazed assemblies need not comply with (1): (a)All glazed assemblies not in an *external wall*. (b)Revolving doors. (c)Fixed louvres. (d)Skylights, roof lights and windows in other than the vertical plane. (e)Sliding and swinging glazed doors without a frame. (f)Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047. (g)Second-hand windows, re-used windows and recycled windows. Heritage windows.	
F3D5	**Wall cladding** (1)External wall cladding must comply with one or a combination of the following: (a)Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. (b)Autoclaved aerated concrete: AS 5146.3. (c)Metal wall cladding: AS 1562.1. (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, *sanitary compartment*, or the like, forming part of a building used for other purposes, except where the construction of the garage, tool shed, *sanitary compartment* or the like contributed to the weatherproofing of another part of the building that is *required* to be weatherproofed. An *open spectator stand* or *open deck carpark*.	Further Detail is required within the Construction Documentation
F6D5	**Artificial lighting** (1)Artificial lighting must be provided— (a)in *required* stairways, passageways, and ramps;	Further Detail is required within the Construction Documentation

	and (b)if natural light of a standard equivalent to that *required* 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 *sanitary compartments*, bathrooms, shower rooms, airlocks and laundries; and (ii)a Class 2 building — to *sanitary compartments*, 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 *required* to be *accessible*, 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 *required* by Part I1. (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.	
NSW F6D6	**Ventilation of rooms** A *habitable room*, office, shop, factory, workroom, *sanitary compartment*, 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.	Further Detail is required within the Construction Documentation
F6D11	**Carparks** Every *storey* of a *carpark*, except an *open-deck carpark*, must have— (a)a system of mechanical ventilation complying with AS 1668.2; or	Further Detail is required within the Construction Documentation

	(b)a system of natural ventilation complying with Section 4 of AS 1668.4.	
F7D3	**Determination of airborne sound insulation ratings** A form of construction *required* to have an airborne sound insulation rating must— (a)have the *required* value for weighted sound reduction index (Rw) or weighted sound reduction index with spectrum adaptation term (Rw + Ctr) determined in accordance with AS/NZS ISO 717.1 using results from laboratory measurements; or comply with Specification 28.	Further Detail is required within the Construction Documentation
F7D4	**Determination of impact sound insulation ratings** (1)A floor in a building *required* to have an impact sound insulation rating must— (a)have the *required* value for weighted normalised impact sound pressure level (Ln,w) determined in accordance with AS ISO 717.2 using results from laboratory measurements; or (b)comply with Specification 28. (2)A wall in a building *required* to have an impact sound insulation rating must— (a)for a Class 2 or 3 building be of discontinuous construction and (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 (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. (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.	Further Detail is required within the Construction Documentation
F7D5	**Sound insulation rating of floors** (1)A floor in a Class 2 or 3 building must have an Rw + Ctr (airborne) not less than 50 and an Ln,w (impact) not more than 62 if it separates— (a)*sole-occupancy units*; or (b)a *sole-occupancy unit* from a plant room, lift *shaft*, stairway, *public corridor*, public lobby or the like, or parts of a different classification. (2)A floor in a Class 9c building separating *sole-occupancy units* must have an Rw not less than 45.	Further Detail is required within the Construction Documentation

F7D6	**Sound insulation rating of walls** (1)A wall in a Class 2 or 3 building must— (a)have an Rw + Ctr (airborne) not less than 50, if it separates *sole-occupancy units*; and (b)have an Rw (airborne) not less than 50, if it separates a *sole-occupancy unit* from a plant room, lift *shaft*, stairway, *public corridor*, public lobby or the like, or parts of a different classification; and (c)comply with F7D4(2) if it separates— (i)a bathroom, *sanitary compartment*, laundry or kitchen in one *sole-occupancy unit* from a *habitable room* (other than a kitchen) in an adjoining unit; or (ii)a *sole-occupancy unit* from a plant room or lift *shaft*. (2)A door may be incorporated in a wall in a Class 2 or 3 building that separates a *sole-occupancy unit* from a stairway, *public corridor*, public lobby or the like, provided the door assembly has an Rw not less than 30. (3)A wall in a Class 9c building must have an Rw not less than 45 if it separates— (a)*sole-occupancy units*; or (b)a *sole-occupancy unit* from a kitchen, bathroom, *sanitary compartment* (not being an associated ensuite), laundry, plant room or utilities room. (4)In addition to (3), a wall separating a *sole-occupancy unit* in a Class 9c building from a kitchen or laundry must comply with F7D4(2). (5)Where a wall *required* to have sound insulation has a floor above, the wall must continue to— (a)the underside of the floor above; or (b)a ceiling that provides the sound insulation *required* for the wall. (6)Where a wall *required* 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 *required* for the wall.	Further Detail is required within the Construction Documentation
F7D7	**Sound insulation rating of internal services** (1)If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall	Further Detail is required within the Construction Documentation

	or floor cavity, serves or passes through more than one *sole-occupancy unit*, the duct or pipe must be separated from the rooms of any *sole-occupancy unit* by construction with an Rw + Ctr (airborne) not less than— (a)40 if the adjacent room is a *habitable room* (other than a kitchen); or (b)25 if the adjacent room is a kitchen or non-*habitable room*. (2)If a stormwater pipe passes through a *sole-occupancy unit*, it must be separated in accordance with (1)(a) and (b).	
F7D8	**Sound isolation of pumps** A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.	Further Detail is required within the Construction Documentation

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