

Date: 4 March 2025
Our Ref: P2500001 (3)

Homes NSW
Locked Bag 5022
Parramatta NSW 2124
Att: Mr Rodney Garrett

Dear Rodney,

**RE: 37 - 39 Munro Rd, Crestwood
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.

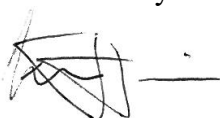
The inclusion of this summary enables an immediate understanding of the compliance status of the proposed design to be obtained.

- ☐ 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

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

**Kieran Tobin
Director**

BCA COMPLIANCE ASSESSMENT

PREPARED FOR

Homes NSW

REGARDING
37 - 39 Munro Rd, Crestwood

Prepared By



REPORT REGISTER

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

Our Reference	Issue No.	Remarks	Issue Date
P2500003	1		31 January 2025
P2500003	2		20 February 2025
P2500003	3	Design Compliance Report	4 March 2025
Author		Kieran Tobin Senior NCC Consultant Registered Building Surveyor - Fair Trading no 0409 Grad Dip Building Surveying UWS	

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1.0 INTRODUCTION

1.1 GENERAL

This “BCA Compliance Assessment” report has been prepared at the request of Homes NSW, and relates to the premises located at 37 - 39 Munro Rd, Crestwood.

The project proposal is for construction of a new residential unit building containing 10 Seniors Living Units.

1.2 REPORT BASIS

The content of this report reflects –

- (a) The principles and provisions of BCA 2022, Parts B, C, D, E, F and J;
- (b) Architectural documentation provided by DTA Architects

Plan No	Plan Description	Dated
06 of 23	Site Plan	20/02/25
07 of 23	Ground Floor Plan	20/02/25
08 of 23	First Floor Plan	20/02/25
09 of 23	Roof Plan	20/02/25
10 of 23	Elevations	20/02/25
11 of 23	Elevations	20/02/25
12 of 23	Sections	20/02/25
13 of 23	Sections	20/02/25

1.4 REPORT PURPOSE

The purpose of this report is to identify the extent to which the proposed Architectural plans may comply with the relevant prescriptive provisions of BCA 2022, Parts B, C, D, E, F and J

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

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

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

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

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

2.0 MATTERS IDENTIFIED / RECOMMENDATIONS

2.1 COMPLIANCE PATHWAYS WITHIN THE BCA

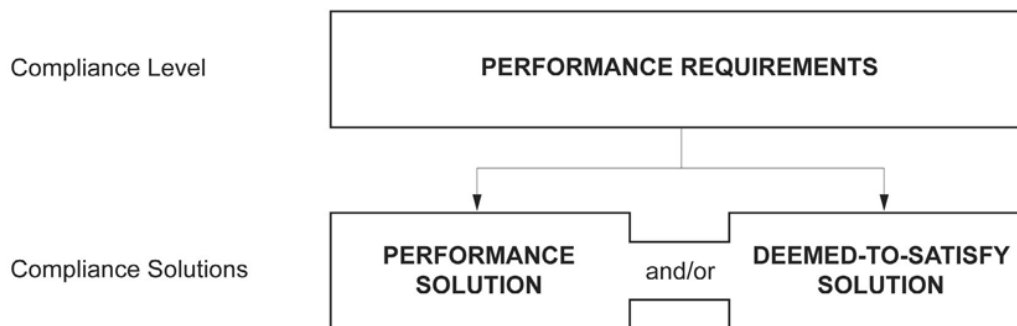
Compliance with the NCC is achieved by complying with—
(1) the Governing Requirements of the NCC; and
(2) the *Performance Requirements*.

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.

Key Compliance Requirements requiring Greater detail at Crown Certificate Application		
	BCA Clause	Comment
1	C2D2	<p>Fire Resistance - General</p> <p>Sectional details are required for each wall system</p> <p>The Internal walls will require a Fire Resistance Level (FRL) of 60/60/60</p> <p>Internal separating walls must extend to either</p> <ul style="list-style-type: none">- The underside of the roof covering or a- ceiling with a resistance to the incipient spread of fire for 60 minutes <p>Floors separating levels will require a minimum FRL of 30/30/30 or a ceiling with a resistance to the incipient spread of fire for 60 minutes</p> <p>External Columns FRLs require 90 minutes</p> <p>The Load Bearing External wall Fire resistance dependant on distance from a Fire Source Feature are:-</p>

		<table><tr><td>Less than 1.5 m</td><td>90/90/90</td></tr><tr><td>1.5 to less than 3 m</td><td>90/60/30</td></tr><tr><td>3 m to less than 9 m</td><td>90/30/30</td></tr><tr><td>9 m to less than 18 m</td><td>90/30/–</td></tr><tr><td>18 m or more</td><td>–/–/–</td></tr></table> <p>Within Type B Construction</p> <p>The Fire Resistance requirements are from both sides (internal and external)</p> <p>Non Load Bearing walls greater than 3m from a fire source feature but constructed of timber framing still require a Fire resistant covering</p>	Less than 1.5 m	90/90/90	1.5 to less than 3 m	90/60/30	3 m to less than 9 m	90/30/30	9 m to less than 18 m	90/30/–	18 m or more	–/–/–
Less than 1.5 m	90/90/90											
1.5 to less than 3 m	90/60/30											
3 m to less than 9 m	90/30/30											
9 m to less than 18 m	90/30/–											
18 m or more	–/–/–											
2	C2D2	<p>Notes on External walls</p> <p>The following wall sections within the roof must be treated as external walls – the fire resistance of these wall must be achieved from both sides (internally and externally)</p> 										
3	C3D13 C3D14	<p>Main Switch Board Fire Separation</p> <p>If the (Internal) Main Switchboard contains elements identified in Clauses C3D13 or C3D14, the wall separating the MSB from the remainder of the building must achieve an FRL of 120/120/120 and the door must be a self closing -/120/30 Fire Door (set)</p>										

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.	<p>Architectural Details within the Crown Certificate Package will need to include:-</p> <ul style="list-style-type: none"> Sectional details for fire resistant walls Test Certificates and Specifications for any proposed Light Weight Fire Resistant System Sectional Details for stairs, hand rails and balustrades A Door and Window Schedule Door hardware details for Public Lobby Exit Doors Clarification of the means of protection of openings to Doors and windows to Sole Occupancy Units in accordance with Clause C4D12

2.	Additional Part D4 Access requirements Colour contrast at Doors Door clearances and circulation space Slip resistance of floors Walkway sections including gradients, kerbs (or 600mm level, firm landscape) Stair section
3.	Fire Hazard Certificates for floor linings
4.	Copy of BASIX
5.	Copy of individual NATHERS
6.	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
7.	Cladding Provide an AS 1530.1 Fire test Certificate for the system
8.	Provide AS 1530.1 Fire Test Certificate for insulation
9.	Provide AS 1530.3 Fire Test Certificate for sarking
10.	Provide AS 1530.1 Fire Test Certificate for building attachments
11.	Regulated Design Certificate – Mechanical Copy of Final Mechanical Services Engineers Design Compliance Certificate and Services Plans
12.	Hydraulic Regulated Design Certificate Design Compliance Certificate and Hydraulic Services Plans Note the Certificate must reference compliance with Clause E12D2, AS 2419.1 – 2021 for the flow and pressure of the Street Hydrant
13.	Civil Stormwater Regulated Design Certificate Design Compliance Certificate Civil Stormwater Services Plans
14.	Electrical Regulated Design Certificate Design Compliance Certificate Electrical Services Plans Confirm compliance with <i>Automatic Smoke Detection and Alarm System</i> Part E2 of the BCA and Specification 20 AS 3786-2014; AS 1670 - 2018 <i>Emergency Lighting and Exit Signs</i> BCA Part E4 of the BCA, and the relevant provisions of AS/NZS 2293.1-2018. Artificial Lighting AS/NZS 1680.0.
15.	Regulated Design Certificate – Vertical Transport Lift Specification and Lift Certificate confirming compliance with AS 1735 and

	Part E3 of the BCA
16.	Part F1 and F3 Façade Engineers Report – External wall Weatherproofing and Non Combustibility
17.	Part F5 Requirements Details of the Acoustic requirements for Floor/ceiling systems between residential units
18.	Part F8 Identify the methods and materials for condensation management
19.	BASIX, NatHERS and Section J4, 5 and 6 Assessment Report is required

3.0 BUILDING DESCRIPTION

3.1 GENERAL

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

3.1 RISE IN STOREYS (CLAUSE C1.2)

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

2.3 BUILDING CLASSIFICATION (CLAUSE A3.2)

The entire building incorporates the following classifications:-

CLASS	DESCRIPTION
Class 2	A Residential Unit Building

2.4 EFFECTIVE HEIGHT (CLAUSE A1.1)

The building has an effective height Not exceeding 12m.

2.5 TYPE OF CONSTRUCTION (TABLE C1.1)

Table S5C21a: Type B construction: FRL of loadbearing parts of external walls

Distance from a fire-source feature	FRL:(in minutes) <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/30	120/90/60	180/120/90	240/180/120
3 m to less than 9 m	90/30/30	120/30/30	180/90/60	240/90/60
9 m to less than 18 m	90/30/–	120/30/–	180/60/–	240/60/–
18 m or more	–/–/–	–/–/–	–/–/–	–/–/–

Table S5C21b: Type B construction: FRL of non-loadbearing parts of external walls

Distance from a fire-source feature	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	–/90/90	–/120/120	–/180/180	–/240/240
1.5 m to less than 3 m	–/60/30	–/90/60	–/120/90	–/180/120
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–

Table S5C21c: Type B construction: FRL of external columns not incorporated in an external wall

Distance from a fire-source feature	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
<i>Loadbearing</i> column — less than 18 m	90/–/–	120/–/–	180/–/–	240/–/–

Table S5C21d: Type B construction: FRL of common walls and fire walls

Wall type	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
<i>Loadbearing</i> or non-loadbearing	90/90/90	120/120/120	180/180/180	240/240/240

Table S5C21e: Type B construction: FRL of loadbearing internal walls

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
<i>Fire-resisting</i> lift and stair <i>shafts</i>	90/90/90	120/120/120	180/120/120	240/120/120
Bounding <i>public corridors</i> , public lobbies and the like	60/60/60	120/-/-	180/-/-	240/-/-
Between or bounding <i>sole-occupancy units</i>	60/60/60	120/-/-	180/-/-	240/-/-

Table S5C21f: Type B construction: FRL of non-loadbearing internal walls

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
<i>Fire-resisting</i> lift and stair <i>shafts</i>	-/90/90	-/120/120	-/120/120	-/120/120
Bounding <i>public corridor</i> , public lobbies and the like	-/60/60	-/-/-	-/-/-	-/-/-
Between or bounding <i>sole-occupancy units</i>	-/60/60	-/-/-	-/-/-	-/-/-

3.5 GENERAL FLOOR AREA LIMITATIONS (TABLE C2.2)

Note – Not applicable to residential portion

3.6 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

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

4.3 SECTION D – ACCESS AND EGRESS

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

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

4.4 SECTION E – SERVICES AND EQUIPMENT

BCA reference	Complies	Does not comply	Detail Required	Not relevant
E1D2 - Fire hydrants			✓	
E1D3 -Fire hose reels				✓
E1D4 - Sprinklers				✓
E1D5 - Where sprinklers are required: all classifications				✓
E1D6 - Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings				✓
E1D7 -Where sprinklers are required: Class 3 building used as a residential care building				✓
E1D8 - Where sprinklers are required: Class 6 building				✓
E1D9 - Where sprinklers are required: Class 7a building, other than an open-deck carpark				✓
E1D10 -Where sprinklers are required: Class 9a health-care building used as a residential care building, Class 9c buildings				✓
E1D11 - Where sprinklers are required: Class 9b buildings				✓
E1D12 - Where sprinklers are required: additional requirements				✓
E1D13 -Where sprinklers are required: occupancies of excessive hazard				✓
E1D14 -Portable fire extinguishers				✓
E1D15 -Fire control centres				✓
E1D16 -Fire precautions during construction				✓
E1D17 -Provision for special hazards				✓
E2D3 -General requirements			✓	
E2D4 -Fire-isolated exits				✓
E2D5 -Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building				✓
E2D6 -Buildings more than 25 m in effective height: Class 5, 6, 7b, 8 or 9b buildings				✓
E2D7 -Buildings more than 25 m in effective height: Class 9a buildings				✓
E2D8 -Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building			✓	
E2D9 -Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings				✓
E2D10 -Buildings not more than 25 m in effective height: large isolated buildings subject to C3D4				✓
E2D11 -Buildings not more than 25 m in effective height: Class 9a and 9c buildings				✓
E2D12 -Class 7a buildings				✓
E2D13 -Basements (other than Class 7a buildings)				✓
E2D14 -Class 6 buildings – in fire compartments more than 2000 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			✓	

4.6 SECTION J – ENERGY EFFICIENCY

BCA reference	Complies	Does not comply	Detail required	Not relevant
Part J0 Energy Efficiency			✓	
Part J1 Building Fabric			✓	
NSW J3D2 Application of Part				✓
NSW J4D2 Application of Part			✓	
NSW J4D3 Thermal construction—general			✓	
NSW J4D6 Walls and glazing				✓
NSW J5D2 Application of Part			✓	
J5D3 Chimneys and flues				✓
J5D4 Roof lights				✓
NSW J5D5 Windows and doors				✓
J5D6 Exhaust fans			✓	
J5D7 Construction of ceilings, walls and floors			✓	
J5D8				✓
NSW J6D2 Application of Part	✓			
J6D3 Air-conditioning system control			✓	
J6D4 Mechanical ventilation system control				✓
J6D5 Fans and duct systems			✓	
J6D6 Ductwork insulation			✓	
J6D7 Ductwork sealing			✓	
J6D8 Pump systems			✓	
J6D9 Pipework insulation			✓	
J6D10 Space heating			✓	
J6D11 Refrigerant chillers				✓
J6D12 Unitary air-conditioning equipment			✓	
J6D13 Heat rejection equipment			✓	
NSW J7D2 Application of Part	✓			

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, 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 <i>fire-resisting construction</i> 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 <i>storey</i> , in C2D4(2); and (c) <i>open spectator stands</i> and indoor sports stadiums, in C2D8. (2)Each building element must comply with Specification 5 as applicable.	Further Detail will be required within the Crown Certificate documentation
C2D10	Non-combustible building elements (1)In a building <i>required</i> to be of Type A or B construction, the following building elements and their components must be <i>non-combustible</i> : (a) <i>External walls</i> and <i>common walls</i> , including all components incorporated in them including the facade covering, framing and insulation.	Further Detail will be required within the Crown Certificate documentation

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

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

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

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

	<p>(k) a face plate or diffuser plate of light fitting and emergency <i>exit</i> signs and associated electrical wiring and electrical components; or</p> <p>(l) a joinery unit, cupboard, shelving, or the like; or</p> <p>(m) an attached non-building fixture and fitting such as— (i) a curtain, blind, or similar decor, other than a proscenium curtain <i>required</i> by Specification 32; and</p> <p>(ii) a whiteboard, <i>window</i> treatment or the like; or</p> <p>(n) timber treads, risers, landings and associated supporting framework installed in accordance with D3D30 where the <i>Spread-of-Flame Index</i> and the <i>Smoke-Developed Index</i> of the timber does not exceed 9 and 8 respectively; or any other material that does not significantly increase the hazards of fire.</p>	
C2D14	<p>Ancillary elements</p> <p>An <i>ancillary element</i> must not be fixed, installed, attached to or supported by the concealed internal parts or external face of an <i>external wall</i> that is <i>required</i> to be <i>non-combustible</i> unless it is one of the following: (a) An <i>ancillary element</i> that is <i>non-combustible</i>.</p> <p>(b) A gutter, downpipe or other plumbing fixture or fitting.</p> <p>(c) A flashing.</p> <p>(d) A grate, grille or similar cover not more than 2 m² in area associated with a building service.</p> <p>(e) An electrical switch, socket-outlet, cover plate or the like.</p> <p>(f) A light fitting.</p> <p>(g) A <i>required</i> sign.</p> <p>(h) A sign other than one provided under (a) or (g) that— (i) achieves a <i>group number</i> of 1 or 2; and</p> <p>(ii) does not extend beyond one <i>storey</i>; and</p> <p>(iii) does not extend beyond one <i>fire compartment</i>; and</p> <p>(iv) is separated vertically from other signs permitted under (h) by at least 2 <i>storeys</i>.</p> <p>(i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that—</p> <p>(i) meets the relevant requirements of Table S7C7 as for an internal element; and</p> <p>(ii) serves a <i>storey</i>— (A) at ground level; or</p> <p>(B) immediately above a <i>storey</i> at ground level; and</p> <p>(iii) does not serve an <i>exit</i>, where it would render the <i>exit</i> unusable in a fire.</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

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

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

	<p>equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of a fault from the non-emergency equipment switchgear.</p> <p>(6)For the purposes of (5), emergency equipment includes but is not limited to the following: (a)Fire hydrant booster pumps.</p> <p>(b)Pumps for <i>automatic</i> sprinkler systems, water spray, chemical fluid suppression systems or the like.</p> <p>(c)Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building.</p> <p>(d)Air handling systems designed to exhaust and control the spread of fire and smoke.</p> <p>(e)Emergency lifts.</p> <p>(f)Control and indicating equipment. Emergency warning and intercom systems.</p>	
C4D12	<p>Bounding construction: Class 2 and 3 buildings and Class 4 parts [2019: C3.11]</p> <p>(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</p> <p>(b)a room not within a sole-occupancy unit; or</p> <p>(c)the landing of an internal non fire-isolated stairway that serves as a required exit; or</p> <p>(d)another sole-occupancy unit.</p> <p>(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</p> <p>(b)the landing of an internal non fire-isolated stairway that serves as a required exit.</p> <p>(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.</p> <p>NSW C4D12(4)</p> <p>(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</p> <p>(b)in a building of Type B or C construction — a self-closing, tight fitting, solid core door, not less than 35 mm thick.</p> <p>(5)In a Class 3 building used as a residential care building protected with a sprinkler system</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

	<p>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</p> <p>(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.</p> <p>(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.</p> <p>(7)A door required by (4) or (5) may be automatic-closing in accordance with the following:</p> <p>(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.</p> <p>(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.</p> <p>(8)The requirements of (9) apply in a Class 2 or 3 building where a path of travel to an exit—</p> <p>(a)does not provide a person seeking egress with a choice of travel in different directions to alternative exits; and</p> <p>(b)is along an open balcony, landing or the like; and</p> <p>(c)passes an external wall of— (i)another sole-occupancy unit; or</p> <p>(ii)a room not within a sole-occupancy unit.</p> <p>(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</p> <p>(b)have any doorway fitted with a self-closing, tight-fitting solid core door not less than 35 mm thick; and</p> <p>(c)have any windows or other openings— (i)protected internally in accordance with C4D5; or located at least 1.5 m above the floor of the balcony, landing or the like.</p>	
C4D13	<p>Openings in floors and ceilings for services</p> <p>(1)Where a service passes through— (a)a floor that is required to have an FRL with respect to</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

	<p>integrity and insulation; or</p> <p>(b)a ceiling required to have a resistance to the incipient spread of fire, the service must be installed in accordance with (2).</p> <p>(2)A service must be protected— (a)in a building of Type A construction, by a shaft complying with Specification 5; or</p> <p>(b)in a building of Type B or C construction, by a shaft that will not reduce the fire performance of the building elements it penetrates; or</p> <p>(c)in accordance with C4D15.</p> <p>(3)Where a service passes through a floor which is required to be protected by a fire-protective covering, the penetration must not reduce the fire performance of the covering.</p>	
C4D14	<p>Openings in shafts</p> <p>In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage or other service shaft must be protected by— (a)if it is in a sanitary compartment — a door or panel which, together with its frame, is non-combustible or has an FRL of not less than –/30/30; or</p> <p>(b)a self-closing –/60/30 fire door or hopper; or</p> <p>(c)an access panel having an FRL of not less than –/60/30; or if the shaft is a garbage shaft — a door or hopper of non-combustible construction.</p>	Further Detail will be required within the Crown Certificate documentation
C3D15	<p>Openings for service installations</p> <p>(1)The requirements of (2) apply where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire.</p> <p>(2)An installation mentioned in (1) must comply with any one of the following: (a)Tested systems — the following applies: (i)The service, building element and any protection method at the penetration— (A)are identical with a prototype assembly of the service, building element and protection method which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the required FRL or resistance to the incipient spread of fire; or</p> <p>(B)differ from a prototype assembly of the service, building element and protection method in</p>	Further Detail will be required within the Crown Certificate documentation

accordance with Section 4 of AS 4072.1.

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

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

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

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

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

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

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

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

(ii) The service is sanitary plumbing installed in accordance with Specification 13 and it— (A) is of metal or UPVC pipe; and

(B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and

(C) is in a sanitary compartment separated from other parts of the building by walls with the FRL required by Specification 5 for a stair shaft in the building and a self-closing –/60/30 fire door.

(iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification 13 and it— of fire; and penetrates a wall, floor or ceiling, but not a ceiling required to have a (A) resistance to the incipient spread

	(B)connects not more than 2 fire compartments in addition to any fire-resisting service shafts. The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification 13.	
C3D16	Construction joints (1)Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner— (a)identical with a prototype tested in accordance with AS 4072.1 and AS 1530.4 to achieve the required FRL; or (b)that differs from a prototype in accordance with Section 4 of AS 4072.1 and achieves the required FRL. (2)The determination of the required FRL must be confirmed in a report from an Accredited Testing Laboratory in accordance with Specifications 1 and 2. (3)The requirements of (1) do not apply where joints, spaces and the like between fire-protected timber elements are provided with cavity barriers in accordance with Specification 9.	Further Detail will be required within the Crown Certificate documentation
C3D17	Columns protected with lightweight construction to achieve an FRL A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire.	Further Detail will be required within the Crown Certificate documentation

5.3 SECTION D – ACCESS AND EGRESS

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
D2D8	<p>Width of exits and paths of travel to exits [2019: D1.6(b), (c), (d) and (e)]</p> <p>(1)The unobstructed width of each <i>required exit</i> or path of travel to an <i>exit</i>, except for ladders provided in accordance with D2D21, D3D23 or I3D5, and doorways, must be not less than—</p> <p>(a)1 m; or <i>area</i> or <i>ward area</i>; and 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a (b)<i>treatment</i></p> <p>(c)in a <i>public corridor</i> in a Class 9c <i>aged care building</i>, notwithstanding (2) and (3)— (i)1.5 m; and</p> <p>(ii)1.8 m for the full width of the doorway, providing access into a <i>sole-occupancy unit</i> or communal bathroom.</p> <p>(2)If the <i>storey</i>, <i>mezzanine</i> or <i>open spectator stand</i> accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width of each <i>required exit</i> or path of travel to an <i>exit</i>, except for doorways, must be not less than— (a)1 m plus 250 mm for each 25 persons (or part) in excess of 100; or 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a (b)<i>treatment area</i> or <i>ward area</i>.</p> <p>(3)If the <i>storey</i>, <i>mezzanine</i> or <i>open spectator stand</i> accommodates more than 200 persons, the aggregate unobstructed width of each <i>required exit</i> or path of travel to an <i>exit</i>, except for doorways, must be not less than— (a)2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or</p> <p>(b)in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200.</p> <p>(4)In an <i>open spectator stand</i> which accommodates more than 2000 persons, the aggregate unobstructed width of each <i>required exit</i> or path of travel to an <i>exit</i>, except for doorways, must be not less than 17 m plus a width (in metres) equal to the number in excess of 2000 divided by 600.</p>	Further Detail will be required within the Crown Certificate documentation

<p>D2D9</p>	<p>Width of doorways in exits or paths of travel to exits In a <i>required exit</i> or path of travel to an <i>exit</i>, the unobstructed width of a doorway must be not less than— (a)in <i>patient care areas</i> through which patients would normally be transported in beds— (i)if the doorway provides access to, or from, a corridor of width— (A)less than 2.2 m — 1200 mm; or (B)2.2 m or greater — 1070 mm; and (ii)where the doorway referred to in (i) is fitted with two leaves and one leaf is secured in the closed position in accordance with D3D26(3)(e), the other leaf must permit an unobstructed opening not less than 800 mm wide; or (b)in <i>patient care areas</i> in a <i>horizontal exit</i> — 1250 mm; or (c)the unobstructed width of each <i>exit</i> provided to comply with D2D8(1), (2), (3) or (4), minus 250 mm; or (d)in a Class 9c building, 800 mm, except— (i)in <i>resident use areas</i> the minimum unobstructed width must be 870 mm; and (ii)for doorways leading from a <i>public corridor</i> to a <i>sole-occupancy unit</i> the minimum unobstructed width must be 1070 mm; and (iii)where the doorway is fitted with two leaves and one leaf is secured in the closed position in accordance with D3D26(3)(e), the other leaf must permit an unobstructed opening not less than 870 mm wide in <i>resident use areas</i> and 800 mm wide in <i>non-resident use area</i>; or in any other case except where it opens to a <i>sanitary compartment</i> or bathroom — 750 mm wide.</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>
<p>D2D10</p>	<p>Exit width not to diminish in direction of travel The unobstructed width of a <i>required exit</i> must not diminish in the direction of travel to a road or <i>open space</i>, except where the width is increased in accordance with D2D8(1)(b) or D2D9(a)(i).</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>
<p>D2D11</p>	<p>Determination and measurement of exits and paths of travel to exits For the purposes of D2D7 to D2D10 the following apply: (a)The <i>required</i> width of a stairway or ramp in a <i>required exit</i> or path of travel to an <i>exit</i> must— (i)be measured clear of all</p>	<p>For Reference</p>

	<p>obstructions such as handrails, projecting parts of barriers and the like; and</p> <p>(ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing.</p> <p>(b) To determine the aggregate unobstructed width, the number of persons accommodated must be calculated according to D2D18.</p>	
D3D8	<p>Installations in exits and paths of travel</p> <p>(1) Access to service <i>shafts</i> and services other than to fire-fighting or detection equipment as permitted in the <i>Deemed-to-Satisfy Provisions</i> of Section E, must not be provided from a <i>fire-isolated stairway</i>, <i>fire-isolated passageway</i> or <i>fire-isolated ramp</i>.</p> <p>(2) An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like, must not be located in any part of a <i>required exit</i> or any corridor, hallway, lobby or the like leading to a <i>required exit</i>.</p> <p>(3) Gas or other fuel services must not be installed in a <i>required exit</i>.</p> <p>(4) Except for in a fire-isolated <i>exit</i> specified in (1), services or equipment enclosed in accordance with (5) may be installed in a <i>required exit</i>, or in any corridor, hallway, lobby or the like leading to a <i>required exit</i>, where that service or equipment comprises— (a) electricity meters, distribution boards or ducts; or</p> <p>(b) central telecommunications distribution boards or equipment; or</p> <p>(c) electrical motors or other motors serving equipment in the building.</p> <p>(5) An enclosure for the purposes of (4) must be suitably sealed against smoke spreading from the enclosure and be— (a) <i>non-combustible</i> construction; or</p> <p>(b) a <i>fire-protective covering</i>.</p> <p>(6) Electrical wiring may be installed in a fire-isolated <i>exit</i> if the wiring is associated with—</p> <p>(a) a lighting, detection, or pressurisation system serving the <i>exit</i>; or</p> <p>(b) a security, surveillance or management system serving the <i>exit</i>; or</p> <p>(c) an intercommunication system or an audible or visual alarm system in accordance with D3D27; or the monitoring of hydrant or sprinkler isolating valves.</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

<p>D3D9</p>	<p>Enclosure of space under stairs and ramps</p> <p>(1) Fire-isolated stairways and ramps — If the space below a required fire-isolated stairway or fire-isolated ramp is within the fire-isolated shaft, it must not be enclosed to form a cupboard or similar enclosed space.</p> <p>(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.</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>
<p>D3D14</p>	<p>Goings and risers</p> <p>(1) A stairway must have— (a) not more than 18 and not less than 2 risers in each <i>flight</i>; and (b) going (G), riser (R) and quantity (2R + G) in accordance with Table D3D14, except as permitted by (2) and (3); and</p> <p>(c) constant goings and risers throughout each <i>flight</i>, except as permitted by (2) and (3), and the dimensions of goings (G) and risers (R) in accordance with (1)(b) are considered constant if the variation between— (i) adjacent risers, or between adjacent goings, is no greater than 5 mm; and</p> <p>(ii) the largest and smallest riser within a <i>flight</i>, or the largest and smallest going within a <i>flight</i>, does not exceed 10 mm; and</p> <p>(d) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and</p> <p>(e) treads which have—</p> <p>(i) a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or</p> <p>(ii) a nosing strip with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; and</p> <p>(f) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 <i>storeys</i>; and</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

	<p>(g)in a Class 9b building, not more than 36 risers in consecutive <i>flights</i> without a change in direction of at least 30°; and</p> <p>(h)in the case of a <i>required</i> stairway, no winders in lieu of a landing.</p> <p>(2)In the case of a non-<i>required</i> stairway— (a)the stairway must have— (i)not more than 3 winders in lieu of a quarter <i>landing</i>; and</p> <p>(ii)not more than 6 winders in lieu of a half <i>landing</i>; and</p> <p>(b)the going of all straight treads must be constant throughout the same <i>flight</i> and the dimensions of goings (G) is considered constant if the variation between— (i)adjacent goings, is no greater than 5 mm; and</p> <p>(ii)the largest and smallest going within a <i>flight</i>, does not exceed 10 mm; and</p> <p>(c)the going of all winders in lieu of a quarter or half <i>landing</i> may vary from the going of the straight treads within the same <i>flight</i> provided that the going of all such winders is constant.</p> <p>(3)Where a stairway discharges to a sloping public walkway or public road— (a)the riser (R) may be reduced to account for the slope of the walkway or road; and the quantity (2R+G) may vary at that location.</p>	
D3D15	<p>Landings</p> <p>In a stairway— (a)<i>landings</i> having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each <i>flight</i> and each <i>landing</i> must— (i)be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the <i>landing</i>; and</p> <p>(ii)have— (A)a surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or D3D15 when tested in accordance with AS 4586, where the edge leads to a <i>flight</i> below; and a strip at the edge of the <i>landing</i> with a slip-resistance classification not less than that listed in (B)Table</p> <p>(b)in a Class 9a building— (i)the area of any <i>landing</i> must be sufficient to move a stretcher, 2 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 <i>landing</i> while changing direction between <i>flights</i>; or</p> <p>(ii)the stair must have a change of direction of 180°, and the <i>landing</i> a clear width of not less</p>	Further Detail will be required within the Crown Certificate documentation

	<p>than 1.6 m and a clear length of not less than 2.7 m.</p> <p>Table D3D15: Slip-resistance classification</p> <table> <tr> <th>Application</th><th>Dry Surface conditions</th><th>Wet surface conditions</th></tr> <tr> <td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr> <tr> <td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr> <tr> <td>Tread or <i>landing</i> surface</td><td>P3 or R10</td><td>P4 or R11</td></tr> <tr> <td>Nosing or <i>landing</i> edge strip</td><td>P3</td><td>P4</td></tr> </table>	Application	Dry Surface conditions	Wet surface conditions	Ramp steeper than 1:14	P4 or R11	P5 or R12	Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11	Tread or <i>landing</i> surface	P3 or R10	P4 or R11	Nosing or <i>landing</i> edge strip	P3	P4	
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D3D16	<p>Thresholds</p> <p>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 <i>patient care areas</i> in a Class 9a <i>health-care building</i>, the door sill is not more than 25 mm above the finished floor level to which the doorway opens; or</p> <p>(b)in <i>resident use areas</i> 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</p> <p>(c)in a building <i>required</i> to be <i>accessible</i> by Part D4, the doorway— (i)opens to a road or <i>open space</i>; and</p> <p>(ii)is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or</p> <p>(d)in other cases— (i)the doorway opens to a road or <i>open space</i>, external stair landing or external balcony; and</p> <p>(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.</p>	Further Detail will be required within the Crown Certificate documentation															
D3D17	<p>Barriers to prevent falls</p> <p>(1)A continuous barrier must be provided along the side of— (a)a roof to which general access is provided; and</p>	Further Detail will be required within the Crown Certificate documentation															

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

	stair <i>flight</i> or ramp to 1 m at a <i>landing</i> or floor.	
D3D19	<p>Openings in barriers</p> <p>(1) Except where allowed by (2), openings in a <i>required</i> barrier must not allow a 125 mm sphere to pass through.</p> <p>(2) In a <i>fire-isolated stairway</i>, <i>fire-isolated ramp</i> or other area used primarily for emergency purposes, openings in a <i>required</i> barrier— (a) must not allow a 300 mm sphere to pass through; or</p> <p>(b) where rails are used— (i) a 150 mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail and the floor of the <i>landing</i>, balcony or the like; and</p> <p>(ii) the opening between rails must not be more than 460 mm.</p> <p>(3) In Class 7 (other than <i>carparks</i>) and Class 8 buildings, openings in a <i>required</i> barrier— (a) must not allow a 300 mm sphere to pass through; or</p> <p>(b) where rails are used— (i) a 150 mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail and the floor of the <i>landing</i>, balcony or the like; and</p> <p>(ii) the opening between the rails must not be more than 460 mm.</p> <p>(4) The requirements of (2) do not apply to external stairways, external ramps, or <i>fire-isolated stairways</i> or <i>fire-isolated ramps</i> serving Class 9b <i>early childhood centres</i>.</p> <p>(5) For a barrier provided under (1), the maximum 125 mm barrier opening for a stairway, such as a non <i>fire-isolated stairway</i>, is measured above the nosing line of the stair treads.</p> <p>(6) Where a <i>required</i> barrier is fixed to the vertical face forming an edge of a <i>landing</i>, balcony, deck, stairway or the like, the opening formed between the barrier and the face must not exceed 40 mm.</p> <p>(7) For the purposes of (6), the opening is measured horizontally from the edge of the trafficable surface to the nearest internal face of the barrier.</p>	Further Detail will be required within the Crown Certificate documentation
D3D20	<p>Barrier climbability</p> <p>[2019: Table D2.16a]</p>	Further Detail will be required within the Crown Certificate documentation

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

	<p>floor surface of the ramp, landing or the like.</p> <p>(3)Handrails— (a)in a Class 9a <i>health-care building</i> must be provided along at least one side of every passageway or corridor used by patients, and must be— (i)fixed not less than 50 mm clear of the wall; and</p> <p>(ii)where practicable, continuous for their full length; and</p> <p>(b)in a Class 9c <i>aged care building</i> must be provided along both sides of every passageway or corridor used by residents, and must be— (i)fixed not less than 50 mm clear of the wall; and</p> <p>(ii)where practicable, continuous for their full length.</p> <p>(4)Handrails <i>required</i> to assist people with a disability must be provided in accordance with D4D4.</p> <p>(5)Handrails to a stairway or ramp within a <i>sole-occupancy unit</i> in a Class 2 or 3 building or Class 4 part of a building must— (a)be located along at least one side of the <i>flight</i> or ramp; and</p> <p>(b)be located along the full length of the <i>flight</i> or ramp, except in the case where a handrail is associated with a barrier, the handrail may terminate where the barrier terminates; and</p> <p>(c)have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads or the floor surface of the ramp; and</p> <p>(d)have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like.</p> <p>(6)The requirements of (5) do not apply to— (a)handrails referred to in D3D23; or</p> <p>(b)a stairway or ramp providing a change in elevation of less than 1 m; or</p> <p>(c)a landing; or a winder where a newel post is installed to provide a handhold.</p>	
D3D29	<p>Protection of openable windows</p> <p>(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</p> <p>(b)a Class 9b <i>early childhood centre</i>.</p>	Further Detail will be required within the Crown Certificate documentation

	<p>(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.</p> <p>(b)A device or screen <i>required</i> by (a) must— (i)not permit a 125 mm sphere to pass through the window opening or screen; and</p> <p>(ii)resist an outward horizontal action of 250 N against the— (A>window restrained by a device; or</p> <p>(B)screen protecting the opening; and</p> <p>(iii)have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.</p> <p>(3)A barrier with a height not less than 865 mm above the floor is <i>required</i> to an openable window— (a)in addition to window protection, when a child resistant release mechanism is <i>required</i> by (2)(b)(iii); and</p> <p>(b)where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (1).</p> <p>(4)A barrier covered by (3) except for (5) must not— (a)permit a 125 mm sphere to pass through it; and</p> <p>(b)have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.</p> <p>(5)A barrier <i>required</i> by (3) to an openable window in— (a)<i>fire-isolated stairways, fire-isolated ramps</i> and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and</p> <p>(b)Class 7 (other than <i>carparks</i>) and Class 8 buildings and parts of buildings containing those classes,</p>	
D4D2	<p>General building access requirements</p> <p>(1)Buildings and parts of buildings must be <i>accessible</i> as <i>required</i> by this clause, unless</p>	Further Detail will be required within the Crown Certificate documentation

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 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.

	<p>(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.</p> <p>(b)<i>Sole-occupancy units</i> — in accordance with Table D4D2b.</p> <p>(10)For a Class 10 building, access requirements are as follows: (a)For a Class 10a non-habitable building located in an <i>accessible</i> area intended for use by the public and containing a sanitary facility, change room facility or shelter, to and within— an <i>accessible</i> sanitary facility; and</p> <p>(ii)a change room facility; and</p> <p>(iii)a public shelter or the like.</p> <p>(b)For Class 10b <i>swimming pools</i>, to and into <i>swimming pools</i> with a total perimeter greater than 40 m, associated with a Class 1b, 2, 3, 5, 6, 7, 8 or 9 building that is <i>required</i> to be <i>accessible</i>, but not <i>swimming pools</i> for the exclusive use of occupants of a Class 1b building or a <i>sole-occupancy unit</i> in a Class 2 or Class 3 building.</p>	
D4D3	<p>Access to buildings</p> <p>(1)An <i>accessway</i> must be provided to a building <i>required</i> to be <i>accessible</i>— (a)from the main points of a pedestrian entry at the allotment boundary; and</p> <p>(b)from another <i>accessible</i> building connected by a pedestrian link; and from any <i>required accessible</i> carparking space on the allotment.</p> <p>(2)In a building <i>required</i> to be <i>accessible</i>, an <i>accessway</i> must be provided through the principal pedestrian entrance, and— (a)through not less than 50% of all pedestrian entrances including the principal pedestrian entrance; and</p> <p>(b)in a building with a total <i>floor area</i> more than 500 m², a pedestrian entrance which is not <i>accessible</i> must not be located more than 50 m from an <i>accessible</i> pedestrian entrance, except for pedestrian entrances serving only areas exempted by D4D5.</p> <p>(3)Where a pedestrian entrance <i>required</i> to be <i>accessible</i> has multiple doorways— (a)if the pedestrian entrance consists of not more than 3 doorways — not less than 1 of those doorways must be <i>accessible</i>; and</p> <p>(b)if a pedestrian entrance consists of more than 3 doorways — not less than 50% of those doorways must be <i>accessible</i>.</p>	Further Detail will be required within the Crown Certificate documentation

	<p>(4)For the purposes of (3)— (a)an <i>accessible</i> pedestrian entrance with multiple doorways is considered to be one pedestrian entrance where— (i)all doorways serve the same part or parts of the building; and</p> <p>(ii)the distance between each doorway is not more than the width of the widest doorway at that pedestrian entrance (see Figure D4D3); and</p> <p>(b)a doorway is considered to be the clear, unobstructed opening created by the opening of one or more door leaves (see Figure D4D3).</p> <p>(5)Where a doorway on an <i>accessway</i> has multiple leaves, (except an automatic opening door) one of those leaves must have a clear opening width of not less than 850 mm in accordance with AS 1428.1.</p>	
D4D4	<p>Parts of buildings to be accessible</p> <p>In a building <i>required</i> to be <i>accessible</i>— (a)every ramp and stairway, except for ramps and stairways in areas exempted by D4D5, must comply with— (i)for a ramp, except a <i>fire-isolated ramp</i>, clause 10 of AS 1428.1; and</p> <p>(ii)for a stairway, except a <i>fire-isolated stairway</i>, clause 11 of AS 1428.1; and</p> <p>(iii)for a <i>fire-isolated stairway</i>, clause 11.1(f) and (g) of AS 1428.1; and</p> <p>(b)every passenger lift must comply with E3D7; and</p> <p>(c)<i>accessways</i> must have— (i)passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an <i>accessway</i> where a direct line of sight is not available; and</p> <p>(ii)turning spaces complying with AS 1428.1— within 2 m of the end of <i>accessways</i> where it is not possible to continue travelling along the <i>accessway</i>;</p> <p>and</p> <p>(B)at maximum 20 m intervals along the <i>accessway</i>; and</p> <p>(d)an intersection of <i>accessways</i> satisfies the spatial requirements for a passing and turning space; and</p> <p>(e)a passing space may serve as a turning space; and</p> <p>(f)a ramp complying with AS 1428.1 or a passenger lift need not be provided to serve a <i>storey</i> or level other than the entrance <i>storey</i> in a Class 5, 6, 7b or 8 building— (i)containing not</p>	Further Detail will be required within the Crown Certificate documentation

	<p>more than 3 <i>storeys</i>; and</p> <p>(ii)with a <i>floor area</i> for each <i>storey</i>, excluding the entrance <i>storey</i>, of not more than 200 m²; and</p> <p>(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</p> <p>(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.</p>	
D4D6	<p>Accessible carparking</p> <p>(1)<i>Accessible</i> carparking spaces— (a)subject to (b), must be provided in accordance with (2) in— (i)a Class 7a building <i>required</i> to be <i>accessible</i>; and</p> <p>(ii)a carparking area on the same allotment as a building <i>required</i> to be <i>accessible</i>; and</p> <p>(b)need not be provided in a Class 7a building or a carparking area where a parking service is provided and direct access to any of the carparking spaces is not available to the public; and</p> <p>(c)subject to (d), must comply with AS/NZS 2890.6; and</p> <p>(d)need not be identified with signage where there is a total of not more than 5 carparking spaces, so as to restrict the use of the carparking space only for people with a disability.</p> <p>(2)For each Class of building to which the <i>carpark</i> or carparking area is associated, the number of <i>accessible</i> carparking spaces <i>required</i> is as follows: (a)Class 1b and 3 buildings:</p> <p>(i)For a boarding house, guest house, hostel, lodging house, backpackers’ accommodation, or the residential part of a hotel or motel, the number of <i>accessible</i> carparking spaces <i>required</i> is to be calculated by multiplying the total number of carparking spaces by the percentage of —</p> <p>(A)<i>accessible sole-occupancy units</i> to the total number of <i>sole-occupancy units</i>; or</p> <p>(B)<i>accessible</i> bedrooms to the total number of bedrooms.</p> <p>(ii)For the purposes of (i), the calculated number is taken to the next whole figure.</p> <p>(iii)For a residential part of a <i>school</i>, accommodation for the aged, disabled or children, residential part of a <i>health-care building</i> which accommodates members of staff or the</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

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

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 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 <i>accessible</i> unisex sanitary facility, other than one that incorporates an <i>accessible</i> adult change facility.	
D4D9	<p>Tactile indicators</p> <p>(1) For a building <i>required</i> to be <i>accessible</i>, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching— (a) a stairway, other than a <i>fire-isolated stairway</i>; and</p> <p>(b) an escalator; and a passenger conveyor or moving walk; and</p> <p>(d) a ramp other than a <i>fire-isolated ramp</i>, step ramp, kerb ramp or <i>swimming pool</i> ramp; and</p> <p>(e) in the absence of a suitable barrier— (i) an overhead obstruction less than 2 m above floor level, other than a doorway; and</p> <p>(ii) an <i>accessway</i> meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D4D5, if there is no kerb or kerb ramp at that point, except for areas exempted by D4D5.</p> <p>(2) Tactile ground surface indicators <i>required</i> by (1) must comply with sections 1 and 2 of AS/NZS 1428.4.1.</p> <p>(3) A hostel for the aged, nursing home for the aged, a <i>residential aged care building</i>, Class 3 accommodation for the aged, Class 9a <i>health-care building</i> or a Class 9c <i>aged care building</i> need not comply with (1)(a) and (d) if handrails incorporating a raised dome button in accordance with AS/NZS 1428.4.1 are provided to warn people who are blind or have a vision impairment that they are approaching a stairway or ramp.</p>	Further Detail will be required within the Crown Certificate documentation
D4D13	<p>Glazing on an accessway</p> <p>On an <i>accessway</i>, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.</p>	Further Detail will be required within the Crown Certificate documentation

5.4 SECTION E – SERVICES AND EQUIPMENT

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
E1D1	<p>Fire hydrants</p> <p>(1)A fire hydrant system must be provided to serve a building—</p> <p>(a)having a total <i>floor area</i> greater than 500 m²; and</p> <p>(b)where a <i>fire brigade station</i> is— (i)no more than 50 km from the building as measured along roads; and</p> <p>(ii)equipped with equipment capable of utilising a fire hydrant.</p> <p>(2)The fire hydrant system must be installed in accordance with AS 2419.1.</p> <p>(3)Notwithstanding (2), a Class 8 <i>electricity network substation</i> need not comply with clause 4.2 of AS 2419.1 if— (a)it cannot be connected to a town main supply; and</p> <p>(b)one hour water storage is provided for fire-fighting.</p> <p>(4)Where internal fire hydrants are provided, they must serve only the <i>storey</i> on which they are located except that a <i>sole-occupancy unit</i>—</p> <p>(a)in a Class 2 or 3 building or Class 4 part of a building may be served by a single fire hydrant located at the level of egress from that <i>sole-occupancy unit</i>; or</p> <p>(b)of not more than 2 <i>storeys</i> in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hydrant located at the level of egress from that <i>sole-occupancy unit</i> provided the fire hydrant can provide coverage to the whole of the <i>sole-occupancy unit</i>.</p>	
E2D8	<p>Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building</p> <p>In a Class 2 and 3 building or part of a building, or Class 4 part of a building, if the building is not more than 25 m in <i>effective height</i>— (a)it must be provided with an <i>automatic</i> smoke detection and alarm system complying with Specification 20; and</p> <p>(b)where a <i>required fire-isolated stairway</i> serving the Class 2 or 3 parts also serves one or more <i>storeys</i> of Class 5, 6, 7 (other than an <i>open-deck carpark</i>), 8 or 9b parts— (i)the <i>fire-isolated stairway</i>, including any associated <i>fire-isolated passageway</i> or <i>fire-isolated ramp</i>, must be provided with an <i>automatic</i> air pressurisation system for fire-isolated <i>exits</i> in</p>	Further Detail will be required within the Crown Certificate documentation

	<p>accordance with AS 1668.1; or</p> <p>(ii)the Class 5, 6, 7 (other than an <i>open-deck carpark</i>), 8 and 9b parts must be provided with— (A)an <i>automatic</i> smoke detection and alarm system complying with Specification 20; or</p> <p>(B)a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17; and</p> <p>(c)where a <i>required fire-isolated stairway</i> serving the Class 4 part also serves one or more <i>storeys</i> of Class 5, 6, 7 (other than an <i>open-deck carpark</i>), 8 or 9b parts—</p> <p>(i)a system complying with (b)(i) or (b)(ii) must be installed; or</p> <p>(ii)a smoke alarm or detector system complying with Specification 20 must be provided except that alarms or detectors need only be installed adjacent to each doorway into each <i>fire-isolated stairway</i> (set back horizontally from the doorway by a distance of not more than 1.5</p>	
E3D2	<p>Lift installations</p> <p>An <i>electric passenger lift</i> installation and an <i>electrohydraulic passenger lift</i> installation must comply with Specification 24.</p>	Further Detail will be required within the Crown Certificate documentation
E3D4	<p>Warning against use of lifts in fire</p> <p>(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.</p> <p>(2)The requirements of (1) do not apply to a small lift such as a dumb-waiter or the like that is for the transport of goods only.</p> <p>(3)Each warning sign <i>required</i> by (1) must comply with the details and dimensions of Figure E3D4 and consist of—</p> <p>(a)incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or letters incised or inlaid directly into the surface of the material forming the wall.</p>	Further Detail will be required within the Crown Certificate documentation
E3D6	<p>Landings</p> <p>Access and egress to and from lift well landings must comply with the <i>Deemed-to-Satisfy</i></p>	Further Detail will be required within the Crown Certificate documentation

	<i>Provisions of Parts D2, D3 and D4.</i>	
E3D7	<p>Passenger lift types and their limitations</p> <p>(1) In an <i>accessible</i> building, every passenger lift must be one of the following lift types, subject to the limitations (if any) of each lift type: (a) There are no limitations on the use of <i>electric passenger lifts, electrohydraulic passenger lifts</i> or <i>inclined lifts</i>.</p> <p>(b) <i>Stairway platform lifts</i> must not— (i) be used to serve a space in a building accommodating more than 100 persons calculated according to D2D18; or</p> <p>(ii) be used in a high traffic public use area such as a theatre, cinema, auditorium, transport interchange, shopping centre or the like; or</p> <p>(iii) be used where it is possible to install another type of passenger lift; or</p> <p>(iv) connect more than 2 <i>storeys</i>; or</p> <p>(v) where more than 1 stairway lift is installed, serve more than 2 consecutive <i>storeys</i>; or</p> <p>(vi) when in the folded position, encroach on the minimum width of a stairway <i>required</i> by D2D8 to D2D11.</p> <p>(c) A <i>low-rise platform lift</i> must not travel more than 1000 mm.</p> <p>(d) A <i>low-rise, low-speed constant pressure lift</i> must not— (i) for an enclosed type, travel more than 4 m; or</p> <p>(ii) for an unenclosed type, travel more than 2 m; or</p> <p>(iii) be used in a high traffic public use areas in buildings such as a theatre, cinema, auditorium, transport interchange, shopping complex or the like.</p> <p>(e) A <i>small-sized, low-speed automatic lift</i> must not travel more than 12 m.</p> <p>(2) A passenger lift referred to in (1) must not rely on a constant pressure device for its operation if the lift car is fully enclosed.</p>	Further Detail will be required within the Crown Certificate documentation
E3D8	<p>Accessible features required for passenger lifts</p> <p>In an <i>accessible</i> building, every passenger lift must have the following features where</p>	Further Detail will be required within the Crown Certificate documentation

	<p>applicable: (a)A handrail complying with the provisions for a mandatory handrail in AS 1735.12 for all lifts except— (i)a <i>stairway platform lift</i>; and (ii)a <i>low-rise platform lift</i>.</p> <p>(b)Lift floor dimensions of not less than 1400 mm wide x 1600 mm deep for all lifts which travel more than 12 m.</p> <p>(c)Lift floor dimensions of not less than 1100 mm wide x 1400 mm deep for all lifts which travel not more than 12 m, except a <i>stairway platform lift</i>.</p> <p>(d)Lift floor dimensions of not less than 810 mm wide x 1200 mm deep for a <i>stairway platform lift</i>. Minimum clear door opening complying with AS 1735.12 for all lifts except a <i>stairway platform lift</i>.</p> <p>(f)Passenger protection system complying with AS 1735.12 for all lifts with power-operated doors.</p> <p>(g)Lift landing doors at the upper landing for all lifts except a <i>stairway platform lift</i>.</p> <p>(h)Lift car and landing control buttons complying with AS 1735.12 for all lifts except— (i)a <i>stairway platform lift</i>; and (ii)a <i>low-rise platform lift</i>.</p> <p>(i)Lighting in accordance with AS 1735.12 for all enclosed lift cars.</p> <p>(j)For all lifts serving more than 2 levels— (i)automatic audible information within the lift car to identify the level each time the car stops; and (ii)audible and visual indication at each lift landing to indicate the arrival of the lift car; and (iii)audible information and audible indication <i>required</i> by (i) and (ii) is to be provided in a range of between 20 - 80 dB(A) at a maximum frequency of 1500 Hz.</p> <p>(k)Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received, for all lifts except a <i>stairway platform lift</i>.</p>	
E4D2	<p>Emergency lighting requirements</p> <p>An emergency lighting system must be installed— (a)in every <i>fire-isolated stairway</i>, <i>fire-</i></p>	Further Detail will be required within the Crown Certificate documentation

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
- (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

	<p>(g)in a Class 9a <i>health-care building</i>— (i)in every passageway, corridor, hallway, or the like, serving a <i>treatment area</i> or a <i>ward area</i>; and</p> <p>(ii)in every room having a <i>floor area</i> of more than 120 m² in a <i>patient care area</i>; and</p> <p>(h)in every Class 9c building excluding within <i>sole-occupancy units</i>; and in every <i>required</i> fire control centre.</p>	
E4D3	<p>Measurement of distance</p> <p>Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.</p>	Further Detail will be required within the Crown Certificate documentation
E4D4	<p>Design and operation of emergency lighting</p> <p>Every <i>required</i> emergency lighting system must comply with AS/NZS 2293.1.</p>	Further Detail will be required within the Crown Certificate documentation
E4D5	<p>Exit signs</p> <p>An <i>exit</i> sign must be clearly visible to persons approaching the <i>exit</i>, and must be installed on, above or adjacent to each— (a)door providing direct egress from a <i>storey</i> to— (i)an enclosed stairway, passageway or ramp serving as a <i>required exit</i>; and</p> <p>(ii)an external stairway, passageway or ramp serving as a <i>required exit</i>; and</p> <p>(iii)an external access balcony leading to a <i>required exit</i>; and</p> <p>(b)door from an enclosed stairway, passageway or ramp at every level of discharge to a road or <i>open space</i>; and</p> <p>(c)<i>horizontal exit</i>; and</p> <p>(d)door serving as, or forming part of, a <i>required exit</i> in a <i>storey required</i> to be provided with emergency lighting in accordance with E4D2.</p>	Further Detail will be required within the Crown Certificate documentation
E4D6	<p>Direction signs</p> <p>If an <i>exit</i> is not readily apparent to persons occupying or visiting the building then <i>exit</i> signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a <i>required exit</i>.</p>	Further Detail will be required within the Crown Certificate documentation

E4D8	Design and operation of exit signs Every <i>required exit</i> sign must— (a)comply with— (i)AS/NZS 2293.1; or (ii)for a photoluminescent <i>exit</i> sign, Specification 25; and (b)be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	Further Detail will be required within the Crown Certificate documentation
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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 will be required within the Crown Certificate 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 will be required within the Crown Certificate documentation
F1D5	External waterproofing membranes A roof, balcony, podium or similar horizontal surface part of a building must be provided with a <i>waterproofing membrane</i> — (a) consisting of materials complying with AS 4654.1; and designed and installed in accordance with AS 4654.2.	Further Detail will be required within the Crown Certificate 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 <i>damp-proof course</i> ; and (c) the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. (2) Where a <i>damp-proof course</i> is provided, it must consist of— (a) a material that complies with AS/NZS 2904; or	Further Detail will be required within the Crown Certificate documentation

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

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

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

	<p>provided in <i>accessible</i> parts of the building in accordance with F4D6; and</p> <p>(b)<i>accessible</i> unisex showers must be provided in accordance with F4D7; and</p> <p>(c)at each bank of toilets where there is one or more toilets in addition to an <i>accessible</i> unisex <i>sanitary compartment</i> at that bank of toilets, not less than one <i>sanitary compartment</i> suitable for a person with an ambulant disability for use by males and one <i>sanitary compartment</i> suitable for a person with an ambulant disability for use by females, must be provided; and</p> <p>(d)an <i>accessible</i> unisex <i>sanitary compartment</i> must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary products; and</p> <p>(e)the circulation spaces, fixtures and fittings of all <i>accessible</i> sanitary facilities provided in accordance with F4D6 and F4D7 must comply with the requirements of AS 1428.1; and</p> <p>(f)an <i>accessible</i> unisex sanitary facility must be located so that it can be entered without crossing an area reserved for one sex only; and</p> <p>(g)where two or more of each type of <i>accessible</i> unisex sanitary facility are provided, the number of left and right handed mirror image facilities must be provided as evenly as possible; and</p> <p>(h)where male sanitary facilities are provided at a separate location to female sanitary facilities, <i>accessible</i> unisex sanitary facilities are only <i>required</i> at one of those locations; and</p> <p>(i)an <i>accessible</i> unisex <i>sanitary compartment</i> or an <i>accessible</i> unisex shower need not be provided on a <i>storey</i> or level that is not <i>required</i> by D4D4(f) to be provided with a passenger lift or ramp complying with AS 1428.1.</p>	
F5D2	<p>Height of rooms and other spaces [2019: F3.1]</p> <p>(1)The height of rooms and other spaces in a Class 2 or 3 building or Class 4 part of a building must be not less than—</p> <p>(a)for a kitchen, laundry, or the like — 2.1 m; and</p> <p>(b)for a corridor, passageway or the like — 2.1 m; and for a habitable room excluding a kitchen — 2.4 m</p>	Further Detail will be required within the Crown Certificate documentation

F6D2	Provision of natural light Natural light must be provided in: (a) A Class 2 building and a Class 4 parts of a building — to all <i>habitable rooms</i> . (b) A Class 3 building — to all bedrooms and dormitories. (c) Class 9a and 9c buildings — to all rooms used for sleeping purposes. (d) A Class 9b building — to all general purpose classrooms in primary or secondary <i>schools</i> and all playrooms or the like for the use of children in an <i>early childhood centre</i> .	Further Detail will be required within the Crown Certificate documentation
F6D3	Methods and extent of natural light (1) <i>Required</i> natural light must be provided by— (a) <i>windows</i> , excluding <i>roof lights</i> , that— (i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the <i>floor area</i> of the room; and (ii) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (b) <i>roof lights</i> , that— (i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the <i>floor area</i> of the room; and (ii) are open to the sky; or a proportional combination of <i>windows</i> and <i>roof lights</i> required by (a) and (b). (2) Except in a Class 9c <i>aged care building</i> , in a Class 2, 3 or 9 building or Class 4 part of a building, a <i>required window</i> that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of— (a) generally — 1 m; and (b) in a <i>patient care area</i> or other room used for sleeping purposes in a Class 9a building — 3 m; and	Further Detail will be required within the Crown Certificate documentation

	<p>(c)50% of the square root of the exterior height of the wall in which the <i>window</i> is located, measured in metres from its sill.</p> <p>(3)In a Class 9c <i>aged care building</i>, a <i>required window</i> must be transparent and located—</p> <p>(a)in an <i>external wall</i> with the <i>window</i> sill not more than 1 m above the floor level; and</p> <p>(b)where the <i>window</i> faces an adjoining allotment, another building or another wall of the same building, it must not be less than a horizontal distance of 3 m from the adjoining allotment, other building or wall.</p> <p>(4)In a Class 9b <i>early childhood centre</i>, the sills of 50% of <i>windows</i> in children's rooms must be located not more than 500 mm above the floor level.</p>	
F6D5	<p>Artificial lighting</p> <p>(1)Artificial lighting must be provided— (a)in <i>required</i> stairways, passageways, and ramps; and</p> <p>(b)if natural light of a standard equivalent to that <i>required</i> by F6D3 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in— (i)a Class 4 part of a building — to <i>sanitary compartments</i>, bathrooms, shower rooms, airlocks and laundries; and</p> <p>(ii)a Class 2 building — to <i>sanitary compartments</i>, bathrooms, shower rooms, airlocks, laundries, common stairways and other spaces used in common by the occupants of the building; and</p> <p>(iii)Class 3, 5, 6, 7, 8 and 9 buildings — to all rooms that are frequently occupied, all spaces <i>required</i> to be <i>accessible</i>, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.</p> <p>(2)The artificial lighting system must comply with AS/NZS 1680.0.</p> <p>(3)The system may provide a lesser level of illumination to the following spaces during times when the level of lighting would be inappropriate for the use: (a)A theatre, cinema or the like, when performances are in progress, with the exception of aisle lighting <i>required</i> by Part I1.</p> <p>(b)A museum, gallery or the like, where sensitive displays require low lighting levels.</p>	Further Detail will be required within the Crown Certificate documentation

	(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 <i>A habitable room</i> , office, shop, factory, workroom, <i>sanitary compartment</i> , bathroom, shower room, laundry and any other room occupied by a person for any purpose must have— (a)natural ventilation complying with F6D7; or a mechanical ventilation or air-conditioning system complying with AS 1668.2.	Further Detail will be required within the Crown Certificate documentation
F6D7	Natural ventilation (1)Natural ventilation provided in accordance with F6D6(a) must consist of openings, <i>windows</i> , doors or other devices which can be opened— (a)with a ventilating area not less than 5% of the <i>floor area</i> of the room <i>required</i> to be ventilated; and (b)open to— (i)a suitably sized court, or space open to the sky; or (ii)an open verandah, carport, or the like; or (iii)an adjoining room in accordance with F6D8. (2)The requirements of (1)(a) do not apply to a Class 8 <i>electricity network substation</i> .	Further Detail will be required within the Crown Certificate documentation
F7D3	Determination of airborne sound insulation ratings A form of construction <i>required</i> to have an airborne sound insulation rating must— (a)have the <i>required</i> value for weighted sound reduction index (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 will be required within the Crown Certificate documentation
F7D4	Determination of impact sound insulation ratings (1)A floor in a building <i>required</i> to have an impact sound insulation rating must— (a)have the <i>required</i> value for weighted normalised impact sound pressure level (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 <i>required</i> to have an impact sound insulation rating must— (a)for a	Further Detail will be required within the Crown Certificate documentation

	<p>Class 2 or 3 building be of discontinuous construction and</p> <p>(b)for a Class 9c building, must— (i)for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or</p> <p>(ii)be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Specification 29 than a wall listed in S28C4 to S28C7.</p> <p>(3)For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and— (a)for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and for other than masonry, there is no mechanical linkage between leaves except at the periphery.</p>	
F7D5	<p>Sound insulation rating of floors</p> <p>(1)A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w}$ (impact) not more than 62 if it separates— (a)<i>sole-occupancy units</i>; or</p> <p>(b)a <i>sole-occupancy unit</i> from a plant room, lift <i>shaft</i>, stairway, <i>public corridor</i>, public lobby or the like, or parts of a different classification.</p> <p>(2)A floor in a Class 9c building separating <i>sole-occupancy units</i> must have an R_w not less than 45.</p>	Further Detail will be required within the Crown Certificate documentation
F7D6	<p>Sound insulation rating of walls</p> <p>(1)A wall in a Class 2 or 3 building must— (a)have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates <i>sole-occupancy units</i>; and</p> <p>(b)have an R_w (airborne) not less than 50, if it separates a <i>sole-occupancy unit</i> from a plant room, lift <i>shaft</i>, stairway, <i>public corridor</i>, public lobby or the like, or parts of a different classification; and</p> <p>(c)comply with F7D4(2) if it separates— (i)a bathroom, <i>sanitary compartment</i>, laundry or kitchen in one <i>sole-occupancy unit</i> from a <i>habitable room</i> (other than a kitchen) in an adjoining unit; or</p> <p>(ii)a <i>sole-occupancy unit</i> from a plant room or lift <i>shaft</i>.</p> <p>(2)A door may be incorporated in a wall in a Class 2 or 3 building that separates a <i>sole-occupancy unit</i> from a stairway, <i>public corridor</i>, public lobby or the like, provided the door</p>	Further Detail will be required within the Crown Certificate documentation

	<p>assembly has an R_w not less than 30.</p> <p>(3) A wall in a Class 9c building must have an R_w not less than 45 if it separates— (a) <i>sole-occupancy units</i>; or</p> <p>(b) a <i>sole-occupancy unit</i> from a kitchen, bathroom, <i>sanitary compartment</i> (not being an associated ensuite), laundry, plant room or utilities room.</p> <p>(4) In addition to (3), a wall separating a <i>sole-occupancy unit</i> in a Class 9c building from a kitchen or laundry must comply with F7D4(2).</p> <p>(5) Where a wall <i>required</i> to have sound insulation has a floor above, the wall must continue to— (a) the underside of the floor above; or</p> <p>(b) a ceiling that provides the sound insulation <i>required</i> for the wall.</p> <p>(6) Where a wall <i>required</i> to have sound insulation has a roof above, the wall must continue to— (a) the underside of the roof above; or a ceiling that provides the sound insulation <i>required</i> for the wall.</p>	
F7D7	<p>Sound insulation rating of internal services</p> <p>(1) If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one <i>sole-occupancy unit</i>, the duct or pipe must be separated from the rooms of any <i>sole-occupancy unit</i> by construction with an $R_w + C_{tr}$ (airborne) not less than— (a) 40 if the adjacent room is a <i>habitable room</i> (other than a kitchen); or</p> <p>(b) 25 if the adjacent room is a kitchen or non-<i>habitable room</i>.</p> <p>(2) If a stormwater pipe passes through a <i>sole-occupancy unit</i>, it must be separated in accordance with (1)(a) and (b).</p>	Further Detail will be required within the Crown Certificate documentation
F7D8	<p>Sound isolation of pumps</p> <p>A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.</p>	Further Detail will be required within the Crown Certificate documentation

5.5 SECTION J – ENERGY EFFICIENCY

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
<p>Consistent with the decision of Building Ministers, NCC 2022 is now available for those who wish to use the new provisions.</p> <p>NCC 2022 will be adopted by the states and territories on 1 May 2023.</p> <p>Building Ministers also agreed to transitional arrangements for the following specific requirements:</p> <ul style="list-style-type: none">• New energy efficiency and condensation mitigation requirements commence 1 October 2023		
NSW J1P1	<p>Introduction to this Part</p> <p>(1)For a Class 2 building or a Class 4 part of a building, where a relevant development consent or an application for a complying development certificate requires compliance with a BASIX Single Dwelling or Multi Dwelling Certificate issued under Version 3.0 or earlier, NSW Section J of NCC 2019 Amendment 1 applies.</p> <p>(2)For a Class 2 building or a Class 4 part of a building, where a relevant development consent or an application for a complying development certificate requires compliance with a BASIX Single Dwelling or Multi Dwelling Certificate issued under Version 4.0 or later, Section J of NCC 2022 applies.</p>	BASIX and NatHers Certificates are required Further Detail will be required within the Crown Certificate documentation
NSW J1P2	<p>Thermal performance of a sole-occupancy unit of a Class 2 building or a Class 4 part of a building</p> <p>[New for 2022]</p> <p>This clause has deliberately been left blank.</p> <p>J1P2 does not apply in NSW as thermal performance of a sole-occupancy unit of a Class 2 building or a Class 4 part of a building is regulated by BASIX.</p>	BASIX and NatHers Certificates are required Further Detail will be required within the Crown Certificate documentation

NSW J1P3	<p>Energy usage of a sole-occupancy unit of a Class 2 building or a Class 4 part of a building [New for 2022] This clause has deliberately been left blank. J1P3 does not apply in NSW as the thermal performance of a sole-occupancy unit of a Class 2 building or a Class 4 part of a building is regulated by BASIX.</p>	<p>BASIX and NatHers Certificates are required Further Detail will be required within the Crown Certificate documentation</p>
NSW J4D2	<p>Application of Part [2019: J1.1] (1)The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 3 and Class 5 to 9 building. (2)NSW J4D3, applies to building elements forming the envelope of a sole-occupancy unit in a Class 2 building and a Class 4 part of a building. (3)(2) only applies to thermal insulation in a sole-occupancy unit in a Class 2 building and a Class 4 part of a building where a development consent specifies that the insulation is to be provided as part of the development.</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>
NSW J4D3	<p>Thermal construction—general [2019: J1.2] (1)Where required, insulation must comply with AS/NZS 4859.1 and be installed so that it— (a)abuts or overlaps adjoining insulation other than at supporting members such as studs, noggings, joists, furring channels and the like where the insulation must be against the member; and (b)forms a continuous barrier with ceilings, walls, bulkheads, floors or the like that inherently contribute to the thermal barrier; and (c)does not affect the safe or effective operation of a service or fitting. (2)Where required, reflective insulation must be installed with— (a)the necessary airspace to achieve the required R-Value between a reflective side of the reflective insulation and a building lining or cladding; and (b)the reflective insulation closely fitted against any penetration, door or window opening; and</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

	<p>(c)the reflective insulation adequately supported by framing members; and</p> <p>(d)each adjoining sheet of roll membrane being— (i)overlapped not less than 50 mm; or (ii)taped together.</p> <p>(3)Where required, bulk insulation must be installed so that— (a)it maintains its position and thickness, other than where it is compressed between cladding and supporting members, water pipes, electrical cabling or the like; and</p> <p>(b)in a ceiling, where there is no bulk insulation or reflective insulation in the wall beneath, it overlaps the wall by not less than 50 mm.</p> <p>(4)Roof, ceiling, wall and floor materials, and associated surfaces are deemed to have the thermal properties listed in Specification 36.</p> <p>(5)The required Total R-Value and Total System U-Value, including allowance for thermal bridging, must be— (a)calculated in accordance with AS/NZS 4859.2 for a roof or floor; or (b)determined in accordance with Specification 37 for wall-glazing construction; or determined in accordance with Specification 39 or Section 3.5 of CIBSE Guide A for soil or sub-floor spaces.</p>	
NSW J4D6	<p>Application of Part [2019: J3.1]</p> <p>The Deemed-to-Satisfy Provisions of this Part apply to elements forming the envelope of a Class 2 to 9 building, other than— (a)a building in climate zones 1, 2, 3 and 5 where the only means of air-conditioning is by using an evaporative cooler; or</p> <p>(b)a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or</p> <p>(c)in a Class 3 or Class 5 to 9 building, a building or space where the mechanical ventilation required by Part F6 provides sufficient pressurisation to prevent infiltration; or parts of buildings that cannot be fully enclosed.</p>	Further Detail will be required within the Crown Certificate documentation
NSW J5D2	<p>Application of Part [2019: J3.1]</p> <p>The Deemed-to-Satisfy Provisions of this Part apply to elements forming the envelope of a Class 2 to 9 building, other than— (a)a building in climate zones 1, 2, 3 and 5 where the only</p>	Further Detail will be required within the Crown Certificate documentation

	<p>means of air-conditioning is by using an evaporative cooler; or</p> <p>(b)a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or</p> <p>(c)in a Class 3 or Class 5 to 9 building, a building or space where the mechanical ventilation required by Part F6 provides sufficient pressurisation to prevent infiltration; or parts of buildings that cannot be fully enclosed.</p>	
J5D6	<p>Exhaust fans [2019: J3.5] An exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving— (a)a conditioned space; or a habitable room in climate zones 4, 5, 6, 7 or 8.</p>	Further Detail will be required within the Crown Certificate documentation
J5D7	<p>Construction of ceilings, walls and floors [2019: J3.6] (1)Ceilings, walls, floors and any opening such as a window frame, door frame, roof light frame or the like must be constructed to minimise air leakage in accordance with (2)— (a)when forming part of the envelope; or (b)in climate zones 4, 5, 6, 7 or 8. (2)Construction required by (1) must be— (a)enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions; or (b)sealed at junctions and penetrations with— (i)close fitting architrave, skirting or cornice; or (ii)expanding foam, rubber compressible strip, caulking or the like. (3)The requirements of (1) do not apply to openings, grilles or the like required for smoke hazard management.</p>	Further Detail will be required within the Crown Certificate documentation
J6D3	<p>Air-conditioning system control [2019: J5.2] (1)An air-conditioning system— (a)must be capable of being deactivated when the building or part of a building served by that system is not occupied; and</p>	Further Detail will be required within the Crown Certificate documentation

(b)when serving more than one air-conditioning zone or area with different heating or cooling needs, must— (i)thermostatically control the temperature of each zone or area; and
(ii)not control the temperature by mixing actively heated air and actively cooled air; and
(iii)limit reheating to not more than— (A)for a fixed supply air rate, a 7.5 K rise in temperature; and
(B)for a variable supply air rate, a 7.5 K rise in temperature at the nominal supply air rate but increased or decreased at the same rate that the supply air rate is respectively decreased or increased; and
(c)which provides the required mechanical ventilation, other than in climate zone 1 or where dehumidification control is needed, must have an outdoor air economy cycle if the total air flow rate of any airside component of an air-conditioning system is greater than or equal to the flow rates in Table J6D3; and
(d)which contains more than one water heater, chiller or coil, must be capable of stopping the flow of water to those not operating; and
(e)with an airflow of more than 1000 L/s, must have a variable speed fan when its supply air quantity is capable of being varied; and occupancy unit that opens to a balcony or the like, is open for more than one minute; and when serving a sole-occupancy unit in a Class 3 building, must not operate when any external door of the (f)sole-
(g)must have the ability to use direct signals from the control components responsible for the delivery of comfort conditions in the building to regulate the operation of central plant; and
(h)must have a control dead band of not less than 2°C, except where a smaller range is required for specialised applications; and
(i)must be provided with balancing dampers and balancing valves, as required to meet the needs of the system at its maximum operating condition, that ensure the maximum design air or fluid flow is achieved but not exceeded by more than 15% above design at each—
(i)component; or
(ii)group of components operating under a common control in a system containing multiple components; and
(j)must ensure that each independently operating space of more than 1 000 m² and every

	<p>separate floor of the building has provision to terminate airflow independently of the remainder of the system sufficient to allow for different operating times; and</p> <p>(k) must have automatic variable temperature operation of heated water and chilled water circuits; and</p> <p>(l) when deactivated, must close any motorised outdoor air or return air damper that is not otherwise being actively controlled.</p> <p>(2) When two or more air-conditioning systems serve the same space they must use control sequences that prevent the systems from operating in opposing heating and cooling modes.</p> <p>(3) Time switches — the following applies:</p> <p>(a) A time switch must be provided to control— (i) an air-conditioning system of more than 2 kW_r; and</p> <p>(ii) a heater of more than 1 kW_e heating used for air-conditioning.</p> <p>(b) The time switch must be capable of switching electric power on and off at variable pre-programmed times and on variable pre-programmed days.</p> <p>(c) The requirements of (a) and (b) do not apply to— (i) an air-conditioning system that serves— (A) only one sole-occupancy unit in a Class 2, 3 or 9c building; or</p> <p>(B) a Class 4 part of a building; or</p> <p>a conditioned space where air-conditioning is needed for 24 hour continuous use.</p>	
J6D5	<p>Fans and duct systems</p> <p>[2019: J5.4]</p> <p>(1) Fans, ductwork and duct components that form part of an air-conditioning system or mechanical ventilation system must— (a) separately comply with (2), (3), (4) and (5); or</p> <p>(b) achieve a fan motor input power per unit of flowrate lower than the fan motor input power per unit of flowrate achieved when applying (2), (3), (4) and (5) together.</p> <p>(2) Fans: (a) Fans in systems that have a static pressure of not more than 200 Pa must have an efficiency at the full load operating point not less than the efficiency calculated with the prescribed formula</p> <p>(a) In the formula at (a)— (i) = the minimum required system static efficiency for installation</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

	<p>type A or C or the minimum required system total efficiency installation type B or D; and</p> <p>(ii) = the static pressure of the system (Pa); and</p> <p>(iii) = natural logarithm.</p> <p>(b) Fans in systems that have a static pressure above 200 Pa must have an efficiency at the full load operating point not less than the efficiency calculated with the prescribed formula</p>	
J6D6	<p>Ductwork insulation</p> <p>(1) Ductwork and fittings in an air-conditioning system must be provided with insulation—</p> <p>(a) complying with AS/NZS 4859.1; and</p> <p>(b) having an insulation R-Value greater than or equal to— (i) for flexible ductwork, 1.0; or</p> <p>(ii) for cushion boxes, that of the connecting ductwork; or</p> <p>(iii) that specified in Table J6D6.</p> <p>(2) Insulation must— (a) be protected against the effects of weather and sunlight; and</p> <p>(b) be installed so that it— (i) abuts adjoining insulation to form a continuous barrier; and</p> <p>(ii) maintains its position and thickness, other than at flanges and supports; and</p> <p>(c) when conveying cooled air— (i) be protected by a vapour barrier on the outside of the insulation; and</p> <p>(ii) where the vapour barrier is a membrane, be installed so that adjoining sheets of the membrane— (A) overlap by at least 50 mm; and</p> <p>(B) are bonded or taped together.</p> <p>(3) The requirements of (1) do not apply to— (a) ductwork and fittings located within the only or last room served by the system; or</p> <p>(b) fittings that form part of the interface with the conditioned space; or</p> <p>(c) return air ductwork in, or passing through, a conditioned space; or</p> <p>(d) ductwork for outdoor air and exhaust air associated with an air-conditioning system; or</p> <p>(e) the floor of an in-situ air-handling unit; or</p> <p>(f) packaged air conditioners, split systems, and variable refrigerant flow air-conditioning equipment complying with MEPS; or</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

	<p>(g)flexible fan connections.</p> <p>(4)For the purposes of (1), (2) and (3), fittings— include non-active components of a ductwork system such as cushion boxes; and</p> <p>(b) exclude active components such as air-handling unit components.</p>	
J6D7	<p>Ductwork sealing</p> <p>Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.</p>	Further Detail will be required within the Crown Certificate documentation
J6D8	<p>Pump systems</p> <p>(1)General — Pumps and pipework that form part of an air-conditioning system must either—</p> <p>(a)separately comply with (2), (3) and (4); or</p> <p>(b)achieve a pump motor power per unit of flowrate lower than the pump motor power per unit of flowrate achieved when applying (2), (3) and (4) together.</p> <p>(2)Circulator pumps — A glandless impeller pump, with a rated hydraulic power output of less than 2.5 kW and that is used in closed loop systems must have an energy efficiency index (EEI) not more than 0.27 calculated in accordance with European Union Commission Regulation No. 622/2012.</p> <p>(3)Other pumps — Pumps that are in accordance with Articles 1 and 2 of European Union Commission Regulation No. 547/2012 must have a minimum efficiency index (MEI) of 0.4 or more when calculated in accordance with European Union Commission Regulation No. 547/2012.</p> <p>(4)Pipework — Straight segments of pipework along the index run, forming part of an air-conditioning system— (a)in pipework systems that do not have branches and have the same flow rate throughout the entire pipe network, must achieve an average pressure drop of not more than— (i)for constant speed systems, the values nominated in Table J6D8a; or (ii)for variable speed systems, the values nominated in Table J6D8b; or (b)in any other pipework system, must achieve an average pressure drop of not more than— (i)for constant speed systems, the values nominated in Table J6D8c; or</p>	Further Detail will be required within the Crown Certificate documentation

	<p>(ii)for variable speed systems, the values nominated in Table J6D8d.</p> <p>(5)The requirements of (4) do not apply— (a)to valves and fittings; or where the smallest pipe size compliant with (4) results in a velocity of 0.7 m/s or less at design flow.</p>	
J6D9	<p>Pipework insulation</p> <p>(1)Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation— (a)complying with AS/NZS 4859.1; and</p> <p>(b)for piping of heating and cooling fluids, having an insulation R-Value in accordance with Table J6D9a; and</p> <p>(c)for vessels, heat exchangers or tanks, having an insulation R-Value in accordance with Table J6D9b; and</p> <p>(d)for refill or pressure relief piping, having an insulation R-Value equal to the required insulation R-Value of the connected pipe, vessel or tank within 500 mm of the connection.</p> <p>(2)Insulation must— (a)be protected against the effects of weather and sunlight; and</p> <p>(b)be able to withstand the temperatures within the piping, vessel, heat exchanger or tank.</p> <p>(3)Insulation provided to piping, vessels, heat exchangers or tanks containing cooling fluid must be protected by a vapour barrier on the outside of the insulation.</p> <p>(4)The requirements of (1) and (2) do not apply to piping, vessels or heat exchangers—</p> <p>(a)located within the only or last room served by the system and downstream of the control device for the regulation of heating or cooling service to that room; or</p> <p>(b)encased within a concrete slab or panel which is part of a heating or cooling system; or</p> <p>(c)supplied as an integral part of a chiller, boiler or unitary air-conditioner complying with the requirements of J6D10, J6D11 and J6D12; or</p> <p>(d)inside an air-handling unit, fan-coil unit, or the like.</p> <p>(5)For the purposes of (1), (2), (3) and (4)— (a)heating fluids include refrigerant, heated water, steam and condensate; and</p> <p>(b)cooling fluids include refrigerant, chilled water, brines and glycol mixtures, but do not include condenser cooling water.</p>	<p>Further Detail will be required within the Crown Certificate documentation</p>

NSW J6D10	<p>Space heating</p> <p>(1)A heater used for air-conditioning or as part of an air-conditioning system must be— (a)a solar heater; or</p> <p>(b)a gas heater; or</p> <p>(c)a heat pump heater; or</p> <p>(d)a heater using reclaimed heat from another process such as reject heat from a refrigeration plant; or</p> <p>(e)an electric heater if— (i)the heating capacity is not more than— (A)10 W/m² of the floor area of the conditioned space in climate zone 1; or</p> <p>(B)40 W/m² of the floor area of the conditioned space in climate zone 2; or</p> <p>(C)the value specified in Table J6D10 where reticulated gas is not available at the allotment boundary; or space in climate zones 1, 2, 3, 4 and 5; or</p> <p>the annual energy consumption for heating is not more than 15 kWh/m² of the floor area of the (ii)conditioned</p> <p>(iii)the in-duct heater complies with J6D3(1)(b)(iii); or</p> <p>any combination of (a) to (e).</p> <p>(2)An electric heater may be used for heating a bathroom in a Class 3, 9a or 9c building if the heating capacity is not more than 1.2 kW and the heater has a timer.</p> <p>(3)A fixed heating or cooling appliance that moderates the temperature of an outdoor space must be configured to automatically shut down when— there are no occupants in the space served; or</p> <p>b)a period of one hour has elapsed since the last activation of the heater; or</p> <p>(c)the space served has reached the design temperature.</p> <p>(4)A gas water heater, that is used as part of an air-conditioning system, must— (a)if rated to consume 500 MJ/hour of gas or less, achieve a minimum gross thermal efficiency of 86%; or</p> <p>if rated to consume more than 500 MJ/hour of gas, achieve a minimum gross thermal efficiency of 90%.</p>	Further Detail will be required within the Crown Certificate documentation
J6D12	<p>Unitary air-conditioning equipment</p> <p>Unitary air-conditioning equipment including packaged air-conditioners, split systems, and</p>	Further Detail will be required within the Crown Certificate documentation

	variable refrigerant flow systems must comply with MEPS and for a capacity greater than or equal to 65 kW _r — (a)where water cooled, have a minimum energy efficiency ratio of 4.0 W _r /W _{input} power for cooling when tested in accordance with AS/NZS 3823.1.2 at test condition T1, where input power includes both compressor and fan input power; or (b)where air cooled, have a minimum energy efficiency ratio of 2.9 W _r /W _{input} power for cooling when tested in accordance with AS/NZS 3823.1.2 at test condition T1, where input power includes both compressor and fan input power.	
J6D13	Heat rejection equipment (1)The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J6D13. (2)The fan in an air-cooled condenser must have a motor rated power of not more than 42 W for each kW of heat rejected from the refrigerant, when determined in accordance with AHRI 460 except for— (a)a refrigerant chiller in an air-conditioning system that complies with the energy efficiency ratios in J6D11; or (b)packaged air-conditioners, split systems, and variable refrigerant flow air-conditioning equipment that complies with the energy efficiency ratios in J6D12.	Further Detail will be required within the Crown Certificate documentation
NSW J7D2	Application of Part (1)The Deemed-to-Satisfy Provisions of this Part do not apply to a Class 2 building or a Class 4 part of a building.	For Reference

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