

Date: 12 September 2022
Our Ref: P220130 (3)

Mr Robert Rezk
2 Toyers Ave
Sans Souci NSW 2219

Dear Robert,

**RE: 9 Lincoln St, Eastwood
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.

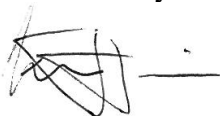
The inclusion of this summary enables an immediate understanding of the compliance status of the proposed design to be obtained.

- ☐ 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 Construction Certificate application to demonstrate the attainment of BCA compliance.

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

Yours faithfully

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

Kieran Tobin
Director

BCA COMPLIANCE ASSESSMENT

PREPARED FOR

Mr Robert Rezk

REGARDING
9 Lincoln St, Eastwood

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
P220130	3	Design Compliance Report	12 September 2022
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 Mr Robert Rezk, and relates to the premises located at 9 Lincoln St, Eastwood.

The project proposal is for construction of a new three storey Childcare Centre and one level of basement carpark.

1.2 REPORT BASIS

The content of this report reflects –

- (a) The principles and provisions of BCA 2019 (amendment 1), Parts B, C, D, E & F;
- (b) Architectural documentation provided by Liskowski Architects

DA001	COVER PAGE AND SHEET LIST A DA	09.09.22
DA010	SITE ANALYSIS PLAN A DA	09.09.22
DA050	DEMOLITION PLAN A DA	09.09.22
DA100	SITE AND ROOF PLAN A DA	09.09.22
DA101	BASEMENT PLAN A DA	09.09.22
DA102	GROUND FLOOR PLAN A DA	09.09.22
DA103	FIRST FLOOR PLAN A DA	09.09.22
DA200	ELEVATIONS A DA	09.09.22
DA300	LONG SECTIONS A DA	09.09.22
DA400	GFA PLANS A DA	09.09.22
DA900	MATERIALS AND FINISHES A DA	09.09.22

1.3 EXCLUSIONS

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

- (a) Structural and services design documentation;
- (b) General building services;
- (c) The individual requirements of service providers (i.e. Telstra, Water Supply, Energy Australia);
- (d) The individual requirements of the Workcover Authority;
- (e) Disability Discrimination Act (DDA);
- (f) Assessment of any structural elements or geotechnical matters relating to the building, including any;
- (g) Consideration of any fire services operations (including hydraulic, electrical or other systems);
- (h) Assessment of plumbing and drainage installations, including stormwater;
- (i) Assessment of mechanical plant operations, electrical systems or security systems;
- (j) Heritage significance;
- (k) Consideration of energy or water authority requirements;
- (l) Consideration of Council’s local planning policies;
- (m) Environmental or planning issues;
- (n) Requirements of statutory authorities;

- (o) Sections G, H, J or I of the BCA are not considered;
- (p) A site inspection of the existing building has only partially been undertaken by BCA Vision (Due to Covid restrictions), the internal portions were not accessed and assumptions have been made in regard to the condition, layout and construction of the internal portions of the existing building.
- (q) This report has been prepared for the exclusive use of the client referred to on the cover sheet of this report. We do not warrant or accept liability for the reliance upon or use of this report by any other party.
- (r) The report considers matters of a significant nature only and should not be considered exhaustive.
- (s) The report does not consider structural adequacy of the building.

1.4 REPORT PURPOSE

The purpose of this report is to identify the extent to which the change of use within the existing building may comply with the relevant prescriptive provisions of BCA 2019 (amendment 1), Parts B, C, D, E & F

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

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

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

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

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

2.0 MATTERS IDENTIFIED / RECOMMENDATIONS

2.1 COMPLIANCE PATHWAYS WITHIN THE BCA

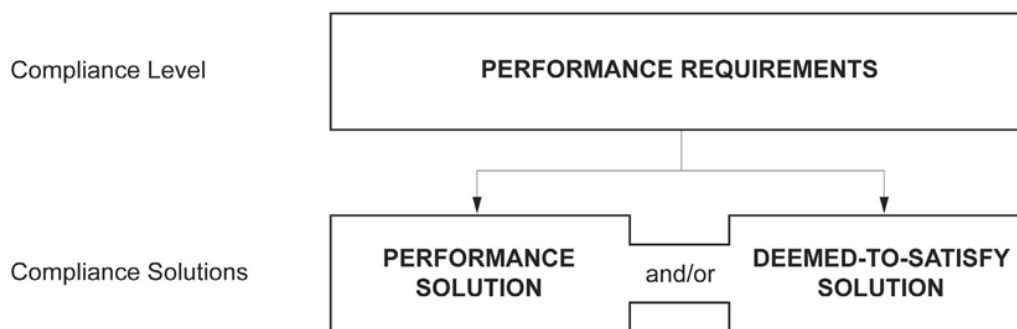
Compliance with the NCC is achieved by complying with—
(1) the Governing Requirements of the NCC; and
(2) the *Performance Requirements*.

A2.1 Compliance with the Performance Requirements

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

- (1) A *Performance Solution*.
- (2) A *Deemed-to-Satisfy Solution*.
- (3) A combination of (1) and (2).

Figure 1: NCC compliance option structure



2.2 KEY COMPLIANCE ISSUES IDENTIFIED

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

	BCA Clause	Comment
1	C1.1 Spec C1.1	The required Fire-Resistant Levels (FRLs) are detailed on page 4 of this report. Generally, the existing masonry external walls provide a compliant Fire Resistance Level (FRL); Wall sections and materials will be required within the CC Documentation to illustrate how the Fire Resistance Levels (FRLs) will be achieved in regard to the external walls and columns. Note Drawing DA002 refers to Type B Construction which is incorrect – Type A Construction applies.
2	C1.9 C1.14	AS 1530 Fire Test Certificates will be required for the proposed External wall systems to confirm non combustibility in regard to Cladding Insulation and Sarking

3	D2.21	In childcare centres a concession applies to the requirements for a lever type handle at Exit doors - where an Emergency Egress Plan is in place allowing an Exit Door to be immediately unlocked— (1) by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or (2) by hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire
4	F2.3	The quantity of junior sanitary facilities provided <u>allows for</u> the proposed 135 students and 10 staff members
5	F2.3	A Class 9b early childhood centre must be provided with— (i) a kitchen or food preparation area with a kitchen sink, separate hand washing facilities, space for a refrigerator and space for cooking facilities, with— (A) the facilities protected by a door or gate with child proof latches to prevent unsupervised access to the facilities by children younger than 5 years old; and (B) the ability to facilitate supervision of children from the facilities if the early childhood centre accommodates children younger than 2 years old
6	F2.4	Clause F2.4 identifies that an Accessible Sanitary Facility is required at each bank of toilets Generally this configuration is not consistent with Child Care Centre layouts due to the need for banks of Junior facilities – in our opinion the absence of an accessible facilities at each bank of toilets is acceptable given the use of the premises We do Highlight however that an Accessible Sanitary Facility has not been provided within the First Floor. We are advised that this compliance item will be addressed within a Performance Assessment Report
7	F4.1	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 A Window Schedule is required to determine compliance in this regard
8	Clause G1.3	Outdoor play spaces (a) Any outdoor play space in a Class 9b <i>early childhood centre</i> must be enclosed on all sides with a barrier which complies with AS 1926.1. (b) For the purposes of (a), AS 1926.1 is applied as if there is a <i>swimming pool</i> located outside the outdoor play space, so that the barrier restricts children from

		exiting the premises without the knowledge of staff in the centre.
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2.3 REQUIRED PERFORMANCE SOLUTIONS

The following table provides a list of building elements or conditions which will not meet the Deemed to Satisfy Requirements of the BCA and will require development of a Performance Solution Report - prepared by an appropriately Accredited Building Professional

Item No.	BCA Clause	Comment
1.	Clause FP1.4	The Design Architect (or similarly qualified person) will need to prepare a Performance Solution demonstrating that the external walls and roof will comply with the requirements of FP1.4
2.	Clause F2.3	The Kitchen does not provide an ability to facilitate supervision of children from the facilities if the early childhood centre accommodates children younger than 2 years old
3.	Clause F2.4	<p>Clause F2.4 identifies that an Accessible Sanitary Facility is required at each bank of toilets</p> <p>Generally this configuration is not consistent with Child Care Centre layouts due to the need for banks of Junior facilities – in our opinion the absence of an accessible facilities at each bank of toilets is acceptable given the use of the premises</p> <p>We do Highlight however that an Accessible Sanitary Facility has not been provided within the First Floor.</p> <p>We are advised that this compliance item will be addressed within a Performance Assessment Report</p>

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 3 (three)

2.3 BUILDING CLASSIFICATION (CLAUSE A3.2)

The entire building incorporates the following classifications:-

CLASS	DESCRIPTION
Class 5	Administrative Office
Class 7a	A Car Park
Class 9b	an <i>assembly building</i> , including a trade workshop, laboratory or the like in a primary or secondary <i>school</i> , but excluding any other parts of the building that are of another Class

2.4 EFFECTIVE HEIGHT (CLAUSE A1.1)

The building has an effective height Not exceeding 12m.

2.5 TYPE OF CONSTRUCTION (TABLE C1.1) Specification C1.1 - Type A Construction

External walls, common walls flooring and floor framing of lift pits must be non-combustible.

Any internal wall having an FRL must extend to –

- (i) the underside of the floor above; or
- (ii) the underside of a complying roof; or
- (iii) if the roof is not required to comply, the underside of the non-combustible roof covering and must not be crossed by combustible building elements (except 75 x 50 mm roof battens); or
- (iv) a ceiling immediately below the roof having a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.

A loadbearing internal wall and fire wall (including part of a loadbearing shaft) must be of concrete or masonry.

Non-loadbearing fire-resisting internal walls, fire and non-fire rated lift, ventilating, pipe, garbage, or similar shaft not for the discharge of hot products of combustion, must be of non-combustible construction.

External column FRL's apply to any internal columns that face and are within 1.5 m of a window and are exposed through that window to a fire-source feature.

2.4 Attachments not to impair fire-resistance

- (a) A combustible material may be used as a finish or lining to a wall or roof, or in a sign, sunscreen or blind, awning, or other attachment to a building element which has the required FRL if—
 - (i) the material is exempted under C1.10 or complies with the fire hazard properties prescribed in Specification C1.10; and
 - (ii) it is not located near or directly above a required exit so as to make the exit unusable in a fire; and
 - (iii) it does not otherwise constitute an undue risk of fire spread via the facade of the building.
- (b) The attachment of a facing or finish, or the installation of ducting or any other service, to a part of a building required to have an FRL must not impair the required FRL of that part

Table 3 TYPE A CONSTRUCTION: FRL OF BUILDING ELEMENTS

Building element	Class of building — FRL: (in minutes)		
	Structural adequacy/ Integrity/ Insulation		
	5, 7a or 9		
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any fire-source feature to which it is exposed is—			
For loadbearing parts—			
less than 1.5 m		120/120/120	
1.5 to less than 3 m		120/ 90/ 90	
3 m or more		120/ 60/ 30	
For non- loadbearing parts—			
less than 1.5 m		-/120/120	
1.5 to less than 3 m		-/ 90/ 90	
3 m or more		-/-/-	
EXTERNAL COLUMN not incorporated in an external wall—			
For loadbearing columns—			
		120/-/-	
For non- loadbearing columns—			
		-/-/-	
COMMON WALLS and FIRE WALLS—		120/120/120	
INTERNAL WALLS—			
Fire-resisting lift and stair shafts—			
Loadbearing		120/120/120	
Non- loadbearing		-/120/120	
Bounding public corridors, public lobbies and the like—			
Loadbearing		120/-/-	
Non- loadbearing		-/-/-	
Between or bounding sole-occupancy units—			
Loadbearing		120/-/-	
Non- loadbearing		-/-/-	
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion—			
Loadbearing		120/ 90/ 90	
Non- loadbearing		-/ 90/ 90	
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—			
		120/-/-	
FLOORS		120/120/120	
ROOFS		120/ 60/ 30	

External wall FRLs as applied to the subject site		
Boundary	Approximate Distance	FRL Required
South	<1.5m	120/120/120
South	<3m	120/ 90/ 90
East	<1.5m	120/120/120
East	<3m	120/ 90/ 90
West	<3m	120/ 90/ 90
Note:- Setback requirements are regardless of orientation		
Separation within the building		
		FRL Required
Floors		120/ 120/ 120
Separation Between class 7a garage and class 9b childcare		120/ 120/ 120
Fire Separation to Main Switch board Room		120/ 120/ 120

3.5 GENERAL FLOOR AREA LIMITATIONS (TABLE C2.2)

Note – Not applicable to residential portion

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

Table C2.2 – Maximum size of Fire Compartments				
Building Class		Type A	Type B	Type C
5, 9b, 9c	Max Floor area	8000 m²	5,500 m ²	3000 m ²
	Max Volume	48,000 m³	33,000 m ³	18,000 m ³

3.6 PART B1 - STRUCTURAL PROVISIONS

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

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

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

4.0 BCA ASSESSMENT – SUMMARY

4.1 GENERAL

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

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

NOTE PERF – REFERS TO A REQUIREMENT FOR PERFORMANCE ASSESSMENT

4.2 SECTION C – FIRE RESISTANCE

BCA reference	Complies	Does not comply	Detail Required	Not relevant
Spec. C1.1 – fire resisting construction			✓	
C1.3 – buildings of multiple classification				✓
C1.4 – mixed types of construction				✓
C1.5 – two storey Class 2 or 3 buildings				✓
C1.6 – Class 4 parts of a building				✓
C1.7 – open spectator stands & indoor sports stadiums				✓
C1.8 – lightweight construction				✓
C1.9 – non-combustible materials			✓	
C1.10 – fire hazard properties			✓	
C1.11 – performance of external walls				✓
C2.2 – general floor area & volume limits	✓			
C2.3 – large isolated buildings				✓
C2.4 – requirements for open spaces & vehicular access				✓
C2.5 – Class 9a and 9c buildings				✓
C2.6 – vertical separation of openings in external walls			✓	
C2.7 – separation of firewalls				✓
C2.8 – separation of classifications in same storey				✓
C2.9 – separation of classifications in different storeys			✓	
C2.10 – separation of lift shafts			✓	
C2.11 – stairways and lifts in one shaft				✓
C2.12 – separation of equipment			✓	
C2.13 – electricity supply system			✓	
C2.14 – public corridors in Class 2 and 3 buildings				✓
C3.1 – application of part				✓
C3.2 – openings in external walls			✓	
C3.3 – separation of external walls & associated openings				✓
C3.4 – acceptable methods of protection			✓	✓
C3.5 – doorways in firewalls			✓	
C3.6 – sliding fire doors				✓
C3.7 – doorways in horizontal exits				✓
C3.8 – openings in fire-isolated exits				✓
C3.9 – service penetrations in fire-isolated exits				✓
C3.10 – openings in fire-isolated lift shafts				✓
C3.11 – bounding construction: Class 2, 3, 4 buildings			✓	
C3.12 – openings in floors & ceilings for services			✓	
C3.13 – openings in shafts			✓	
C3.15 – openings for service installations			✓	
C3.16 – construction joints			✓	
C3.17 – columns protected with f/r lightweight construction			✓	

4.3 SECTION D – ACCESS AND EGRESS

BCA reference	Complies	Does not comply	Detail Required	Not relevant
D1.2 – number of exits required	✓			
D1.3 – when fire-isolated exits are required				✓
D1.4 – exit travel distances	✓			
D1.5 – distance between alternative exits	✓			
D1.6 – dimensions of exits and paths of travel to exits			✓	
D1.7 – travel via fire-isolated exits				✓
D1.8 – external stairways or ramps in lieu of fire-isolated exits				✓
D1.9 – travel via non-fire isolated stairways or ramps	✓			
D1.10 – discharge from exits	✓			
D1.11 – horizontal exits				✓
D1.12 – non-required stairways or ramps				✓
D1.16 – plant rooms and lift motor rooms: concession				✓
D1.17 – access to lift pits			✓	
D2.2 – fire-isolated stairways and ramps			✓	
D2.3 – non-fire isolated stairways and ramps			✓	
D2.4 – separation of rising and descending stair flights				✓
D2.5 – open access ramps and balconies				✓
D2.6 – smoke lobbies				✓
D2.7 – installations in exits and paths of travel			✓	
D2.8 – enclosure of space under stairs and ramps			✓	
D2.9 – width of stairways				✓
D2.10 – pedestrian ramps				✓
D2.11 – fire-isolated passageways				✓
D2.12 – roof as open space				✓
D2.13 – goings and risers			✓	
D2.14 – landings			✓	
D2.15 – thresholds			✓	
D2.16 – balustrades			✓	
D2.17 – handrails			✓	
D2.18 – fixed platforms, walkways, stairways and ladders				✓
D2.19 – doorways and doors			✓	
D2.20 – swinging doors			✓	
D2.21 – operation of latch			✓	
D2.22 – re-entry from fire-isolated exits				✓
D2.23 – signs on doors			✓	
D2.24 – Protection of Openable windows			✓	
D3.1 – General Building Access requirements			✓	
D3.2 – Access to Buildings			✓	
D3.3 – parts of buildings to be accessible			✓	
D3.4 – concessions			✓	
D3.5 – car parking			✓	
D3.6 – signage			✓	
D3.7 – hearing augmentation services and features				✓
D3.8 – tactile indicators			✓	
D3.9 – Wheelchair Seating				✓
D3.10 – Swimming Pools				✓
D3.11 - Ramps				✓
D3.12 – Glazing on Access ways			✓	

4.4 SECTION E – SERVICES AND EQUIPMENT

BCA reference	Complies	Does not comply	Detail Required	Not relevant
E1.3 – fire hydrants			✓	
E1.4 – fire hose reels			✓	
E1.D4 – sprinklers 2022 Standard			✓	
E1.6 – portable fire extinguishers			✓	
E1.8 – fire control centres				✓
E1.9 – fire precautions during construction				✓
E1.10 – provision for special hazards				✓
E2.2a – general provisions			✓	
E2.2b – specific provisions				✓
E2.3 – provision for special hazards				✓
E3.2 – stretcher facility in lifts				✓
E3.3 – warning against use of lifts in fire			✓	
E3.4 – emergency lifts				✓
E3.5 – landings			✓	
E3.6 – facilities for people with disabilities			✓	
E3.7 – fire service controls				✓
E3.8 – aged care buildings				✓
E3.9 – Fire Service Recall Switch				✓
E3.10 – Lift Car Fire Service Drive Control Switch				✓
E4.2 – emergency lighting			✓	
E4.4 – design and operation of emergency lighting			✓	
E4.5 – exit signs			✓	
E4.6 – direction signs			✓	
E4.7 – Class 2 and 3 buildings and Class 4 parts: exemptions				✓
E4.8 – design and operation of exit signs			✓	
E4.9 – Sound Systems & Intercom Systems for Emergencies				✓

3.1. SECTION F – HEALTH AND AMENITY

BCA reference	Complies	Does not comply	PERF	Detail required	Not relevant
F1.1 – storm water drainage				✓	
F1.5 – roof coverings				✓	
F1.6 – sarking				✓	
F1.7 – water proofing of wet areas				✓	
F1.9 – damp proofing				✓	
F1.10 – damp proofing of floors on ground				✓	
F1.11 – floor wastes				✓	
F1.12 – sub-floor ventilation					✓
F1.13 – glazed assemblies				✓	
F2.1 – facilities in residential buildings					✓
F2.3 – facilities in Class 3 to 9 buildings				✓	
F2.4 – facilities for people with disabilities				✓	
F2.5 – construction of sanitary compartments				✓	
F2.8 – waste management					✓
F3.1 – height of rooms				✓	
F4.1 – provision of natural light				✓	
F4.2 – methods and extent of natural lighting				✓	
F4.3 – natural lighting borrowed from adjoining room					✓
F4.4 – artificial lighting				✓	
F4.5 – ventilation of rooms				✓	
F4.6 – natural ventilation				✓	
F4.7 – ventilation borrowed from an adjoining room					✓
F4.8 – restriction on position of water closets and urinals					✓
F4.9 – airlocks					✓
F4.11 – car parks				✓	
F4.12 – kitchen local exhaust ventilation				✓	
F5.2 –Determination – airborne sound insulation					✓
F5.3 Determination – impact sound insulation					✓
F5.4 – sound insulation of floors					✓
F5.5 – sound insulation rating of walls					✓
F5.6 – sound insulation rating of services					✓
F5.7 – sound insulation of pumps					✓
F6.2 - Pliable building membrane					✓
F6.3 - Flow rate and discharge of exhaust systems					✓
F6.4 - Ventilation of roof spaces					✓

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 2019 amendment 1, Volume 1, can be achieved subject to the implementation of the following details into the Construction documentation.

4.1 SECTION C – FIRE RESISTANCE

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
Cl. C1.1	Type of construction required (a) The minimum Type of <i>fire-resisting construction</i> of a building must be that specified in Table C1.1 and Specification C1.1, (b) Type A construction is the most fire-resistant and Type C the least fire-resistant of the Types of construction.	Generally the building construction must achieve the minimum FRL requirements specified within clause 2.3 (page 3, 4 & 5) of this report for Type A Construction. Details of the method and type of construction will be required within the Construction documentation.
Cl. C1.10	Fire Hazard Properties (a) The <i>fire hazard properties</i> of the following linings, materials and assemblies in a Class 2 to 9 building must comply with Specification C1.10	Confirmation of the Fire Hazard properties will be required with the Construction Certificate Documentation. Floor linings and floor coverings A floor lining or floor covering must

		<p>have—</p> <p>(a) a <i>critical radiant flux</i> not less than a grouping of 2.2; and</p> <p>(b) in a building not protected by a sprinkler system complying with Specification E1.5, a maximum <i>smoke development rate</i> of 750 percent-minutes; and</p> <p>(c) a group number complying with Clause 6(a)(ii), for any portion of the floor covering that is continued more than 150 mm up a wall.</p> <p>Wall and ceiling linings – requires groupings as follows</p> <p>Fire Isolated Exit = Grouping of 1</p> <p>Public Corridors = a grouping of 1,2</p> <p>Other areas = a grouping of 1,2,3</p> <p>(a) For the purposes of this Clause, the <i>group number</i> of a material is determined by either—</p> <p>(i) physical testing in accordance with AS ISO 9705; or</p> <p>(ii) prediction in accordance with Clause 3 of Specification A2.4 using data obtained by testing the material at 50 kW/m² irradiance in the horizontal orientation with edge frame in accordance with AS/NZS 3837.</p> <p>(b) The <i>group number</i> of a material is as follows when tested or predicted in accordance with sub-clause (a):</p>
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		<ul style="list-style-type: none">(i) A Group 1 material is one that does not reach <i>flashover</i> when exposed to 100 kW for 600 seconds followed by exposure to 300 kW for 600 seconds.(ii) A Group 2 material is one that reaches <i>flashover</i> following exposure to 300 kW within 600 seconds after not reaching <i>flashover</i> when exposed to 100 kW for 600 seconds.(iii) A Group 3 material is one that reaches <i>flashover</i> in more than 120 seconds but within 600 seconds when exposed to 100 kW.(iv) A Group 4 material is one that reaches <i>flashover</i> within 120 seconds when exposed to 100 kW. <p>(c) A material used as a finish, surface, lining or attachment to a wall or ceiling must be a Group 1, Group 2 or Group 3 material used in accordance with Table 3 and for buildings not fitted with a sprinkler system complying with Specification E1.5, have—</p> <ul style="list-style-type: none">(i) a <i>smoke growth rate index</i> not more than 100; or(ii) an <i>average specific extinction area</i> less than 250 m²/kg. <p>Lift cars</p> <p>(a) Materials used as—</p> <ul style="list-style-type: none">(i) floor linings and floor coverings must have a <i>critical radiant flux</i> not less
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		<p>than 2.2; and</p> <p>(ii) wall and ceiling linings must be a Group 1 material or a Group 2 material in accordance with Clause 4(b).</p> <p>(a) Materials, other than those referenced in (a), used in the construction of a lift car in a Class 2 to 9 building must comply with the <i>fire hazard properties required</i> by AS 1735.2.</p>
Cl. C1.9	<p>Non-combustible building elements</p> <p>(a) In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible:</p> <p>(i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation.</p> <p>(ii) The flooring and floor framing of lift pits.</p> <p>(iii) Non-loadbearing internal walls where they are required to be fire-resisting.</p> <p>(b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in—</p> <p>(i) a building required to be of Type A construction; and</p> <p>(ii) a building required to be of Type B construction, subject to C2.10, in—</p> <p>(A) a Class 2, 3 or 9 building; and</p> <p>(B) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys.</p> <p>(c) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1.</p> <p>(d) The requirements of (a) and (b) do not apply to the following:</p> <p>(i) Gaskets.</p> <p>(ii) Caulking.</p> <p>(iii) Sealants.</p>	<p>An AS 1530.1 Fire Test Certificates must be obtained for:-</p> <p>Wall cladding</p> <p>Wall insulation</p> <p>An AS 1530.3 Fire Test Certificates must be obtained for:-</p> <p>Wall sarking</p>

	<ul style="list-style-type: none"> (iv) Termite management systems. (v) Glass, including laminated glass. (vi) Thermal breaks associated with glazing systems. (vii) Damp-proof courses. (e) The following materials may be used wherever a non-combustible material is required: <ul style="list-style-type: none"> (i) Plasterboard. (ii) Perforated gypsum lath with a normal paper finish. (iii) Fibrous-plaster sheet. (iv) Fibre-reinforced cement sheeting. (v) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (vi) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5. (vii) Bonded laminated materials where— <ul style="list-style-type: none"> (A) each lamina, including any core, is non-combustible; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (C) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively 	
Cl. C2.6	<p>Vertical separation of openings in external walls</p> <p>(a) If in a building of Type A construction, any part of a <i>window</i> or other opening in an <i>external wall</i> is above another opening in the <i>storey</i> next below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by—</p> <ul style="list-style-type: none"> (i) a spandrel which— <ul style="list-style-type: none"> (A) is not less than 900 mm in height; and (B) extends not less than 600 mm above the upper surface of the intervening floor; and (C) is of <i>non-combustible</i> material having an FRL of not less than 60/60/60; or (ii) part of a <i>curtain wall</i> or <i>panel wall</i> that complies with (i); or 	Details of the method and type of construction will be required within the Construction documentation

	<p>(iii) construction that complies with (i) behind a <i>curtain wall</i> or <i>panel wall</i> and has any gaps packed with a <i>non-combustible</i> material that will withstand thermal expansion and structural movement of the walling without the loss of seal against fire and smoke; or</p> <p>(iv) a slab or other horizontal construction that—</p> <p>(A) projects outwards from the external face of the wall not less than 1100 mm; and</p> <p>(B) extends along the wall not less than 450 mm beyond the openings concerned; and</p> <p>(C) is <i>non-combustible</i> and has an FRL of not less than 60/60/60.</p> <p>(b) The requirements of (a) do not apply to—</p> <p>(i) an <i>open-deck carpark</i>; or</p> <p>(ii) an <i>open spectator stand</i>; or</p> <p>(iii) a building which has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or</p> <p>(iv) openings within the same stairway; or</p> <p>(v) openings in <i>external walls</i> where the floor separating the <i>storeys</i> does not require an FRL with respect to <i>integrity</i> and <i>insulation</i>.</p> <p>(c) For the purposes of C2.6, <i>window</i> or other opening means that part of the <i>external wall</i> of a building that does not have an FRL of 60/60/60 or greater.</p>	
Cl. C2.9	<p>Separation of classifications in different storeys</p> <p>If parts of different classification are situated one above the other in adjoining <i>storeys</i> they must be separated as follows:</p> <p>(a) Type A construction — The floor between the adjoining parts must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower <i>storey</i>.</p> <p>(b) Type B or C construction — If one of the adjoining parts is of Class 2, 3 or 4, the floor separating the part from the <i>storey</i> below must—</p> <p>(i) be a floor/ceiling system incorporating a ceiling which has a <i>resistance to the incipient spread of fire</i> to the space above itself of not less than 60 minutes; or</p> <p>(ii) have an FRL of at least 30/30/30; or</p> <p>(iii) have a <i>fire-protective covering</i> on the underside of the floor, including beams incorporated in it, if the floor is <i>combustible</i> or of metal.</p>	<p>Details of the method and type of construction will be required within the Construction documentation</p>

Cl. C1.14	<p>Ancillary elements</p> <p>An <i>ancillary element</i> must not be fixed, installed or attached to the 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:</p> <ul style="list-style-type: none">(a) An <i>ancillary element</i> that is <i>non-combustible</i>.(b) A gutter, downpipe or other plumbing fixture or fitting.(c) A flashing.(d) A grate or grille not more than 2 m² in area associated with a building service.(e) An electrical switch, socket-outlet, cover plate or the like.(f) A light fitting.(g) A <i>required</i> sign.(h) A sign other than one provided under (a) or (g) that—<ul style="list-style-type: none">(i) achieves a <i>group number</i> of 1 or 2; and(ii) does not extend beyond one <i>storey</i>; and(iii) does not extend beyond one <i>fire compartment</i>; and(iv) is separated vertically from other signs permitted under (h) by at least 2 <i>storeys</i>.(i) An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that—<ul style="list-style-type: none">(i) meets the relevant requirements of Table 4 of Specification C1.10 as for an internal element; and(ii) serves a <i>storey</i>—<ul style="list-style-type: none">(A) at ground level; or(B) immediately above a <i>storey</i> at ground level; and(iii) does not serve an <i>exit</i>, where it would render the <i>exits</i> unusable in a fire.(j) A part of a security, intercom or announcement system.(k) Wiring.(l) A paint, lacquer or a similar finish.(m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k).	Details of the method and type of construction will be required within the Construction documentation
Cl. C2.12	<p>Separation of equipment</p> <p>(a) Equipment other than that described in <u>(b)</u> and <u>(c)</u> must be separated from the</p>	Verification will be required within the CC Documentation.

remainder of the building with construction complying with (d), if that equipment comprises—

- (i) lift motors and lift control panels; or
 - (ii) emergency generators used to sustain emergency equipment operating in the emergency mode; or
 - (iii) central smoke control plant; or
 - (iv) boilers; or
 - (v) a battery or batteries installed in the building that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours.
- (b) Equipment need not be separated in accordance with (a) if the equipment comprises—
- (i) smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification E2.2b; or
 - (ii) stair pressurising equipment installed in compliance with the relevant provisions of AS/NZS 1668.1; or
 - (iii) a lift installation without a machine-room; or
 - (iv) equipment otherwise adequately separated from the remainder of the building.
- (c) Separation of on-site fire pumps must comply with the requirements of AS 2419.1.
- (d) Separating construction must have—
- (i) except as provided by (ii)—
 - (A) an FRL as required by Specification C1.1, but not less than 120/120/120; and
 - (B) any doorway protected with a self-closing fire door having an FRL of not less than –/120/30; or
 - (ii) when separating a lift shaft and lift motor room, an FRL not less than

	120/-/-.	
Cl. C2.13	<p>Electricity supply system</p> <p>(a) An electricity substation located within a building must—</p> <p>(i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and</p> <p>(ii) 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>(b) A main switchboard located within the building which sustains emergency equipment operating in the emergency mode must—</p> <p>(i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and</p> <p>(ii) 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>(c) Electrical conductors located within a building that supply—</p> <p>(i) a substation located within the building which supplies a main switchboard covered by (b); or</p> <p>(ii) a main switchboard covered by (b), must—</p> <p>(iii) have a classification in accordance with AS/NZS 3013 of not less than—</p> <p>(A) if located in a position that could be subject to damage by motor vehicles — WS53W; or</p> <p>(B) otherwise — WS52W; or</p> <p>(iv) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120.</p> <p>(d) 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 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>(e) For the purposes of (d), emergency equipment includes but is not limited to the following:</p>	Verification will be required within the CC Documentation.

	<p>(i) Fire hydrant booster pumps.</p> <p>(ii) Pumps for <i>automatic</i> sprinkler systems, water spray, chemical fluid suppression systems or the like.</p> <p>(iii) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building.</p> <p>(iv) Air handling systems designed to exhaust and control the spread of fire and smoke.</p> <p>(v) Emergency lifts.</p> <p>(vi) Control and indicating equipment.</p> <p>(vii) Sound systems and intercom systems for emergency purposes.</p>	
Cl. C3.2	<p>Protection of openings in external walls</p> <p>Openings in an <i>external wall</i> that is <i>required</i> to have an FRL must—</p> <p>(a)if the distance between the opening and the <i>fire-source feature</i> to which it is exposed is less than—</p> <p>(i)3 m from a side or rear boundary of the allotment; or</p> <p>(ii)6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a <i>storey</i> at or near ground level; or</p> <p>(iii)6 m from another building on the allotment that is not Class 10,</p> <p>be protected in accordance with C3.4 and if wall-wetting sprinklers are used, they are located externally; and</p> <p>(b)if <i>required</i> to be protected under (a), not occupy more than 1/3 of the area of the <i>external wall</i> of the <i>storey</i> in which it is located unless they are in a Class 9b building used as an <i>open spectator stand</i>.</p>	Verification will be required with the Construction Documentation
Cl. C3.4	<p>Acceptable methods of protection</p> <p>(a)Where protection is <i>required</i>, doorways, <i>windows</i> and other openings must be protected as follows:</p> <p>(i)Doorways—</p> <p>(A)internal or external wall-wetting sprinklers as appropriate used with doors that are <i>self-closing</i> or <i>automatic closing</i>; or</p>	Verification will be required with the Construction Documentation

	<p>(B)–/60/30 fire doors that are <i>self-closing</i> or <i>automatic</i> closing.</p> <p>(ii) <i>Windows</i>—</p> <p>(A) internal or external wall-wetting sprinklers as appropriate used with <i>windows</i> that are <i>automatic</i> closing or permanently fixed in the closed position; or</p> <p>(B)–/60/– fire <i>windows</i> that are <i>automatic</i> closing or permanently fixed in the closed position; or</p> <p>(C)–/60/– <i>automatic</i> closing fire shutters.</p> <p>(iii) <i>Other openings</i>—</p> <p>(A) excluding voids — internal or external wall-wetting sprinklers, as appropriate; or</p> <p>(B) construction having an FRL not less than –/60/–.</p> <p>(b) Fire doors, fire <i>windows</i> and fire shutters must comply with Specification C3.4.</p>	
Cl. C3.5	<p>Doorways in fire walls</p> <p>(a) The aggregate width of openings for doorways in a <i>fire wall</i>, which are not part of a <i>horizontal exit</i>, must not exceed ½ of the length of the <i>fire wall</i>, and each doorway must be protected by—</p> <p>(i) 2 fire doors or fire shutters, one on each side of the doorway, each of which has an FRL of not less than ½ that <i>required</i> by Specification C1.1 for the <i>fire wall</i> except that each door or shutter must have an <i>insulation</i> level of at least 30; or</p> <p>(ii) a fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (i); or</p> <p>(iii) a single fire door or fire shutter which has an FRL of not less than that <i>required</i> by Specification C1.1 for the <i>firewall</i> except that each door or shutter must have an <i>insulation</i> level of at least 30.</p> <p>(b) A fire door or fire shutter <i>required</i> by (a)(i), (ii) or (iii) must be <i>self-closing</i>, or <i>automatic</i> closing in accordance with (c) and (d).</p> <p>(c) The <i>automatic</i> closing operation <i>required</i> by (b) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located on each side of the <i>fire wall</i> not more than 1.5m horizontal distance</p>	Verification will be required with the Construction Documentation

	from the opening.	
Cl. C3.10	<p>Openings in fire-isolated lift shafts</p> <p>(a)Doorways — If a lift <i>shaft</i> is <i>required</i> to be fire-isolated, an entrance doorway to that <i>shaft</i> must be protected by –/60/– fire doors that—</p> <p>(i)comply with AS 1735.11; and</p> <p>(ii)are set to remain closed except when discharging or receiving passengers, goods or vehicles.</p> <p>(b)Lift indicator panels — A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift <i>shaft</i> must be backed by construction having an FRL of not less than –/60/60 if it exceeds 35 000 mm² in area.</p>	Verification will be required with the Construction Documentation
Cl. C3.12	Service openings through any floors in the building must be either fire sealed or enclosed in a fire rated shaft, using materials having an FRL not less than the floor concerned.	Verification will be required with the Construction Documentation
Cl. C3.13	Openings to shafts must be self-closing and 1-hour fire rated (i.e. access panels, doors, hoppers).	Verification will be required with the Construction Documentation
Cl. C3.15	<p>Openings for service installations</p> <p>Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an <i>external wall</i> or roof) that is <i>required</i> to have an FRL with respect to <i>integrity</i> or <i>insulation</i> or a <i>resistance to the incipient spread of fire</i>, that installation must comply with any one of the following:</p> <p>(a) Tested systems</p> <p>(i) The service, building element and any protection method at the penetration 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 <i>required</i> FRL or <i>resistance to the incipient spread of fire</i>.</p> <p>(ii) It complies with (i) except for the <i>insulation</i> criteria relating to the service if—</p> <p>(A) the service is a pipe system comprised entirely of metal (excluding pipe seals or the like); and</p> <p>(B) any <i>combustible</i> building element is not located within 100 mm of the service for a distance of 2 m from the penetration; and</p> <p>(C) <i>combustible</i> material is not able to be located within 100 mm of the service for a distance of 2</p>	Verification will be required with the Construction Documentation

	<p>m from the penetration; and</p> <p>(D) it is not located in a <i>required exit</i>.</p> <p>(b) Ventilation and air-conditioning — In the case of ventilating or air-conditioning ducts or equipment, the installation is in accordance with AS/NZS 1668.1.</p> <p>(c) Compliance with Specification C3.15</p> <p>(i) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like) and is installed in accordance with Specification C3.15 and it—</p> <p>(A) penetrates a wall, floor or ceiling, but not a ceiling <i>required</i> to have a <i>resistance to the incipient spread of fire</i>; and</p> <p>(B) connects not more than 2 <i>fire compartments</i> in addition to any <i>fire-resisting service shafts</i>; and</p> <p>(C) does not contain a flammable or <i>combustible</i> liquid or gas.</p> <p>(ii) The service is sanitary plumbing installed in accordance with Specification C3.15 and it—</p> <p>(A) is of metal or UPVC pipe; and</p> <p>(B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and</p> <p>(C) is in a <i>sanitary compartment</i> separated from other parts of the building by walls with the FRL <i>required</i> by Specification C1.1 for a stair <i>shaft</i> in the building and a <i>self-closing</i> –/60/30 fire door.</p> <p>(iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification C3.15 and it—</p> <p>(A) penetrates a wall, floor or ceiling, but not a ceiling <i>required</i> to have a <i>resistance to the incipient spread of fire</i>; and</p> <p>(B) connects not more than 2 <i>fire compartments</i> in addition to any <i>fire-resisting service shafts</i>.</p> <p>(iv) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification C3.15.</p>	
Cl. C3.16	Construction joints between fire resistant elements must be fire sealed with a material having a fire resistance level not less than the elements being joined.	Verification will be required with the Construction Documentation

4.4 SECTION D – ACCESS AND EGRESS

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
Cl. D1.6	Dimensions of exits and paths of travel to exits In a <i>required exit</i> or path of travel to an <i>exit</i> — (a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and (b) the unobstructed width of each <i>exit</i> or path of travel to an <i>exit</i> , except for doorways, must be not less than 1m	Verification will be required with the Construction Documentation Note we would advise that stairs and ramps within and external to the building must achieve a width of 1200mm to allow for handrails to each side in accordance with clause 11 of AS 1428.1 – 2009 and a clear width of 1000mm
Cl. D1.17	Access to lift pits Access to lift pits must— (a) where the pit depth is not more than 3 m, be through the lowest landing doors	Verification will be required with the Construction Documentation
Cl. D2.7	Electrical ducts, meter or distribution boards, and communication boards or equipment, and electrical motors, must be separated from an exit or path of travel by smoke sealed non-combustible construction.	Verification will be required with the Construction Documentation
Cl. D2.8	Enclosure of space under stairs and ramps (b) Non fire-isolated stairways and ramps — The space below a <i>required non fire-isolated stairway</i> (including an external stairway) or non <i>fire-isolated ramp</i> must not be enclosed to form a cupboard or other enclosed space unless— (i) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and (ii) any access doorway to the enclosed space is fitted with a <i>self-closing</i> –/60/30 fire door.	Verification will be required with the Construction Documentation
Cl. D2.13	Goings and risers (a) A stairway must have—	Verification will be required with the Construction Documentation

- (i) not more than 18 nor less than 2 risers in each flight; and
 - (ii) except as permitted by (b) and (c), going (G), riser (R) and quantity $(2R + G)$ in accordance with Table D2.13; and
 - (iii) except as permitted by (b) and (c), goings and risers that are constant throughout in one flight; and
 - (iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and
 - (v) treads which have—
 - (A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or
 - (B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and
 - (vi) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and
 - (viii) in the case of a required stairway, no winders in lieu of a landing.
- (b) In the case of a non- required stairway—
- (i) the stairway must have—
 - (A) not more than 3 winders in lieu of a quarter landing; and
 - (B) not more than 6 winders in lieu of a half landing; and
 - (ii) the going of all straight treads must be constant throughout the same flight; and
 - (iii) the going of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going of all such winders is constant.

	<p>(c) Where a stairway discharges to a sloping public walkway or public road—</p> <p>(i) the riser (R) may be reduced to account for the slope of the walkway or road; and</p> <p>(ii) the quantity (2R+G) may vary at that location.</p>															
Cl. D2.14	<p>Landings In a stairway—</p> <p>(a) landings 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 landing must—</p> <p>(i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and</p> <p>(ii) have—</p> <p>(A) a surface with a slip-resistance classification not less than that listed in <u>Table D2.14</u> when tested in accordance with AS 4586; or</p> <p>(B) a strip at the edge of the landing with a slip-resistance classification not less than that listed in <u>Table D2.14</u> when tested in accordance with AS 4586, where the edge leads to a <i>flight</i> below</p> <p>Table D2.14 SLIP-RESISTANCE CLASSIFICATION</p> <table> <tr> <th rowspan="2">Application</th><th colspan="2">Surface conditions</th></tr> <tr> <th>Dry</th><th>Wet</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 landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr> </table>	Application	Surface conditions		Dry	Wet	Ramp steeper than 1:14	P4 or R11	P5 or R12	Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11	Tread or landing surface	P3 or R10	P4 or R11	Verification will be required with the Construction Documentation
Application	Surface conditions															
	Dry	Wet														
Ramp steeper than 1:14	P4 or R11	P5 or R12														
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11														
Tread or landing surface	P3 or R10	P4 or R11														

	Nosing or landing edge strip	P3	P4	
Cl. D2.15	<p>Thresholds The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—</p> <p>(a) in patient care areas in a Class 9a health-care building, the door sill is not more than 25 mm above the finished floor level to which the doorway opens; or</p> <p>(b) 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 required to be accessible by Part D3, the doorway—</p> <p>(i) opens to a road or open space; and</p> <p>(ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or</p> <p>d) in a Class 9b building used as an entertainment venue, the door sill of a doorway opening to a road, open space, external stair landing or external balcony is not more than 50 mm above the finished floor level to which the doorway opens; or</p> <p>(e) in other cases—</p> <p>(i) the doorway opens to a road or open space, 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>			Door Thresholds are required to comply with the requirements for Access to buildings in accordance with Clause AS 1428.1 - 2009 Verification will be required within the Construction Documentation.
Cl. D2.16	<p>Balustrades or other barriers</p> <p>(a) A continuous balustrade or other barrier must be provided along the side of any roof to which public access is provided, any stairway or ramp, any floor, corridor, hallway, balcony, deck, verandah, <u>mezzanine</u>, access bridge or the like and along the side of any delineated path of access to a building, if—</p> <p>(i) it is not bounded by a wall; and</p> <p>(ii) its level above the surface beneath, is more than—</p> <p>(A) 4 m where it is possible for a person to fall through an openable <u>window</u>; or</p> <p>(B) 1 m in any other case.</p> <p>(c) A balustrade or other barrier in—</p> <p>(i) <u>fire-isolated stairways</u>, <u>fire-isolated ramps</u> and other areas used primarily for emergency</p>			Verification will be required with the Construction Documentation

- purposes, excluding external stairways and external ramps; and
- (ii) Class 7 (other than car parks) and Class 8 buildings and parts of buildings containing those classes, must comply with (g) and (h)(i).
- (d) A balustrade or other barrier in stairways and ramps, other than those covered in (c), must comply with (g) and (h)(ii).
- (e) A balustrade or other barrier along the side of a horizontal or near horizontal surface such as a—
- (i) roof to which public access is provided and any path of access to a building; and
- (ii) floor, corridor, hallway, balcony, verandah, mezzanine, access bridge or the like,
- ☐ must comply with (g) and (h)(ii).
- (g) The height of a balustrade or other barrier must be constructed in accordance with the following:
- (i) The height is not less than 865 mm above the nosings of the stair treads or the floor of a ramp or other path of travel with a gradient not less than 1:20.
- (ii) The height is not less than—
- (A) 1 m above the floor of any access path, balcony, landing or the like where the path of travel has a gradient less than 1:20; or
- (B) 865 mm above the floor of a landing to a stair or ramp where the balustrade or other barrier is provided along the inside edge of the landing and does not exceed a length of 500 mm; or
- (C) 865 mm above the floor beneath an openable window.
- (iii) A transition zone may be incorporated where the balustrade or other barrier height changes from 865 mm on the stair flight or ramp to 1 m at the landing.
- (iv) For a balustrade or other barrier provided under (f), the height above the floor must be not less than—
- (A) 1 m; or
- (B) 700 mm and a horizontal projection extends not less than 1 m outwards from the top of the balustrade.
- (h) Openings in a balustrade or other barrier must be constructed in accordance with the following:
- (i) For a balustrade or other barrier provided under (c)—
- (A) the space between balusters or the width of any opening (including any openable window or

	<p>panel) must not be more than 300 mm; or</p> <p>(B) where rails are used, a rail must be provided at a height of not more than 150 mm above the nosings of the stair treads or the floor of the landing, balcony or the like and the space between rails must not be more than 460 mm.</p> <p>(ii) For a balustrade or other barrier other than those provided under (c)—</p> <p>(A) any opening does not permit a 125 mm sphere to pass through it and for stairs, the space is measured above the nosings; and</p> <p>(B) for floors more than 4 m above the surface beneath, any horizontal or near horizontal elements between 150 mm and 760 mm above the floor must not facilitate climbing.</p>	
Cl. D2.17	<p>Handrails must be provided to at least one side of all stairways and ramps less than 2-metres in width, and to both sides where more than 2-metres in width, and must: –</p> <ul style="list-style-type: none"> <input type="checkbox"/> Be continuous between stair flight landings <input type="checkbox"/> Have no obstruction that would cause a break in the hand hold <input type="checkbox"/> Have one rail fixed at a height not less than 865-mm 	Verification will be required with the Construction Documentation
Cl. D2.19	<p>Doorways and doors</p> <p>(a) A doorway in a <i>resident use area</i> of a Class 9c building must not be fitted with—</p> <ul style="list-style-type: none"> (i) a sliding fire door; or (ii) a sliding smoke door; or (iii) a revolving door; or (iv) a roller shutter door; or (v) a tilt-up door. <p>(b) A doorway serving as a <i>required exit</i> or forming part of a <i>required exit</i>, or a doorway in a <i>patient care area</i> of a Class 9a <i>health-care building</i>—</p> <ul style="list-style-type: none"> (i) must not be fitted with a revolving door; and (ii) must not be fitted with a roller shutter or tilt-up door unless— <ul style="list-style-type: none"> (A) it serves a Class 6, 7 or 8 building or part with a <i>floor area</i> not more than 200 m²; and (B) the doorway is the only <i>required exit</i> from the building or part; and (C) it is held in the open position while the building or part is lawfully occupied; and 	Verification will be required with the Construction Documentation

	<p>iii) must not be fitted with a sliding door unless—</p> <p>(A) it leads directly to a road or <i>open space</i>; and</p> <p>(B) the door is able to be opened manually under a force of not more than 110 N; and</p> <p>(iv) if fitted with a door which is power-operated—</p> <p>(A) it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and</p> <p>(B) if it leads directly to a road or <i>open space</i> it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the <i>fire compartment</i> served by the door.</p> <p>(c) A power-operated door in a path of travel to a <i>required exit</i>, except for a door in a <i>patient care area</i> of a Class 9a <i>health-care building</i> as provided in (b), must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source.</p>	
Cl. D2.20	<p>Swinging doors</p> <p>A swinging door in a <i>required exit</i> or forming part of a <i>required exit</i>—</p> <p>(a) must not encroach—</p> <p>(i) at any part of its swing by more than 500 mm on the <i>required</i> width (including any landings) of a <i>required</i>—</p> <p>(A) stairway; or</p> <p>(B) ramp; or</p> <p>(C) passageway,</p> <p>if it is likely to impede the path of travel of the people already using the <i>exit</i>; and</p> <p>(ii) when fully open, by more than 100 mm on the <i>required</i> width of the <i>required exit</i>, and the measurement of encroachment in each case is to include door handles or other furniture or attachments to the door; and</p> <p>(b) must swing in the direction of egress</p>	Verification will be required with the Construction Documentation
Cl. D2.21	<p>Operation of latch</p> <p>(a) A door in a <i>required exit</i>, forming part of a <i>required exit</i> or in the path of travel to a</p>	Verification will be required with the Construction Documentation

	<p><i>required exit</i> must be readily openable without a key from the side that faces a person seeking egress, by—</p> <p>(i) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area <i>required</i> to be <i>accessible</i> by Part D3—</p> <p>(A) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and</p> <p>(B) have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35 mm and not more than 45 mm; or</p> <p>(ii) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor.</p>	<p>Note In childcare centres a concession applies to these requirements where an Emergency Egress Plan is in place allowing an Exit Door to be immediately unlocked—</p> <p>(1) by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or</p> <p>(2) by hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire</p>
Cl. D2.24	<p>Protection of openable windows</p> <p>(a) A window opening must be provided with protection, if the floor below the window is 2 m or more above the surface beneath in—</p> <p>(i) a bedroom in a Class 2 or 3 building or Class 4 part of a building; or</p> <p>(ii) a Class 9b <i>early childhood centre</i>.</p> <p>(b) Where the lowest level of the window opening is less than 1.7 m above the floor, a window opening covered by (a) must comply with the following:</p> <p>(i) The openable portion of the window must be protected with—</p> <p>(A)</p> <p>a device capable of restricting the window opening; or</p> <p>(B)</p> <p>a screen with secure fittings.</p> <p>(ii) A device or screen <i>required</i> by (i) must—</p>	<p>Verification will be required with the Construction Documentation</p>

	<p>(A) not permit a 125 mm sphere to pass through the window opening or screen; and</p> <p>(B) resist an outward horizontal action of 250 N against the—</p> <p>(aa) window restrained by a device; or</p> <p>(bb) screen protecting the opening; and</p> <p>(C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.</p> <p>(c) A barrier with a height not less than 865 mm above the floor is <u>required</u> to an openable window—</p> <p>(i) in addition to window protection, when a child resistant release mechanism is <u>required</u> by (b)(ii)(C); and</p> <p>(ii) where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (a).</p> <p>(d) A barrier covered by (c) must not—</p> <p>(i) permit a 125 mm sphere to pass through it; and</p> <p>(ii) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.</p>	
Cl. D3.1	<p>General building access requirements</p> <p>Buildings and parts of buildings must be <i>accessible as required</i> by Table D3.1, unless exempted by D3.4.</p>	<p>Key Compliance issues</p> <p>1) An Access WC has not been provided on the upper floor</p> <p>Compliance with the AS 1428.1 Clauses following must be observed/demonstrated through construction:-</p> <p>Clause 6 - CONTINUOUS ACCESSIBLE PATHS OF TRAVEL</p> <p>Clause 7 - FLOOR OR GROUND</p>

		<p>SURFACES ON CONTINUOUS ACCESSIBLE PATHS OF TRAVEL AND CIRCULATION SPACES</p> <p>Clause 8 - SIGNAGE</p> <p>Clause 9 - TACTILE GROUND SURFACE INDICATORS</p> <p>Clause 10 - WALKWAYS, RAMPS AND LANDINGS</p> <p>Clause 11 - STAIRWAYS</p> <p>Clause 12 - HANDRAILS</p> <p>Clause 13 - DOORWAYS, DOORS AND CIRCULATION SPACE AT DOORWAYS</p> <p>Clause 14 - SWITCHES AND GENERAL PURPOSE OUTLETS (POWER POINTS)</p> <p>Clause 15 - SANITARY FACILITIES</p>
Cl. D3.2	<p>Access to Buildings</p> <ul style="list-style-type: none"> ▪ Must be provided by an AS 1428.1 complying path of travel from – <ul style="list-style-type: none"> (i) a entry point from the road at the allotment boundary to the entrance doorway. (ii) any disabled car parking space on the allotment. (iii) any other accessible building on the allotment. (iv) through the principal public entrance. ▪ Parts of buildings required to be accessible must comply with AS 1428.1 	For reference
Cl. D3.3	Parts of buildings to be accessible	For reference

	<p>In a building <i>required</i> to be <i>accessible</i>:</p> <p>(a) every ramp and stairway, except for ramps and stairways in areas exempted by clause D3.4, must comply with:</p> <p>(i) for a ramp, except a fire-isolated ramp, clause 10 of AS 1428.1; and</p> <p>(ii) for a stairway, except a fire-isolated stairway, clause 11 of AS 1428.1;</p> <p>(iii) for a fire-isolated stairway, clause 11.1(f) and (g) of AS 1428.1;</p> <p>(b) every passenger lift must comply with clause E3.6;</p> <p>(c) <i>access ways</i> must have:</p> <p>(i) passing spaces complying with AS 1428.1 at maximum 20 m intervals on those parts of an <i>access way</i> where a direct line of sight is not available; and</p> <p>(ii) turning spaces complying with AS 1428.1:</p> <p>(A) within 2 m of the end of <i>access ways</i> where it is not possible to continue travelling along the <i>access way</i>; and</p> <p>(B) at maximum 20 m intervals along the <i>access way</i>;</p> <p>(d) an intersection of <i>access ways</i> satisfies the spatial requirements for a passing and turning space;</p> <p>(e) a passing space may serve as a turning space;</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-</p> <p>(i) containing not 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.</p>	
Cl. D3.4	<p>Exemptions</p> <p>The following areas are not <i>required</i> to be <i>accessible</i>:</p> <p>(a) An area where access would be inappropriate because of the particular purpose for which</p>	<p>A Clause D3.4 concession has been applied within this assessment to the following areas</p>

	<p>the area is used.</p> <p>(b)An area that would pose a health or safety risk for people with a disability.</p> <p>(c)Any path of travel providing access only to an area exempted by (a) or (b).</p>	<p>Sore Room/s</p> <p>Bottle prep</p> <p>Laundry</p> <p>Garbage store</p> <p>Cot Room</p> <p>Children's Toilets</p>
Cl. D3.5	<p>Accessible carparking</p> <p><i>Accessible</i> carparking spaces—</p> <p>(a) subject to (b), must be provided in accordance with Table D3.5 in—</p> <p>(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 designated 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>Verification will be required with the Construction Documentation</p>
Cl. D3.8	<p>Tactile indicators</p> <p>(a) 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—</p> <p>(i) a stairway, other than a <i>fire-isolated stairway</i>; and</p> <p>(ii) an escalator; and</p> <p>(iii) a passenger conveyor or moving walk; and</p> <p>(iv) a ramp other than a <i>fire-isolated ramp</i>, step ramp, kerb ramp or <i>swimming pool</i> ramp; and</p> <p>(v) in the absence of a suitable barrier—</p> <p>(A) an overhead obstruction less than 2 m above floor level, other than a doorway; and</p> <p>(B) an <i>accessway</i> meeting a vehicular way adjacent to any pedestrian entrance to a building,</p>	<p>Verification will be required with the Construction Documentation</p>

	<p>excluding a pedestrian entrance serving an area referred to in D3.4, if there is no kerb or kerb ramp at that point, except for areas exempted by D3.4.</p> <p>(b) Tactile ground surface indicators <i>required</i> by (a) must comply with sections 1 and 2 of AS/NZS 1428.4.1.</p> <p>(c) 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 building need not comply with (a)(i) and (iv) if handrails incorporating a raised dome button in accordance with the requirements for stairway handrails in AS 1428.1 are provided to warn people who are blind or have a vision impairment that they are approaching a stairway or ramp.</p>	
Cl. D3.12	<p>D3.12 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>	<p>Verification will be required with the Construction Documentation</p>

4.5 SECTION E – SERVICES AND EQUIPMENT

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
Cl. E1.3	<p>Fire Hydrants</p> <ul style="list-style-type: none"> ▪ Be provided to a building more than 500 m² and where fire brigades can attend. ▪ Be AS 2419.1 installed, meet the operational requirements of the Brigades for flows and pressures, and when internal, serve only the storey on which they are located except a – <ul style="list-style-type: none"> (i) Class 2, 3, 4 sole-occupancy unit may be served by a single hydrant at the level of egress from that unit (ii) Class 5, 6, 7, 8, 9 sole-occupancy unit 2 or less storeys may be served by a single hydrant at the level of egress from that unit provided the hydrant can cover the whole unit ▪ On-site pump sets provided to achieve the AS 2419.1 performance requirements must comprise – <ul style="list-style-type: none"> (i) two pumps, at least one driven by a compression ignition engine or electric motor supplied from an emergency power generator; or (ii) two electric motor pumps connected to independent power sources; or (iii) if connected to a reticulated water supply and in a building not greater than 25 m, one pump driven by – <ul style="list-style-type: none"> (a) a compression ignition engine; or (b) an electric motor supplied from an emergency power generator; or (c) an electric motor connected to two independent power sources through an automatic change-over facility ▪ Internal fixed on-site pump sets must be in a clearly indicated room having direct egress to a road or open space and, if the building is not sprinkled, separated by construction having an FRL of that required for a fire wall for the classification occupied. ▪ External fixed on-site pump sets are to be in clearly indicated weatherproof enclosures with direct egress to a road or open space, and if within 6 m of the building – <ul style="list-style-type: none"> (i) each wall of the enclosure exposed to the building; or (ii) that part of the building external wall 2 m each side and 3 m above the enclosure; or (iii) a wall between the building and enclosure extending 2 m each side and 3 m above the enclosure, <p>has an FRL of that required for a fire wall for the classification occupied</p>	Verification will be required with the Construction Documentation

	Where the supply system is from a static source, suitable connections and vehicular access must permit Brigade personnel to draw water, and a fire-service booster connection is provided adjacent to allow boosting of the system	
Cl. E1.4	<p>Fire hose reels</p> <p>(a)E1.4 does not apply to—</p> <p>(i)a Class 2, 3 or 5 building or Class 4 part of a building; or</p> <p>(ii)a Class 8 <i>electricity network substation</i>; or</p> <p>(iii)a Class 9c building; or</p> <p>(iv)classrooms and associated corridors in a primary or secondary <i>school</i>.</p> <p>(b)A fire hose reel system must be provided—</p> <p>(i)to serve the whole building where one or more internal fire hydrants are installed; or</p> <p>(ii)where internal fire hydrants are not installed, to serve any <i>fire compartment</i> with a <i>floor area</i> greater than 500m².</p> <p>(c)The fire hose reel system must—</p> <p>(i)have fire hose reels installed in accordance with AS 2441; and</p> <p>(ii)provide fire hose reels to serve only the <i>storey</i> at which they are located, except a <i>sole-occupancy unit</i> of not more than 2 <i>storeys</i> in a Class 6, 7, 8 or 9 building may be served by a single fire hose reel located at the level of egress from that <i>sole-occupancy unit</i> provided the fire hose reel can provide coverage to the whole of the <i>sole-occupancy unit</i>.</p> <p>(d)Fire hose reels must be located internally, externally or in combination, to achieve the system coverage specified in AS 2441.</p> <p>(e)In achieving system coverage, one or a combination of the following criteria for individual internally located fire hose reels must be met in determining the layout of any fire hose reel system:</p> <p>(i)Fire hose reels must be located adjacent to an internal fire hydrant (other than one within a fire-isolated <i>exit</i>), except that a fire hose reel need not be located adjacent to every fire hydrant, provided system coverage can be achieved.</p> <p>(ii)Fire hose reels must be located within 4 m of an <i>exit</i>, except that a fire hose reel need not be located adjacent to every <i>exit</i>, provided system coverage can be achieved.</p>	Verification will be required with the Construction Documentation

	<p>(iii)Where system coverage is not achieved by compliance with (i) and (ii), additional fire hose reels may be located in paths of travel to an <i>exit</i> to achieve the <i>required</i> coverage.</p> <p>(f)Fire hose reels must be located so that the fire hose will not need to pass through doorways fitted with fire or smoke doors, except—</p> <p>(i)doorways in walls referred to in C2.5(a)(v) in a Class 9a building and C2.5(b)(iv) in a Class 9c building, separating ancillary use areas of high potential <i>fire hazard</i>; and</p> <p>(ii)doorways in walls referred to in C2.12 or C2.13 separating equipment or electrical supply systems; and</p> <p>(iii)doorway openings to <i>shafts</i> referred to in C3.13.</p> <p>(g)Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable—</p> <p>(i)a pump; or</p> <p>(ii)water storage facility; or</p> <p>(iii)both a pump and water storage facility,</p> <p>must be installed to provide the minimum flow and pressures required by clause 6.1 of AS 2441.</p>	
Cl. E1D4 BCA 2022	<p>Sprinklers [2019: E1.5]</p> <p>A sprinkler system must— (a)be installed in a building or part of a building when <i>required</i> by E1D5 to E1D12 as applicable; and comply with Specification 17 and Specification 18 as applicable</p>	<p>Verification will be required with the Construction Documentation</p>
Cl. E1D11 BCA 2022	<p>Where sprinklers are required: Class 9b buildings [2019: Table E1.5]</p> <p>(1)In a Class 9b building, other than an <i>early childhood centre</i>, see Part I1.</p> <p>(2)In a building containing a Class 9b <i>early childhood centre</i>, sprinklers are <i>required</i> throughout the whole building, including any part of another class.</p> <p>Exemptions E1D11(2) does not apply to a Class 9b <i>early childhood centre</i>— (a)wholly within a <i>storey</i></p>	<p>Verification will be required with the Construction Documentation</p>

	that provides direct egress to a road or <i>open space</i> ; or with a <i>rise in storeys</i> of not more than 2, where the Class 9b <i>early childhood centre</i> is the only use in the build	
Cl. E1.6	<p>Portable fire extinguishers</p> <p>(a) Portable fire extinguishers must be—</p> <p>(i) provided as listed in Table E1.6</p>	Verification will be required with the Construction Documentation
Cl. E2.2	<p>General requirements</p> <p>(a) A building must comply with (b), (c), (d) and—</p> <p>(i) Table E2.2a as applicable to Class 2 to 9 buildings such that each separate part complies with the relevant provisions for the classification; and</p> <p>(ii) Table E2.2b as applicable to Class 6 and 9b buildings such that each separate part complies with the relevant provisions for the classification.</p> <p>(b) An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one <i>fire compartment</i> to another <i>fire compartment</i> or operates in a manner that may unduly contribute to the spread of smoke from one <i>fire compartment</i> to another <i>fire compartment</i> must—</p> <p>(i) be designed and installed to operate as a smoke control system in accordance with AS 1668.1; or</p> <p>(ii)</p> <p>(A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the <i>fire compartments</i> served; and</p> <p>(B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close <i>automatically</i> by smoke detectors complying with clause 7.5 of AS 1670.1; and for the purposes of this provision, each <i>sole-occupancy unit</i> in a Class 2 or 3 building is treated as a separate <i>fire compartment</i>.</p> <p>(c) Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one <i>fire compartment</i> (other than a <i>carpark</i> ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard.</p> <p>Smoke Hazard Management</p> <p>Automatic shutdown:</p> <p>A building or part of a building used as an assembly building must be provided with automatic shutdown of any air-handling system (other than non-ducted individual room</p>	Verification will be required with the Construction Documentation

	<p>units with a capacity not more than 1000 L/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 6 of AS/NZS 1668.1) which does not form part of the smoke hazard management system, on the activation of—</p> <p>(i) smoke detectors installed complying with Clause 5 of Specification E2.2a; and</p> <p>(ii) any other installed fire detection and alarm system, including a sprinkler system complying with Specification E1.5.</p>	
Cl. E3.1	<p>Lift installations</p> <p>An <i>electric passenger lift</i> installation and an <i>electrohydraulic passenger lift</i> installation must comply with <u>Specification E3.1</u>.</p>	Verification will be required with the Construction Documentation
Cl. E3.3	<p>Warning against use of lifts in fire</p> <p>A warning sign must—</p> <p>(a) be displayed where it can be readily seen—</p> <p>(i) near every call button for a passenger lift or group of lifts throughout a building; except</p> <p>(ii) a small lift such as a dumb-waiter or the like that is for the transport of goods only; and</p> <p>(b) comply with the details and dimensions of Figure E3.3 and consist of—</p> <p>(i) incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or</p> <p>(ii) letters incised or inlaid directly into the surface of the material forming the wall.</p>	Verification will be required with the Construction Documentation

	<div><div><div>DO NOT USE LIFTS IF THERE IS A FIRE</div><div>10 mm</div></div><div>OR</div><div><div>Do not use lifts if there is a fire</div><div>8 mm</div></div></div>																			
Cl. E3.5	Landings Access and egress to and from lift well landings must comply with the <i>Deemed-to-Satisfy Provisions</i> of Section D.	Circulation space forward of the lift must have a minimum dimension of 1500mm to allow for a 90 degree turn																		
Cl. E3.6	<p>Passenger lifts</p> <p>In an <u>accessible</u> building, every passenger lift must—</p> <ul style="list-style-type: none">(a) be one of the types identified in <u>Table E3.6a</u>, subject to the limitations on use specified in the Table; and(b) have <u>accessible</u> features in accordance with <u>Table E3.6b</u>; and(c) not rely on a constant pressure device for its operation if the lift car is fully enclosed. <p>Table E3.6a LIMITATIONS ON USE OF TYPES OF PASSENGER LIFTS</p> <table><tr><th>Lift type</th><th>Limitations on use</th></tr><tr><td><u>Electric passenger lift</u></td><td>No limitation.</td></tr><tr><td><u>Electrohydraulic passenger lift</u></td><td>No limitation.</td></tr><tr><td><u>Stairway platform lift</u></td><td>Must not—</td></tr><tr><td></td><td>(a) be used to serve a space in a building accommodating more than 100 persons calculated according to <u>D1.13</u>; or</td></tr><tr><td></td><td>(b) be used in a high traffic public use area such as a theatre, cinema, auditorium, transport interchange, shopping centre or the like; or</td></tr><tr><td></td><td>(c) be used where it is possible to install another type of passenger lift; or</td></tr><tr><td></td><td>(d) connect more than 2 <u>storeys</u>; or</td></tr><tr><td></td><td>(e) where more than 1 stairway lift is installed, serve more than 2 consecutive <u>storeys</u>; or</td></tr></table>	Lift type	Limitations on use	<u>Electric passenger lift</u>	No limitation.	<u>Electrohydraulic passenger lift</u>	No limitation.	<u>Stairway platform lift</u>	Must not—		(a) be used to serve a space in a building accommodating more than 100 persons calculated according to <u>D1.13</u> ; or		(b) be used in a high traffic public use area such as a theatre, cinema, auditorium, transport interchange, shopping centre or the like; or		(c) be used where it is possible to install another type of passenger lift; or		(d) connect more than 2 <u>storeys</u> ; or		(e) where more than 1 stairway lift is installed, serve more than 2 consecutive <u>storeys</u> ; or	Verification will be required with the Construction Documentation
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	(e) where more than 1 stairway lift is installed, serve more than 2 consecutive <u>storeys</u> ; or																			

	(f)	when in the folded position, encroach on the minimum width of a stairway <i>required</i> by D1.6.
<i>Inclined lift</i>		No limitation.
<i>Low-rise platform lift</i>		Must not travel more than 1000 mm.
<i>Low-rise, low-speed constant pressure lift</i>		Must not—
	(a)	for an enclosed type, travel more than 4 m; or
	(b)	for an unenclosed type, travel more than 2 m; or
	(c)	be used in high traffic public use areas in buildings such as a theatre, cinema, auditorium, transport interchange, shopping complex or the like.
<i>Small sized, low-speed automatic lift</i>		Must not travel more than 12 m.

Table E3.6b APPLICATION OF FEATURES TO PASSENGER LIFTS

Feature		Application
Handrail complying with the provisions for a mandatory handrail in AS 1735.12		All lifts except—
	(a)	a <u>stairway platform lift</u> ; and
	(b)	a <u>low-rise platform lift</u> .
Lift floor dimension of not less than 1400 mm wide x 1600 mm deep		All lifts which travel more than 12 m.
Lift floor dimensions of not less than 1100 mm wide x 1400 mm deep		All lifts which travel not more than 12 m except a <u>stairway platform lift</u> .
Lift floor dimensions of not less than 810 mm wide x 1200 mm deep		A <u>stairway platform lift</u>
Minimum clear door opening complying with AS 1735.12		All lifts except a <u>stairway platform lift</u> .
Passenger protection system complying with AS 1735.12		All lifts with a power operated door.
Lift landing doors at the upper landing		All lifts except a <u>stairway platform lift</u> .
Lift car and landing control buttons complying with AS 1735.12		All lifts except—
	(a)	a <u>stairway platform lift</u> ; and
	(b)	a <u>low-rise platform lift</u> .
Lighting in accordance with AS 1735.12		All enclosed lift cars.
(a)	Automatic audible information within the lift car to identify the level each time the car stops; and	All lifts serving more than 2 levels.
(b)	audible and visual indication at each lift landing to indicate the arrival of the lift	

	<table border="1"> <tr> <td></td><td>car; and</td><td></td></tr> <tr> <td>(c)</td><td>audible information and audible indication <i>required</i> by (a) and (b) is to be provided in a range of between 20–80 dB(A) at a maximum frequency of 1 500 Hz</td><td></td></tr> <tr> <td></td><td>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</td><td>All lifts except a <i>stairway platform lift</i>.</td></tr> </table>		car; and		(c)	audible information and audible indication <i>required</i> by (a) and (b) is to be provided in a range of between 20–80 dB(A) at a maximum frequency of 1 500 Hz			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	All lifts except a <i>stairway platform lift</i> .	
	car; and										
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	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	All lifts except a <i>stairway platform lift</i> .									
Cl. E4.2	AS 2293.1 compliant emergency lighting must be provided throughout the building.	Verification will be required with the Construction Documentation									
Cl. E4.4	Refer Clause E4.2 above for emergency lighting requirements	Verification will be required with the Construction Documentation									
Cl. E4.5 Cl. E4.8	AS 2293.1 compliant Exit Signage is required above each Exit (door or stair)	Verification will be required with the Construction Documentation									
Cl. E4.6 Cl. E4.8	AS 2293.1 compliant Directional signage must be provided where Exit signage is not directly visible	Verification will be required with the Construction Documentation									

4.6 SECTION F – HEALTH AND AMENITY

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
Cl. F1.0	Deemed-to-Satisfy Provisions (a) Performance Requirement FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls. (b) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements FP1.1 to FP1.3 and FP1.5 to FP1.7 are satisfied by complying with F1.1 to F1.13. (c) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2.2(3) and A2.4(3) as applicable.	Verification will be required with the Construction Documentation
Cl. F1.1	Stormwater drainage Stormwater drainage must comply with AS/NZS 3500.3	Verification will be required with the Construction Documentation
Cl. F1.5	Roof coverings A roof must be covered with metal sheet roofing complying with AS 1562.1	Verification will be required with the Construction Documentation
Cl. F1.6	Sarking <i>Sarking-type materials</i> used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.	Verification will be required with the Construction Documentation
Cl. F1.7	Wet areas must be water proofed in accordance with AS 3740	Verification will be required with the Construction Documentation
Cl. F1.9	Damp-proofing (a) Except for a building covered by (c), moisture from the ground must be prevented from reaching— (i) the lowest floor timbers and the walls above the lowest floor joists; and (ii) the walls above the damp-proof course; and	Verification will be required with the Construction Documentation

	<p>(iii) the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders.</p> <p>(b) Where a damp-proof course is provided, it must consist of—</p> <p>(i) a material that complies with AS/NZS 2904; or</p> <p>(ii) impervious termite shields in accordance with AS 3660.1.</p> <p>(c) The following buildings need not comply with (a):</p> <p>(i) A Class 7 or 8 building where in the particular case there is no necessity for compliance.</p> <p>(ii) A garage, tool shed, <i>sanitary compartment</i>, or the like, forming part of a building used for other purposes.</p> <p>(iii) An <i>open spectator stand</i> or <i>open-deck car park</i>.</p>	
Cl. F1.10	<p>Damp-proofing of floors on the ground</p> <p>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, except damp-proofing need not be provided if—</p> <p>(a) weatherproofing is not <i>required</i>; or</p> <p>(b) the floor is the base of a stair, lift or similar <i>shaft</i> which is adequately drained by gravitation or mechanical means.</p>	Verification will be required with the Construction Documentation
Cl. F1.11	The floor of each bathroom and laundry must be graded to permit drainage to a floor waste.	Verification will be required with the Construction Documentation
Cl. F1.13	<p>Glazed assemblies</p> <p>(a) Subject to (b) and (c), the following glazed assemblies in an <i>external wall</i>, must comply with AS 2047 requirements for resistance to water penetration:</p> <p>(i) Windows.</p> <p>(ii) Sliding doors with a frame.</p> <p>(iii) Adjustable louvres.</p> <p>(iv) Shopfronts.</p>	Verification will be required with the Construction Documentation

	<p>(v) Window walls with one piece framing.</p> <p>(b) The following buildings need not comply with (a):</p> <p>(i) A Class 7 or 8 building where in the particular case there is no necessity for compliance.</p> <p>(ii) 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 contributes to the weatherproofing of the other part of the building.</p> <p>(iii) An <i>open spectator stand</i> or <i>open-deck car park</i>.</p> <p>(c) The following glazed assemblies need not comply with (a):</p> <p>(i) All glazed assemblies not in an <i>external wall</i>.</p> <p>(ii) Hinged doors, including French doors and bi-fold doors.</p> <p>(iii) Revolving doors.</p> <p>(iv) Fixed louvres.</p> <p>(v) Skylights, roof lights and windows in other than the vertical plane.</p> <p>(vi) Sliding doors without a frame.</p> <p>(vii) Shopfront doors.</p> <p>(viii) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047.</p> <p>(ix) Second-hand windows, re-used windows, recycled windows and replacement windows.</p> <p>(x) Heritage windows.</p>	
Cl. F2.3	<p>Facilities in Class 3 to 9 buildings</p> <p>(iv) one island-type plunge bath in each <i>storey</i> containing a <i>ward area</i>. <i>Vic F2.3(g) and (ga)</i></p> <p>(h) A Class 9b <i>early childhood centre</i> must be provided with—</p> <p>(i) a kitchen or food preparation area with a kitchen sink, separate hand washing facilities, space for a refrigerator and space for cooking facilities, with—</p> <p>(A) the facilities protected by a door or gate with child proof latches to prevent unsupervised access to the facilities by children younger than 5 years old; and</p> <p>(B) the ability to facilitate supervision of children from the facilities if the <i>early childhood</i></p>	<p>The quantity of junior sanitary facilities provided <u>allows for</u> the proposed 135 students and 10 staff members</p> <p>For Reference:-</p> <p>A Class 9b early childhood centre must be provided with—</p> <p>(i) a kitchen or food preparation area with a kitchen sink, separate hand washing</p>

	<p><i>centre</i> accommodates children younger than 2 years old; and</p> <p>(ii) one bath, shower or shower-bath; and</p> <p>(iii) if the <i>centre</i> accommodates children younger than 3 years old—</p> <p>(A) a laundry facility comprising a washtub and space in the same room for a washing machine; and</p> <p>(B) a bench type baby bath, which is within 1 m of the nappy change bench; and</p> <p>(C) a nappy changing bench which—</p> <p>(aa) is within 1 m of separate adult hand washing facilities and bench type baby bath; and</p> <p>(bb) must be not less than 0.9 m^2 in area and at a height of not less than 850 mm, but not more than 900 mm above the finished floor level; and</p> <p>(cc) must have a space not less than 800 mm high, 500 mm wide and 800 mm deep for the storage of steps; and</p> <p>(dd) is positioned to permit a staff member changing a nappy to have visibility of the play area at all times.</p>	<p>facilities, space for a refrigerator and space for cooking facilities, with—</p> <p>(A) the facilities protected by a door or gate with child proof latches to prevent unsupervised access to the facilities by children younger than 5 years old; and</p> <p>(B) the ability to facilitate supervision of children from the facilities if the early childhood centre accommodates children younger than 2 years old</p>
Cl. F2.4	<p>Accessible sanitary facilities</p> <p>In a building <i>required</i> to be <i>accessible</i>—</p> <p>(a) <i>accessible</i> unisex <i>sanitary compartments</i> must be provided in <i>accessible</i> parts of the building in accordance with Table F2.4(a); and</p> <p>(b) <i>accessible</i> unisex showers must be provided in accordance with Table F2.4(b); 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, a <i>sanitary compartment</i> suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females; 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 towels; and</p> <p>(e) the circulation spaces, fixtures and fittings of all <i>accessible</i> sanitary facilities provided in accordance with Table F2.4(a) and Table F2.4(b) must comply with the requirements of AS 1428.1</p>	<p>The Accessible sanitary facilities will be required to be compliant with Clause 15 of AS 1428.1 as an Accessible sanitary facility</p> <p>An Accessible Sanitary Facility is required at each bank of toilets</p> <p>Generally this configuration is not consistent with Child Care Centre layouts due to the need for banks of Junior facilities – in our opinion the absence of an accessible facilities at each bank of toilets is acceptable given the use of the premises</p>

		An Accessible sanitary facility is required within Level 1
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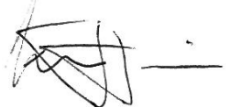
Cl. F3.1	<p>Height of rooms and other spaces</p> <p>The height of rooms and other spaces must be not less than—</p> <p>(a) in a Class 2 or 3 building or Class 4 part of a building—</p> <p>(i) a kitchen, laundry, or the like — 2.1 m; and</p> <p>(ii) a corridor, passageway or the like — 2.1 m; and</p> <p>(iii) a <i>habitable room</i> excluding a kitchen — 2.4 m; and</p> <p>(iv) in a room or space with a sloping ceiling or projections below the ceiling line within—</p> <p>(A) a <i>habitable room</i>—</p> <p>(aa) in an attic — a height of not less than 2.2 m for not less than two-thirds of the <i>floor area</i> of the room or space; and</p> <p>(bb) in other rooms — a height of not less than 2.4 m for not less than two-thirds of the <i>floor area</i> of the room or space; and</p> <p>(B) a <i>non-habitable room</i> — a height of not less than 2.1 m for not less than two-thirds of the <i>floor area</i> of the room or space; and</p> <p>when calculating the <i>floor area</i> of a room or space, any part that has a ceiling height of less than 1.5 m is not included; and</p> <p>(b) in a Class 5, 6, 7 or 8 building—</p> <p>(i) except as allowed in (ii) and (f) — 2.4 m; and</p> <p>(ii) a corridor, passageway, or the like — 2.1 m; and</p> <p>(d) in a Class 9b building—</p> <p>(i) a <i>school</i> classroom or other <i>assembly building</i> or part that accommodates not more than 100 persons — 2.4 m; and</p> <p>(ii) a commercial kitchen — 2.4 m; and</p> <p>(iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like.</p>	Verification will be required with the Construction Documentation
Cl. F4.1	Provision of natural light	For Reference

	<p>Natural light must be provided in:</p> <p>(a) Class 2 buildings and Class 4 parts of buildings — to all <i>habitable rooms</i>.</p> <p>(b) Class 3 buildings — to all bedrooms and dormitories.</p> <p>(c) Class 9a and 9c buildings — to all rooms used for sleeping purposes.</p> <p><i>Vic F4.1(d)</i></p> <p>(d) Class 9b buildings — to all general purpose classrooms in primary or secondary <i>schools</i> and all playrooms or the like for the use of children in an <i>early childhood centre</i>.</p>	
Cl. F4.2	<p>Part F4 Light and ventilation</p> <p><i>Deemed-to-Satisfy Provisions</i></p> <p>Methods and extent of natural light</p> <p>(a) <i>Required</i> natural light must be provided by—</p> <p>(i) <i>windows</i>, excluding <i>roof lights</i>, that—</p> <p>(A) 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</p> <p>(B) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or</p> <p>(ii) <i>roof lights</i>, that—</p> <p>(A) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the <i>floor area</i> of the room; and</p> <p>(B) are open to the sky; or</p> <p>(iii) a proportional combination of <i>windows</i> and <i>roof lights</i> required by (i) and (ii).</p> <p><i>Vic F4.2(b)</i></p> <p>(b) Except in a Class 9c <i>aged care building</i>, in a Class 2, 3 or 9 building or Class 4 part of a building a <i>required window</i> that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of—</p> <p>(i) generally — 1 m; and</p> <p>(ii) in a <i>patient care area</i> or other room used for sleeping purposes in a Class 9a building — 3 m; and</p>	<p>In a Class 9b <i>early childhood centre</i>, the sills of 50% of <i>windows</i> in children's rooms must be located not more than 500 mm above the floor level</p>

	<p>(iii) 50% of the square root of the exterior height of the wall in which the <i>window</i> is located, measured in meters from its sill.</p> <p><i>Vic F4.2(c)</i></p> <p>(c) In a Class 9c <i>aged care building</i>, a <i>required window</i> must be transparent and located—</p> <p>(i) in an <i>external wall</i> with the <i>window</i> sill not more than 1 m above the floor level; and</p>	
Cl. F4.4	Artificial lighting must be AS 1680 compliant.	Verification will be required with the Construction Documentation
Cl. F4.5	Ventilation to rooms and spaces other than habitable rooms within the Residential Sole Occupancy Units must be either natural or AS 1668.2 compliant mechanical ventilation.	Verification will be required with the Construction Documentation
Cl. F4.11	<p>Car parks</p> <p>(a) Every <i>storey</i> of a <i>car park</i>, except an <i>open-deck car park</i>, must have—</p> <p>(i) a system of ventilation complying with AS 1668.2; or</p> <p>(ii) an adequate system of permanent natural ventilation.</p> <p>(b) A mechanical ventilation system, serving a <i>car park</i> with more than 40 vehicle spaces and controlled by an atmospheric contaminant monitoring system in accordance with AS 1668.2, may be stopped when the monitored condition is below the determined maximum concentration if—</p> <p>(i) the system operates intermittently to provide a minimum of 0.5 air changes per hour (ACH) during any 24 hour period; or</p> <p>(ii) a supplemental natural ventilation system equivalent to (i) is provided.</p>	
Cl. F4.12	<p>Kitchen local exhaust ventilation</p> <p>A commercial kitchen must be provided with a kitchen exhaust hood complying with AS 1668.1 and AS 1668.2 where—</p> <p>(a) any cooking apparatus has—</p> <p>(i) a total maximum electrical power input exceeding 8 kW; or</p> <p>(ii) a total gas power input exceeding 29 MJ/h; or (b) the total maximum power input to more than one apparatus exceeds—</p> <p>(i) 0.5 kW electrical power; or</p>	Verification will be required with the Construction Documentation

	(ii) 1.8 MJ/hour gas, 2 per m of floor area of the room or enclosure.	
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Author



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