



Date: 21 June 2022
Our Ref: P210138 (3)

NSW Land & Housing Corporation
Locked Bag 7028
Liverpool BC 1871
Att: Van Huynh

Dear Van,

**RE: 15-17 Cecily St, Belfield
DESIGN COMPLIANCE ASSESSMENT**

Please find enclosed our BCA Design 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 3 and 4 as: –

- ☐ Part 3 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 4 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 insufficient (design) detail, as applicable.

This commentary enables the project team to readily identify and understand the nature and extent of information required within the Building Permit (or other) 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', followed by a horizontal line.

**Kieran Tobin
Director**

DESIGN COMPLIANCE ASSESSMENT

PREPARED FOR

NSW Land & Housing Corporation

REGARDING

15-17 Cecily St, Belfield

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
P210138	1	Design Compliance Assessment	23 September 2021
P210138	2	Design Compliance Assessment	28 October 2021
P210138	3	Design Compliance Assessment	21 June 2022

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1.0 INTRODUCTION

1.1 GENERAL

This “BCA Compliance Assessment” report has been prepared at the request of NSW Land & Housing Corporation and relates to 15-17 Cecily St, Belfield.

The project proposal includes construction of a new residential unit buildings containing 8 units.

This report is based upon, and limited to, the information depicted in the documentation provided for assessment, and does not make assumptions regarding “design intention” or the like.

1.2 REPORT BASIS

The content of this report reflects –

- (a) The principles and provisions of BCA 2019 Amendment 1
- (b) Architectural documentation prepared by DKT Studio Architects

Plan Number	Titled	Dated
A00	Cover Page	10/06/22
A03	Site Plan	10/06/22
A04	Ground Floor Plan	10/06/22
A05	First Floor Plan	10/06/22
A06	Roof Plan	10/06/22
A07	Elevations	10/06/22
A08	Elevations and Sections	10/06/22
A09	Ground Floor Circulation Space	10/06/22
A10	First Floor Circulation Space	10/06/22
A13	Finishes	10/06/22

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 (i.e. passenger lifts);
- (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).

1.4 REPORT PURPOSE

The purpose of this report is to identify the extent to which the architectural design documentation complies with the relevant prescriptive provisions of the BCA 2019 Amendment 1.

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 insufficient detail exists, summary of the information required from the project team for inclusion within future applications (i.e. Building Permit) shall also be outlined in Part 4.

2.0 BUILDING DESCRIPTION

2.1 GENERAL

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

2.2 RISE IN STOREYS (CLAUSE C1.2)

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

2.2 BUILDING CLASSIFICATION (CLAUSE A3.2)

Building A incorporates the following classifications:-

CLASS	DESCRIPTION
Class 2	A residential building,

2.3 EFFECTIVE HEIGHT (CLAUSE A1.1)

The building has an effective height Not exceeding 12m.

2.6 TYPE OF CONSTRUCTION (TABLE C1.1)

The Building is Required to be of Type B Construction.

Table 4 TYPE B CONSTRUCTION: FRL OF BUILDING ELEMENTS

Building element	Class of building—FRL: (in minutes)	
	<u>Structural adequacy/ Integrity/ Insulation</u>	
	2, 3 or 4 part	
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any <u>fire-source feature</u> to which it is exposed is—		
For <u>loadbearing</u> parts—		
	less than 1.5 m	90/ 90/ 90
	1.5 to less than 3 m	90/ 60/ 30
	3 to less than 9 m	90/ 30/ 30
	9 to less than 18 m	90/ 30/—
	18 m or more	—/—/—
For non- <u>loadbearing</u> parts—		
	less than 1.5 m	—/ 90/ 90
	1.5 to less than 3 m	—/ 60/ 30
	3 m or more	—/—/—
EXTERNAL COLUMN not incorporated in an <u>external wall</u> , where the distance from any <u>fire-source feature</u> to which it is exposed is—		
For <u>loadbearing</u> columns—		

Building element		Class of building—FRL: (in minutes)
		<u>Structural adequacy/ Integrity/ Insulation</u>
		2, 3 or 4 part
	less than 18 m	90/—/—
	18 m or more	—/—/—
For non- <i>loadbearing</i> columns—		
		—/—/—
COMMON WALLS and FIRE WALLS—		90/ 90 / 90
INTERNAL WALLS—		
<i>Fire-resisting</i> lift and stair <i>shafts</i> —		
	<i>Loadbearing</i>	90/ 90/ 90
<i>Fire-resisting</i> stair <i>shafts</i> —		
	Non- <i>loadbearing</i>	—/ 90/ 90
Bounding <i>public corridors</i> , public lobbies and the like—		
	<i>Loadbearing</i>	60/ 60/ 60
	Non- <i>loadbearing</i>	—/ 60/ 60
Between or bounding <i>sole-occupancy units</i> —		
	<i>Loadbearing</i>	60/ 60/ 60
	Non- <i>loadbearing</i>	—/ 60/ 60
OTHER LOADBEARING INTERNAL WALLS		
and COLUMNS—		60/—/—

3.0 BCA ASSESSMENT – SUMMARY

3.1. 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 “insufficient detail”, a detailed analysis and commentary is provided within Part 4.

3.2. 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				✓
C1.12 – non-combustible materials				✓
C1.13 – Fire-protected timber: Concession			✓	
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				✓
C3.2 – 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 and 9 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			✓	

3.3. 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				✓
D1.13 – number of persons accommodated				✓
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 – Openable windows			✓	
D3.1 – general building access requirements			✓	
D3.2 – Access to buildings			✓	
D3.3 – parts of buildings to be accessible			✓	
D3.4 – exemptions				✓
D3.5 – accessible car parking			✓	
D3.6 – signage			✓	
D3.7 – hearing augmentation				✓
D3.8 – tactile indicators			✓	
D3.9 – Wheelchair seating spaces class 9b				✓
D3.10 – swimming pools				✓
D3.11 – ramps				✓
D3.12 – glazing on an accessway			✓	

3.4. SECTION E – SERVICES AND EQUIPMENT

BCA reference	Complies	Does not comply	Detail required	Not relevant
E1.3 – fire hydrants			✓	
E1.4 – fire hose reels				
E1.5 – sprinklers				✓
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 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 – emergency warning and intercommunication systems				✓

3.1. SECTION F – HEALTH AND AMENITY

BCA reference	Complies	Does not comply	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			✓	

3.2. SECTION G – HEALTH AND AMENITY

BCA reference	Complies	Does not comply	Detail required	Not relevant
Part G1 – Minor Structures and Components				✓
Part G2 – Heating Appliances				✓
Part G3 – Atrium Construction				✓
Part G4 – Construction in Alpine Areas				✓
Part G5 – Construction in Bushfire Prone Areas				✓

3.3. SECTION J – ENERGY EFFICIENCY

BCA reference	Complies	Does not comply	Detail required	Not relevant
J1.2 – thermal construction general				✓*
J1.3 – roof and ceiling construction				✓*
J1.4 – roof lights				✓*
J1.5 – walls				✓*
J1.6 – floors				✓*
J2.4 – glazing				✓*
J2.5 – shading				✓*
J3.2 – chimneys and flues				✓*
J3.3 – roof lights				✓*
J3.4 – external windows and doors			✓	
J3.5 – exhaust fans			✓	
J3.6 – construction of roofs, walls and floors			✓	
J3.7 – Evaporative coolers				✓
J5.2 – air conditioning and ventilation systems			✓	
J5.3 – time switch				✓
J5.4 – heating and cooling systems			✓	
J5.5 – ancillary exhaust systems				✓
J6.2 – interior artificial lighting			✓	
J6.3 – interior artificial lighting and power control	✓			
J6.4 – Interior and decorative lighting				✓
J6.5 – Artificial lighting around perimeter of building			✓	
✓* = Address within BASIX Certificate				

4.0 BCA ASSESSMENT – DETAILED ANALYSIS

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

4.2 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 Details of the method and type of construction will be required within the Construction documentation.
Cl. C1.9	Non-combustible building elements (a) In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible: (i) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. (ii) The flooring and floor framing of lift pits.	Details of the method and type of construction will be required within the Construction documentation.

	<p>(iii) Non-loadbearing internal walls where they are required to be fire-resisting.</p> <p>(b) A shaft, being a of hot products of combustion, lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge 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 loadbearing shaft, must comply with , including those that are part of a Specification C1.1.</p> <p>(d) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants and damp-proof courses.</p> <p>(e) The following materials may be used wherever a non-combustible material is required:</p> <p>(i) Plasterboard.</p> <p>(ii) Perforated gypsum lath with a normal paper finish.</p> <p>(iii) Fibrous-plaster sheet.</p> <p>(iv) Fibre-reinforced cement sheeting.</p> <p>(i) 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.</p> <p>(vi) Bonded laminated materials where—</p> <p>(A) each lamina, including any core, is non-combustible; and</p> <p>(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</p> <p>(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.</p>	
Cl. C1.10	<p>Fire Hazard Properties</p> <p>(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</p>	<p>Confirmation of the Fire Hazard properties will be required with the Construction Certificate Documentation.</p> <p>Floor linings and floor coverings</p> <p>A floor lining or floor covering must 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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		<p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(iv) A Group 4 material is one that reaches <i>flashover</i> within 120 seconds when exposed to 100 kW.</p> <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> <p>(i) a <i>smoke growth rate index</i> not more than 100; or</p> <p>(ii) an <i>average specific extinction area</i> less than 250 m²/kg.</p> <p>Lift cars</p> <p>(a) Materials used as—</p> <p>(i) floor linings and floor coverings must</p>
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		<p>have a <i>critical radiant flux</i> not less 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. C1.13	<p>Fire-protected timber:</p> <p>Concession Fire-protected timber may be used wherever an element is required to be non-combustible, provided—</p> <p>(a) the building is—</p> <p>(i) a separate building; or</p> <p>(ii) a part of a building—</p> <p>(A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or</p> <p>(B) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and</p> <p>(b) the building has an effective height of not more than 25 m; and</p> <p>(c) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification E1.5; and</p> <p>(d) any insulation installed in the cavity of the timber building element required to have an FRL is non-combustible; and</p> <p>(e) cavity barriers are provided in accordance with Specification C1.13.</p>	<p>Verification will be required with the Construction Documentation</p>
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 remainder of the building with construction complying with <u>(d)</u>, if that equipment</p>	<p>Verification will be required within the Construction Documentation.</p>

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> <ul style="list-style-type: none"> (a) An electricity substation located within a building must— <ul style="list-style-type: none"> (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have any doorway in that construction protected with a <u>self-closing</u> fire door having an FRL of not less than -/120/30. (b) A main switchboard located within the building which sustains emergency equipment operating in the emergency mode must— <ul style="list-style-type: none"> (i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and (ii) have any doorway in that construction protected with a <u>self-closing</u> fire door having an FRL of not less than -/120/30. (c) Electrical conductors located within a building that supply— <ul style="list-style-type: none"> (i) a substation located within the building which supplies a main switchboard covered by <u>(b)</u>; or (ii) a main switchboard covered by <u>(b)</u>, must— <ul style="list-style-type: none"> (iii) have a classification in accordance with AS/NZS 3013 of not less than— <ul style="list-style-type: none"> (A) if located in a position that could be subject to damage by motor vehicles — WS53W; or (B) otherwise — WS52W; or (iv) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120. (d) Where emergency equipment is <u>required</u> in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be 	<p>Verification will be required within the Construction Documentation.</p>

	<p>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> <ul style="list-style-type: none"> (i) Fire hydrant booster pumps. (ii) Pumps for <i>automatic</i> sprinkler systems, water spray, chemical fluid suppression systems or the like. (iii) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building. (iv) Air handling systems designed to exhaust and control the spread of fire and smoke. (v) Emergency lifts. (vi) Control and indicating equipment. (vii) Sound systems and intercom systems for emergency purposes. 	
Cl. C3.11	Doorways leading from sole occupancy units to a public corridor, public lobby, a room not within a sole occupancy unit and any other sole occupancy unit must be self-closing -/60/30 fire doors.	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>	Verification will be required with the Construction Documentation

- (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 *required* FRL or *resistance to the incipient spread of fire*.
- (ii) It complies with (i) except for the *insulation* criteria relating to the service if—
 - (A) the service is a pipe system comprised entirely of metal (excluding pipe seals or the like); and
 - (B) any *combustible* building element is not located within 100 mm of the service for a distance of 2 m from the penetration; and
 - (C) *combustible* material is not able to be located within 100 mm of the service for a distance of 2 m from the penetration; and
 - (D) it is not located in a *required* exit.
- (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.
- (c) **Compliance with Specification C3.15**
 - (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—
 - (A) penetrates a wall, floor or ceiling, but not a ceiling *required* to have a *resistance to the incipient spread of fire*; and
 - (B) connects not more than 2 *fire compartments* in addition to any *fire-resisting* service shafts; and
 - (C) does not contain a flammable or *combustible* liquid or gas.
 - (ii) The service is sanitary plumbing installed in accordance with Specification C3.15 and it—
 - (A) is of metal or UPVC pipe; and
 - (B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and
 - (C) is in a *sanitary compartment* separated from other parts of the building by walls with the FRL *required* by Specification C1.1 for a stair *shaft* in the building and a *self-closing* –/60/30 fire door.
 - (iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with

	<p>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</i> service shafts.</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	<p>Dimensions of exits and paths of travel to exits In a <u>required exit</u> or path of travel to an <u>exit</u>—</p> <ul style="list-style-type: none"> (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 <u>exit</u> or path of travel to an <u>exit</u>, except for doorways, must be not less than 1m 	Verification will be required with the Construction Documentation
Cl. D1.17	<p>Access to lift pits Access to lift pits must—</p> <ul style="list-style-type: none"> (a) where the pit depth is not more than 3 m, be through the lowest landing doors; or (b) where the pit depth is more than 3 m, be provided through an access doorway complying with the following: <ul style="list-style-type: none"> (i) In lieu of D1.6, the doorway must be level with the pit floor and not be less than 600 mm wide by 1980 mm high clear opening, which may be reduced to 1500 mm where it is necessary to comply with (ii). (ii) No part of the lift car or platform must encroach on the pit doorway entrance when the car is on a fully compressed buffer. (iii) Access to the doorway must be by a stairway complying with AS 1657. (iv) In lieu of D2.21, doors fitted to the doorway must be— <ul style="list-style-type: none"> (A) of the horizontal sliding or outwards opening hinged type; and (B) self-closing and self-locking from the outside; and (C) marked on the landing side with the letters not less than 35 mm high: “DANGER LIFTWELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES” 	Verification will be required with the Construction Documentation

Cl. D2.3	<p>Non-fire-isolated stairways and ramps</p> <p>In a building having a rise in storeys of more than 2, required stairs and ramps (including landings and any supporting building elements) which are not required to be within a fire-resisting shaft, must be constructed according to D2.2, or only of—</p> <ul style="list-style-type: none"> (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— <ul style="list-style-type: none"> (i) has a finished thickness of not less than 44 mm; and (ii) has an average density of not less than 800 kg/m³ at a moisture content of 12%; and (iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue. 	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	<p>Enclosure of space under stairs and ramps</p> <ul style="list-style-type: none"> (a) Fire-isolated stairways and ramps — If the space below a <u>required fire-isolated stairway</u> or <u>fire-isolated ramp</u> is within the fire-isolated <u>shaft</u>, it must not be enclosed to form a cupboard or similar enclosed space. (b) Non fire-isolated stairways and ramps — The space below a <u>required</u> non <u>fire-isolated stairway</u> (including an external stairway) or non <u>fire-isolated ramp</u> must not be enclosed to form a cupboard or other enclosed space unless— <ul style="list-style-type: none"> (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 <u>self-closing</u> –/60/30 fire door. 	For reference
Cl. D2.13	<p>Goings and risers</p> <ul style="list-style-type: none"> (a) A stairway must have— <ul style="list-style-type: none"> (i) not more than 18 nor less than 2 risers in each <u>flight</u>; and (ii) except as permitted by (b) and (c), going (G), riser (R) and quantity 	Verification will be required with the Construction Documentation

- | | | |
|--|---|--|
| | <p>(2R + G) in accordance with <u>Table D2.13</u>; and</p> <p>(iii) except as permitted by (b) and (c), goings and risers that are constant throughout in one <u>flight</u>; and</p> <p>(iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and</p> <p>(v) treads which have—</p> <ul style="list-style-type: none">(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(B) a nosing strip with a slip-resistance classification not less than that listed in <u>Table D2.14</u> when tested in accordance with AS 4586; and <p>(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 <u>storeys</u>; and</p> <p>(viii) in the case of a <u>required</u> stairway, no winders in lieu of a landing.</p> <p>(b) In the case of a non- <u>required</u> stairway—</p> <ul style="list-style-type: none">(i) the stairway must have—<ul style="list-style-type: none">(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 <u>flight</u>; 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 <u>flight</u> 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> </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	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											

	<table> <tr> <td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr> <tr> <td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr> </table>	Tread or landing surface	P3 or R10	P4 or R11	Nosing or landing edge strip	P3	P4	
Tread or landing surface	P3 or R10	P4 or R11						
Nosing or landing edge strip	P3	P4						
Cl. D2.15	<p>Thresholds</p> <p>The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—</p> <ul style="list-style-type: none"> (a) in <i>patient care areas</i> in a Class 9a <i>health-care building</i>, the door sill is not more than 25 mm above the finished floor level to which the doorway opens; or (b) in a Class 9c <i>aged care building</i>, a ramp is provided with a maximum gradient of 1:8 for a maximum height of 25 mm over the threshold; or (c) in a building <i>required</i> to be <i>accessible</i> by <i>Part D3</i>, the doorway— <ul style="list-style-type: none"> (i) opens to a road or <i>open space</i>; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (d) in other cases— <ul style="list-style-type: none"> (i) the doorway opens to a road or <i>open space</i>, external stair landing or external balcony; and (ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens. 	<p>Thresholds at the building entry points must comply with AS 1428.1 – 2009.</p> <p>Verification will be required within the Construction Documentation.</p>						
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, <i>mezzanine</i>, access bridge or the like and along the side of any delineated path of access to a building, if—</p> <ul style="list-style-type: none"> (i) it is not bounded by a wall; and 	<p>Verification will be required with the Construction Documentation</p>						

- (ii) its level above the surface beneath, is more than—
 - (A) 4 m where it is possible for a person to fall through an openable window; or
 - (B) 1 m in any other case.
- (c) A balustrade or other barrier in—
 - (i) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency 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—

	<p>(A) 1 m; or</p> <p>(B) 700 mm and a horizontal projection extends not less than 1 m outwards from the top of the balustrade.</p> <p>(h) Openings in a balustrade or other barrier must be constructed in accordance with the following:</p> <p>(i) For a balustrade or other barrier provided under (c)—</p> <p>(A) the space between balusters or the width of any opening (including any openable <u>window</u> or 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> <p><input type="checkbox"/> Be continuous between stair flight landings</p> <p><input type="checkbox"/> Have no obstruction that would cause a break in the hand hold</p> <p><input type="checkbox"/> Have one rail fixed at a height not less than 865-mm</p>	Verification will be required with the Construction Documentation
Cl. D2.21	<p>All doors in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily provided with door hardware located between 900-1100-mm above floor level and be readily openable without a key from the side facing a person seeking egress by a single downward action.</p>	Verification will be required with the Construction Documentation
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>	Verification will be required with the Construction Documentation

- (ii) a Class 9b *early childhood centre*.
- (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:
 - (i) The openable portion of the window must be protected with—
 - (A)
a device capable of restricting the window opening; or
 - (B)
a screen with secure fittings.
 - (ii) A device or screen *required* by (i) must—
 - (A) not permit a 125 mm sphere to pass through the window opening or screen; and
 - (B) resist an outward horizontal action of 250 N against the—
 - (aa) window restrained by a device; or
 - (bb) screen protecting the opening; and
 - (C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden.
- (c) A barrier with a height not less than 865 mm above the floor is *required* to an openable window—
 - (i) in addition to window protection, when a child resistant release mechanism is *required* by (b)(ii)(C); and
 - (ii) where the floor below the window is 4 m or more above the surface beneath if the window is not covered by (a).
- (d) A barrier covered by (c) must not—

	<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</i> as <i>required</i> by Table D3.1, unless exempted by D3.4.</p> <p>Class 5 - 8</p> <p>To all areas normally occupied within the building</p> <p>Common areas</p> <p>Class 3</p> <p>Units</p> <p>At Least 2 Units are required to be fully “Accessible”</p> <p>Common Areas</p> <p>From a pedestrian entrance <i>required</i> to be <i>accessible</i> to at least 1 floor containing <i>sole-occupancy units</i> and to the entrance doorway of each <i>sole-occupancy unit</i> located on that level. To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, <i>swimming pool</i>, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed— (a) to the entrance doorway of each <i>sole-occupancy unit</i>; and (b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp. Not more than 2 <i>required accessible sole-occupancy units</i> may be located adjacent to each other. Where more than 2 <i>accessible sole-occupancy units</i> are <i>required</i>, they must be representative of the range of rooms available.</p>	<p>The Development is proposed under the Housing SEPP – an Access Report will be required to assess the Housing SEPP and AS 1428.1 – 2009 requirements. The following key elements require further detail within the proposed plans:-</p> <ol style="list-style-type: none"> 1) Details of compliant floor surface materials will be required in accordance with Clause 7 of AS 1428.1; 2) Details of compliant turning and passing areas within the pathway to all units will be required in accordance with Clause 7 of AS 1428.1; 3) Details of the walkways From the street to each unit entry will be required in accordance with Clause 10 & 12 of AS 1428.1; 4) Details of the hand rail compliance to the stairs from the basement car park; will be required in accordance with Clause 12 of AS 1428.1;

		<p>5) Details of the door dimensions, circulation and door approach dimensions door hardware and colour contrast at doors in accordance with Clause 13 of AS 1428.1</p> <p>6) Clause 15 Sanitary requirements</p> <p>7) Compliance with Clause E3.6 Lift requirements</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	<p>Parts of buildings to be accessible</p> <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>	For reference

	<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. D3.5	<p>Accessible carparking Accessible 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 required to be accessible; and</p> <p>(ii) a carparking area on the same allotment as a building required to be accessible; 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>	Verification will be required with the Construction Documentation
Cl. D3.6	<p>Signage</p> <p>In a building <u>required</u> to be <u>accessible</u>—</p> <p>(a) braille and tactile signage complying with <u>Specification D3.6</u> must—</p> <p>(i) incorporate the international symbol of access or deafness, as appropriate, in accordance with AS 1428.1 and identify each—</p>	Verification will be required with the Construction Documentation

	<p>(A) sanitary facility, except a sanitary facility within a <u>sole-occupancy unit</u> in a Class 1b or Class 3 building; and</p> <p>(B) space with a hearing augmentation system; and</p> <p>(ii) identify each door <u>required</u> by E4.5 to be provided with an <u>exit</u> sign and state—</p> <p>(A) "Exit"; and</p> <p>(B) "Level" followed by the floor level number; and</p> <p>(b) signage including the international symbol for deafness in accordance with AS 1428.1 must be provided within a room containing a hearing augmentation system identifying—</p> <p>(i) the type of hearing augmentation; and</p> <p>(ii) the area covered within the room; and</p> <p>(iii) if receivers are being used and where the receivers can be obtained; and</p> <p>(c) signage in accordance with AS 1428.1 must be provided for <u>accessible</u> unisex sanitary facilities to identify if the facility is suitable for left or right handed use; and</p> <p>(d) signage to identify an ambulant <u>accessible</u> sanitary facility in accordance with AS 1428.1 must be located on the door of the facility; and</p> <p>(e) where a pedestrian entrance is not <u>accessible</u>, directional signage incorporating the international symbol of access, in accordance with AS 1428.1 must be provided to direct a person to the location of the nearest <u>accessible</u> pedestrian entrance; and</p> <p>(f) where a bank of sanitary facilities is not provided with an <u>accessible</u> unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must be placed at the location of the sanitary facilities that are not <u>accessible</u>, to direct a person to the location of the nearest <u>accessible</u> unisex sanitary facility.</p>	
Cl. D3.8	<p>Tactile indicators</p> <p>(a) For a building <u>required</u> to be <u>accessible</u>, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are</p>	<p>Verification will be required with the Construction Documentation</p>

	<p>approaching—</p> <ul style="list-style-type: none"> (i) a stairway, other than a <u>fire-isolated stairway</u>; and (ii) an escalator; and (iii) a passenger conveyor or moving walk; and (iv) a ramp other than a <u>fire-isolated ramp</u>, step ramp, kerb ramp or <u>swimming pool</u> ramp; and (v) in the absence of a suitable barrier— <ul style="list-style-type: none"> (A) an overhead obstruction less than 2 m above floor level, other than a doorway; and (B) an <u>accessway</u> meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in <u>D3.4</u>, if there is no kerb or kerb ramp at that point, <p>except for areas exempted by <u>D3.4</u>.</p> <p>(b) Tactile ground surface indicators <u>required</u> by (a) must comply with sections 1 and 2 of AS/NZS 1428.4.1</p>	
<p>Cl. D3.12</p>	<p>Glazing on an accessway</p> <p>On an <u>accessway</u>, 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 	<p>Verification will be required with the Construction Documentation</p>

	<p>the enclosure,</p> <p>has an FRL of that required for a fire wall for the classification occupied</p> <p>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</p>	
Cl. E1.6	<p>Portable fire extinguishers</p> <p>(a) Portable fire extinguishers must be—</p> <p>(i) provided as listed in <u>Table E1.6</u>; and</p> <p>(ii) for a Class 2 or 3 building or Class 4 part of a building, provided—</p> <p>(A) to serve the whole Class 2 or 3 building or Class 4 part of a building where one or more internal fire hydrants are installed; or</p> <p>(B) where internal fire hydrants are not installed, to serve any <u>fire compartment</u> with a <u>floor area</u> greater than 500 m², and for the purposes of this clause, a <u>sole-occupancy unit</u> in a Class 2 or 3 building or Class 4 part of a building is considered to be a <u>fire compartment</u>; and</p> <p>(iii) subject to <u>(b)</u>, selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444.</p> <p>(b) Portable fire extinguishers provided in a Class 2 or 3 building or Class 4 part of a building must be—</p> <p>(i) an ABE type fire extinguisher; and</p> <p>(ii) a minimum size of 2.5 kg; and</p> <p>(iii) distributed outside a <u>sole-occupancy unit</u>—</p> <p>(A) to serve only the <u>storey</u> at which they are located; and</p> <p>(B) so that the travel distance from the entrance doorway of any <u>sole-occupancy unit</u> to the nearest fire extinguisher is not more than 10 m.</p>	<p>Verification will be required with the Construction Documentation</p>

Cl. E2.2a	<p>General requirements</p> <ul style="list-style-type: none">(a) A building must comply with <u>(b)</u>, <u>(c)</u>, <u>(d)</u> and—<ul style="list-style-type: none">(i) <u>Table E2.2a</u> as applicable to Class 2 to 9 buildings such that each separate part complies with the relevant provisions for the classification; and(ii) <u>Table E2.2b</u> as applicable to Class 6 and 9b buildings such that each separate part complies with the relevant provisions for the classification.(b) An air-handling system which does not form part of a smoke hazard management system in accordance with <u>Table E2.2a</u> or <u>Table E2.2b</u> and which recycles air from one <u>fire compartment</u> to another <u>fire compartment</u> or operates in a manner that may unduly contribute to the spread of smoke from one <u>fire compartment</u> to another <u>fire compartment</u> must—<ul style="list-style-type: none">(i) be designed and installed to operate as a smoke control system in accordance with AS/NZS 1668.1; or(ii)<ul style="list-style-type: none">(A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the <u>fire compartments</u> served; and(B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close <u>automatically</u> by smoke detectors complying with clause 4.10 of AS/NZS 1668.1; andfor the purposes of this provision, each <u>sole-occupancy unit</u> in a Class 2 or 3 building is treated as a separate <u>fire compartment</u>.(c) Miscellaneous air-handling systems covered by Sections 5 and 11 of AS/NZS 1668.1 serving more than one <u>fire compartment</u> (other than a <u>carpark</u> ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard.(d) A smoke detection system must be installed in accordance with <u>Clause 5 of Specification E2.2a</u> to operate AS/NZS 1668.1 systems that are provided for zone smoke control and <u>automatic</u> air pressurisation for fire-isolated <u>exits</u>.	Verification will be required with the Construction Documentation
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	<p>CLASS 2 AND 3 BUILDINGS AND CLASS 4 PART OF A BUILDING</p> <p>A Class 2 and 3 building or part of a building and Class 4 part of a building must be provided with an <u>automatic</u> smoke detection and alarm system complying with <u>Specification E2.2a</u></p> <p>Class 6, 7b, 8 or 9b building (other than a <u>school</u>) or part of a building having a <u>rise in storeys</u> of more than 2 a zone smoke control system in accordance with AS/NZS 1668.1, if the building has more than one <u>fire compartment</u>; or</p> <p>an <u>automatic</u> smoke detection and alarm system complying with <u>Specification E2.2a</u>; or</p> <p>a sprinkler system complying with <u>Specification E1.5</u></p>	
Cl. E3.1	<p>Lift installations</p> <p>An <u>electric passenger lift</u> installation and an <u>electrohydraulic passenger lift</u> 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



Cl. E3.6

Passenger lifts

In an accessible building, every passenger lift must—

- (a) be one of the types identified in Table E3.6a, subject to the limitations on use specified in the Table; and
- (b) have accessible features in accordance with Table E3.6b; and
- (c) not rely on a constant pressure device for its operation if the lift car is fully enclosed.

Verification will be required with the Construction Documentation

Table E3.6a LIMITATIONS ON USE OF TYPES OF PASSENGER LIFTS

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

	(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 <i>stairway platform lift</i> ; and
		(b) a <i>low-rise platform lift</i> .
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 <i>stairway platform lift</i> .
Lift floor dimensions of not less than 810 mm wide x 1200 mm deep		A <i>stairway platform lift</i>
Minimum clear door opening complying with AS 1735.12		All lifts except a <i>stairway platform lift</i> .
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 <i>stairway platform lift</i> .
Lift car and landing control buttons complying with AS 1735.12		All lifts except—
		(a) a <i>stairway platform lift</i> ; and
		(b) a <i>low-rise platform lift</i> .
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.

	<table> <tr> <td>(b)</td><td>audible and visual indication at each lift landing to indicate the arrival of the lift 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 colspan="2">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>	(b)	audible and visual indication at each lift landing to indicate the arrival of the lift 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> .	
(b)	audible and visual indication at each lift landing to indicate the arrival of the lift 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> .									
Cl. E4.2	AS 2293.1 compliant emergency lighting must be provided throughout the car parking, retail and residential common areas and stairwells of 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) A concession applies within the Sole Occupancy Units	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 A concession applies within the Sole Occupancy Units	Verification will be required with the Construction Documentation									

4.6 SECTION F – HEALTH AND AMENITY

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
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; or	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 (iii) the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. (b) Where a damp-proof course is provided, it must consist of— (i) a material that complies with AS/NZS 2904; or (ii) impervious termite shields in accordance with AS 3660.1. (c) The following buildings need not comply with (a): (i) A Class 7 or 8 building where in the particular case there is no necessity for compliance. (ii) A garage, tool shed, <i>sanitary compartment</i> , or the like, forming part of a building used for other purposes. (iii) An <i>open spectator stand</i> or <i>open-deck car park</i> .	Verification will be required with the Construction Documentation

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>	<p>Verification will be required with the Construction Documentation</p>
Cl. F1.11	<p>The floor of each bathroom and laundry must be graded to permit drainage to a floor waste.</p>	<p>Verification will be required with the Construction Documentation</p>
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> <ul style="list-style-type: none"> (i) Windows. (ii) Sliding doors with a frame. (iii) Adjustable louvres. (iv) Shopfronts. (v) Window walls with one piece framing. <p>(b) The following buildings need not comply with (a):</p> <ul style="list-style-type: none"> (i) A Class 7 or 8 building where in the particular case there is no necessity for compliance. (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. (iii) An <i>open spectator stand</i> or <i>open-deck car park</i>. <p>(c) The following glazed assemblies need not comply with (a):</p> <ul style="list-style-type: none"> (i) All glazed assemblies not in an <i>external wall</i>. (ii) Hinged doors, including French doors and bi-fold doors. (iii) Revolving doors. 	<p>Verification will be required with the Construction Documentation</p>

	<ul style="list-style-type: none"> (iv) Fixed louvres. (v) Skylights, roof lights and windows in other than the vertical plane. (vi) Sliding doors without a frame. (vii) Shopfront doors. (viii) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047. (ix) Second-hand windows, re-used windows, recycled windows and replacement windows. (x) Heritage windows. 	
Cl. F2.1	<p>Facilities in residential buildings Sanitary and other facilities for Class 2, 3 and 9c buildings and for Class 4 parts of buildings must be provided in accordance with Table F2.1.</p> <p>Within each sole-occupancy unit, provide—</p> <ul style="list-style-type: none"> (a) a kitchen sink and facilities for the preparation and cooking of food; and (b) a bath or shower; and (c) a closet pan; and (d) a washbasin. Laundry facilities, provide either— <ul style="list-style-type: none"> (a) in each sole-occupancy unit— <ul style="list-style-type: none"> (i) clothes washing facilities, comprising at least one washtub and space for a washing machine; and (ii) clothes drying facilities comprising— <ul style="list-style-type: none"> (A) clothes line or hoist with not less than 7.5 m of line; or (B) space for one heat-operated drying cabinet or appliance in the same room as the clothes washing facilities; or Note: A kitchen sink or washbasin must not be counted as a laundry washtub. (b) a separate laundry for each 4 sole-occupancy units, or part thereof— <ul style="list-style-type: none"> (i) clothes washing facilities comprising at least one washtub and one washing machine; and (ii) clothes drying facilities comprising— <ul style="list-style-type: none"> (A) clothes line or hoist with not less than 7.5 m of line per sole-occupancy unit; or (B) one heat-operated drying cabinet or appliance for each 4 sole-occupancy units. <p>Facilities for employees—</p> <p>If the building contains more than 10 sole-occupancy units, or a group of Class 2 buildings on the one allotment contains, in total, more than 10 sole-occupancy units — provide a closet pan and washbasin</p>	<p>Verification will be required with the Construction Documentation</p>

	in a compartment or room at or near ground level and accessible to employees without entering a sole-occupancy unit. Note: A reference to "employees" includes owners, managers, workers and contractors.	
Cl. F2.5	<p>Construction of sanitary compartments</p> <p>(b) The door to a fully enclosed <i>sanitary compartment</i> must—</p> <ul style="list-style-type: none"> (i) open outwards; or (ii) slide; or (iii) be readily removable from the outside of the <i>sanitary compartment</i>, <p>unless there is a clear space of at least 1.2 m, measured in accordance with Figure F2.5, between the closet pan within the <i>sanitary compartment</i> and the doorway.</p>	Verification will be required with the Construction Documentation
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> <ul style="list-style-type: none"> (a) in a Class 2 or 3 building or Class 4 part of a building— <ul style="list-style-type: none"> (i) a kitchen, laundry, or the like — 2.1 m; and (ii) a corridor, passageway or the like — 2.1 m; and (iii) a <i>habitable room</i> excluding a kitchen — 2.4 m; and (iv) in a room or space with a sloping ceiling or projections below the ceiling line within— <ul style="list-style-type: none"> (A) a <i>habitable room</i>— <ul style="list-style-type: none"> (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 (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 (B) a non- <i>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 	Verification will be required with the Construction Documentation

	<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</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. F4.6	<p>Natural ventilation</p> <p>(a) Natural ventilation provided in accordance with <u>F4.5(a)</u> must consist of permanent openings, <u>windows</u>, doors or other devices which can be opened—</p> <p>(i) with an aggregate opening or openable size not less than 5% of the <i>floor area</i> of the room <u>required</u> to be ventilated; and</p> <p>(ii) open to—</p> <p>(A) a suitably sized court, or space open to the sky; or</p> <p>(B) an open verandah, carport, or the like; or</p> <p>(C) an adjoining room in accordance with <u>F4.7</u>.</p>	Verification will be required with the Construction Documentation
Cl. F4.7	<p>Ventilation borrowed from adjoining room</p> <p>Natural ventilation to a room may come through a <u>window</u>, opening, ventilating door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same <u>sole-occupancy unit</u> or the enclosed verandah is common property, and—</p> <p>(a) in a Class 2 building, a <u>sole-occupancy unit</u> of a Class 3 building or Class 4 part of a building—</p> <p>(i) the room to be ventilated is not a <u>sanitary compartment</u>; and</p>	Verification will be required with the Construction Documentation

	<ul style="list-style-type: none"> (ii) the <u>window</u>, opening, door or other device has a ventilating area of not less than 5% of the <u>floor area</u> of the room to be ventilated; and (iii) the adjoining room has a <u>window</u>, opening, door or other device with a ventilating area of not less than 5% of the combined <u>floor areas</u> of both rooms 	
Cl. F4.8	<p>Restriction on position of water closets and urinals</p> <p>A room containing a closet pan or urinal must not open directly into—</p> <ul style="list-style-type: none"> (a) a kitchen or pantry; or (b) a public dining room or restaurant; or (c) a dormitory in a Class 3 building; or (d) a room used for public assembly (which is not an <u>early childhood centre</u>, primary <u>school</u> or <u>open spectator stand</u>); or (e) a workplace normally occupied by more than one person. 	Verification will be required with the Construction Documentation
Cl. F4.9	<p>Airlocks</p> <p>If a room containing a closet pan or urinal is prohibited under <u>F4.8</u> from opening directly to another room—</p> <ul style="list-style-type: none"> (a) in a <u>sole-occupancy unit</u> in a Class 2 or 3 building or Class 4 part of a building— <ul style="list-style-type: none"> (i) access must be by an airlock, hallway or other room; or (ii) the room containing the closet pan or urinal must be provided with mechanical exhaust ventilation; and (b) in a Class 5, 6, 7, 8 or 9 building (which is not an <u>early childhood centre</u>, primary <u>school</u> or <u>open spectator stand</u>)— <ul style="list-style-type: none"> (i) access must be by an airlock, hallway or other room with a <u>floor area</u> of not less than 1.1 m² and fitted with <u>self-closing</u> doors at all access doorways; or 	Verification will be required with the Construction Documentation

	(ii) the room containing the closet pan or urinal must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.	
Cl. F5.2	<p>Determination of airborne sound insulation ratings</p> <p>A form of construction <u>required</u> to have an airborne sound insulation rating must—</p> <ul style="list-style-type: none"> (a) have the <u>required</u> value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or (b) comply with <u>Specification F5.2</u>. 	Verification will be required with the Construction Documentation
Cl. F5.3	<p>Determination of impact sound insulation ratings</p> <ul style="list-style-type: none"> (a) A floor in a building <u>required</u> to have an impact sound insulation rating must— <ul style="list-style-type: none"> (i) have the <u>required</u> value for weighted normalised impact sound pressure level with spectrum adaptation term ($L_{n,w} + C_1$) determined in accordance with AS/ISO 717.2 using results from laboratory measurements; or (ii) comply with <u>Specification F5.2</u>. (b) A wall in a building <u>required</u> to have an impact sound insulation rating must— <ul style="list-style-type: none"> (i) for a Class 2 or 3 building be of discontinuous construction; and (ii) for a Class 9c <u>aged care building</u>, must— <ul style="list-style-type: none"> (A) for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or (B) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with <u>Specification F5.5</u> than a wall listed in Table 2 of <u>Specification F5.2</u>. (c) For the purposes of this Part, discontinuous construction means a wall having a minimum 	Verification will be required with the Construction Documentation

	<p>20 mm cavity between 2 separate leaves, and</p> <ul style="list-style-type: none"> (i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and (ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery. 	
Cl. F5.4	<p>Sound insulation rating of floors</p> <ul style="list-style-type: none"> (a) A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w} + C_1$ (impact) not more than 62 if it separates— <ul style="list-style-type: none"> (i) <u>sole-occupancy units</u>; or (ii) a <u>sole-occupancy unit</u> from a plant room, lift <u>shaft</u>, stairway, <u>public corridor</u>, public or the like, or parts of a different classification. (b) A floor in a Class 9c <u>aged care building</u> separating <u>sole-occupancy units</u> must have an R_w not less than 45. 	Verification will be required with the Construction Documentation
Cl. F5.5	<p>Sound insulation rating of walls</p> <ul style="list-style-type: none"> (a) A wall in a Class 2 or 3 building must— <ul style="list-style-type: none"> (i) have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates <u>sole-occupancy units</u>; and (ii) have an R_w (airborne) not less than 50, if it separates a <u>sole-occupancy unit</u> from a plant room, lift <u>shaft</u>, stairway, <u>public corridor</u>, public lobby or the like, or parts of a different classification; and (iii) comply with <u>F5.3(b)</u> if it separates— <ul style="list-style-type: none"> (A) a bathroom, <u>sanitary compartment</u>, laundry or kitchen in one <u>sole-occupancy unit</u> from a <u>habitable room</u> (other than a kitchen) in an adjoining unit; or (B) a <u>sole-occupancy unit</u> from a plant room or lift <u>shaft</u>. 	Verification will be required with the Construction Documentation

	<p>(b) A door may be incorporated in a wall in a Class 2 or 3 building that separates a <u>sole-occupancy unit</u> from a stairway, <u>public corridor</u>, public lobby or the like, provided the door assembly has an R_w not less than 30.</p> <p>(c) A wall in a Class 9c <u>aged care building</u> must have an R_w not less than 45 if it separates—</p> <ul style="list-style-type: none"> (i) <u>sole-occupancy units</u>; or (ii) a <u>sole-occupancy unit</u> from a kitchen, bathroom, <u>sanitary compartment</u> (not being an associated ensuite), laundry, plant room or utilities room. <p>(d) In addition to (c), a wall separating a <u>sole-occupancy unit</u> in a Class 9c <u>aged care building</u> from a kitchen or laundry must comply with F5.3(b).</p> <p>(e) Where a wall <u>required</u> to have sound insulation has a floor above, the wall must continue to—</p> <ul style="list-style-type: none"> (i) the underside of the floor above; or (ii) a ceiling that provides the sound insulation <u>required</u> for the wall. <p>(f) Where a wall <u>required</u> to have sound insulation has a roof above, the wall must continue to—</p> <ul style="list-style-type: none"> (i) the underside of the roof above; or (ii) a ceiling that provides the sound insulation <u>required</u> for the wall. 	
Cl. F5.6	<p>Sound insulation rating of internal services</p> <p>(a) If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one <u>sole-occupancy unit</u>, the duct or pipe must be separated from the rooms of any <u>sole-occupancy unit</u> by construction with an $R_w + C_{tr}$ (airborne) not less than—</p> <ul style="list-style-type: none"> (i) 40 if the adjacent room is a <u>habitable room</u> (other than a kitchen); or (ii) 25 if the adjacent room is a kitchen or non- <u>habitable room</u>. <p>(b) If a storm water pipe passes through a <u>sole-occupancy unit</u> it must be separated in accordance with (a)(i) and (ii).</p>	Verification will be required with the Construction Documentation

Cl. F5.7	Flexible coupling must be used at the point of connection of service pipes and circulating pumps.	Verification will be required with the Construction Documentation
Cl. F6.1	Application of Part The Deemed-to-Satisfy Provisions of this Part only apply to a sole-occupancy unit of a Class 2 building and a Class 4 part of a building.	For Reference
Cl. F6.2	Pliable building membrane (a) Where a pliable building membrane is installed in an external wall, it must— (i) comply with AS/NZS 4200.1; and (ii) be installed in accordance with AS 4200.2; and (iii) be a vapour permeable membrane for climate zones 6, 7 and 8; and (iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. (b) Except for single skin masonry and single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity.	Verification will be required with the Construction Documentation
Cl. F6.3	Flow rate and discharge of exhaust systems (a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of— (i) 25 L/s for a bathroom or sanitary compartment; and (ii) 40 L/s for a kitchen or laundry. (b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. (c) Exhaust from a bathroom, sanitary compartment, or laundry must be discharged— (i) directly or via a shaft or duct to outdoor air; or (ii) to a roof space that is ventilated in accordance with F6.4.	Verification will be required with the Construction Documentation
Cl. F6.4	Ventilation of roof spaces (a) Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings. (b) Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22°, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22°.	Verification will be required with the Construction Documentation

	<p>(c) 30% of the total unobstructed area required by (b) must be located not more than 900 mm below the ridge or highest point of the roof space, measured vertically, with the remaining required area provided by eave vents.</p>	
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4.7 SECTION J – BUILDING FABRIC

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
Part JO.1	<p>Energy Efficiency</p> <p>J0.1 Application of Section J Performance Requirement JP1 is satisfied by complying with—</p> <p>(a) for reducing the heating or cooling loads—</p> <p>(i) of sole-occupancy units of a Class 2 building or a Class 4 part of a building, J0.2 to J0.5; and</p> <p>(ii) of a Class 2 to 9 building, other than the sole-occupancy units of a Class 2 building or a Class 4 part of a building, Parts J1 and J3; and</p> <p>(b) for air-conditioning and ventilation, Part J5; and</p> <p>(c) for artificial lighting and power, Part J6</p>	For Reference
Part JO.2	<p>Heating and cooling loads of sole-occupancy units of a Class 2 building or a Class 4 part The sole-occupancy units of a Class 2 building or a Class 4 part of a building must—</p> <p>(a) for reducing the heating or cooling loads—</p> <p>(i) collectively achieve an average energy rating of not less than 6 stars, including the separate heating and cooling load limits; and</p> <p>(ii) individually achieve an energy rating of not less than 5 stars, including the separate heating and cooling load limits, using house energy rating software and the load limits specified in the ABCB Standard for NatHERS Heating and Cooling Load Limits.</p> <p>(b) for general thermal construction, comply with J1.2; and</p> <p>(c) for thermal breaks, comply with J0.4 and J0.5; and</p> <p>(d) for floor edge insulation, comply with J1.6(b) and J1.6(c); and</p> <p>(e) for building sealing, comply with Part J3.</p>	<p>Provide a copy of the project NatHERS Certificates.</p> <p>Verification will be required with the Construction Documentation</p>
Part JO.3	<p>Ceiling fans Ceiling fans required as part of compliance with J0.2(a), must—</p> <p>(a) be permanently installed; and (b) have a speed controller; and</p> <p>(c) serve the whole room, with the floor area that a single fan serves not exceeding—</p> <p>(i) 15 m² if it has a blade rotation diameter of not less than 900 mm; and</p>	<p>Provide a copy of the project NatHERS Certificates.</p> <p>Verification will be required with the Construction Documentation</p>

	(ii) 25 m2 if it has a blade rotation diameter of not less than 1 200 mm.	
Part JO.4	Roof thermal breaks For compliance with J0.2(c), a roof that— (a) has metal sheet roofing fixed to metal purlins, metal rafters or metal battens; and (b) does not have a ceiling lining or has a ceiling lining fixed directly to those metal purlins, metal rafters or metal battens, must have a thermal break, consisting of a material with an R-Value of not less than R0.2, installed at all points of contact between the metal sheet roofing and its supporting metal purlins, metal rafters or metal battens.	Verification will be required with the Construction Documentation
Part JO.5	Wall thermal breaks For compliance with J0.2(c), a wall that— (a) does not have a wall lining or has a wall lining that is fixed directly to the same metal frame; and (b) has lightweight external cladding such as weatherboards, fibre-cement or metal sheeting fixed to a metal frame, must have a thermal break, consisting of a material with an R-Value of not less than R0.2, installed at all points of contact between the external cladding and the metal frame.	Verification will be required with the Construction Documentation
Cl. J3.1	Application of Part The Deemed-to-Satisfy Provisions of this Part apply to elements forming the envelope of a Class 2 to 9 building, other than— (a) a building in climate zones 1, 2, 3 and 5 where the only means of air-conditioning is by using an evaporative cooler; or (b) a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or (c) a building or space where the mechanical ventilation required by Part F4 provides sufficient pressurisation to prevent infiltration	Verification will be required with the Construction Documentation
Cl. J3.3	Roof lights (a) A roof light must be sealed, or capable of being sealed, when serving— (i) a conditioned space; or (ii) a habitable room in climate zones 4, 5, 6, 7 or 8. (b) A roof light required by (a) to be sealed, or capable of being sealed, must be constructed with— (i) an imperforate ceiling diffuser or the like installed at the ceiling or internal lining level; or (ii) a weatherproof seal; or	Verification will be required with the Construction Documentation

	(iii) a shutter system readily operated either manually, mechanically or electronically by the occupant.	
Cl. J3.4	<p>Windows and doors</p> <p>(a) A door, openable window or the like must be sealed—</p> <p>(i) when forming part of the envelope; or</p> <p>(ii) in climate zones 4, 5, 6, 7 or 8.</p> <p>(b) The requirements of (a) do not apply to—</p> <p>(i) a window complying with AS 2047; or</p> <p>(ii) a fire door or smoke door; or</p> <p>(iii) a roller shutter door, roller shutter grille or other security door or device installed only for out-of-hours security.</p> <p>(c) A seal to restrict air infiltration—</p> <p>(i) for the bottom edge of a door, must be a draft protection device; and</p> <p>(ii) for the other edges of a door or the edges of an openable window or other such opening, may be a foam or rubber compression strip, fibrous seal or the like.</p> <p>(d) An entrance to a building, if leading to a conditioned space must have an airlock, self-closing door, rapid roller door, revolving door or the like, other than—</p> <p>(i) where the conditioned space has a floor area of not more than 50 m²; or</p> <p>(ii) where a café, restaurant, open front shop or the like has—</p> <p>(A) a 3 m deep un-conditioned zone between the main entrance, including an open front, and the conditioned space; and</p> <p>(B) at all other entrances to the café, restaurant, open front shop or the like, self-closing doors.</p> <p>(e) A loading dock entrance, if leading to a conditioned space, must be fitted with a rapid roller door or the like.</p>	Verification will be required with the Construction Documentation
Cl. J3.5	<p>Exhaust fans</p> <p>(a) An exhaust fan must be fitted with a sealing device such as a self-closing damper or the</p>	Verification will be required with the Construction Documentation

	<p>like when serving—</p> <p>(i) a conditioned space; or</p> <p>(ii) a habitable room in climate zones 4, 5, 6, 7 or 8.</p>	
Cl. J3.6	<p>Construction of roofs, walls and floors</p> <p>(a) Roofs, ceilings, walls, floors and any opening such as a <i>window</i> frame, door frame, <i>roof light</i> frame or the like must be constructed to minimise air leakage in accordance with (b) when forming part of—</p> <p>(i) the <i>envelope</i>; or</p> <p>(ii) the external <i>fabric</i> of a <i>habitable room</i> or a public area in <i>climate zones</i> 4, 5, 6, 7 and 8.</p> <p>(b) Construction <i>required</i> by (a) must be—</p> <p>(i) enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions; or</p> <p>(ii) sealed by caulking, skirting, architraves, cornices or the like.</p> <p>(c) The requirements of (a) do not apply to openings, grilles or the like <i>required</i> for smoke hazard management.</p>	<p>Verification will be required with the Construction Documentation</p>
Cl. J5.2	<p>Air-conditioning system control</p> <p>(a) An air-conditioning system—</p> <p>(i) must be capable of being deactivated when the building or part of a building served by that system is not occupied; and</p> <p>(ii) when serving more than one air-conditioning zone or area with different heating or cooling needs, must—</p> <p>(A) thermostatically control the temperature of each zone or area; and</p> <p>(B) not control the temperature by mixing actively heated air and actively cooled air; and</p> <p>(C) limit reheating to not more than—</p> <p>(aa) for a fixed supply air rate, a 7.5 K rise in temperature; and</p>	<p>A Mechanical Engineers Design Plans and Design Compliance Certificate are required</p>

- (bb) for a variable supply air rate, a 7.5 K rise in temperature at the nominal supply air rate but increased or decreased at the same rate that the supply air rate is respectively decreased or increased; and
- (iii) which provides the required mechanical ventilation, other than in climate zone 1 or where dehumidification control is needed, must have an outdoor air economy cycle if the total air flow rate of any airside component of an air-conditioning system is greater than or equal to the figures in Table J5.2; and
- (iv) which contains more than one water heater, chiller or coil, must be capable of stopping the flow of water to those not operating; and
- (v) with an airflow of more than 1000 L/s, must have a variable speed fan when its supply air quantity is capable of being varied; and
- (vi) when serving a sole-occupancy unit in a Class 3 building, must not operate when any external door of the sole- occupancy unit that opens to a balcony or the like, is open for more than one minute; and
- (vii) must have the ability to use direct signals from the control components responsible for the delivery of comfort conditions in the building to regulate the operation of central plant; and
- (viii) must have a control dead band of not less than 2°C, except where a smaller range is required for specialised applications; and (ix) must be provided with balancing dampers and balancing valves that ensure the maximum design air or fluid flow is achieved but not exceeded by more than 15% above design at each—
- (A) component; or
- (B) group of components operating under a common control in a system containing multiple components, as required to meet the needs of the system at its maximum operating condition; and
- (x) must ensure that each independently operating space of more than 1 000 m² and every separate floor of the building has provision to terminate airflow independently of the remainder of the system sufficient to allow for different operating times; and

	<p>(xi) must have automatic variable temperature operation of heated water and chilled water circuits; and</p> <p>(xii) when deactivated, must close any motorised outdoor air or return air damper that is not otherwise being actively controlled.</p> <p>(c) (i) A time switch must be provided to control—</p> <p>(A) an air-conditioning system of more than 2 kW_r; and</p> <p>(B) a heater of more than 1 kW used for air-conditioning. heating</p> <p>(ii) The time switch must be capable of switching electric power on and off at variable pre-programmed times and on variable pre-programmed days.</p> <p>(iii) The requirements of (i) and (ii) do not apply to—</p> <p>(A) an air-conditioning system that serves—</p> <p>(aa) only one sole-occupancy unit in a Class 2, 3 or 9c building; or</p> <p>(bb) a Class 4 part of a building; or</p> <p>(B) a conditioned space where air-conditioning is needed for 24 hour continuous use.</p>	
Cl. J5.4	<p>Mechanical ventilation system control</p> <p>General — the mechanical system serves only one sole-occupancy unit in a Class 2 building or serves only a Class 4 part of a building, must—</p> <p>(a) A mechanical ventilation system, including one that is part of an air-conditioning system, except where</p> <p>(i) be capable of being deactivated when the building or part of the building served by that system is not occupied; and</p> <p>(ii) when serving a conditioned space, except in periods when evaporative cooling is being used— (A) where specified in Table J5.3, have—</p> <p>(aa) an energy reclaiming system that preconditions outdoor air at a minimum sensible heat transfer effectiveness of 60%; or</p>	<p>A Mechanical Engineers Design Plans and Design Compliance Certificate are required</p> <p>Verification will be required with the Construction Documentation</p>

<p>(bb) demand control ventilation in accordance with AS 1668.2 if appropriate to the application; and</p> <p>(B) not exceed the minimum outdoor air quantity required by Part F4 by more than 20%, except where—</p> <p>(aa) additional unconditioned outdoor air is supplied for free cooling; or</p> <p>(bb) additional mechanical ventilation is needed to balance the required exhaust or process exhaust; or</p> <p>(cc) an energy reclaiming system preconditions all the outdoor air; and NC</p> <p>(iii) for an airflow of more than 1000 L/s, have a variable speed fan unless the downstream airflow is required by Part F4 to be constant.</p> <p>(b) An exhaust system with an air flow rate of more than 1000 L/s must be capable of stopping Carpark exhaust systems —</p> <p>(c) Carpark exhaust systems must have a control system in accordance with—</p> <p>(i) 4.11.2 of AS 1668.2; or</p> <p>(ii) 4.11.3 of AS 1668.2. Time switches—</p> <p>(d) (i) A time switch must be provided to a mechanical ventilation system with an air flow rate of more than 1000 L/s.</p> <p>(ii) The time switch must be capable of switching electric power on and off at variable pre-programmed times and on variable pre-programmed days.</p> <p>(iii) The requirements of (i) and (ii) do not apply to—</p> <p>(A) a mechanical ventilation system that serves—</p> <p>(aa) only one sole-occupancy unit in a Class 2, 3 or 9c building; or (bb) a Class 4 part of a building; or</p> <p>(B) a building where mechanical ventilation is needed for 24 hour occupancy.</p>	
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<p>Cl. J5.5</p>	<p>Fan systems</p> <p>(a) Fans, ductwork and duct components that form part of an air-conditioning system or mechanical ventilation system must—</p> <p>(i) separately comply with (b), (c), (d) and (e); or</p> <p>(ii) achieve a fan motor input power per unit of flowrate lower than the fan motor input power per unit of flowrate achieved when applying (b), (c), (d) and (e) together. Fans—</p> <p>(b) (i) Fans in systems that have a static pressure of not more than 200 Pa must have an efficiency at the full load operating point not less than the efficiency calculated with the following formula: $\eta_{\min} = 0.13 \times \ln(p) - 0.3$ where— η_{\min} = the minimum required system static efficiency for installation type A or C or the minimum required system total efficiency for installation type B or D; and p = the static pressure of the system (Pa); and \ln = natural logarithm.</p> <p>(ii) Fans in systems that have a static pressure above 200 Pa must have an efficiency at the full load operating point not less than the efficiency calculated with the following formula: $\eta_{\min} = 0.85 \times (a \times \ln(P) - b + N) / 100$ where—</p> <p>= the minimum total efficiency for installation type B or D; and</p> <p>P = the motor input power of the fan (kW); and N = the minimum performance grade obtained from Table J5.4a; and a = regression coefficient a, obtained from Table J5.4b; and b = regression coefficient b, obtained from Table J5.4c; and \ln = natural logarithm. required system static efficiency for installation type A or C or the minimum required system η_{\min}</p> <p>(iii) The requirements of (i) and (ii) do not apply to fans that need to be explosion proof.</p> <p>(c) (i) The pressure drop in the index run across all straight sections of rigid ductwork and all sections of flexible ductwork must not exceed 1 Pa/m when averaged over the entire length of straight rigid duct and flexible duct.</p> <p>The pressure drop of flexible ductwork sections may be calculated as if the flexible ductwork is laid straight.</p> <p>(ii) Flexible ductwork must not account for more than 6 m in length in any duct run.</p> <p>(iii) The upstream connection to ductwork bends, elbows and tees in the index run must have an equivalent diameter to the connected duct.</p>	<p>A Mechanical Engineers Design Plans and Design Compliance Certificate are required</p> <p>Verification will be required with the Construction Documentation</p>
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- (iv) Turning vanes must be included in all rigid ductwork elbows of 90° or more acute than 90° in the index run except where—
 - (A) the inclusion of turning vanes presents a fouling risk; or
 - (B) a long radius bend in accordance with AS 4254.2 is used. Ductwork components in the index run—
- (d) (i) The pressure drop across a coil must not exceed the value specified in Table J5.4d.
- (ii) A high efficiency particulate arrestance (HEPA) air filter must not exceed the higher of—
 - (A) a pressure drop of 200 Pa when clean; or
 - (B) the filter design pressure drop when clean at an air velocity of 1.5 m/s.
- (iii) Any other air filter must not exceed—
 - (A) the pressure drop specified in Table J5.4e when clean; or
 - (B) the filter design pressure drop when clean at an air velocity of 2.5 m/s.
- (iv) The pressure drop across intake louvres must not exceed the higher of—
 - (A) for single stage louvres, 30 Pa; and
 - (B) for two stage louvres, 60 Pa; and
 - (C) for acoustic louvres, 50 Pa; and
 - (D) for other non-weatherproof louvres, 30 Pa.
- (v) The pressure drop across a variable air volume box, with the damper in the fully open position, must not exceed—
 - (A) for units with electric reheat, 100 Pa; and
 - (B) for other units, 25 Pa not including coil pressure losses.
- (vi) Rooftop cowls must not exceed a pressure drop of 30 Pa. (vii) Attenuators must not exceed a pressure drop of 40 Pa.
- (viii) Fire dampers must not exceed a pressure drop of 15 Pa when open.
- (ix) Balancing and control dampers in the index run must not exceed a pressure drop of 25 Pa when in the fully open position.
- (x) Supply air diffusers and grilles must not exceed a pressure drop of 40 Pa.
- (xi) Exhaust grilles must not exceed a pressure drop of 30 Pa.
- (xii) Transfer ducts must not exceed a pressure drop of 12 Pa.

	<p>(xiii) Door grilles must not exceed a pressure drop of 12 Pa.</p> <p>(xiv) Active chilled beams must not exceed a pressure drop of 150 Pa.</p> <p>(e) The requirements of (a), (b), (c) and (d) do not apply to—</p> <p>(i) fans in unducted air-conditioning systems with a supply air capacity of less than 1000 L/s; and</p> <p>(ii) smoke spill fans, except where also used for air-conditioning or ventilation; and</p> <p>(iii) the power for process-related components; and</p> <p>(iv) kitchen exhaust systems.</p>	
Cl. J5.6	<p>Ductwork insulation</p> <p>(a) Ductwork and fittings in an air-conditioning system must be provided with insulation—</p> <p>(i) complying with AS/NZS 4859.1; and</p> <p>(ii) having an insulation R-Value greater than or equal to—</p> <p>(A) for flexible ductwork, 1.0; or</p> <p>(B) for cushion boxes, that of the connecting ductwork; or</p> <p>(C) that specified in Table J5.5.</p> <p>(b) Insulation must—</p> <p>(i) be protected against the effects of weather and sunlight; and</p> <p>(ii) be installed so that it—</p> <p>(A) abuts adjoining insulation to form a continuous barrier; and</p> <p>(B) maintains its position and thickness, other than at flanges and supports; and</p> <p>(iii) when conveying cooled air—</p> <p>(A) be protected by a vapour barrier on the outside of the insulation; and</p> <p>(B) where the vapour barrier is a membrane, be installed so that adjoining sheets of the membrane—</p> <p>(aa) overlap by at least 50 mm; and</p> <p>(bb) are bonded or taped together.</p> <p>(c) The requirements of (a) do not apply to—</p> <p>(i) ductwork and fittings located within the only or last room served by the system; or</p> <p>(ii) fittings that form part of the interface with the conditioned space; or</p>	<p>A Mechanical Engineers Design Plans and Design Compliance Certificate are required</p> <p>Verification will be required with the Construction Documentation</p>

	<p>(iii) return air ductwork in, or passing through, a conditioned space; or</p> <p>(iv) ductwork for outdoor air and exhaust air associated with an air-conditioning system; or</p> <p>(v) the floor of an in-situ air-handling unit; or</p> <p>(vi) packaged air conditioners, split systems, and variable refrigerant flow air-conditioning equipment complying with MEPS; or (vii) flexible fan connections.</p> <p>(d) For the purposes of (a), (b) and (c), fittings—</p> <p>(i) include non-active components of a ductwork system such as cushion boxes; and</p> <p>(ii) exclude active components such as air-handling unit components.</p>	
Cl. J6.2	<p>Artificial lighting</p> <p>(a) In a sole-occupancy unit of a Class 2 building or a Class 4 part of a building—</p> <p>(i) the lamp power density or illumination power density of artificial lighting must not exceed the allowance of—</p> <p>(A) 5 W/m² within a sole-occupancy unit; and</p> <p>(B) 4 W/m² on a verandah, balcony or the like attached to a sole-occupancy unit; and</p> <p>(ii) the illumination power density allowance in (i) may be increased by dividing it by the illumination power density adjustment factor for a control device in Table J6.2b as applicable; and</p> <p>(iii) when designing the lamp power density or illumination power density, the power of the proposed installation must be used rather than nominal allowances for exposed batten holders or luminaires; and</p> <p>(iv) halogen lamps must be separately switched from fluorescent lamps.</p>	<p>An Electrical Engineers Design Plans and Design Compliance Certificate are required</p> <p>Verification will be required with the Construction Documentation</p>
Cl. J6.5	<p>Exterior artificial lighting</p> <p>(a) Exterior artificial lighting attached to or directed at the facade of a building, must—</p> <p>(i) be controlled by—</p> <p>(A) a daylight sensor; or</p> <p>(B) a time switch that is capable of switching on and off electric power to the system at variable pre- programmed times and on variable pre-programmed days; and</p>	<p>An Electrical Engineers Design Plans and Design Compliance Certificate are required</p> <p>Verification will be required with the Construction Documentation</p>

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| <p>(ii) when the total lighting load exceeds 100 W—
(A) use LED luminaires for 90% of the total lighting load; or
(B) be controlled by a motion detector in accordance with Specification J6; or
(C) when used for decorative purposes, such as façade lighting or signage lighting, have a separate time switch in accordance with Specification J6.
(b) The requirements of (a)(ii) do not apply to the following:
(i) Emergency lighting in accordance with Part E4.</p> | |
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