

Date: 26 October 2022
Our Ref: P200038 (2)

Mr Glenn Cooper
20 Kevin Ave,
Avalon NSW 2107

Dear Glenn,

**RE: 20 Kevin Ave, Avalon Beach
BCA COMPLIANCE ASSESSMENT**

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

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

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

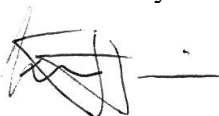
The inclusion of this summary enables an immediate understanding of the compliance status of the proposed design to be obtained.

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

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

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

Yours faithfully

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

Kieran Tobin
Director

BCA COMPLIANCE ASSESSMENT

PREPARED FOR

Mr Glenn Cooper

REGARDING
20 Kevin Ave, Avalon Beach

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
P200038 (2)	1	Design Compliance Report	26 October 2022
Author	Kieran Tobin Senior NCC Consultant Registered Building Surveyor - Fair Trading no 0409 Grad Dip Building Surveying UWS		

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1.0 INTRODUCTION

1.1 GENERAL

This “BCA Compliance Assessment” report has been prepared at the request of Mr Glenn Cooper, and relates to the premises located at 20 Kevin Ave, Avalon Beach.

The existing building is a two-storey lightweight timber residential dwelling and detached car port.

The project proposal is for

- Change of use from class 1a single residential to class 2 residential (two dwellings)
- Alterations within the ground and first floor
- New rear external stair
- Storeroom (attached to carport)
- Swimming Pool
- New rear balconies and pergola
- New Front Deck

1.2 REPORT BASIS

The content of this report reflects –

- (a) The principles and provisions of BCA 2019 (amendment 1), Parts B, C, D, E & F;
- (a) A Site inspection of the premises on Monday the 24th of March 2020
- (b) Survey Plan prepared by Altitude Surveys and dated 06/01/20
- (c) BASIX Certificate No A463110_03 issued by Jacaranda Trading International and dated 23/10/22
- (d) BASIX Certificate No A478245 issued by Jacaranda Trading International and dated 23/10/22
- (e) Architectural documentation provided by Inlet Design Studio

Plan Reference	Plan Description	Dated
A01	Site Plan	15/06/22
A02	Existing Floor Plan	15/06/22
A03	Proposed Floor Plans	15/06/22
A04	Elevations	15/06/22
A05	Elevations	15/06/22
A06	Sections	15/06/22
A07	Window and Door Schedule	15/06/22
A08	Storeroom and Screen	15/06/22
A09	Pool Plan	15/06/22
A11	BASIX	15/06/22
A12	BASIX	15/06/22
A13	Specification	15/06/22

1.4 REPORT PURPOSE

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

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

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

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

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

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

2.0 MATTERS IDENTIFIED / RECOMMENDATIONS

2.1 COMPLIANCE PATHWAYS WITHIN THE BCA

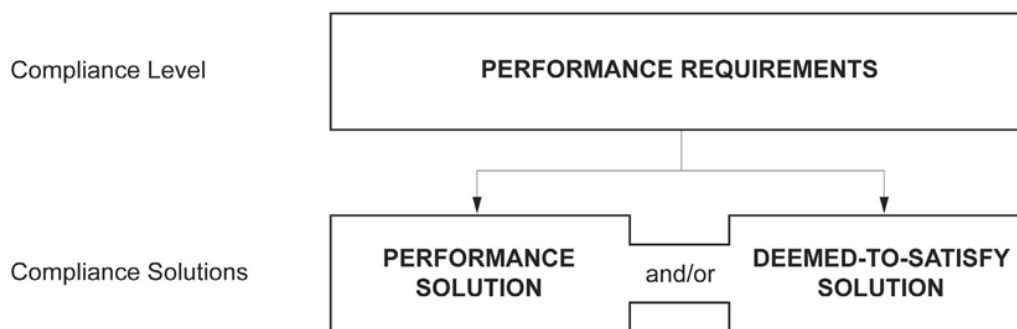
Compliance with the NCC is achieved by complying with—
(1) the Governing Requirements of the NCC; and
(2) the *Performance Requirements*.

A2.1 Compliance with the Performance Requirements

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

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

Figure 1: NCC compliance option structure

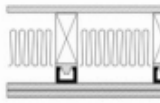


2.2 KEY COMPLIANCE ISSUES IDENTIFIED

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

Recommended Deemed-To-Satisfy Compliance Solutions		
Item No.	BCA Clause	Comment
1.	Clause C1.1, Spec C1.1	<p>All prescribed building elements to achieve the fire resistance levels of Type C Construction as outlined in Specification C1.1 (Refer Clause 3.4 of this report).</p> <p>1 The existing external walls (and eaves) within 1.5m are required have a fire resistance level (FRL) as they are exposed to a fire source feature.</p> <p>The south side wall of the dwelling/s is within 1.5m of the property boundary and requires alteration to achieve an FRL of 90/90/90.</p> <p>In addition, posts to the new external stair are within 1.5m of the north side boundary and require an FRL of 90/-/-</p> <p>2 There are openings in external walls within 1.5m exposed to a</p>

		<p>fire source feature that are required to be protected.</p> <p>BCA 2019 Clause 3.2 Requires - Protection of openings in external walls Openings in an external wall that is required to have an FRL</p> <p>3 The floor separating the sole-occupancy units is to be upgraded to have a fire resistance level, this includes the penetrations through the floor.</p> <p>Part 4 of this report identifies: -</p> <p>Provide a ceiling with a resistance to the incipient spread of fire for 60 minutes to the first floor;</p> <p>The ceiling system should be an AS 1530 tested and certified system installed in exact accordance with the product specification.</p> <p>The application of a lightweight system will be complicated by the existing timber part to the external (brick veneer) walls and the internal timber walls.</p> <p>The presence of timber walls will make it necessary to line all walls with a Lightweight fire rated system to achieve a minimum FRL of 60 minutes; this will be necessary to achieve a compliant junction for the incipient ceiling.</p> <p>I would recommend engaging a Passive Fire Protection expert to propose the exact method.</p> <p>Several plasterboard manufacturers (CSR, Boral – to identify two) produce a lightweight plasterboard system that has been tested and Certified in accordance with AS 1530.</p> <p>The method of achieving compliance should be detailed within the Building Certificate Application Documentation.</p>
2.	Part D3	<p>Building Access</p> <p>Part D3 of the BCA requires AS 1428.1 – 2009 compliant access from the street to the ground floor entrance door.</p>
3.	Part F5	<p>Acoustic Separation</p> <p>Existing (and proposed) floors will need to be provided with insulation against the transmission of airborne and impact generated sound.</p> <p>As identified a new ceiling system is required within the ground floor (Ceiling).</p> <p>When selecting a product specification, the client should ensure that in addition it achieves an RW + Ctr rating of 50 and an Lnw (impact) not more than 62</p> <p>The BCA identifies the following methods however as for “Alternate Systems” tested for Fire Resistance lightweight systems also propose alternate systems</p>

		Floor construction type: Timber 19 mm thick chipboard floor sheeting with— (a) 190×45 mm timber joists at 450 mm centres; and (b) R2.5 glass wool insulation positioned between timber joists; and (c) 28 mm metal furring channels and isolation mounts fixed to underside of joists, isolation mounts to be of natural rubber with a dynamic factor of not more than 1.1 and static deflection of not less than 3 mm at actual operating load; and (d) two layers of 16 mm fire-protective grade plasterboard fixed to furring channels.	50	62	50	
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2.3 REQUIRED PERFORMANCE SOLUTIONS

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

Item No.	BCA Clause	Comment
1.	Clause FP1.4	The Design Architect (or similarly qualified person) will need to prepared a Performance Solution demonstrating that the external walls and roof will comply with the requirements of FP1.4

3.0 BUILDING DESCRIPTION

3.1 GENERAL

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

3.2 RISE IN STOREYS (CLAUSE C1.2)

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

3.3 BUILDING CLASSIFICATION (CLAUSE A3.2)

The entire building incorporates the following classifications:-

CLASS	DESCRIPTION
Class 2	A residential building,
Class 10a	A Car port

EFFECTIVE HEIGHT (CLAUSE A1.1)

The building has an effective height Not exceeding 12m.

3.4 TYPE OF CONSTRUCTION (TABLE C1.1)

Type C Construction - Clause C1.5 Concession applies

Table 5 TYPE C CONSTRUCTION: FRL OF BUILDING Specification

Building Element	Distance to Fire Source Feature	FRL Class 2
External Wall	Less than 1.5m	90/90/90
	1.5 to less than 3m	-/-/-
	3m or more	-/-/-
External Column	Less than 1.5m	90/-/-
	1.5m to 3m	-/-/-
Common Walls & Fire Walls	N/A	90/90/90
Fire Resisting Lift or Stair Shaft	N/A	60/60/60
Internal Wall Bounding Public Corridor	N/A	60/60/60
Internal Wall Bounding SOU	N/A	60/60/60
Roof	N/A	-/-/-

3.5 GENERAL FLOOR AREA LIMITATIONS (TABLE C2.2)

Note – Not applicable to residential portion

3.6 PART B1 - STRUCTURAL PROVISIONS

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

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

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

4 BCA ASSESSMENT – SUMMARY

4.1 GENERAL

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

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

4.2 SECTION C – FIRE RESISTANCE

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

4.3 SECTION D – ACCESS AND EGRESS

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

4.4 SECTION E – SERVICES AND EQUIPMENT

BCA reference	Complies	Does not comply	Detail Required	Not relevant
E1.3 – fire hydrants				✓
E1.4 – fire hose reels				✓
E1.5 – 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 Fire Service Drive Control Switch				✓
E4.2 – emergency lighting				✓
E4.4 – design and operation of emergency lighting				✓
E4.5 – exit signs				✓
E4.6 – direction signs				✓
E4.7 – Class 2 and 3 buildings and Class 4 parts: exemptions	✓			✓
E4.8 – design and operation of exit signs				✓
E4.9 – Sound Systems & Intercom Systems for Emergencies				✓

3.1. SECTION F – HEALTH AND AMENITY

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

5.0 BCA ASSESSMENT – DETAILED ANALYSIS

5.1 GENERAL

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

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

In our opinion compliance with the Building Code of Australia 2019 amendment 1, Volume 1, can be achieved subject to the implementation of the following details into the Construction documentation.

5.2 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 Type C Construction. Clarification on how the FRLs will be achieved – Construction method will be required. Details of the method and type of construction will be required within the Construction documentation.
Cl. C1.10	Fire Hazard Properties (a) The <i>fire hazard properties</i> of the following linings, materials and assemblies in a Class 2 to 9 building must comply with Specification C1.10	Confirmation of the Fire Hazard properties will be required with the Construction Certificate Documentation.

		<p>Floor linings and floor coverings</p> <p>A floor lining or floor covering must have—</p> <ul style="list-style-type: none">(a) a <i>critical radiant flux</i> not less than a grouping of 2.2; and(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(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>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> <ul style="list-style-type: none">(a) For the purposes of this Clause, the <i>group number</i> of a material is determined by either—<ul style="list-style-type: none">(i) physical testing in accordance with AS ISO 9705; or(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.(b) The <i>group number</i> of a material is as
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		<p>follows when tested or predicted in accordance with sub-clause (a):</p> <ul style="list-style-type: none">(i) A Group 1 material is one that does not reach <i>flashover</i> when exposed to 100 kW for 600 seconds followed by exposure to 300 kW for 600 seconds.(ii) A Group 2 material is one that reaches <i>flashover</i> following exposure to 300 kW within 600 seconds after not reaching <i>flashover</i> when exposed to 100 kW for 600 seconds.(iii) A Group 3 material is one that reaches <i>flashover</i> in more than 120 seconds but within 600 seconds when exposed to 100 kW.(iv) A Group 4 material is one that reaches <i>flashover</i> within 120 seconds when exposed to 100 kW. <p>(c) A material used as a finish, surface, lining or attachment to a wall or ceiling must be a Group 1, Group 2 or Group 3 material used in accordance with Table 3 and for buildings not fitted with a sprinkler system complying with Specification E1.5, have—</p> <ul style="list-style-type: none">(i) a <i>smoke growth rate index</i> not more than 100; or(ii) an <i>average specific extinction area</i> less than 250 m²/kg.
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<p>Cl. C3.2</p>	<p>Protection of openings in external walls Openings in an <i>external wall</i> that is <i>required</i> to have an FRL must— (a)if the distance between the opening and the <i>fire-source feature</i> to which it is exposed is less than— (i)3 m from a side or rear boundary of the allotment; or (ii)6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a <i>storey</i> at or near ground level; or (iii)6 m from another building on the allotment that is not Class 10, be protected in accordance with C3.4 and if wall-wetting sprinklers are used, they are located externally</p>	<p>We recommend that new window openings to the Ground floor and First Floor bedrooms (south side) are protected with Clause C3.4 compliant protection</p>
<p>Cl. C3.4</p>	<p>Acceptable methods of protection (a)Where protection is <i>required</i>, doorways, <i>windows</i> and other openings must be protected as follows: (i)Doorways— (A)internal or external wall-wetting sprinklers as appropriate used with doors that are <i>self-closing</i> or <i>automatic</i> closing; or (B)–/60/30 fire doors that are <i>self-closing</i> or <i>automatic</i> closing. (ii)Windows— (A)internal or external wall-wetting sprinklers as appropriate used with <i>windows</i> that are <i>automatic</i> closing or permanently fixed in the closed position; or (B)–/60/– fire <i>windows</i> that are <i>automatic</i> closing or permanently fixed in the closed position; or (C)–/60/– <i>automatic</i> closing fire shutters. (iii)Other openings— (A)excluding voids — internal or external wall-wetting sprinklers, as appropriate; or (B)construction having an FRL not less than –/60/–. (b)Fire doors, fire <i>windows</i> and fire shutters must comply with Specification C3.4</p>	<p>Verification will be required with the Construction Documentation</p>
<p>Cl. C1.13</p>	<p>Fire-protected timber: Concession Fire-protected timber may be used wherever an element is required to be non-combustible,</p>	<p>Verification will be required with the Construction Documentation</p>

	<p>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>	
Cl. C3.12	Service openings through any floors in the building must be either fire sealed or enclosed in a fire rated shaft, using materials having an FRL not less than the floor concerned.	Verification will be required with the Construction Documentation
Cl. C3.13	Openings to shafts must be self-closing and 1-hour fire rated (i.e. access panels, doors, hoppers).	Verification will be required with the Construction Documentation
Cl. C3.15	<p>Openings for service installations</p> <p>Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an <i>external wall</i> or roof) that is <i>required</i> to have an FRL with respect to <i>integrity</i> or <i>insulation</i> or a <i>resistance to the incipient spread of fire</i>, that installation must comply with any one of the following:</p> <p>(a) Tested systems</p> <p>(i) The service, building element and any protection method at the penetration are identical with a prototype assembly of the service, building element and protection method which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the <i>required FRL</i> or <i>resistance to the incipient spread of fire</i>.</p> <p>(ii) It complies with (i) except for the <i>insulation</i> criteria relating to the service if—</p>	Verification will be required with the Construction Documentation

- (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 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*.
- (iv) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification C3.15.

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

5.3 SECTION D – ACCESS AND EGRESS

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
Cl. D2.13	<p>Goings and risers</p> <p>(a) A stairway must have—</p> <ul style="list-style-type: none">(i) not more than 18 nor less than 2 risers in each <i>flight</i>; and(ii) except as permitted by (b) and (c), going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13; and(iii) except as permitted by (b) and (c), goings and risers that are constant throughout in one <i>flight</i>; and(iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and(v) treads which have—<ul style="list-style-type: none">(A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or(B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and(vi) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 <i>storeys</i>; and(viii) in the case of a <i>required</i> stairway, no winders in lieu of a landing. <p>(b) In the case of a non- <i>required</i> 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	Verification will be required with the Construction Documentation

	<ul style="list-style-type: none"> (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> <ul style="list-style-type: none"> (i) the riser (R) may be reduced to account for the slope of the walkway or road; and (ii) the quantity (2R+G) may vary at that location. 	
Cl. D2.14	<p>Landings In a stairway—</p> <ul style="list-style-type: none"> (a) landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each <u>flight</u> and each landing must— <ul style="list-style-type: none"> (i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and (ii) have— <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 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 <u>flight</u> below <p>Table D2.14 SLIP-RESISTANCE CLASSIFICATION</p>	Verification will be required with the Construction Documentation

	<table> <tr> <th rowspan="2">Application</th><th colspan="2">Surface conditions</th></tr> <tr> <th>Dry</th><th>Wet</th></tr> <tr> <td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr> <tr> <td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr> <tr> <td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr> <tr> <td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr> </table>	Application	Surface conditions		Dry	Wet	Ramp steeper than 1:14	P4 or R11	P5 or R12	Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11	Tread or landing surface	P3 or R10	P4 or R11	Nosing or landing edge strip	P3	P4	
Application	Surface conditions																		
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Tread or landing surface	P3 or R10	P4 or R11																	
Nosing or landing edge strip	P3	P4																	
Cl. D2.15	<p>Thresholds The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—</p> <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 <u>Part D3</u>, 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. 	Verification will be required within the Construction Documentation.																	
Cl. D2.16	Balustrades or other barriers	Verification will be required with the																	

- (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, mezzanine, access bridge or the like and along the side of any delineated path of access to a building, if—
- (i) it is not bounded by a wall; and
 - (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.

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	<p>(iii) A transition zone may be incorporated where the balustrade or other barrier height changes from 865 mm on the stair <u>flight</u> or ramp to 1 m at the landing.</p> <p>(iv) For a balustrade or other barrier provided under (f), the height above the floor must be not less than—</p> <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. D2.24	<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—
 - (i) permit a 125 mm sphere to pass through it; and

	(ii) have any horizontal or near horizontal elements between 150 mm and 760 mm above the floor that facilitate climbing.	
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>Compliance with the AS 1428.1 Clauses following must be identified within the Construction Certificate plans:-</p> <p>Clause 6 - CONTINUOUS ACCESSIBLE PATHS OF TRAVEL</p> <p>Clause 7 - FLOOR OR GROUND SURFACES ON CONTINUOUS ACCESSIBLE PATHS OF TRAVEL AND CIRCULATION SPACES</p> <p>Clause 10 - WALKWAYS, RAMPS AND LANDINGS</p> <p>Clause 11 - STAIRWAYS</p> <p>Clause 12 - HANDRAILS</p> <p>Clause 13 - DOORWAYS, DOORS AND CIRCULATION SPACE AT DOORWAYS</p>
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. 	For reference

	<p>(iv) through the principal public entrance.</p> <p>▪ Parts of buildings required to be accessible must comply with AS 1428.1</p>	
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> <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>	For reference

5.4 SECTION E – SERVICES AND EQUIPMENT

CLAUSE	CLAUSE REQUIREMENT	ACTION/RECOMENDATION
Cl. E2.2a	<p>General requirements</p> <p>(a) A building must comply with (b), (c), (d) and—</p> <p>(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</p> <p>(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.</p> <p>(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—</p> <p>(i) be designed and installed to operate as a smoke control system in accordance with AS/NZS 1668.1; or</p> <p>(ii)</p> <p>(A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the <u>fire compartments</u> served; and</p> <p>(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; and</p> <p>for 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>.</p> <p>(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.</p>	<p>Verification will be required with the Construction Documentation</p>

- (d) A smoke detection system must be installed in accordance with Clause 5 of Specification E2.2a to operate AS/NZS 1668.1 systems that are provided for zone smoke control and automatic air pressurisation for fire-isolated exits.

CLASS 2 AND 3 BUILDINGS AND CLASS 4 PART OF A BUILDING

A Class 2 and 3 building or part of a building and Class 4 part of a building must be provided with an automatic smoke detection and alarm system complying with Specification E2.2a Class 6, 7b, 8 or 9b building (other than a school) or part of a building having a rise in storeys of more than 2 a zone smoke control system in accordance with AS/NZS 1668.1, if the building has more than one fire compartment; or
an automatic smoke detection and alarm system complying with Specification E2.2a; or
a sprinkler system complying with Specification E1.5

5.5 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	Damp-proofing of floors on the ground	Verification will be required with the

	<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>	Construction Documentation
Cl. F1.11	The floor of each bathroom and laundry must be graded to permit drainage to a floor waste.	Verification will be required with the Construction Documentation
Cl. F1.13	<p>Glazed assemblies</p> <p>(a) Subject to (b) and (c), the following glazed assemblies in an <i>external wall</i>, must comply with AS 2047 requirements for resistance to water penetration:</p> <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. (iv) Fixed louvres. (v) Skylights, roof lights and windows in other than the vertical plane. 	Verification will be required with the Construction Documentation

	<p>(vi) Sliding doors without a frame.</p> <p>(vii) Shopfront doors.</p> <p>(viii) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047.</p> <p>(ix) Second-hand windows, re-used windows, recycled windows and replacement windows.</p> <p>(x) Heritage windows.</p>	
Cl. 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. 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> <p>(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</p> <p>(b) comply with <u>Specification F5.2</u>.</p>	Verification will be required with the Construction Documentation
Cl. F5.3	<p>Determination of impact sound insulation ratings</p> <p>(a) A floor in a building <u>required</u> to have an impact sound insulation rating must—</p> <p>(i) have the <u>required</u> value for weighted normalised impact sound pressure level with spectrum adaptation term ($L_{n,w} + C_i$) determined in accordance with AS/ISO 717.2 using results from laboratory measurements; or</p> <p>(ii) comply with <u>Specification F5.2</u>.</p> <p>(b) A wall in a building <u>required</u> to have an impact sound insulation rating must—</p> <p>(i) for a Class 2 or 3 building be of discontinuous construction; and</p> <p>(ii) for a Class 9c <u>aged care building</u>, must—</p> <p>(A) for other than masonry, be two or more separate leaves without</p>	Verification will be required with the Construction Documentation

	<p>rigid mechanical connection except at the periphery; or</p> <p>(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>.</p> <p>(c) For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and</p> <p>(i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and</p> <p>(ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.</p>	
Cl. F5.4	<p>Sound insulation rating of floors</p> <p>(a) A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w} + C_I$ (impact) not more than 62 if it separates—</p> <p>(i) <u>sole-occupancy units</u>; or</p> <p>(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.</p> <p>(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.</p>	Verification will be required with the Construction Documentation
Cl. F5.5	<p>Sound insulation rating of walls</p> <p>(a) A wall in a Class 2 or 3 building must—</p> <p>(i) have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates <u>sole-occupancy units</u>; and</p> <p>(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</p>	Verification will be required with the Construction Documentation

	<ul style="list-style-type: none">(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>.(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.(c) A wall in a Class 9c <u>aged care building</u> must have an R_w not less than 45 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 kitchen, bathroom, <u>sanitary compartment</u> (not being an associated ensuite), laundry, plant room or utilities room.(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 <u>F5.3(b)</u>.(e) Where a wall <u>required</u> to have sound insulation has a floor above, the wall must continue to—<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.(f) Where a wall <u>required</u> to have sound insulation has a roof above, the wall must continue to—<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> <ul style="list-style-type: none">(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—	Verification will be required with the Construction Documentation

	<p>(i) 40 if the adjacent room is a <i>habitable room</i> (other than a kitchen); or</p> <p>(ii) 25 if the adjacent room is a kitchen or non- <i>habitable room</i>.</p> <p>(b) If a storm water pipe passes through a <i>sole-occupancy unit</i> it must be separated in accordance with (a)(i) and (ii).</p>	
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	<p>Application of Part</p> <p>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.</p>	For Reference
Cl. F6.2	<p>Pliable building membrane</p> <p>(a) Where a pliable building membrane is installed in an external wall, it must—</p> <p>(i) comply with AS/NZS 4200.1; and</p> <p>(ii) be installed in accordance with AS 4200.2; and</p> <p>(iii) be a vapour permeable membrane for climate zones 6, 7 and 8; and</p> <p>(iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building.</p> <p>(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.</p>	Verification will be required with the Construction Documentation
Cl. F6.3	<p>Flow rate and discharge of exhaust systems</p> <p>(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of—</p> <p>(i) 25 L/s for a bathroom or sanitary compartment; and</p> <p>(ii) 40 L/s for a kitchen or laundry.</p> <p>(b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air.</p> <p>(c) Exhaust from a bathroom, sanitary compartment, or laundry must be discharged—</p> <p>(i) directly or via a shaft or duct to outdoor air; or</p> <p>(ii) to a roof space that is ventilated in accordance with F6.4.</p>	Verification will be required with the Construction Documentation
Cl. F6.4	<p>Ventilation of roof spaces</p> <p>(a) Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof</p>	Verification will be required with the Construction Documentation

	<p>space, the roof space must be ventilated to outdoor air through evenly distributed openings.</p> <p>(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°.</p> <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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