



**National
Construction
Code**

Volume Two

Building Code of Australia

PREVIEW

ENERGY EFFICIENCY AND CONDENSATION PROVISIONS

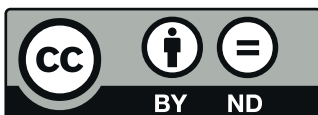


**Australian
Building
Codes Board**

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Australian Building Codes Board

GPO Box 2013, Canberra ACT 2601

Phone: 1300 134 631

Email: ncc@abcb.gov.au

Web: abcb.gov.au

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Part A5 Documentation of design and construction

Governing Requirements

A5G9 NatHERS

[New for 2022]

Where *house energy rating software* is *required* to be used, evidence of the *house energy rating software* output must be in the form of a NatHERS certificate issued in accordance with the NatHERS scheme.

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Part H4 Health and amenity

Verification Methods

H4V5 Verification of condensation management

[2019: V2.4.7]

- (1) Compliance with *Performance Requirement H4P7* is verified for a roof or *external wall* assembly when it is determined that a mould index of greater than 3, as defined by Section 6 of AIRAH DA07, does not occur on—
- (a) the interior surface of the *water control layer*; or
 - (b) the surfaces of building *fabric* components interior to the *water control layer*.
- (2) The calculation method for (1) must use—
- (a) input assumptions in accordance with AIRAH DA07; and
 - (b) the intermediate method for calculating indoor design humidity in Section 4.3.2 of AIRAH DA07.

Deemed-to-Satisfy Provisions

H4D9 Condensation management

[2019: 3.8.7]

Compliance with Part 10.8 of the ABCB Housing Provisions satisfies *Performance Requirement H4P7* for *condensation* management.

Explanatory Information

The intent of these requirements is to assist in the mitigation of *condensation* within a building. The implementation of *condensation* management measures may not prevent *condensation* from occurring.

Part H6 Energy efficiency

Introduction to this Part

This Part is intended to improve the efficient use of energy in building design and construction, as well as the energy usage by key equipment installed in a building.

Objectives

H6O1 Objective

[2019: O2.6]

The Objective of this Part is to —

- (a) reduce energy consumption and energy peak demand; and
- (b) reduce greenhouse gas emissions; and
- (c) improve occupant health and *amenity*.

Functional Statements

H6F1 Energy efficiency

[2019: F2.6]

A building must—

- (a) reduce the energy consumption and energy peak demand of key energy using equipment; and
- (b) reduce greenhouse gas emissions that occur as a result of a building's energy consumption and energy source; and
- (c) improve occupant health and *amenity* by mitigating the impact of extreme hot and cold weather events, and energy blackouts.

Performance Requirements

H6P1 Thermal performance

[2019: P2.6.1]

- (1) The total *heating load* of the *habitable rooms* and *conditioned spaces* in a building must not exceed the *heating load* limit in Specification 44.
- (2) The total *cooling load* of the *habitable rooms* and *conditioned spaces* in a building must not exceed the *cooling load* limit in Specification 44.
- (3) The total *thermal energy load* of the *habitable rooms* and *conditioned spaces* in a building must not exceed the *thermal energy load* limit in Specification 44.

H6P2 Energy usage

[2019: P2.6.2]

- (1) The *energy value* of a building's *domestic services* must not exceed 70% of the *energy value* with—
 - (a) a 3-star ducted heat pump, rated under the 2019 GEMS determination, heating all spaces that are provided with heating; and
 - (b) a 3-star ducted heat pump, rated under the 2019 GEMS determination, cooling all spaces that are provided with cooling; and
 - (c) a 5-star instantaneous gas water heater, rated under the 2017 GEMS determination, providing all domestic hot water; and
 - (d) a lighting power density of 4 W/m² serving all internal spaces that are provided with artificial lighting.
- (2) *Domestic services*, including any associated distribution system and components must, to the degree necessary, have features that facilitate the efficient use of energy appropriate to—
 - (a) the *domestic service* and its usage; and
 - (b) the geographic location of the building; and
 - (c) the location of the *domestic service*; and
 - (d) the energy source.

Verification Methods

H6V1 Application of H6V2 and H6V3

[2019: V2.6.1]

The *Verification Methods* in this Part only apply to—

- (a) a Class 1 building; and
- (b) an enclosed Class 10a building attached to a Class 1 building.

Explanatory Information

The *Verification Methods* in this Part are intended to apply to whole Class 1 buildings and to whole Class 1 buildings that incorporate attached and enclosed Class 10a parts, such as attached garages. The *Verification Methods* are not intended to apply to detached garages or to open carports.

H6V2 Verification using a reference building

[2019: V2.6.2.2]

- (1) Compliance with H6P1 is verified when a proposed building—
 - (a) compared to a *reference building*, using a calculation method other than *house energy rating software*, has—
 - (i) in *climate zone* 1, a *cooling load* equal to or less than that of the *reference building*; or
 - (ii) in *climate zone* 8, a *heating load* equal to or less than that of the *reference building*; or
 - (iii) in *climate zones* 2, 3, 4, 5, 6 and 7, a *heating load* and a *cooling load* equal to or less than that of the *reference building*; and
 - (b) complies with—
 - (i) for building *fabric* thermal insulation, clause 13.2.2 of the ABCB Housing Provisions; and

- (ii) for thermal breaks, clauses 13.2.3(7) and 13.2.5(5) of the ABCB Housing Provisions; and
 - (iii) for floor edge insulation, clauses 13.2.6(4), 13.2.6(6) and 13.2.6(7) of the ABCB Housing Provisions; and
 - (iv) for building sealing, Part 13.4 of the ABCB Housing Provisions or H6V3.
- (2) The *reference building* must comply with the *Deemed-to-Satisfy Provisions* in Parts 13.2, 13.3 and 13.5 of the ABCB Housing Provisions.
- (3) The *heating load* and *cooling load* for the proposed building and the *reference building* must be determined using the same—
 - (a) calculation method; and
 - (b) location specific data, including that of climate and topography appropriate to the location where the proposed building is to be constructed if the data is available, or the nearest location with similar climatic conditions in the same *climate zone* for which the data is available; and
 - (c) impact of adjoining structures and features; and
 - (d) soil conditions; and
 - (e) orientation; and
 - (f) floor plan, including the location and size of *glazing*; and
 - (g) number of storeys; and
 - (h) roof cladding and *roof lights*; and
 - (i) separating walls; and
 - (j) external non-glazed doors; and
 - (k) intermediate floors; and
 - (l) floor coverings; and
 - (m) ventilation; and
 - (n) function and use of the building and spaces, including zoning and hours of occupation; and
 - (o) operating schedules for heating and cooling in Table H6V2a; and
 - (p) cooling thermostat settings of—
 - (i) for bedrooms, 24°C; and
 - (ii) for *habitable rooms* other than bedrooms—
 - (A) in *climate zones* 1, 2, 3 and 4, 27°C; and
 - (B) In *climate zones* 5, 6, 7 and 8, 26°C; and
 - (q) heating thermostat setting of 20°C for all *habitable rooms*; and
 - (r) occupancy in Table H6V2b, with —
 - (i) heat gains due to occupants of—
 - (A) 75 W per person in bedrooms; and
 - (B) 105 W per person in *habitable rooms* other than bedrooms; and
 - (ii) occupancy schedules in Table H6V2c; and
 - (s) internal heat gains—
 - (i) from appliances, 450 W; and
 - (ii) from lighting, 4 W/m²; and
 - (iii) from cooking equipment, in Table H6V2b; and
 - (iv) using the operating schedules for lighting, cooking equipment and appliances, in Table H6V2d; and
 - (t) air infiltration rate—
 - (i) of 0.75 air changes per hour; or
 - (ii) equal to the intended building air change rate at 50 Pa, divided by 20, where—
 - (A) an intended building air change rate at 50 Pa is specified; and
 - (B) additional building sealing provisions to Part 13.4 of the ABCB Housing Provisions are specified; and

(C) building sealing is verified using H6V3.

- (4) The calculation method used must comply with ANSI/ASHRAE Standard 140 and be capable of assessing the *heating load* and *cooling load* by modelling—
- (a) the building *fabric*; and
 - (b) *glazing* and shading; and
 - (c) air infiltration and ventilation; and
 - (d) the function and use of the building including zoning, hours of occupation, hours of heating and cooling availability and internal heat gains; and
 - (e) relevant built-environment and topographical features; and
 - (f) the sensible heat component of the *cooling load* and *heating load*.
- (5) Climatic data employed in the calculation method must be based on hourly recorded values and be representative of a typical year for the proposed location.

Table H6V2a: Heating and cooling schedules

Hour ending at	Habitable rooms other than bedrooms	Bedrooms
1:00	OFF	ON
2:00	OFF	ON
3:00	OFF	ON
4:00	OFF	ON
5:00	OFF	ON
6:00	OFF	ON
7:00	ON	ON
8:00	ON	ON
9:00	ON	ON
10:00	ON	OFF
11:00	ON	OFF
12:00	ON	OFF
13:00	ON	OFF
14:00	ON	OFF
15:00	ON	OFF
16:00	ON	OFF
17:00	ON	OFF
18:00	ON	OFF
19:00	ON	ON
20:00	ON	ON
21:00	ON	ON
22:00	ON	ON
23:00	ON	ON
0:00	OFF	ON

Table H6V2b: Occupancy and cooking equipment loads

Floor area of <i>habitable rooms</i> (m ²)	Occupancy (m ² /occupant)	Cooking equipment load (W/m ² of kitchen area)
100	41.2	36.2
125	44.3	34.7

Floor area of <i>habitable rooms</i> (m ²)	Occupancy (m ² /occupant)	Cooking equipment load (W/m ² of kitchen area)
150	47.8	28.9
175	51.7	24.8
200	55.8	25.3
225	60.0	22.5
250	64.4	20.2
275	68.9	18.4
300	73.3	16.9
325	77.5	15.6
350	81.6	14.5
375	85.4	13.5
400	89.0	12.7

Table H6V2c: Occupancy schedules

Hour ending at	Weekday occupancy in <i>habitable rooms</i> other than bedrooms	Weekend occupancy in <i>habitable rooms</i> other than bedrooms	Weekday and weekend bedroom occupancy
1:00	0%	0%	100%
2:00	0%	0%	100%
3:00	0%	0%	100%
4:00	0%	0%	100%
5:00	0%	0%	100%
6:00	0%	0%	100%
7:00	30%	30%	50%
8:00	30%	30%	50%
9:00	100%	30%	50%
10:00	100%	100%	0%
11:00	50%	100%	0%
12:00	50%	100%	0%
13:00	50%	100%	0%
14:00	50%	50%	0%
15:00	50%	50%	0%
16:00	50%	50%	0%
17:00	100%	50%	0%
18:00	100%	50%	0%
19:00	100%	100%	50%
20:00	100%	100%	50%
21:00	100%	100%	50%
22:00	30%	100%	100%
23:00	30%	30%	100%
0:00	0%	0%	100%

Table H6V2d: Lighting, cooking and appliance schedules

Hour ending at	Lighting	Cooking	Appliances
1:00	0%	0%	45%
2:00	0%	0%	40%
3:00	0%	0%	40%
4:00	0%	0%	40%
5:00	0%	0%	40%
6:00	0%	0%	40%
7:00	10%	5%	50%
8:00	10%	10%	70%
9:00	5%	10%	55%
10:00	0%	15%	50%
11:00	0%	15%	50%
12:00	0%	15%	50%
13:00	0%	20%	50%
14:00	0%	20%	50%
15:00	0%	20%	50%
16:00	0%	20%	50%
17:00	0%	25%	75%
18:00	20%	40%	95%
19:00	30%	80%	80%
20:00	35%	80%	70%
21:00	30%	40%	70%
22:00	25%	20%	65%
23:00	15%	10%	55%
0:00	0%	5%	55%

H6V3 Verification of building envelope sealing

[2019: V2.6.2.3]

- (1) Compliance with H6P1 is verified for building *envelope* sealing when a building *envelope* is sealed at an air permeability of not more than 10 m³/hr.m² at 50 Pa reference pressure when tested in accordance with AS/NZS ISO 9972 Method 1.
- (2) Where an air permeability of not more than 5 m³/hr.m² at 50 Pa reference pressure is achieved—
 - (a) a mechanical ventilation system must be provided that—
 - (i) can be manually overridden; and
 - (ii) provides outdoor air, either—
 - (A) continuously; or
 - (B) intermittently, where the system has controls that enable operation for not less than 25 percent of each 4 hour segment; and
 - (iii) provides a flow rate not less than that achieved with the following formula: $Q = (0.05 \times A + 3.5 \times (N + 1)) / p$, where—
 - (A) Q
= the required air flow rate (L/s); and

- (B) A
= the total floor area of the building (m^2); and
- (C) N
= the number of bedrooms in the building; and
- (D) p
= the fraction of time within each 4 hour segment that the system is operational; and
- (b) any space with a solid-fuel burning combustion appliance must be ventilated with permanent openings directly to outside with a free area of not less than half of the cross-sectional area of the appliance's flue; and
- (c) any space with a gas-fuelled combustion appliance must be ventilated in accordance with—
 - (i) clause 6.4 of AS/NZS 5601.1; and
 - (ii) clause 6.4.5 of AS/NZS 5601.1.
- (3) For the purposes of (2)(c), the volume of the space is considered to be 1 m^3 for determining ventilation requirements.

Explanatory Information

The intent is that $10\text{ m}^3/\text{hr.m}^2$ at 50 Pa is broadly equivalent to 10 air changes per hour at 50 Pa when applied to homes.

Deemed-to-Satisfy Provisions

H6D1 Deemed-to-Satisfy Provisions

[New for 2022]

- (1) Where a *Deemed-to-Satisfy Solution* is proposed, *Performance Requirements H6P1* and *H6P2* are satisfied by complying with *H6D2*.
- (2) Where a *Performance Solution* is proposed, the relevant *Performance Requirements* must be determined in accordance with *A2G2(3)* and *A2G4(3)* as applicable.

H6D2 Application of Part H6

[2019: 3.12.0]

- (1) *Performance Requirement H6P1* for the thermal performance of the building is satisfied by—
 - (a) complying with *S42C2*, using *house energy rating software* and *S42C4*; or
 - (b) complying with the following parts of the ABCB Housing Provisions—
 - (i) *Part 13.2*, for the building *fabric*; and
 - (ii) *Part 13.3*, for the external *glazing* and shading; and
 - (iii) *Part 13.4*, for building sealing; and
 - (iv) *Part 13.5*, for ceiling fans.
- (2) *Performance Requirement H6P2* for the energy usage of the building is satisfied by—
 - (a) complying with *S42C3* using *house energy rating software* and *S42C4(2)*; or
 - (b) complying with *Parts 13.6* and *13.7* of the ABCB Housing Provisions for a building with a total floor area not greater than 500 m^2 .

Explanatory Information

There are two Deemed-to-Satisfy pathways for complying with the energy efficiency *Performance Requirements*:

- Option 1 Energy Rating — applying [Specification 42](#) to achieve the heating and cooling loads, net equivalent energy usage, and other energy saving features such as thermal breaks, compensation for a loss of ceiling insulation, floor edge insulation and building sealing.
- Option 2 Elemental Provisions — using Section 13 of the ABCB Housing Provisions to satisfy all the detailed provisions including building [fabric](#), external [glazing](#), building sealing, ceiling fans, whole-of-home energy usage and [services](#).

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Specification 42

House energy rating software

S42C1 Scope

[New for 2022]

This Specification sets out requirements for satisfying H6P1 and H6P2 using *house energy rating software*.

S42C2 Heating and cooling loads

[2019: 3.12.0.1]

- (1) A building must achieve an energy rating, including the separate heating and cooling load limits, using *house energy rating software*, of greater than or equal to—
 - (a) 7 stars; or
 - (b) for a building in *climate zones* 1 or 2, 6.5 stars if the building has an outdoor living area as described in (3) which is fully covered with an impervious roof having a *Total R-Value* greater than or equal to 1.5 (for downward heat flow); or
 - (c) for a building in *climate zones* 1 or 2, 6 stars if the building has an outdoor living area as described in (3) which—
 - (i) is fully covered with an impervious roof having a *Total R-Value* greater than or equal to 1.5 (for downward heat flow); and
 - (ii) has at least one permanently installed ceiling fan.
- (2) The heating and cooling load limits in (1) are specified in the ABCB Standard for NatHERS Heating and Cooling Load Limits.
- (3) An outdoor living area in (1)(b) and (1)(c) is a space that—
 - (a) is directly adjoining, and directly accessible from, a general purpose living area of a Class 1 building such as a lounge, kitchen, dining or family room, which is not a room for sleeping or specialist tasks such as a study or home theatre; and
 - (b) has a *floor area* greater than or equal to 12.0 m²; and
 - (c) has length and width dimensions greater than or equal to 2.5 m each; and
 - (d) has an opening height above floor level greater than or equal to 2.1 m; and
 - (e) has one side permanently open with a second side either—
 - (i) permanently open; or
 - (ii) readily openable.
- (4) The sides referred to in (3)(e) must be greater than or equal to 900 mm from an allotment boundary or 900 mm from an obstruction to the breeze path such as a building, fence or other structure.
- (5) Where a ceiling fan is *required* as part of compliance with (1)(c), the fan must—
 - (a) be permanently installed; and
 - (b) have a speed controller; and
 - (c) serve the whole room, with the floor area that a single fan serves not exceeding—
 - (i) 15 m² if it has a blade rotation diameter of less than 1200 mm; and
 - (ii) 25 m² if it has a blade rotation diameter of greater than or equal to 1200 mm.

Explanatory Information: Complying with S42C2(1)

- To comply with (1), the modelled energy loads of a building must not exceed three separate load limits, i.e.—
 - (i) the total load limit corresponding to the applicable star rating; and
 - (ii) the heating load limit; and
 - (iii) the cooling load limit.
- Information about building modelling using *house energy rating software* is available at www.nathers.gov.au.
- The ABCB Standard for NatHERS Heating and Cooling Load Limits can be accessed at www.abcb.gov.au.

Explanatory Information: Outdoor living areas

- The opening height in (3)(d) is to provide a breeze path and is likely to be the measurement from the floor to the underside of a perimeter beam. It is not a ceiling height measurement. It is also not a height for mounting a ceiling fan or the height of ceiling fan blades above the floor. These dimensions need to be determined considering the activities in the space, the safety of occupants of the space and any appropriate safety standards.
- There is some survey evidence that suggests the majority of home owners turn off their air-conditioners when using an outdoor living area. Another cost effective option is to install a reed switch or other micro switch on the door leading to the outdoor living area in order to automatically deactivate an air-conditioning unit when the door is left open for a period which allows occupants to enter and leave the air-conditioned space but does not affect the operation of the air-conditioner.
- A side referred to in (3)(e) may contain some obstructions such as columns and barriers. Where an open side is *required* to have a 1 m barrier, consideration as to the type (wire, solid or other) should be made with regard to the overall opening area of the two sides.

S42C3 Net equivalent energy usage

[New for 2022]

A building must achieve a whole-of-home rating of not less than 60 using *house energy rating software*.

S42C4 Additional Deemed-to-Satisfy Provisions when using house energy rating software

[3.12.0]

- (1) To comply with H6P1, in addition to S42C2, a building must comply with Section 13 of the ABCB Housing Provisions clauses—
 - (a) 13.2.2, for building *fabric* thermal insulation; and
 - (b) 13.2.3(7) and 13.2.5(5), for thermal breaks; and
 - (c) 13.2.3(5), for compensating for a loss of ceiling insulation, other than where the *house energy rating software* has compensated for a loss of ceiling insulation; and
 - (d) 13.2.6(4), 13.2.6(6) and for floor edge insulation; and
 - (e) Part 13.4, for building sealing.
- (2) To comply with H6P2, in addition to S42C3, a building must comply with Part 13.7 of the ABCB Housing Provisions.

Specification 44

Calculation of heating load limit, cooling load limit and thermal energy load limit

S44C1 Scope

[New for 2022]

This Specification contains the method of calculating the *heating load* limit, *cooling load* limit and *thermal energy load* limit for compliance with J1P2 and H6P1.

S44C2 Heating load limit

[New for 2022]

The *heating load* limit of a space, measured in MJ/m².annum, is equal to the greater of—

- (a) 4; and
- (b) $((0.0044 \times HDH) - 5.9) \times F_H$

, where—

- (i) HDH
= the total annual *heating degree hours* of the building location; and
- (ii) F_H
= the area adjustment factor for the *heating load* limit, determined in accordance with Table S44C2.

Table S44C2: Area adjustment factors for the heating load limit

Total area of <i>habitable rooms</i> (A_H)	Area adjustment factor (F_H)
$\leq 50 \text{ m}^2$	1.37
$> 50 \text{ m}^2$ to $\leq 350 \text{ m}^2$	$(5.11 \times 10^{-6})A_H^2 - (3.82 \times 10^{-3})A_H + 1.55$
$> 350 \text{ m}^2$	0.84

S44C3 Cooling load limit

[New for 2022]

(1) The *cooling load* limit of a space, measured in MJ/m².annum, is calculated in accordance with the following formula:

$$CLL = (5.4 + 0.00617 \times (CDH + 1.85DGH)) \times F_C$$

(2) In the formula at (1)—

- (a) CLL
= the *cooling load* limit (MJ/m².annum); and
- (b) CDH
= the total annual *cooling degree hours* of the building location; and
- (c) DGH
= the total annual *dehumidification gram hours* of the building location; and
- (d) F_C

= the area adjustment factor for the *cooling load* limit, determined in accordance with Table S44C3.

Table S44C3: Area adjustment factors for the cooling load limit

Total area of the <i>habitable rooms</i> (A_H)	Area adjustment factor (F_C)
$\leq 50 \text{ m}^2$	1.34
$> 50 \text{ m}^2$ and $\leq 200 \text{ m}^2$	$(1.29 \times 10^{-5})A_H^2 - (5.55 \times 10^{-3})A_H + 1.58$
$> 200 \text{ m}^2$ and $\leq 1000 \text{ m}^2$	$(3.76 \times 10^{-7})A_H^2 - (7.82 \times 10^{-4})A_H + 1.12$
$> 1000 \text{ m}^2$	0.71

S44C4 Thermal energy load limit

[New for 2022]

(1) The *thermal energy load* limit of a space, measured in MJ/m².annum, is calculated in accordance with the following

formula:
$$TLL = \frac{19.3HLL + 22.6CLL - 8.4}{T_r + 10.74} - 15$$

(2) In the formula at (1)—

- (a) TLL
= the *thermal energy load* limit; and
- (b) HLL
= the *heating load* limit; and
- (c) CLL
= the *cooling load* limit; and
- (d) T_r
= the annual average *daily outdoor temperature range*.

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Schedule 1

Definitions

Abbreviations

Symbols

Glossary

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Abbreviations

Abbreviation	Definitions
ABCB	Australian Building Codes Board
AC	Alternating Current
ACC	Acrylic conformal coating
ACL	Acrylic latex
ACP	Aluminium Composite Panel
AIRAH	Australian Institute of Refrigeration, Air conditioning and Heating
ANSI	American National Standards Institute
AS	Australian Standard
ASET	Available Safe Egress Time
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASTM	American Society for Testing and Materials
BCA	Building Code of Australia
BE	Fire blocks evacuation route
CAN	National Standard of Canada
CCT	Correlated Colour Temperature
CF	Challenging fire
CHF	Critical Heat Flux
CIBSE	Chartered Institution of Building Services Engineers
CRF	Critical Radiant Flux
CRI	Colour Rendering Index
CS	Fire starts in a concealed space
C_{SHGC}	Constant for solar heat gain
CSIRO	Commonwealth Scientific and Industrial Research Organisation
C_U	Constant for conductance
DC	Direct Current
FED	Fractional Effective Dose
FI	Fire brigade intervention
FRL	Fire Resistance Level
FZ	Flame Zone
GEMS	Greenhouse and Energy Minimum Standards
GRP	Glass fibre reinforced polyester
HDG	Hot dip galvanising
HRR	Heat Release Rate
HS	Horizontal fire spread
IS	Rapid fire spread involving internal surface linings
ISO	International Organisation for Standardisation
IZS	Inorganic zinc silicate
LED	Light-Emitting Diode
MEPS	Minimum Energy Performance Standards
NABERS	National Australian Built Environment Rating System

Preview Definitions

Abbreviation	Definitions
NASH	National Association of Steel-Framed Housing
NATA	National Association of Testing Authorities Australia
NatHERS	Nationwide House Energy Rating Scheme
NCC	National Construction Code
NSF	National Sanitation Foundation
PBDB	Performance-based design brief
PCA	Plumbing Code of Australia
PMV	Predicted Mean Vote
ppm	parts per million
PUR	Polyurethane
PVC	Polyvinyl chloride
RC	Robustness check
RSET	Required Safe Egress Time
R_w	Weighted sound reduction index
SF	Smouldering fire
SHGC	Solar Heat Gain Coefficient
SL	Square mesh
SS	Structural stability and other property
STC	Sound Transmission Class
TM	Trench mesh
UF	Unexpected catastrophic failure
UPVC	Unplasticized polyvinyl chloride
UT	Fire in normally unoccupied room threatening occupants of other rooms
U-Value	Thermal transmittance
VS	Vertical fire spread involving external cladding or external openings

Symbols

Symbols	Definitions
°	degree(s)
°C	degree(s) Celsius
°CDB	degree(s) Celsius Dry Bulb
°CWB	degree(s) Celsius Wet Bulb
-e/MJ	equivalent per Megajoule(s)
µm	micrometre
µg/N.s	Micrograms per newton-second
dB(A)	decibels “A” scale weighting network
f’c	Characteristic compressive strength of concrete at 28 days
f’y	Yield stress used in design
G	Permanent load
J	Joule(s)
J/kg.K	Joules per kilogram degree Kelvin
J/s.m ²	Joules per second square metre
K	Kelvin(s)
kg	kilogram(s)
kg/m	kilogram(s) per metre
kg/m ²	kilogram(s) per square metre
kg/m ³	kilogram(s) per cubic metre
kJ/m ² .hour	kilojoules per square metre hour
km	kilometre(s)
kPa	kilopascal(s)
kW/m ²	kilowatt(s) per square metre
kW _{heating}	kilowatt(s) of heating
kWr	kilowatt(s) of refrigeration
L	litre(s)
L/min	litre(s) per minute
L/s	litre(s) per second
L/s.m ²	litre(s) per second square metre
Lumens/W	Lumens per Watt
lx	lux
m	metre(s)
m/s	metre(s) per second
m ²	square metre(s)
m ² .K/W	square metre Kelvin(s) per Watt
m ³	cubic metre(s)
m ³ /hour	cubic metre(s) per hour
m ³ /s	cubic metre(s) per second
mcd/m ²	millicandelas per square metre
min	minute(s)

Preview Definitions

Symbols	Definitions
MJ/hour	Megajoules per hour
MJ/m².annum	Megajoules per square metre annum
mm	millimetre(s)
mm²	square millimetre(s)
MW	megawatt(s)
N	newton(s)
N/m	Newton(s) per metre
Pa	pascal(s)
Pa/m	pascal(s) per metre
Q	Imposed load
s	second(s)
ULS	Ultimate limit state
V	Volt(s)
W	Watt(s)
W_{input power}	Watts of input power
W_r/W_{input power}	Watts of thermal refrigeration per watt of input power
W/kW_{rej}	Watts per kilowatt of heat rejected
Wm⁻¹K⁻¹	Watts per metre degree Kelvin
W/m²	Watts per square metre
°south	degree south
%	percent
>	greater than
<	less than
≤	less than or equal to
≥	equal to or more than

Glossary

Above ground rainwater tank: A rainwater tank that is not in any way set into the ground.

Accessible: Having features to enable use by people with a disability.

Accessway: A continuous [accessible](#) path of travel (as defined in AS 1428.1) to, into or within a building.

Accredited Testing Laboratory: One of the following:

- (a) An organisation accredited by the National Association of Testing Authorities Australia (NATA) to undertake the relevant tests.
- (b) An organisation outside Australia accredited to undertake the relevant tests by an authority recognised by NATA through a mutual recognition agreement.
- (c) An organisation recognised as being an Accredited Testing Laboratory under legislation at the time the test was undertaken.

Activity support level: The degree to which occupants can undertake activities with respect to the likely [activity traits](#) and [occupant traits](#).

Explanatory Information

This term is used to articulate whether the height of a room or space is sufficient and by what degree. This is achieved by having regard to the room or space's intended use by occupants, through consideration of the defined terms '[activity traits](#)' and '[occupant traits](#)'.

Activity traits: For the purposes of—

- (a) Volume One, the features of the activities that will be undertaken in a [habitable room](#) or space; or
- (b) Volume Two, the features of the activities that will be undertaken in a room or space.

Explanatory Information

This term is used to describe the characteristics of the activities that will be undertaken in a room or space.

For example, the activities likely to be undertaken in a bedroom, and the associated features are—

- sleeping — a person laying horizontally; and
- resting — a person laying horizontally or sitting upright on the bed; and
- leisure activities, such as reading a book — a person sitting upright on the bed, with enough space to stretch their arms vertically; and
- dressing/changing clothes — a person standing with enough space to stretch their arms vertically.

Administering body: The body responsible for administering the [WaterMark Certification Scheme](#).

Aged care building: A Class 9c building for residential accommodation of aged persons who, due to varying degrees of incapacity associated with the ageing process, are provided with [personal care services](#) and 24 hour staff assistance to evacuate the building during an emergency.

[NSW Aisle](#)

[SA Agriculture](#)

Air-conditioning: For the purposes of Section J of Volume One, a [service](#) that actively cools or heats the air within a space, but does not include a [service](#) that directly—

- (a) cools or heats cold or hot rooms; or
- (b) maintains specialised conditions for equipment or processes, where this is the main purpose of the [service](#).

Alarm zone: For the purposes of Specification 23, an area of a building protected by one or more smoke alarms connected to one alarm circuit.

Alpine area: An area given in [Figure 1](#) and in [Table 1](#) for specific locations, and is—

- (a) likely to be subject to significant snowfalls; and

- (b) in New South Wales, the ACT or Victoria more than 1200 m above the Australian Height Datum; and
- (c) in Tasmania more than 900 m above the Australian Height Datum.

Table 1: Alpine areas where snow loads are significant

Location	Map identifier
Kiandra (NSW)	1
Mount Kosciuszko (NSW)	2
Perisher Valley (NSW)	3
Thredbo (NSW)	4
Cabramurra (NSW)	5
Charlotte Pass Village (NSW)	6
Diggers Creek (NSW)	7
Guthega Village (NSW)	8
Mount Blue Cow (NSW)	9
Mount Selwyn (NSW)	10
Perisher Range (NSW)	11
Rules Point (NSW)	12
Sawpit Creek (NSW)	13
Smiggin Holes (NSW)	14
Smiggin Range (NSW)	15
Three Mile Dam (NSW)	16
Wilsons Valley (NSW)	17
Falls Creek (Vic.), including Summit Area, Sun Valley and Village Bowl	18
Mount Baw Baw (Vic.)	19
Mount Buffalo (Vic.), including Chalet, Dingo Dell and Tatra	20
Mount Buller (Vic.), including Baldy and Village	21
Mount Hotham (Vic.), including Davenport and Village Centre	22
Dinner Plain (Vic.)	23
Lake Mountain (Vic.)	24
Mount Stirling (Vic.)	25
Ben Lomond Ski Field (Tas.)	26
Cradle Valley (Tas.)	27
Great Lake Area (Tas.)	28
Mount Field Ski Field (Tas.)	29

Figure 1: Alpine areas

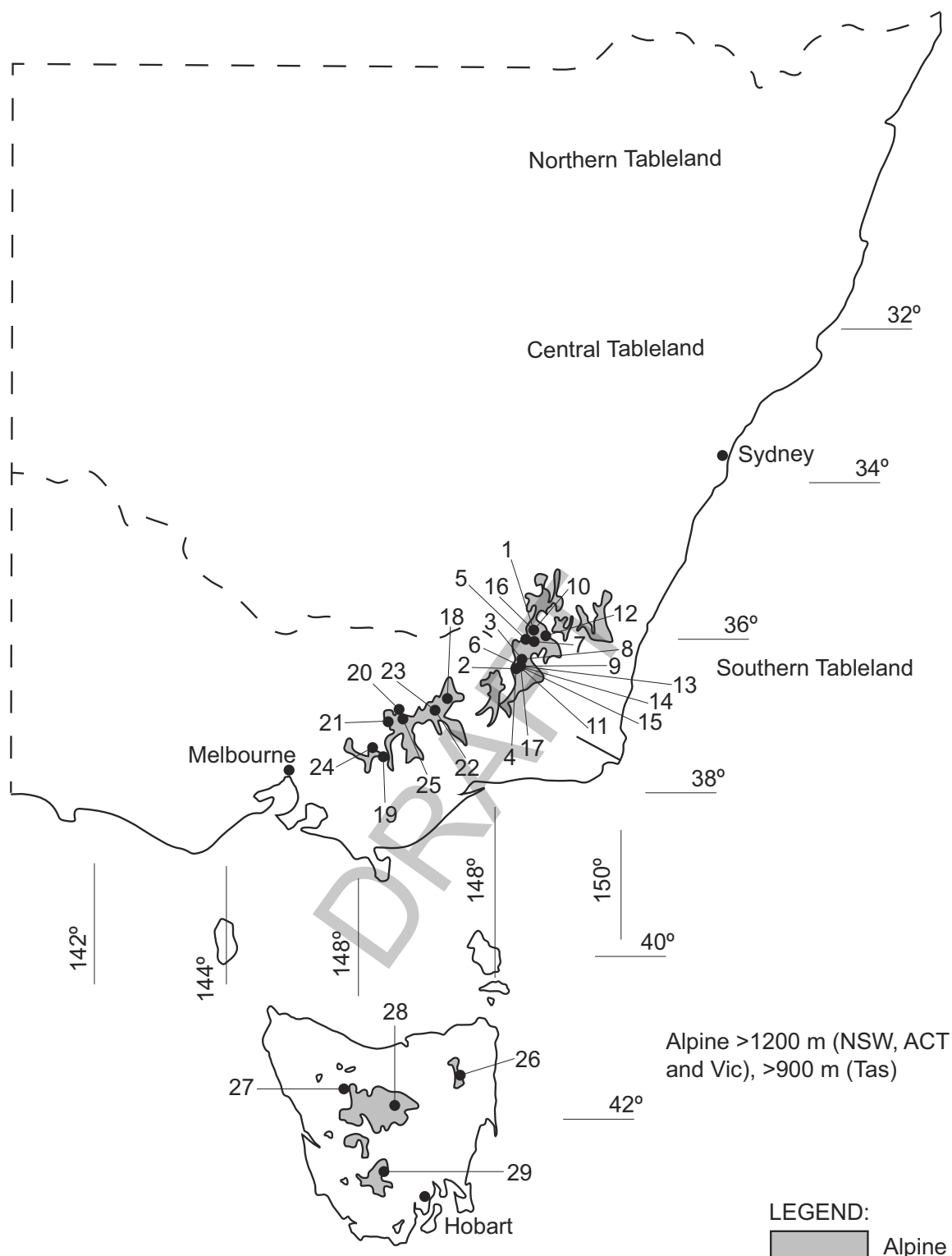


Figure Notes

This map is approximate only and altitude above Australian Height Datum must be used to determine whether the building falls into an *alpine area* region.

Explanatory Information

Alpine areas are located in New South Wales, Victoria and Tasmania.

Alpine areas are areas 1200 m or more above Australian Height Datum (AHD) for New South Wales, Australian Capital Territory and Victoria, and 900 m or more above AHD for Tasmania, as shown in Figure 1.

Alpine areas are considered to receive significant snowfalls (snowfalls that result in an average snow accumulation on

the ground of 175 mm or greater). Regions in New South Wales, the Australian Capital Territory and Victoria between 600 – 1200 m AHD are considered to be sub-alpine areas and may receive significant snowfalls, however unlike alpine areas the snow is unlikely to accumulate.

It is recommended that the *appropriate authority* be consulted to determine whether the building is located in an alpine area. AS/NZS 1170.3 also contains further detail in the identification of alpine areas and the altitude of the alpine regions of Australia.

In the Australian Capital Territory, Canberra is not designated as an alpine areas as snow loads are not considered significant.

Alteration: In relation to a building, includes an addition or extension to a building.

Aluminium Composite Panel (ACP): Flat or profiled aluminium sheet material in composite with any type of materials.

Amenity: An attribute which contributes to the health, physical independence, comfort and well-being of people.

Ancillary element: An element that is secondary to and not an integral part of another element to which it is attached.

Annual exceedance probability: The probability that a given rainfall total accumulated over a given duration will be exceeded in any one year.

Annual greenhouse gas emissions: The theoretical amount of greenhouse gas emissions attributable to the energy used annually by a building's *services*, excluding kitchen exhaust and the like.

Appropriate authority: For the purposes of the Fire Safety Verification Method, means the relevant authority with the statutory responsibility to determine the particular matter satisfies the relevant *Performance Requirement*.

Explanatory Information

The *Appropriate Authority* is typically the building surveyor or building certifier charged with the statutory responsibility to determine building compliance and issue the building permit / approval and occupancy certificate / approval.

NSW Appropriate authority

Appropriate authority: The relevant authority with the statutory responsibility to determine the particular matter.

Appropriately qualified person: A person recognised by the *appropriate authority* as having qualifications and/or experience in the relevant discipline in question.

Approved disposal system: A system for the disposal of sewage, sullage or stormwater approved by an authority having jurisdiction.

Articulated masonry: Masonry construction in which special provisions have been made for movement by articulation.

NSW Assembly building

SA Assembly building

Assembly building: A building where people may assemble for—

- (a) civic, theatrical, social, political or religious purposes including a library, theatre, public hall or place of worship; or
- (b) educational purposes in a *school*, *early childhood centre*, preschool, or the like; or
- (c) entertainment, recreational or sporting purposes including—
 - (i) a discotheque, nightclub or a bar area of a hotel or motel providing live entertainment or containing a dance floor; or
 - (ii) a cinema; or
 - (iii) a sports stadium, sporting or other club; or
- (d) transit purposes including a bus station, railway station, airport or ferry terminal.

Assessment Method: A method that can be used for determining that a *Performance Solution* or *Deemed-to-Satisfy Solution* complies with the *Performance Requirements*.

Assumed cooling thermostat set point: The cooling thermostat set point used to calculate *cooling degree hours*, and equal to $17.8 + 0.31 T_m$, where T_m

is the mean January outdoor air temperature measured in degrees Celsius.

Atrium: A space within a building that connects 2 or more *storeys* and—

- (a) is enclosed at the top by a floor or roof (including a glazed roof structure); and
- (b) includes any adjacent part of the building not separated by an appropriate barrier to fire; but
- (c) does not include a stairwell, rampwell or the space within a *shaft*; and
- (d) for the purposes of (a) a space is considered enclosed if the area of the enclosing floor or roof is greater than 50% of the area of the space, measured in plan, of any of the *storeys* connected by the space.

Atrium well: A space in an *atrium* bounded by the perimeter of the openings in the floors or by the perimeter of the floors and the *external walls*.

NSW Auditorium

Automatic: Designed to operate when activated by a heat, smoke or fire sensing device.

Available safe egress time (ASET)

- (1) The time between ignition of a fire and the onset of untenable conditions in a specific part of a building.
- (2) The time referred to in (1) is the calculated interval between the time of ignition of a fire and the time at which conditions become such that the occupant is unable to take effective action to escape to a place of safety.

Average daylight factor: The ratio of the illumination level within a room provided by daylight to the level of daylight outside the building during overcast conditions.

Average specific extinction area: The average specific extinction area for smoke as determined by AS 5637.1.

Backflow prevention device: An air gap, break tank or mechanical device that is designed to prevent the unplanned reversal of flow of water or *contaminants* into the water service or a *Network Utility Operator's* water supply.

Backpressure: A reversal of water flow caused by the downstream pressure becoming greater than the supply pressure.

Backsiphonage: A reversal of flow of water caused by negative pressure in the distributing pipes of a water service or supply.

Backstage: A space associated with, and adjacent to, a *stage* in a Class 9b building for scenery, props, equipment, dressing rooms, or the like.

Battery system: One or more chemical cells connected in series, parallel or a combination of the two for the purpose of electrical energy storage.

Blockage: An obstruction within a water service or sanitary *plumbing* or *drainage* system.

Boiler: A vessel or an arrangement of vessels and interconnecting parts, wherein steam or other vapour is generated, or water or other liquid is heated at a pressure above that of the atmosphere, by the application of fire, the products of combustion, electrical power, or similar high temperature means, and—

- (a) includes superheaters, reheaters, economisers, boiler piping, supports, mountings, valves, gauges, fittings, controls, the boiler settings and directly associated equipment; but
- (b) excludes a fully flooded or pressurised system where water or other liquid is heated to a temperature lower than the normal atmospheric boiling temperature of the liquid.

Bond breaker: A material used as part of a *waterproofing system* that prevents the *membrane* bonding to the substrate, bedding or lining.

Breaking surf: Any area of salt water in which waves break on an average of at least 4 days per week but does not include white caps or choppy water.

Explanatory Information

Breaking surf normally occurs in areas exposed to the open sea. Breaking surf does not normally occur in sheltered areas, such as that which occurs around Port Phillip Bay, Sydney Harbour, Swan River, Derwent River and similar locations.

Building complexity criteria: Are used to determine the building complexity level of all or part of a building in accordance with Table 2, where building complexity criteria are as follows:

- (a) Attributes — the building is designed or constructed with any of the following sub-criteria:
 - (i) An *effective height* of more than 25 m.

- (ii) One or more *Performance Solutions* are used to demonstrate compliance with the *Performance Requirements* relating to material and systems for structural safety.
- (iii) One or more *Performance Solutions* are used to demonstrate compliance with the *Performance Requirements* relating to material and systems for fire safety.
- (iv) Is located in an area prone to natural disaster or adverse environmental conditions.
- (b) Class 2 — all or part of the building is Class 2 of three or more *storeys*.
- (c) Occupant numbers — the building is to be occupied by more than 100 people determined in accordance with D2D18.
- (d) Occupant characteristics — the building is to be occupied by more than 10 people who will require assistance to evacuate the building in an emergency.
- (e) Importance Level — the building is determined to be Importance Level 4 or 5.

Notes

The NCC currently does not include corresponding technical requirements relating to the defined term 'building complexity criteria' and the various building complexity levels. It is intended that these terms will be integrated into future editions of the NCC.

Table 2: Building complexity level

Building complexity level	Criteria
Low	The building meets only one of the following <i>building complexity criteria</i> : (a) (Attributes), (b) (Class 2), (c) (Occupant numbers) or (d) (Occupant characteristics)
Medium	The building meets two of the following <i>building complexity criteria</i> : (a) (Attributes), (b) (Class 2), (c) (Occupant numbers) or (d) (Occupant characteristics)
High	The building meets three of the following <i>building complexity criteria</i> : (a) (Attributes), (b) (Class 2), (c) (Occupant numbers) or (d) (Occupant characteristics)
Very high	The building meets all of the following <i>building complexity criteria</i> : (a) (Attributes), (b) (Class 2), (c) (Occupant numbers) and (d) (Occupant characteristics); or (e) (Building Importance Level 4 or 5)

Buried rainwater tank: A rainwater tank that is set into and completely covered by earth.

Burnout: Exposure to fire for a time that includes *fire growth*, full development, and decay in the absence of intervention or automatic suppression, beyond which the fire is no longer a threat to building elements intended to perform *loadbearing* or fire separation functions, or both.

SA Brush fence

SA Bulk grain storage facility

Carpark: A building that is used for the parking of motor vehicles but is neither a *private garage* nor used for the servicing of vehicles, other than washing, cleaning or polishing.

Cavity: A void between 2 leaves of masonry, or in masonry veneer construction, a void between a leaf of masonry and the supporting frame.

Cavity wall: For the purposes of F3V1 and H2V1, a wall that incorporates a drained cavity.

SA Cell type silo

TAS Centre-based care class 4 facility

Certificate of Accreditation: A certificate issued by a State or Territory accreditation authority stating that the properties and performance of a building material or method of construction or design fulfil specific requirements of the NCC.

Certificate of Conformity: A certificate issued under the ABCB scheme for products and systems certification stating that the properties and performance of a building material or method of construction or design fulfil specific requirements of the NCC.

Certification body: A person or organisation operating in the field of material, product, form of construction or design certification that has been accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ), and is accredited for a purpose other than as part of the CodeMark Australia Certification Scheme or *WaterMark Certification Scheme*.

Characteristic: The occupant data to be used in the modelling of access solutions which define how an occupant interacts with a building, i.e. occupant movement speeds, turning ability, reach capability, perception of luminance contrast and hearing threshold.

VIC Children's service

Clad frame: Timber or metal frame construction with exterior timber or sheet wall cladding that is not sensitive to minor movement and includes substructure masonry walls up to 1.5 m high.

Climate zone: An area defined in [Figure 2](#) and in [Table 3](#) for specific locations, having energy efficiency provisions based on a range of similar climatic characteristics.

Table 3: Climate zones for thermal design

State	Location	Climate zone
ACT	Canberra	7
NSW	Albury	4
NSW	Armidale	7
NSW	Batemans Bay	6
NSW	Bathurst	7
NSW	Bega	6
NSW	Bellingen Shire - Dorrigo Plateau	7
NSW	Bellingen Shire - Valley & seaboard	2
NSW	Bourke	4
NSW	Broken Hill	4
NSW	Byron Bay	2
NSW	Cobar	4
NSW	Coffs Harbour	2
NSW	Dubbo	4
NSW	Goulburn	7
NSW	Grafton	2
NSW	Griffith	4
NSW	Ivanhoe	4
NSW	Lismore	2
NSW	Lord Howe Island	2
NSW	Moree	4
NSW	Newcastle	5
NSW	Nowra	6
NSW	Orange	7
NSW	Perisher - Smiggins	8
NSW	Port Macquarie	5
NSW	Sydney East	5
NSW	Sydney West	6
NSW	Tamworth	4
NSW	Thredbo	8
NSW	Wagga Wagga	4
NSW	Williamstown	5

Preview Definitions

State	Location	Climate zone
NSW	Wollongong	5
NSW	Yass	6
NT	Alice Springs	3
NT	Darwin	1
NT	Elliot	3
NT	Katherine	1
NT	Renner Springs	3
NT	Tennant Creek	3
QLD	Birdsville	3
QLD	Brisbane	2
QLD	Bundaberg	2
QLD	Cairns	1
QLD	Cooktown	1
QLD	Cunnamulla	3
QLD	Gladstone	2
QLD	Hervey Bay	2
QLD	Hughenden	3
QLD	Longreach	3
QLD	Mackay	2
QLD	Mount Isa	3
QLD	Normanton	1
QLD	Rockhampton	2
QLD	Roma	3
QLD	Southport	2
QLD	Toowoomba	5
QLD	Townsville	1
QLD	Warwick	5
QLD	Weipa	1
SA	Adelaide	5
SA	Bordertown	6
SA	Ceduna	5
SA	Cook	4
SA	Elliston	5
SA	Kingscote	6
SA	Leigh Creek	5
SA	Lobethal	6
SA	Loxton	5
SA	Naracoorte	6
SA	Marree	4
SA	Mount Gambier	6
SA	Murray Bridge	6
SA	Oodnadatta	4
SA	Port Augusta	4
SA	Port Lincoln	5

**Preview
Definitions**

State	Location	Climate zone
SA	Renmark	5
SA	Tarcoola	4
SA	Victor Harbour	6
SA	Whyalla	4
TAS	Burnie	7
TAS	Bicheno	7
TAS	Deloraine	7
TAS	Devonport	7
TAS	Flinders Island	7
TAS	Hobart	7
TAS	Huonville	7
TAS	King Island	7
TAS	Launceston	7
AS	New Norfolk	7
TAS	Oatlands	7
TAS	Orford	7
TAS	Rossarden	7
TAS	Smithton	7
TAS	St Marys	7
TAS	Zeehan	7
VIC	Anglesea	6
VIC	Ararat	7
VIC	Bairnsdale	6
VIC	Ballarat	7
VIC	Benalla	6
VIC	Bendigo	6
VIC	Bright	7
VIC	Colac	6
VIC	Dandenong	6
VIC	Echuca	4
VIC	Geelong	6
VIC	Hamilton	7
VIC	Horsham	6
VIC	Melbourne	6
VIC	Mildura	4
VIC	Portland	6
VIC	Sale	6
VIC	Shepparton	4
VIC	Swan Hill	4
VIC	Traralgon	6
VIC	Wangaratta	7
VIC	Warrnambool	6
VIC	Wodonga	6
WA	Albany	6

State	Location	Climate zone
WA	Balladonia	4
WA	Broome	1
WA	Bunbury	5
WA	Carnarvon	3
WA	Christmas Island	1
WA	Cocos Island	1
WA	Derby	1
WA	Esperance	5
WA	Exmouth	1
WA	Geraldton	5
WA	Halls Creek	3
WA	Kalgoorlie-Boulder	4
WA	Karratha	1
WA	Meekatharra	4
WA	Northam	4
WA	Pemberton	6
WA	Perth	5
WA	Port Hedland	1
WA	Wagin	4
WA	Wyndham	1

Figure 2: Climate zones for thermal design

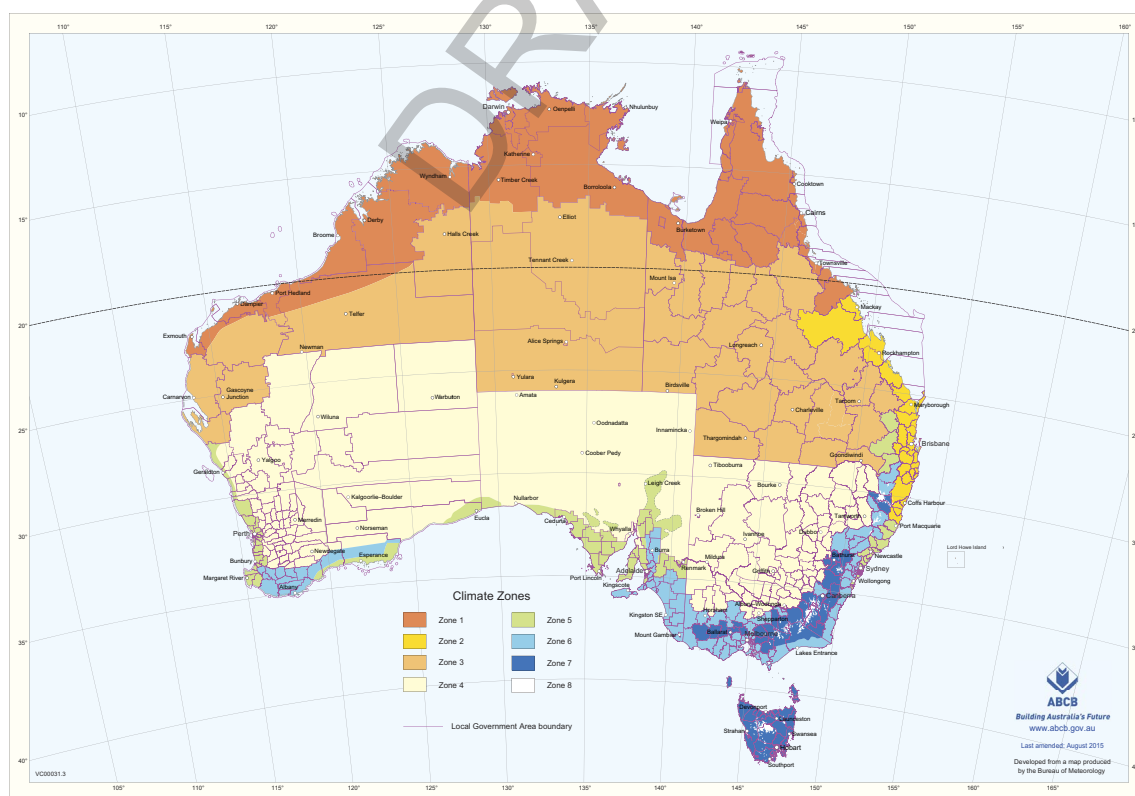


Figure Notes

- (1) This map can be viewed in enlargeable form on the ABCB website at abcb.gov.au.
- (2) A Zone 4 area in South Australia, other than a council area, at an altitude greater than 300 m above the

Australian Height Datum is to be considered as Zone 5.

- (3) The areas referred to in (2) have been defined in an enlarged format on the following maps produced by the Department of Planning, Transport and Infrastructure (these maps can be viewed on the Government of South Australia website at www.sa.gov.au):
- (a) Adelaide Hills Climate Zone Map.
 - (b) Barossa Council Climate Zone Map.
 - (c) Regional Council of Goyder Climate Zone Map.
- (4) Locations in *climate zone* 8 are in *alpine areas*.

Combustible: Applied to—

- (a) a material — means combustible as determined by AS 1530.1; and
- (b) construction or part of a building — means constructed wholly or in part of combustible materials.

Common wall: For the purposes of—

- (a) Volume One, a wall that is common to adjoining buildings.
- (b) Volume Two and the ABCB Housing Provisions, a wall that is common to adjoining buildings other than Class 1 buildings.

Condensation: The formation of moisture on the surface of a building element or material as a result of moist air coming into contact with a surface which is at a lower temperature.

Conditioned space: For the purposes of—

- (a) Volume One, a space within a building, including a ceiling or under-floor supply air plenum or return air plenum, where the environment is likely, by the intended use of the space, to have its temperature controlled by *air-conditioning*; or
- (b) Volume Two, a space within a building that is heated or cooled by the building's *domestic services*, excluding a non-*habitable room* in which a heater with a capacity of not more than 1.2 kW or 4.3 MJ/hour is installed.

Construction activity actions: Actions due to stacking of building materials or the use of equipment, including cranes and trucks, during construction or actions which may be induced by floor to floor propping.

Containment protection: The installation of a *backflow prevention device* at the *point of connection* of a *Network Utility Operator's* water supply to a site.

Contaminant: Any substance (including gases, liquids, solids or micro-organisms), energy (excluding noise) or heat, that either by itself or in combination with the same, similar or other substances, energy or heat, changes or is likely to change the physical, chemical or biological condition of water.

NSW Continental seating

Controlled fill: Material that has been placed and compacted in layers with compaction equipment (such as a vibrating plate) within a defined moisture range to a defined density requirement.

Cooling degree hours: For any one hour when the mean outdoor air temperature is above the *assumed cooling thermostat set point*, the degree Celsius air temperature difference between the mean outdoor air temperature and the *assumed cooling thermostat set point*.

Cooling load: The calculated amount of energy removed from the cooled spaces of the building annually by artificial means to maintain the desired temperatures in those spaces.

Critical radiant flux (CRF): The critical heat flux at extinguishment (CHF in kW/m²) as determined by AS ISO 9239.1.

Cross-connection: Any actual or potential connection between a water supply and any *contaminant*.

NSW Cross-over

Curtain wall: A non-*loadbearing external wall* that is not a *panel wall*.

Daily outdoor temperature range: The difference between the maximum and minimum temperatures that occur in a day.

Damp-proof course (DPC): A continuous layer of impervious material placed in a masonry wall or pier, or between a wall or pier and a floor, to prevent the upward or downward migration of water.

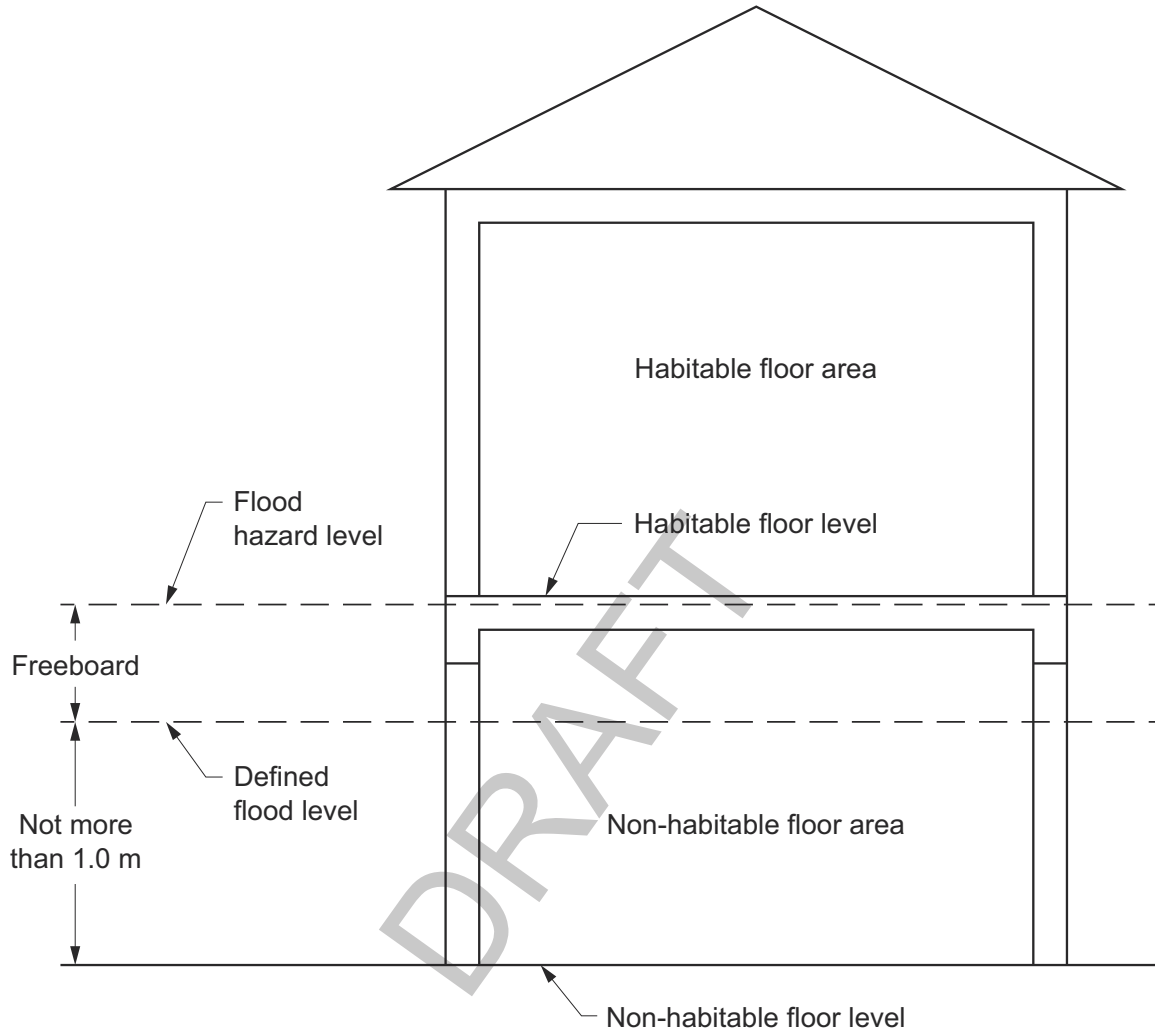
Deemed-to-Satisfy Provisions: Provisions which are deemed to satisfy the *Performance Requirements*.

Deemed-to-Satisfy Solution: A method of satisfying the *Deemed-to-Satisfy Provisions*.

Defined flood event (DFE): The flood event selected for the management of flood hazard for the location of specific development as determined by the *appropriate authority*.

Defined flood level (DFL): The flood level associated with a *defined flood event* relative to a specified datum (see Figure 3).

Figure 3: Identification of defined flood level, flood hazard level and freeboard



Dehumidification gram hours: For any one hour when the mean humidity is more than 15.7g/kg, the grams per kilogram of absolute humidity difference between the mean outdoor absolute humidity and 15.7g/kg.

NSW Designated bushfire prone area

Designated bushfire prone area: Land which has been designated under a power of legislation as being subject, or likely to be subject, to bushfires.

Design bushfire: The characteristics of a bushfire, its initiation, spread and development, which arises from weather conditions, topography and fuel (vegetation) in a given setting, used to determine *fire actions*.

Design fire: The quantitative description of a representation of a fire within the *design scenario*.

Design scenario: The specific scenario of which the sequence of events is quantified and a *fire safety engineering* analysis is conducted against.

WA Design wind speed

Design wind speed: The design gust wind speed for the area where the building is located, calculated in accordance with AS/NZS 1170.2 or AS 4055 (see Table 4 for wind classes).

Table 4: Wind classes

Non-cyclonic Region A and B	Cyclonic Region C and D
N1, N2, N3	C1
N4, N5, N6 (these wind classes are covered in the ABCB Housing Provisions Part 2.2).	C2, C3, C4 (these wind classes are covered in the ABCB Housing Provisions Part 2.2).

Table Notes

- (1) Wind classification map identifying wind regions is contained in ABCB Housing Provisions Part 2.2 (see Figure 2.2.3).
- (2) Information on wind classes for particular areas may be available from the [appropriate authority](#).
- (3) “N” = non-cyclonic winds and “C” = cyclonic winds.

Detention centre: A building in which persons are securely detained by means of the built structure including a prison, remand centre, juvenile detention centre, holding cells or psychiatric detention centre.

NSW Development consent

Direct fix cladding wall: For the purposes of F3V1 and H2V1, means a wall with cladding attached directly to the wall framing without the use of a drained cavity.

Discontinuous construction: Means—

- (a) a wall having a minimum 20 mm cavity between 2 separate leaves, and—
 - (i) for masonry, where wall ties are used to connect leaves, the ties are of the resilient type; and
 - (ii) for other than masonry, there is no mechanical linkage between the leaves, except at the periphery; and
- (b) a staggered stud wall is not deemed to be discontinuous construction.

Display glazing: [Glazing](#) used to display retail goods in a shop or showroom directly adjacent to a walkway or footpath, but not including that used in a café or restaurant.

Domestic services: The basic engineering systems that use energy or control the use of energy; and—

- (a) includes—
 - (i) heating, [air-conditioning](#), mechanical ventilation and artificial lighting; and
 - (ii) pumps and heaters for [swimming pools](#) and spa pools; and
 - (iii) heated water systems; and
 - (iv) on-site [renewable energy](#) equipment; but
- (b) excludes cooking facilities and portable appliances.

Drainage: Any part of—

- (a) a sanitary drainage system, including any liquid trade waste drainage; or
- (b) a stormwater drainage system.

Drainage flange: A flange connected to a waste pipe, at the point at which it passes through the floor substrate, to prevent leakage and which enables tile bed drainage into the waste pipe.

Drainage riser: A waste pipe between the floor waste and the drainage system.

Drinking water: Water intended primarily for human consumption but which has other domestic uses.

Explanatory Information

See also the Australian Drinking Water Guidelines produced by the National Health and Medical Research Council.

TAS Early childhood centre

VIC Early childhood centre

Early childhood centre: Any premises or part thereof providing or intending to provide a centre-based education and care service within the meaning of the Education and Care Services National Law Act 2010 (Vic), the Education and Care Services National Regulations and centre-based services that are licensed or approved under State and Territory children’s services law, but excludes education and care primarily provided to school aged children in outside school

hours settings.

Effective height: The vertical distance between the floor of the lowest *storey* included in the calculation of *rise in storeys* and the floor of the topmost *storey* (excluding the topmost *storey* if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).

Efficacy: The degree to which a system achieves a design objective given that it performs to a level consistent with the system specification during the relevant fire scenario.

Electricity network substation: A building in which high voltage supply is converted or transformed and which is controlled by a licensed network service provider designated under a power of legislation.

Electric passenger lift: A power-operated lift for raising or lowering people in a car in which the motion of the car is obtained from an electric motor mechanically coupled to the hoisting mechanism.

Electrohydraulic passenger lift: A power-operated lift for raising or lowering people in a car in which the motion of the car is obtained from the action of liquid under pressure acting on a piston or ram, the pressure being generated by a pump driven by an individual electric motor.

Energy value: The net cost to society including, but not limited to, costs to the building user, the environment and energy networks.

Engaged pier: A pier bonded to a masonry wall by course bonding of masonry units or by masonry ties.

NSW Entertainment venue

Envelope: For the purposes of—

- (a) Section J in NCC Volume One, the parts of a building's *fabric* that separate a *conditioned space* or *habitable room* from—
 - (i) the exterior of the building; or
 - (ii) a non-*conditioned space* including—
 - (A) the floor of a rooftop plant room, lift-machine room or the like; and
 - (B) the floor above a *carpark* or warehouse; and
 - (C) the *common wall* with a *carpark*, warehouse or the like; or
- (b) Part H6 in NCC Volume Two and Section 13 of the ABCB Housing Provisions, the parts of a building's *fabric* that separate artificially heated or cooled spaces from—
 - (i) the exterior of the building; or
 - (ii) other spaces that are not artificially heated or cooled.

Equivalent: Equivalent to the level of health, safety and amenity provided by the *Deemed-to-Satisfy Provisions*.

Evacuation route: The continuous path of travel (including *exits*, *public corridors* and the like) from any part of a building, including within a *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part, to a *safe place*.

Evacuation time: The time calculated from when the emergency starts for the occupants of the building to evacuate to a *safe place*.

Exit: Means—

- (a) Any, or any combination of the following if they provide egress to a road or *open space*:
 - (i) An internal or external stairway.
 - (ii) A ramp.
 - (iii) A *fire-isolated passageway*.
 - (iv) A doorway opening to a road or *open space*; or
- (b) A *horizontal exit* or a *fire-isolated passageway* leading to a *horizontal exit*.

TAS Expert judgement

Expert judgement: The judgement of an expert who has the qualifications and experience to determine whether a *Performance Solution* or *Deemed-to-Satisfy Solution* complies with the *Performance Requirements*.

Explanatory Information

Contemporary and relevant qualifications and/or experience are necessary to determine whether a *Performance*

Solution complies with the *Performance Requirements*. The level of qualification and/or experience may differ depending on the complexity of the proposal and the requirements of the regulatory authority. Practitioners should seek advice from the authority having jurisdiction or *appropriate authority* for clarification as to what will be accepted.

External wall: For the purposes of—

- (a) Volume One, an outer wall of a building which is not a *common wall*; or
- (b) Volume Two, an outer wall of a building which is not a *separating wall*.

Extra-low voltage: A *voltage* not exceeding 50 V AC or 120 V ripple-free DC.

Fabric: The basic building structural elements and components of a building including the roof, ceilings, walls, glazing and floors.

SA Farm building

Farm building: A Class 7 or 8 building located on land primarily used for *farming*—

- (a) that is—
 - (i) used in connection with *farming*; or
 - (ii) used primarily to store one or more *farm vehicles*; or
 - (iii) a combination of (i) and (ii); and
- (b) in which the total number of persons accommodated at any time does not exceed one person per 200 m² of floor area or part thereof, up to a maximum of 8 persons; and
- (c) with a total *floor area* of not more than 3500 m².

Farming: Includes—

- (a) cultivating, propagating and harvesting plants or fungi or their products or parts, including seeds, spores, bulbs or the like, but does not include forestry; or
- (b) maintaining animals in any physical environment for the purposes of—
 - (i) breeding them; or
 - (ii) selling them; or
 - (iii) acquiring and selling their bodily produce such as milk, wool, eggs or the like; or
- (c) a combination of (a) and (b),

but does not include forestry or maintaining animals for sport or recreational purposes.

Farm shed: A single *storey* Class 7 or 8 building located on land primarily used for *farming*—

- (a) that is—
 - (i) used in connection with *farming*; or
 - (ii) used primarily to store one or more *farm vehicles*; or
 - (iii) a combination of (i) and (ii); and
- (b) occupied neither frequently nor for extended periods by people; and
- (c) in which the total number of persons accommodated at any time does not exceed 2; and
- (d) with a total *floor area* of more than 500 m² but not more than 2000 m².

Farm vehicle: A vehicle used in connection with *farming*.

NSW Film

Finished ground level: The ground level adjacent to footing systems at the completion of construction and landscaping.

Fire actions: Each of the following:

- (a) airborne embers; and
- (b) burning debris and/or accumulated embers adjacent to building elements; and
- (c) heat transfer from combustible materials within the site; and
- (d) radiant heat from a bushfire front; and
- (e) flame contact from a bushfire front; and

(f) the period of time post fire front subject to collapsing vegetation due to persistent combustion.

Fire brigade: A statutory authority constituted under an Act of Parliament having as one of its functions, the protection of life and property from fire and other emergencies.

Fire brigade station: For the purposes of E1D2(1)(b) and I3D9, means a state or territory government operated premises which is a station for a *fire brigade*.

Fire compartment: Either—

- (a) the total space of a building; or
- (b) when referred to in—
 - (i) the *Performance Requirements* — any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or
 - (ii) the *Deemed-to-Satisfy Provisions* — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that *required* for a *fire wall* for that type of construction and where all openings in the separating construction are protected in accordance with the *Deemed-to-Satisfy Provisions* of the relevant Part.

Fire growth: The stage of fire development during which the *heat release rate* and the temperature of the fire are generally increasing.

Fire hazard: The danger in terms of potential harm and degree of exposure arising from the start and spread of fire and the smoke and gases that are thereby generated.

Fire hazard properties: The following properties of a material or assembly that indicate how they behave under specific fire test conditions:

- (a) *Average specific extinction area*, *critical radiant flux* and *Flammability Index*, determined as defined in Schedule 1.
- (b) *Smoke-Developed Index*, *smoke development rate* and *Spread-of-Flame Index*, determined in accordance with Specification 3.
- (c) *Group number* and *smoke growth rate index* (SMOGRA_{RC}), determined in accordance with Specification 7.

Fire intensity: The rate of release of calorific energy in watts, determined either theoretically or empirically, as applicable.

Fire-isolated passageway: A corridor, hallway or the like, of *fire-resisting construction*, which provides egress to or from a *fire-isolated stairway* or *fire-isolated ramp* or to a road or *open space*.

Fire-isolated ramp: A ramp within a *fire-resisting* enclosure which provides egress from a *storey*.

Fire-isolated stairway: A stairway within a *fire-resisting shaft* and includes the floor and roof or top enclosing structure.

Fire load: The sum of the net calorific values of the *combustible* contents which can reasonably be expected to burn within a *fire compartment*, including furnishings, built-in and removable materials, and building elements.

Notes

The calorific values must be determined at the ambient moisture content or humidity (the unit of measurement is MJ).

Fire-protected timber: *Fire-resisting* timber building elements that comply with Specification 10.

Fire-protective covering: Any one or more of the following:

- (a) 13 mm fire-protective grade plasterboard.
- (b) 12 mm cellulose cement flat sheeting complying with AS/NZS 2908.2 or ISO 8336.
- (c) 12 mm fibrous plaster reinforced with 13 mm x 13 mm x 0.7 mm galvanised steel wire mesh located not more than 6 mm from the exposed face.
- (d) Other material not less fire-protective than 13 mm fire-protective grade plasterboard, fixed in accordance with the normal trade practice for a fire-protective covering.

Fire-resistance level (FRL): The grading periods in minutes determined in accordance with *Specifications 1 and 2*, for the following criteria—

- (a) *structural adequacy*; and
- (b) *integrity*; and

(c) *insulation*,
and expressed in that order.

Notes

A dash means there is no requirement for that criterion. For example, 90/—/— means there is no requirement for an FRL for *integrity* and *insulation*, and —/—/— means there is no requirement for an FRL.

Fire-resisting construction: For the purposes of Volume One, means one of the Types of construction referred to in Part C2 of Volume One.

Fire-resisting: For the purposes of—

- (a) Volume One, applied to a building element, having an FRL appropriate for that element; or
- (b) Volume Two, applied to a *structural member* or other part of a building, having the FRL *required* for that *structural member* or other part.

Fire safety engineering: Application of engineering principles, rules and *expert judgement* based on a scientific appreciation of the fire phenomenon, often using specific *design scenario*, of the effects of fire and of the reaction and behaviour of people in order to—

- (a) save life, protect property and preserve the environment and heritage from destructive fire; and
- (b) quantify the hazards and risk of fire and its effects; and
- (c) mitigate fire damage by proper design, construction, arrangement and use of buildings, materials, structures, industrial processes and transportation systems; and
- (d) evaluate analytically the optimum protective and preventive measures, including design, installation and maintenance of active and passive fire and life safety systems, necessary to limit, within prescribed levels, the consequences of fire.

Fire safety system: One or any combination of the methods used in a building to—

- (a) warn people of an emergency; or
 - (b) provide for safe evacuation; or
 - (c) restrict the spread of fire; or
 - (d) extinguish a fire,
- and includes both active and passive systems.

Fire-source feature: Any one or more of the following:

- (a) The far boundary of a road, river, lake or the like adjoining the allotment.
- (b) A side or rear boundary of the allotment.
- (c) An *external wall* of another building on the allotment which is not a Class 10 building.

Fire wall: A wall with an appropriate resistance to the spread of fire that divides a *storey* or building into *fire compartments*.

Fixed wired: For the purposes of Specification 23, a system of electrical wiring (either AC or DC), in which cables are fixed or supported in position.

Flammability Index: The index number as determined by AS 1530.2.

VIC Flashing

Flashing: A strip or sleeve of impervious material dressed, fitted or built-in to provide a barrier to water movement, or to divert the travel of water, or to cover a joint where water would otherwise penetrate to the interior of a building, and includes the following:

- (a) Perimeter flashing: a flashing used at the floor-wall junction.
- (b) Vertical flashing: a flashing used at wall junctions within *shower areas*.

Flashover: In relation to *fire hazard properties*, means a *heat release rate* of 1 MW.

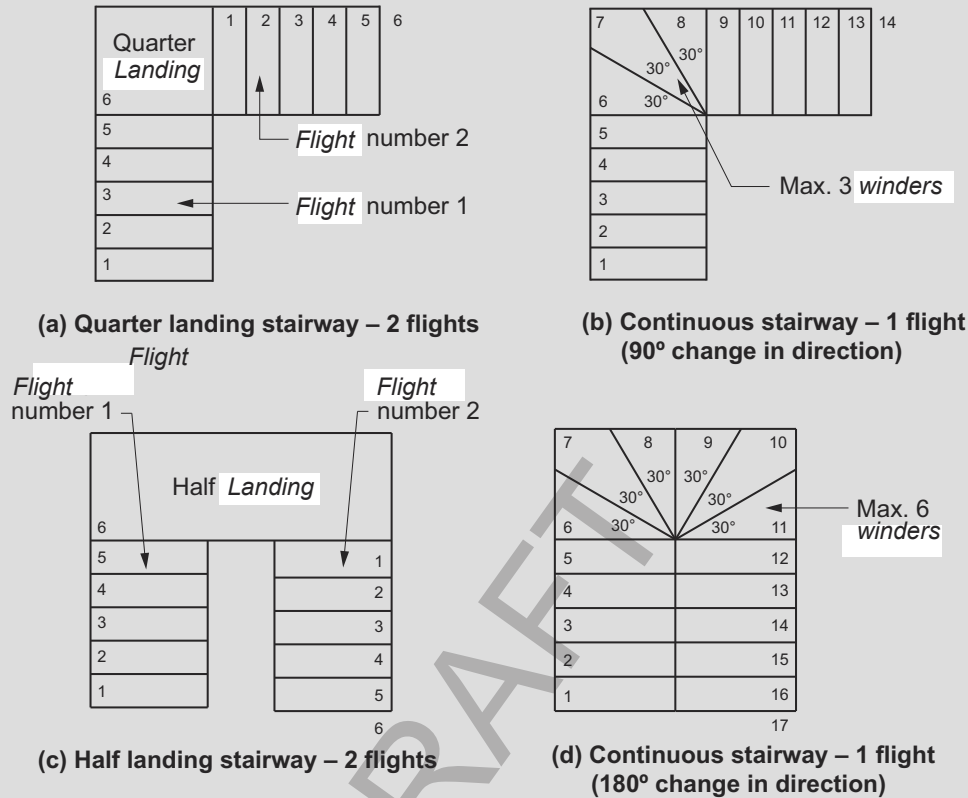
Flight: That part of a stair that has a continuous series of *risers*, including *risers* of *winders*, not interrupted by a *landing* or floor.

Explanatory Information

A **flight** is the part of a stair that has a continuous slope created by the nosing line of treads. The length of a **flight** is limited to restrict the distance a person could fall down a stair.

Quarter **landings**, as shown in Explanatory Figure 1, are considered sufficient to halt a person's fall and therefore are considered for the purposes of NCC Volume Two and the ABCB Housing Provisions not to be part of the **flight**.

Figure 1 (explanatory): Identification of stair flights — Plan view



VIC Flood hazard area

Flood hazard area: The **site** (whether or not mapped) encompassing land lower than the **flood hazard level** which has been determined by the **appropriate authority**.

Flood hazard level (FHL): The flood level used to determine the height of floors in a building and represents the **defined flood level** plus the **freeboard** (see Figure 3).

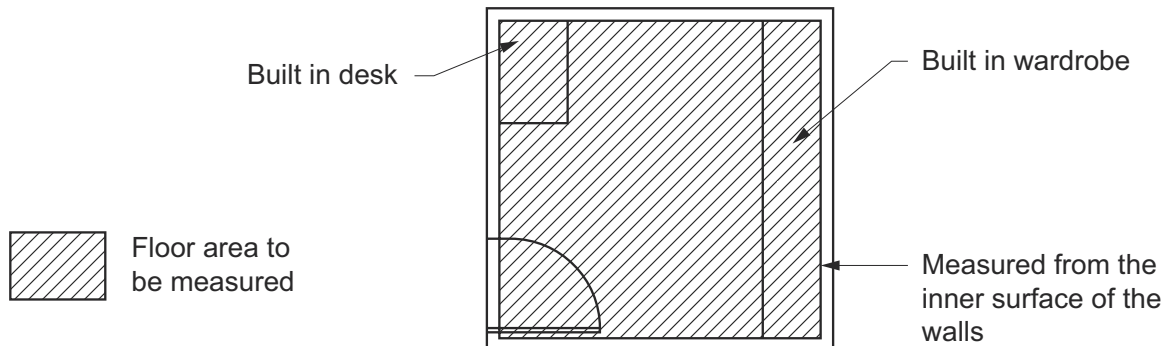
Floor area: For the purposes of—

- (1) Volume One—
 - (a) in relation to a building — the total area of all **storeys**; and
 - (b) in relation to a **storey** — the area of all floors of that **storey** measured over the enclosing walls, and includes—
 - (i) the area of a **mezzanine** within the **storey**, measured within the finished surfaces of any **external walls**; and
 - (ii) the area occupied by any **internal wall** or partitions, any cupboard, or other built-in furniture, fixture or fitting; and
 - (iii) if there is no enclosing wall, an area which has a use that contributes to the **fire load** or impacts on the safety, health or amenity of the occupants in relation to the provisions of the BCA; and
 - (c) in relation to a room — the area of the room measured within the internal finished surfaces of the walls, and includes the area occupied by any cupboard or other built-in furniture, fixture or fitting; and
 - (d) in relation to a **fire compartment** — the total area of all floors within the **fire compartment** measured within the finished internal surfaces of the bounding construction, and if there is no bounding construction, includes an area which has a use which contributes to the **fire load**; and
 - (e) in relation to an **atrium** — the total area of all floors within the **atrium** measured within the finished surfaces

of the bounding construction and if no bounding construction, within the *external walls*.

- (2) Volume Two and the ABCB Housing Provisions, in relation to a room, the area of the room measured within the finished surfaces of the walls, and includes the area occupied by any cupboard or other built-in furniture, fixture or fitting (see Figure 4).

Figure 4: Identification of floor area of a room

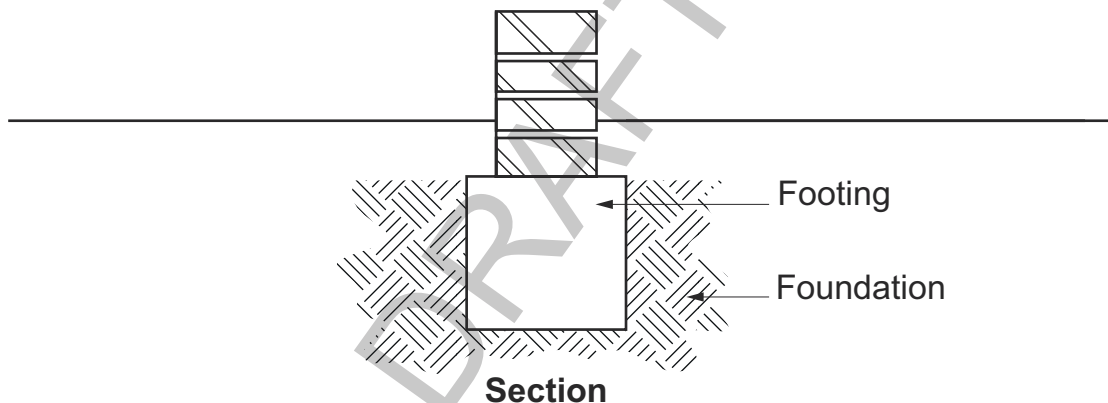


Floor waste: A grated inlet within a graded floor intended to drain the floor surface.

NSW Flying scenery

Foundation: The ground which supports the building (see Figure 5).

Figure 5: Identification of foundation



Fractional effective dose (FED): The fraction of the dose (of thermal effects) that would render a person of average susceptibility incapable of escape.

Explanatory Information

The definition for FED has been modified from the ISO definition to be made specific for the Fire Safety *Verification Method*. The use of CO or CO₂ as part of FED is not part of that *Verification Method*. This is because the ability to measure CO in a repeatable test varies by two orders of magnitude for common cellulosic fuel.

VIC Freeboard

Freeboard: The height above the *defined flood level* as determined by the *appropriate authority*, used to compensate for effects such as wave action and localised hydraulic behaviour.

Fully developed fire: The state of total involvement of the majority of available combustible materials in a fire.

NSW Garage top dwelling

Glazing: For the purposes of—

- (a) Section J of Volume One, except for a *sole-occupancy unit* of a Class 2 building or a Class 4 part of a building—
 - (i) a transparent or translucent element and its supporting frame located in the *envelope*; and
 - (ii) includes a *window* other than a *roof light*; or
- (b) Section J of NCC Volume One, for a *sole-occupancy unit* of a Class 2 building or a Class 4 part of a building—

- (i) a translucent element and its supporting frame located in the external *fabric* of the building; and
 - (ii) includes a *window* other than a *roof light*; or
- (c) **Part H6** of NCC Volume Two and Section 13 of the ABCB Housing Provisions—
- (i) a transparent or translucent element and its supporting frame located in the external *fabric* of the building; and
 - (ii) includes a *window* other than a *roof light*.

Going: The horizontal dimension from the front to the back of a tread less any overhang from the next tread or *landing* above (see Figure 11.2.2f in the ABCB Housing Provisions).

Green Star: The building sustainability rating scheme managed by the Green Building Council of Australia.

NSW Grid

Group number: The number of one of 4 groups of materials used in the regulation of *fire hazard properties* and applied to materials used as a finish, surface, lining, or attachment to a wall or ceiling.

Habitable room: A room used for normal domestic activities, and—

- (a) includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom; but
- (b) excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.

Hazard Rating: A level of potential toxicity that may cause contamination in a *drinking water* system, having a rating of *Low Hazard*, *Medium Hazard* or *High Hazard*, determined in accordance with NCC Volume Three.

Health-care building: A building whose occupants or patients undergoing medical treatment generally need physical assistance to evacuate the building during an emergency and includes—

- (a) a public or private hospital; or
- (b) a nursing home or similar facility for sick or disabled persons needing full-time care; or
- (c) a clinic, day surgery or procedure unit where the effects of the predominant treatment administered involve patients becoming non-ambulatory and requiring supervised medical care on the premises for some time after the treatment.

Heated water: Water that has been intentionally heated; normally referred to as hot water or warm water.

Heating degree hours: For any one hour when the mean outdoor air temperature is less than 15°C, the degrees Celsius temperature difference between the mean outdoor air temperature and 15°C.

Heating load: The calculated amount of energy delivered to the heated spaces of the building annually by artificial means to maintain the desired temperatures in those spaces.

Heat release: The thermal energy produced by combustion (measured in kJ).

Heat release rate (HRR): The rate of thermal energy production generated by combustion, measured in kW (preferred) or MW.

High Hazard: Any condition, device or practice which, in connection with a water supply, has the potential to cause death.

High wind area: A region that is subject to *design wind speed* more than N3 or C1 (see Table 4).

Hob: The upstand at the perimeter of a *shower area*.

Horizontal exit: A *required* doorway between 2 parts of a building separated from each other by a *fire wall*.

VIC Hotel offering shared accommodation

Hours of operation: The number of hours when the occupancy of the building is greater than 20% of the peak occupancy.

House energy rating software: For the purposes of—

- (a) Volume One, software accredited under the Nationwide House Energy Rating Scheme (NatHERS); or
- (b) Volume Two—
 - (i) applied to *H6V2*—software accredited or previously accredited under the Nationwide House Energy Rating Scheme (NatHERS) and the additional functionality provided in non-regulatory mode; and
 - (ii) applied to *Specification 42*—software accredited under the Nationwide House Energy Rating Scheme (NatHERS).

Explanatory Information

The Nationwide House Energy Rating Scheme (NatHERS) refers to the Australian Governments' scheme that facilitates consistent energy ratings from software tools which are used to assess the potential thermal efficiency of dwelling envelopes.

Illuminance: The luminous flux falling onto a unit area of surface.

Illumination power density: The total of the power that will be consumed by the lights in a space, including any lamps, ballasts, current regulators and control devices other than those that are plugged into socket outlets for intermittent use such as floor standing lamps, desk lamps or work station lamps, divided by the area of the space, and expressed in W/m^2 .

Explanatory Information

Illumination power density relates to the power consumed by the lighting system and includes the light source or luminaire and any control device. The power for the lighting system is the illumination power load. This approach is more complicated than the *lamp power density* approach but provides more flexibility for a dwelling with sophisticated control systems.

The area of the space refers to the area the lights serve. This could be considered a single room, open plan space, verandah, balcony or the like, or the total area of all these spaces.

Inclined lift: A power-operated device for raising or lowering people within a carriage that has one or more rigid guides on an inclined plane.

Individual protection: The installation of a *backflow prevention device* at the point where a water service connects to a single fixture or appliance.

NSW Information and education facility

Insulation: In relation to an FRL, the ability to maintain a temperature on the surface not exposed to the furnace below the limits specified in AS 1530.4.

Integrity: In relation to an FRL, the ability to resist the passage of flames and hot gases specified in AS 1530.4.

Internal wall: For the purposes of—

- (a) Volume One, excludes a *common wall* or a party wall; or
- (b) Volume Two, excludes a *separating wall*, *common wall* or party wall.

Interstitial condensation: The *condensation* of moisture on surfaces between material layers inside the building component.

Irrigation system: An irrigation system of the following types:

- (a) Type A— all permanently open outlets and piping more than 150 mm above finished surface level, not subject to ponding or *backpressure* and not involving injection systems.
- (b) Type B— irrigation systems in domestic or residential buildings with piping or outlets installed less than 150 mm above finished surface level and not involving injection systems.
- (c) Type C— irrigation systems in other than domestic or residential buildings with piping outlets less than 150 mm above finished surface level and not involving injection systems.
- (d) Type D— irrigation systems where fertilizers, herbicides, nematicides or the like are injected or siphoned into the system.

JAS-ANZ: The Joint Accreditation System of Australia and New Zealand.

Lamp power density: The total of the maximum power rating of the lamps in a space, other than those that are plugged into socket outlets for intermittent use such as floor standing lamps, desk lamps or work station lamps, divided by the area of the space, and expressed in W/m^2 .

Explanatory Information

Lamp power density is a simple means of setting energy consumption at an efficient level for Class 1 and associated Class 10a buildings.

Lamp refers to the globe or globes that are to be installed in a permanently wired light fitting. The maximum power of

a lamp is usually marked on the fitting as the maximum allowable wattage.

The area of the space refers to the area the lights serve. This could be considered a single room, open plan space, verandah, balcony or the like, or the total area of all these spaces.

Landing: An area at the top or bottom of a *flight* or between two *flights*.

Latent heat gain: The heat gained by the vapourising of liquid without change of temperature.

Lateral support: A support (including a footing, buttress, cross wall, beam, floor or braced roof structure) that effectively restrains a wall or pier at right angles to the face of the wall or pier.

Lead free: Where a plumbing product or material in contact with *drinking water* has a *weighted average* lead content of not more than 0.25%.

NSW Licensed premises

WA Licensed premises

Lightweight construction: Construction which incorporates or comprises—

- (a) sheet or board material, plaster, render, sprayed application, or other material similarly susceptible to damage by impact, pressure or abrasion; or
- (b) concrete and concrete products containing pumice, perlite, vermiculite, or other soft material similarly susceptible to damage by impact, pressure or abrasion; or
- (c) masonry having a width of less than 70 mm.

Loadbearing: Intended to resist vertical forces additional to those due to its own weight.

Loadbearing wall: For the purposes of H1D4 and H2D3 of NCC Volume Two and Section 4 of the ABCB Housing Provisions, means any wall imposing on the footing a load greater than 10 kN/m.

Loss: Physical damage, financial loss or loss of *amenity*.

Low Hazard: Any condition, device or practice which, in connection with a water supply, would constitute a nuisance by colour, odour or taste but does not have the potential to injure or endanger health.

Low rainfall intensity area: An area with a 5 minute rainfall intensity for an *annual exceedance probability* of 5% of not more than 125 mm/hour.

Explanatory Information

Rainfall intensity figures can be obtained from Tables 7.4.3d in the ABCB Housing Provisions.

Low-rise, low-speed constant pressure lift: A power-operated low-rise, low-speed device for raising or lowering people with limited mobility on a carriage that is controlled by the application of constant pressure to a control.

Low-rise platform lift: A power-operated device for raising or lowering people with limited mobility on a platform, that is controlled automatically or by the application of constant pressure to a control.

Low voltage: A *voltage* exceeding *extra-low voltage*, but not exceeding 1000 V AC or 1500 V DC.

Luminance contrast: The light reflected from one surface or component, compared to the light reflected from another surface or component.

Main water heater: The domestic hot water unit in a dwelling that is connected to at least one shower and the largest number of hot water outlets.

Main space conditioning: Either—

- (a) the heating or cooling equipment that serves at least 70% of the *conditioned space* of a dwelling, or
- (b) if no one heating or cooling equipment serves at least 70% of the *conditioned space* of the dwelling, the equipment that results in the highest net equivalent energy usage when calculated in accordance with J3D14(1)(a) of NCC Volume One or 13.6.2(1)(a) of the ABCB Housing Provisions.

Notes

- (1) If a multi-split *air-conditioning* unit is installed, it is considered to be a single heating or cooling *service*.
- (2) A series of separate heaters or coolers of the one type can be considered a single heater or cooler type with a performance level of that of the unit with the lowest efficiency.

Explanatory Information

The purpose of defining for main space conditioning is to provide criteria upon which the heating or cooling equipment should be selected when showing compliance with J3D14(1)(a) of NCC Volume One and 13.6.2(1)(a) of the ABCB Housing Provisions when more than one type and efficiency of equipment is present. In J3D14(1)(a) the formula that determines E_R allows the selection of only one heating or cooling system. This definition requires that if any one system serves at least 70% of the *floor area* that is heated or cooled it should be used as the basis of determining E_R . If, however, no one system serves at least 70% of the *floor area*, then the appliance that results in the highest net equivalent energy usage, when calculated in accordance with J3D14(1)(a)/13.6.2(1)(a), should be selected.

Massive timber: An element not less than 75 mm thick as measured in each direction formed from solid and laminated timber.

Maximum retained water level: The point where surface water will start to overflow out of the *shower area*.

Medium Hazard: Any condition, device or practice which, in connection with a water supply, has the potential to injure or endanger health.

Membrane: A barrier impervious to moisture.

Explanatory Information

A barrier may be a single or multi-part system.

Mezzanine: An intermediate floor within a room.

Minimum Energy Performance Standards (MEPS): The Minimum Energy Performance Standards for equipment and appliances established through the Greenhouse and Energy Minimum Standards Act 2012.

NSW Minimum lateral clearance

Mixed construction: A building consisting of more than one form of construction, particularly in double-storey buildings.

Mould: A fungal growth that can be produced from conditions such as dampness, darkness, or poor ventilation.

NABERS Energy: The National Australian Built Environment Rating Systems for energy efficiency, which is managed by the New South Wales Government.

Network Utility Operator: A person who—

- (a) undertakes the piped distribution of *drinking water* or *non-drinking water* for supply; or
- (b) is the operator of a sewerage system or a stormwater *drainage* system.

Explanatory Information

A Network Utility Operator in most States and Territories is the water and sewerage authority licensed to supply water and receive sewage and/or stormwater. The authority operates or proposes to operate a network that undertakes the distribution of water for supply and undertakes to receive sewage and/or stormwater drainage. This authority may be a licensed utility, local government body or council.

Non-combustible: Applied to—

- (a) a material — means not deemed *combustible* as determined by AS 1530.1 — Combustibility Tests for Materials; or
- (b) construction or part of a building — means constructed wholly of materials that are not deemed *combustible*.

Non-drinking water: Water which is not intended primarily for human consumption.

Occupant traits: For the purposes of—

- (a) Volume One, the features, needs and profile of the occupants in a *habitable room* or space; or
- (b) Volume Two, the features, needs and profile of the occupants in a room or space.

Explanatory Information

For the purpose of Volume Two, this term is used to describe the characteristics of the occupants and their associated requirements in relation to a room or space.

For example, in relation to a bedroom, the following occupant characteristics and associated requirements should be

considered:

- Characteristics: height, mobility and how often the space will be used.
- Requirements: a sleeping space and a space to undertake leisure activities.

Occupiable outdoor area: A space on a roof, balcony or similar part of a building—

- (a) that is open to the sky; and
- (b) to which access is provided, other than access only for maintenance; and
- (c) that is not *open space* or directly connected with *open space*.

VIC On-site wastewater management system

On-site wastewater management system: A system that receives and/or treats wastewater generated and discharges the resulting effluent to an *approved disposal system* or re-use system.

Open-deck carpark: A carpark in which all parts of the parking *storeys* are cross-ventilated by permanent unobstructed openings in not fewer than 2 opposite or approximately opposite sides, and—

- (a) each side that provides ventilation is not less than $\frac{1}{6}$ of the area of any other side; and
- (b) the openings are not less than $\frac{1}{2}$ of the wall area of the side concerned.

Open space: A space on the allotment, or a roof or similar part of a building adequately protected from fire, open to the sky and connected directly with a public road.

Open spectator stand: A tiered stand substantially open at the front.

Other property: All or any of the following—

- (a) any building on the same or an adjoining allotment; and
- (b) any adjoining allotment; and
- (c) a road.

Outdoor air: Air outside the building.

Outdoor air economy cycle: A mode of operation of an *air-conditioning* system that, when the *outdoor air* thermodynamic properties are favourable, increases the quantity of *outdoor air* used to condition the space.

Outfall: That part of the disposal system receiving *surface water* from the *drainage* system and may include a natural water course, kerb and channel, or soakage system.

Overflow device: A device that provides relief to a water service, sanitary *plumbing* and *drainage* system, *rainwater service* or stormwater system to avoid the likelihood of *uncontrolled discharge*.

Panel wall: A non-*loadbearing external wall*, in frame or similar construction, that is wholly supported at each *storey*.

Partially buried rainwater tank: A rainwater tank that is not completely covered by earth but is partially set into the ground.

Patient care area: A part of a *health-care building* normally used for the treatment, care, accommodation, recreation, dining and holding of patients including a *ward area* and *treatment area*.

Performance-based design brief (PBDB): The report that defines the scope of work for the performance-based analysis, the technical basis for analysis, and the criteria for acceptance of any relevant *Performance Solution* as agreed by stakeholders.

Performance Requirement: A requirement which states the level of performance which a *Performance Solution* or *Deemed-to-Satisfy Solution* must meet.

Performance Solution: A method of complying with the *Performance Requirements* other than by a *Deemed-to-Satisfy Solution*.

Perimeter of building: For the purposes of Section 8 of the Housing Provisions, means the external envelope of a building.

TAS Permit Authority

Personal care services: Any of the following:

- (a) The provision of nursing care.
- (b) Assistance or supervision in—
 - (i) bathing, showering or personal hygiene; or

- (ii) toileting or continence management; or
- (iii) dressing or undressing; or
- (iv) consuming food.
- (c) The provision of direct physical assistance to a person with mobility problems.
- (d) The management of medication.
- (e) The provision of substantial rehabilitative or development assistance.

Piping: For the purposes of Section J in Volume One or [Part H6](#) in Volume Two, and Section 13 of the Housing Provisions, means an assembly of pipes, with or without valves or other fittings, connected together for the conveyance of liquids and gases.

NSW Planning for Bush Fire Protection

Pliable building membrane: A water barrier as classified by AS 4200.1.

VIC Plumbing

Plumbing: Any water service plumbing or sanitary plumbing system.

Plumbing or Drainage Solution: A solution which complies with the [Performance Requirement](#) and is a—

- (a) [Performance Solution](#); or
- (b) [Deemed-to-Satisfy Solution](#); or
- (c) combination of (a) and (b).

Point of connection: Any of the following:

- (a) For a cold water service, means the point where the cold water service connects to—
 - (i) the [Network Utility Operator's](#) water supply system; or
 - (ii) the point of isolation to an alternative water source where there is no [Network Utility Operator's](#) water supply available or is not utilised.
- (b) For a [heated water](#) service, means the point where the water heater connects to the cold water service downstream of the isolation valve.
- (c) For sanitary [drainage](#), means the point where the on-site sanitary [drainage](#) system connects to—
 - (i) the [Network Utility Operator's](#) sewerage system; or
 - (ii) an [on-site wastewater management system](#).
- (d) For sanitary [plumbing](#), means the point where the sanitary [plumbing](#) system connects to the sanitary [drainage](#) system.
- (e) For a [rainwater service](#), means the point where the [rainwater service](#)—
 - (i) connects to the point of isolation for the [rainwater storage](#); or
 - (ii) draws water from the [rainwater storage](#).
- (f) For stormwater disposal, means the point where the on-site stormwater [drainage](#) system connects to—
 - (i) the [Network Utility Operator's](#) stormwater system; or
 - (ii) an approved on-site disposal system.
- (g) For a fire-fighting water service, means the point where the service connects to—
 - (i) a cold water service, downstream of a [backflow prevention device](#); or
 - (ii) the [Network Utility Operator's](#) water supply system; or
 - (iii) the point of isolation to an alternative water source.

Notes

A domestic fire sprinkler service conforming to FPAA101D is considered part of the cold water service.

Explanatory Information

The [point of connection](#) is usually determined by the [Network Utility Operator](#) according to the water and sewerage

Acts, Regulations and codes that apply within the *Network Utility Operator's* licensed area and/or jurisdiction.

WA Potable water

Predicted Mean Vote (PMV): The Predicted Mean Vote of the thermal perception of building occupants determined in accordance with ANSI/ASHRAE Standard 55.

Preformed shower base: A preformed, prefinished *vessel* installed as the finished floor of a shower compartment, and which is provided with a connection point to a sanitary *drainage* system.

Explanatory Information

Preformed shower bases are commonly made of plastics, composite materials, vitreous enamelled pressed steel, or stainless steel.

Pressure vessel: A vessel subject to internal or external pressure, including interconnected parts and components, valves, gauges and other fittings up to the first point of connection to connecting piping, and—

- (a) includes fire heaters and gas cylinders; but
- (b) excludes—
 - (i) any vessel that falls within the definition of a *boiler*; and
 - (ii) storage tanks and equipment tanks intended for storing liquids where the pressure at the top of the tank is not exceeding 1.4 kPa above or 0.06 kPa below atmospheric pressure; and
 - (iii) domestic-type hot water supply heaters and tanks; and
 - (iv) pressure vessels installed for the purposes of fire suppression or which serve a fire suppression system.

QLD Primary building element

Primary building element: For the purposes of—

- (a) Volume One, a member of a building designed specifically to take part of the loads specified in B1D3 and includes roof, ceiling, floor, stairway or ramp and wall framing members including bracing members designed for the specific purpose of acting as a brace to those members; or
- (b) Part 3.4 of the ABCB Housing Provisions, a member of a building designed specifically to take part of the building loads and includes roof, ceiling, floor, stairway or ramp and wall framing members including bracing members designed for the specific purpose of acting as a brace to those members.

Explanatory Information

The loads to which a building may be subjected are dead, live, wind, snow and earthquake loads. Further information on building loads can be found in the AS 1170 series of Standards.

Primary insulation layer: The most interior insulation layer of a wall or roof construction.

Private bushfire shelter: A structure associated with, but not attached to, or part of a Class 1a dwelling that may, as a last resort, provide shelter for occupants from immediate life threatening effects of a bushfire.

Private garage: For the purposes of—

- (a) Volume One—
 - (i) any garage associated with a Class 1 building; or
 - (ii) any single *storey* of a building of another Class containing not more than 3 vehicle spaces, if there is only one such *storey* in the building; or
 - (iii) any separate single *storey* garage associated with another building where such garage contains not more than 3 vehicle spaces; or
- (b) Volume Two—
 - (i) any garage associated with a Class 1 building; or
 - (ii) any separate single *storey* garage associated with another building where such garage contains not more than 3 vehicle spaces.

Product: *Plumbing* and *drainage* items within the scope of Volume Three including but not limited to—

- (a) materials, fixtures and components used in a *plumbing* or *drainage* installation; and
- (b) appliances and equipment connected to a *plumbing* or *drainage* system.

Product Technical Statement: A form of documentary evidence stating that the properties and performance of a building material, product or form of construction fulfil specific requirements of the NCC, and describes—

- (a) the application and intended use of the building material, product or form of construction; and
- (b) how the use of the building material, product or form of construction complies with the requirements of the NCC Volume One and Volume Two; and
- (c) any limitations and conditions of the use of the building material, product or form of construction relevant to (b).

Professional engineer: A person who is—

- (a) if legislation is applicable — a registered professional engineer in the relevant discipline who has appropriate experience and competence in the relevant field; or
- (b) if legislation is not applicable—
 - (i) registered in the relevant discipline on the National Engineering Register (NER) of the Institution of Engineers Australia (which trades as ‘Engineers Australia’); or
 - (ii) eligible to become registered on the Institution of Engineers Australia’s NER and has appropriate experience and competence in the relevant field.

NSW Projection suite

TAS Public

WA Public building

Public corridor: An enclosed corridor, hallway or the like which—

- (a) serves as a means of egress from 2 or more *sole-occupancy units* to a *required exit* from the *storey* concerned; or
- (b) is *required* to be provided as a means of egress from any part of a *storey* to a *required exit*.

Rainwater service: A water service which distributes water from the isolation valve of the rainwater storage to the rainwater points of discharge for purposes such as for clothes washing, urinal and water closet flushing and external hose cocks.

Rainwater storage: Any storage of rainwater collected from a roof catchment area which is used to supply water for the primary purposes of drinking, personal hygiene or other uses.

Explanatory Information

Generally this applies to alternative water sources not supplied by a *Network Utility Operator*. This does not include *rainwater storage* for non-drinking purposes.

SA Rainwater tank

Rapid roller door: A door that opens and closes at a speed of not less than 0.5 m/s.

Recognised expert: A person with qualifications and experience in the area of *plumbing* or *drainage* in question recognised by the authority having jurisdiction.

Explanatory Information

A *recognised expert* is a person recognised by the authority having jurisdiction as qualified to provide evidence under A5G4(5). Generally, this means a hydraulic consultant or engineer, however the specific requirements are determined by the authority having jurisdiction.

Under A5G4(5), a report from a *recognised expert* may be used as evidence of suitability that a *product* listed on the *WaterMark Schedule of Excluded Products*, or a *plumbing* or *drainage* system, complies with a *Performance Requirement* or *Deemed-to-Satisfy Provisions*.

Reference building: For the purposes of—

- (a) Volume One, a hypothetical building that is used to calculate the maximum allowable—
 - (i) *annual greenhouse gas emissions* for the common area of a Class 2 building or a Class 3 to 9 building; or

- (ii) *heating load*, *cooling load* and *energy value* for a *sole-occupancy unit* of a Class 2 building or a Class 4 part of a building; or
- (b) Volume Two, a hypothetical building that is used to determine the maximum allowable *heating load* and *cooling load* for the proposed building.

Reflective insulation: A building membrane with a reflective surface such as a reflective foil laminate, reflective barrier, foil batt or the like capable of reducing radiant heat flow.

Explanatory Information

For Volume Two:

- Typical *R-Values* achieved by adding *reflective insulation* are given in the explanatory information accompanying Section 13 of the ABCB Housing Provisions. Information on specific products may be obtained from *reflective insulation* manufacturers.
- The surface of *reflective insulation* may be described in terms of its emittance (or infra-red emittance) or in terms of its reflectance (or solar reflectance). Generally, for the surface of a particular *reflective insulation*: emittance + reflectance = 1.
- Some types of *reflective insulation* may also serve the purposes of waterproofing or vapour proofing.

Regulated energy: The energy consumed by a building's *services* minus the amount of *renewable energy* generated and used on *site*.

Reinforced masonry: Masonry reinforced with steel reinforcement that is placed in a bed joint or grouted into a core to strengthen the masonry.

Reliability: The probability that a system performs to a level consistent with the system specification.

Renewable energy: Energy that is derived from sources that are regenerated, replenished, or for all practical purposes cannot be depleted and the energy sources include, but are not limited to, solar, wind, hydroelectric, wave action and geothermal.

Required: Required to satisfy a *Performance Requirement* or a *Deemed-to-Satisfy Provision* of the NCC as appropriate.

Required safe egress time (RSET): The time required for safe evacuation of occupants to a place of safety prior to the onset of untenable conditions.

Residential aged care building: A Class 3 or 9a building whose residents, due to their incapacity associated with the ageing process, are provided with physical assistance in conducting their daily activities and to evacuate the building during an emergency.

Residential care building: A Class 3, 9a or 9c building which is a place of residence where 10% or more of persons who reside there need physical assistance in conducting their daily activities and to evacuate the building during an emergency (including any *aged care building* or *residential aged care building*) but does not include a hospital.

VIC Residential care building (Vic)

Resident use area: Part of a Class 9c building normally used by residents, and—

- (a) includes *sole-occupancy units*, lounges, dining areas, activity rooms and the like; but
- (b) excludes offices, storage areas, commercial kitchens, commercial laundries and other spaces not for the use of residents.

Resistance to the incipient spread of fire: In relation to a ceiling membrane, means the ability of the membrane to insulate the space between the ceiling and roof, or ceiling and floor above, so as to limit the temperature rise of materials in this space to a level which will not permit the rapid and general spread of fire throughout the space.

Explanatory Information

Resistance to the incipient spread of fire refers to the ability of a ceiling to prevent the spread of fire and thermally insulate the space between the ceiling and the roof or floor above. "Resistance to the incipient spread of fire" is superior to "fire-resistance" because it requires a higher standard of heat insulation.

The definition is used in Volume Two for separating floors/ceilings for a Class 1a dwelling located above a non-appurtenant *private garage*.

Rise in storeys: The greatest number of *storeys* calculated in accordance with C2D3 of Volume One.

Riser: The height between consecutive treads and between each *landing* and continuous tread.

VIC Restricted children's service

Rolled fill: Material placed in layers and compacted by repeated rolling by an excavator.

SA Roof catchment area

Roof light: For the purposes of Section J and Part F4 in NCC Volume One, *Part H6* in NCC Volume Two, and Part 10.5 and Section 13 of the ABCB Housing Provisions, a skylight, *window* or the like installed in a roof—

- (a) to permit natural light to enter the room below; and
- (b) at an angle between 0 and 70 degrees measured from the horizontal plane.

NSW Row

R-Value: The thermal resistance of a component calculated by dividing its thickness by its thermal conductivity, expressed in m².K/W.

Safe place: Either—

- (a) a place of safety within a building—
 - (i) which is not under threat from a fire; and
 - (ii) from which people must be able to safely disperse after escaping the effects of an emergency to a road or *open space*; or
- (b) a road or *open space*.

Sanitary compartment: A room or space containing a closet pan or urinal (see *Figures 6a and 6b*).

DRAFT

Figure 6a: Identification of a sanitary compartment (diagram a)

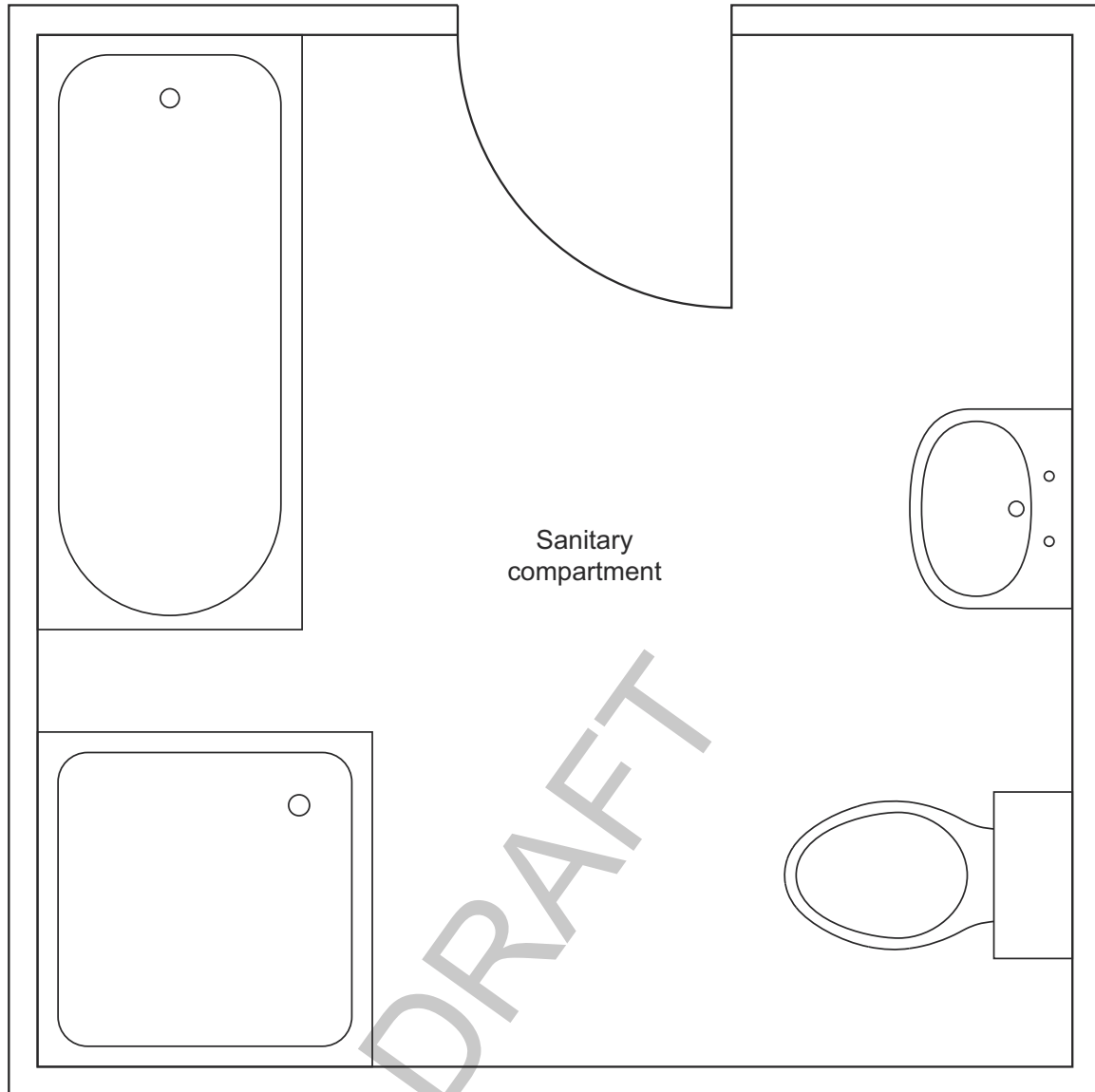
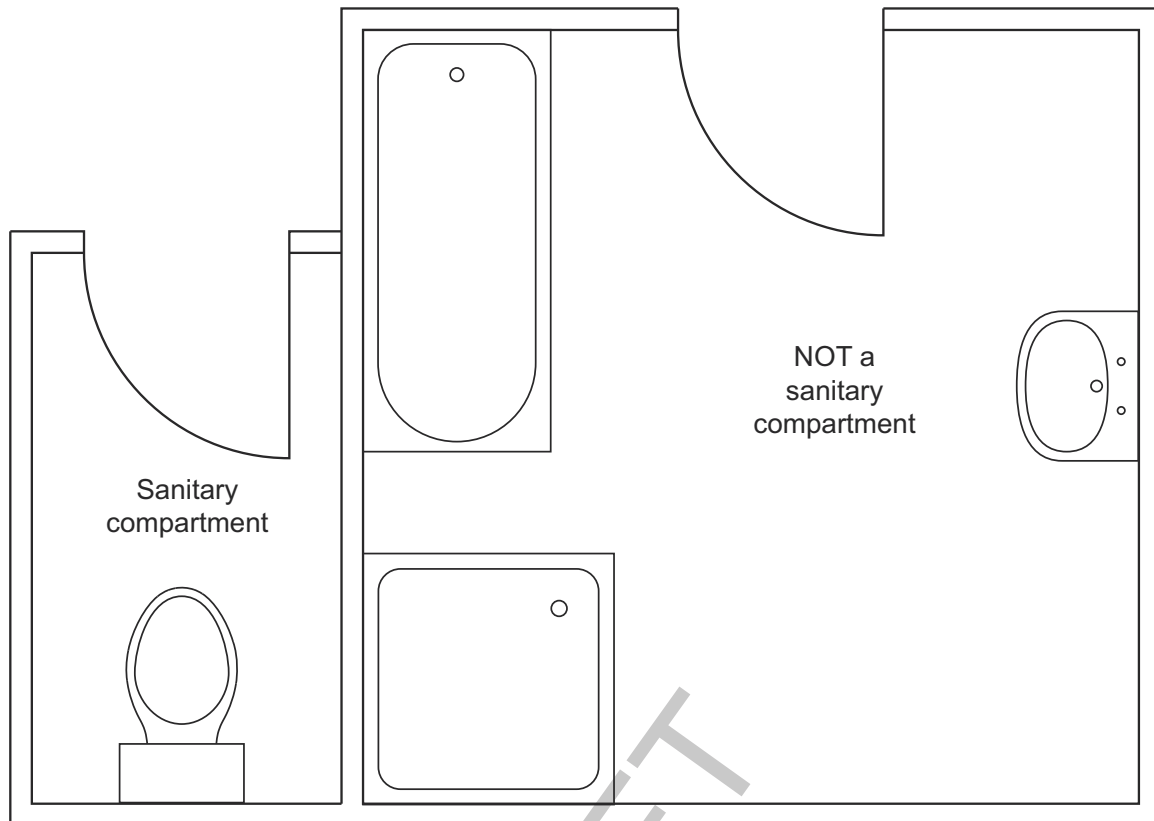


Figure 6b: Identification of a sanitary compartment (diagram b)



Sarking-type material: A material such as a *reflective insulation* or other flexible membrane of a type normally used for a purpose such as waterproofing, vapour management or thermal reflectance.

School: Includes a primary or secondary school, college, university or similar educational establishment.

TAS School age care facility

Screed: A layer of material (usually cement based) which sets in situ between a structural base and the finished floor material.

Self-closing: For the purposes of—

- (a) Volume One, applied to a door, means equipped with a device which returns the door to the fully closed position immediately after each opening; or
- (b) Volume Two, applied to a door or *window*, means equipped with a device which returns the door or *window* to the fully closed and latched position immediately after each manual opening.

Sensible heat gain: The heat gained which causes a change in temperature.

Separating element: A barrier that exhibits fire *integrity*, *structural adequacy*, *insulation*, or a combination of these for a period of time under specified conditions (often in accordance with AS 1530.4).

Separating wall: A wall that is common to adjoining Class 1 buildings (see *Figure 7*).

Figure 7: Separating wall

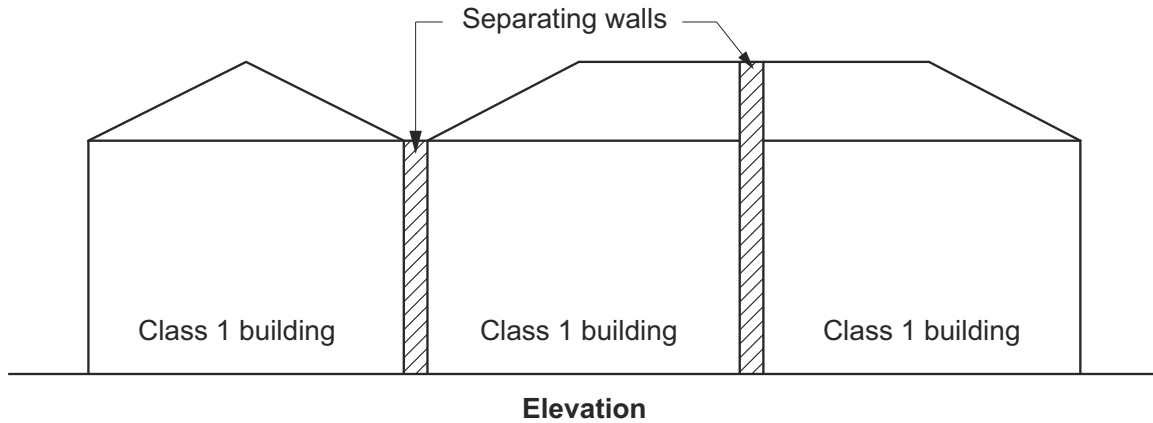


Figure Notes

In Volume Two a separating wall may also be known as a party wall and typically is *required* to be *fire-resisting* construction (see ABCB Housing Provisions Parts 9.2 and 9.3).

Service: For the purposes of Section J in Volume One, means a mechanical or electrical system that uses energy to provide *air-conditioning*, mechanical ventilation, heated water supply, artificial lighting, vertical transport and the like within a building, but which does not include—

- (a) systems used solely for emergency purposes; and
- (b) cooking facilities; and
- (c) portable appliances.

Service station: A garage which is not a *private garage* and is for the servicing of vehicles, other than only washing, cleaning or polishing.

Shaft: The walls and other parts of a building bounding—

- (a) a well, other than an *atrium well*; or
- (b) a vertical chute, duct or similar passage, but not a chimney or flue.

Shower area: The area affected by water from a shower, including a shower over a bath and for a shower area that is—

- (a) Enclosed – the area enclosed by walls or screens including hinged or sliding doors that contain the spread of water to within that space; or
- (b) Unenclosed – the area where, under normal use, water from the shower rose is not contained within the shower area.

Shower screen: The panels, doors or windows enclosing or partially enclosing a *shower area*.

Single leaf masonry: Outer walls constructed with a single thickness of masonry unit.

Site: The part of the allotment of land on which a building stands or is to be erected.

Sitework: Work on or around a *site*, including earthworks, preparatory to or associated with the construction, *alteration*, demolition or removal of a building.

NSW Small live music or arts venue

SA Small arts venue

Small-scale Technology Certificate: A certificate issued under the Commonwealth Government's Small-scale Renewable Energy Scheme.

Small-sized, low-speed automatic lift: A restricted use power-operated device for the infrequent raising or lowering of people with limited mobility on a platform that is controlled automatically but has the capability of being electrically isolated by a key-lockable control.

Smoke-and-heat vent: A vent, located in or near the roof for smoke and hot gases to escape if there is a fire in the building.

Smoke-Developed Index: The index number for smoke as determined by AS/NZS 1530.3.

Smoke development rate: The development rate for smoke as determined by testing flooring materials in accordance

with AS ISO 9239.1.

Smoke growth rate index (SMOGR_{RC}): The index number for smoke used in the regulation of *fire hazard properties* and applied to materials used as a finish, surface, lining or attachment to a wall or ceiling.

Solar admittance: The fraction of incident irradiance on a *wall-glazing construction* that adds heat to a building's space.

Sole-occupancy unit: A room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes—

- (a) a dwelling; or
- (b) a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
- (c) a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
- (d) a room or suite of associated rooms in a Class 9c building, which includes sleeping facilities and any area for the exclusive use of a resident.

NSW Spa pool

Spandrel panel: For the purposes of Section J, means the opaque part of a façade in curtain wall construction which is commonly adjacent to, and integrated with, *glazing*.

NSW Special fire protection purpose

Spiral stairway: A stairway with a circular plan, winding around a central post with steps that radiate from a common centre or several radii (see Figures 11.2.2d and 11.2.2e in the ABCB Housing Provisions).

Spread-of-Flame Index: The index number for spread of flame as determined by AS/NZS 1530.3.

Sprinkler alarm switch: For the purposes of Specification 23, a device capable of sending an electrical signal to activate an alarm when a residential sprinkler head is activated (e.g. a flow switch).

Stack bonded pier: A pier where the overlap of a masonry unit is not more than 25% of the length of the masonry unit below.

Stage: A floor or platform in a Class 9b building on which performances are presented before an audience.

Stairway platform lift: A power-operated device for raising or lowering people with limited mobility on a platform (with or without a chair) in the direction of a stairway.

Standard Fire Test: The Fire-resistance Tests of Elements of Building Construction as described in AS 1530.4.

SA Storage shed

Storey: A space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not—

- (a) a space that contains only—
 - (i) a lift *shaft*, stairway or meter room; or
 - (ii) a bathroom, shower room, laundry, water closet, or other *sanitary compartment*; or
 - (iii) accommodation intended for not more than 3 vehicles; or
 - (iv) a combination of the above; or
- (b) a *mezzanine*.

Structural adequacy: In relation to an FRL, means the ability to maintain stability and adequate *loadbearing* capacity as determined by AS 1530.4.

Structural member: A component or part of an assembly which provides vertical or lateral support to a building or structure.

Surface water: All naturally occurring water, other than sub-surface water, which results from rainfall on or around the *site* or water flowing onto the *site*.

Swimming pool: Any excavation or structure containing water and principally used, or that is designed, manufactured or adapted to be principally used for swimming, wading, paddling, or the like, including a bathing or wading pool, or spa.

Tapered tread: A stair tread with a walking area that grows smaller towards one end.

NSW Temporary structure

TAS Temporary structure

Thermal comfort level: The level of thermal comfort in a building expressed as a *PMV* sensation scale.

Thermal energy load: The sum of the *heating load* and the *cooling load*.

Total R-Value: The sum of the *R-Values* of the individual component layers in a composite element including any building material, insulating material, airspace, thermal bridging and associated surface resistances, expressed in m².K/W.

Total System Solar Heat Gain Coefficient (SHGC): For the purposes of—

- (a) Volume One, the fraction of incident irradiance on a *wall-glazing construction* or a *roof light* that adds heat to a building's space; or
- (b) Volume Two, the fraction of incident irradiance on *glazing* or a *roof light* that adds heat to a building's space.

Total System U-Value: The thermal transmittance of the composite element allowing for the effect of any airspaces, thermal bridging and associated surface resistances, expressed in W/m².K.

Treatment area: An area within a *patient care area* such as an operating theatre and rooms used for recovery, minor procedures, resuscitation, intensive care and coronary care from which a patient may not be readily moved.

Uncontrolled discharge: Any unintentional release of fluid from a *plumbing* and *drainage* system and includes leakage and seepage.

Unique wall: For the purposes of F3V1 in Volume One and H2V1 in Volume Two, a wall which is neither a *cavity wall* nor a *direct fix cladding wall*.

Unobstructed opening: For the purposes of Section 8 of the ABCB Housing Provisions, a glazed area that a person could mistake for an open doorway or clearway and walk into the glazed panel.

Unprotected water service: Unprotected water service means that the water service may be contaminated from a surrounding hazard.

Unreinforced masonry: Masonry that is not reinforced.

Vapour permeance: The degree that water vapour is able to diffuse through a material, measured in µg/N.s and tested in accordance with the ASTM-E96 Procedure B – Water Method at 23°C 50% relative humidity.

Vapour pressure: The pressure at which water vapour is in thermodynamic equilibrium with its condensed state.

Ventilation opening: An opening in the *external wall*, floor or roof of a building designed to allow air movement into or out of the building by natural means including a permanent opening, an openable part of a *window*, a door or other device which can be held open.

Verification Method: A test, inspection, calculation or other method that determines whether a *Performance Solution* complies with the relevant *Performance Requirements*.

Vessel: For the purposes of Volume One and Part 10.2 of the ABCB Housing Provisions, an open, pre-formed, pre-finished concave receptacle capable of holding water, usually for the purpose of washing, including a basin, sink, bath, laundry tub and the like.

Visibility: The maximum distance at which an object of defined size, brightness and contrast can be seen and recognised.

Voltage: A difference of potential, measured in Volts (V) and includes *extra-low voltage* and *low voltage*.

Volume: In relation to—

- (a) a building — the volume of the total space of the building measured above the lowest floor (including, for a suspended floor, any subfloor space), over the enclosing walls, and to the underside of the roof covering; or
- (b) a *fire compartment* — the volume of the total space of the *fire compartment* measured within the inner finished surfaces of the enclosing *fire-resisting* walls and/or floors, and—
 - (i) if there is no *fire-resisting* floor at the base of the *fire compartment*, measured above the finished surface of the lowest floor in the *fire compartment*; and
 - (ii) if there is no *fire-resisting* floor at the top of the *fire compartment*, measured to the underside of the roof covering of the *fire compartment*; and
 - (iii) if there is no *fire-resisting* wall, measured over the enclosing wall and if there is no enclosing wall, includes any space within the *fire compartment* that has a use which contributes to the *fire load*; or
- (c) an *atrium* — the volume of the total space of the *atrium* measured within the finished surfaces of the bounding construction and if there is no bounding construction, within the *external walls*.

Waffle raft: A stiffened raft with closely spaced ribs constructed on the ground and with slab panels supported between ribs.

Wall-glazing construction: For the purposes of Section J in Volume One, the combination of wall and *glazing* components

comprising the *envelope* of a building, excluding—

- (a) *display glazing*; and
- (b) opaque non-glazed openings such as doors, vents, penetrations and shutters.

Ward area: That part of a *patient care area* for resident patients and may contain areas for accommodation, sleeping, associated living and nursing facilities.

Water control layer: A *pliable building membrane* or the exterior cladding when no *pliable building membrane* is present.

WaterMark Certification Scheme: The ABCB scheme for certifying and authorising *plumbing* and *drainage products*.

WaterMark Conformity Assessment Body (WMCAB): A conformity assessment body registered with and accredited by the *JAS-ANZ* to conduct evaluations leading to *product* certification and contracted with the *administering body* to issue the *WaterMark Licence*.

WaterMark Licence: A licence issued by a *WaterMark Conformity Assessment Body*.

WaterMark Schedule of Excluded Products: The list maintained by the *administering body* of *products* excluded from the *WaterMark Certification Scheme*.

WaterMark Schedule of Products: The list maintained by the *administering body* of *products* included in the *WaterMark Certification Scheme*, and the specifications to which the *products* can be certified.

Explanatory Information

The *WaterMark Schedule of Products* and the *WaterMark Schedule of Excluded Products* can be viewed on the ABCB website at www.abcb.gov.au.

Waterproof: The property of a material that does not allow water to penetrate through it.

Waterproofing system: A combination of elements that are *required* to achieve a *waterproof* barrier as *required* by H4D2 and H4D3 including substrate, *membrane*, bond breakers, sealants, finishes and the like.

Water resistant: The property of a system or material that restricts water movement and will not degrade under conditions of water.

Water sensitive materials: Materials that have an inherent capacity to absorb water vapour and include timber, plasterboard, plywood, oriented strand board and the like.

Waterstop: A vertical extension of the *waterproofing system* forming a barrier to prevent the passage of water in a floor or other horizontal surfaces.

Watertight: Will not allow water to pass from the inside to the outside of the component or joint and vice versa.

Weighted average: Is calculated across the *wetted surface area* of a pipe, pipe fitting or plumbing fixture.

WA WELS

Wet area: An area within a building supplied with water from a water supply system, which includes bathrooms, showers, laundries and *sanitary compartments* and excludes kitchens, bar areas, kitchenettes or domestic food and beverage preparation areas.

Wetted surface area: Is calculated by the total sum of diameter (D) in contact with *drinking water*.

Winders: Treads within a straight *flight* that are used to change direction of the stair (see Explanatory Figure 1).

Window: includes a *roof light*, glass panel, glass block or brick, glass louvre, glazed sash, glazed door, or other device which transmits natural light directly from outside a building to the room concerned when in the closed position.

Yield: The mass of a combustion product generated during combustion divided by the mass loss of the test specimen as specified in the *design fire*.

Zone protection: The installation of a *backflow prevention device* at the point where a water service is connected to multiple fixtures or appliances, with no *backflow prevention device* installed as *individual protection* downstream of this point.



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