

Ministerial Building Standard MBS 005

Additional requirements for housing on designated Aboriginal lands

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South Australia

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1. SCOPE AND APPLICATION

- 1.1 This standard is published as a Ministerial Building Standard that forms part of the Building Rules under the *Planning, Development and Infrastructure Act 2016* (the Act) and must be read in conjunction with the requirements of that Act and the Planning, Development and Infrastructure (General) Regulations 2017 (*Regulations*).
- 1.2 This standard requires increased levels of durability, sustainability, health and safety to be provided for housing (Class 1 buildings under the *Building Code*) on *designated Aboriginal lands* in western South Australia that are subject to harsh environmental conditions and where access to maintenance facilities is limited.
- 1.3 The provisions of this standard are in addition those required by the *Building Code* and apply to a Class 1 building located in areas identified as *designated Aboriginal lands* in 2.1 below.
- 1.4 A reference to an Australian Standard in this Standard is a reference to the edition current at the time of application.

2. DESIGNATED ABORIGINAL LANDS

- 2.1 A Class 1 building is on *designated Aboriginal lands* if it is located on any of the following Aboriginal lands (refer to **Figure 2.1**)-
- (a) The Anangu Pitjantjatjara Yankunytjatjara Lands, including-
 - (i) Granite Downs Station; and
 - (ii) Lambina Station.
 - (b) The following land held by the Indigenous Land Corporation-
 - (i) Mt Willoughby Station
 - (ii) Mt Clarence Station
 - (iii) Mabel Creek Station.
 - (c) Land owned or occupied by the Umoona Community, excluding properties within the township of Coober Pedy; and
 - (d) Land owned or occupied by the Dunjiba Community within the township of Oodnadatta.
 - (e) The Maralinga Tjarutja Lands, including land owned or occupied by the Oak Valley Community.
 - (f) Land held by the Aboriginal Lands Trust at Yalata or owned or occupied by the Yalata Community.
 - (g) Land owned or occupied by the Irrwanyere Community within Witjira National Park.

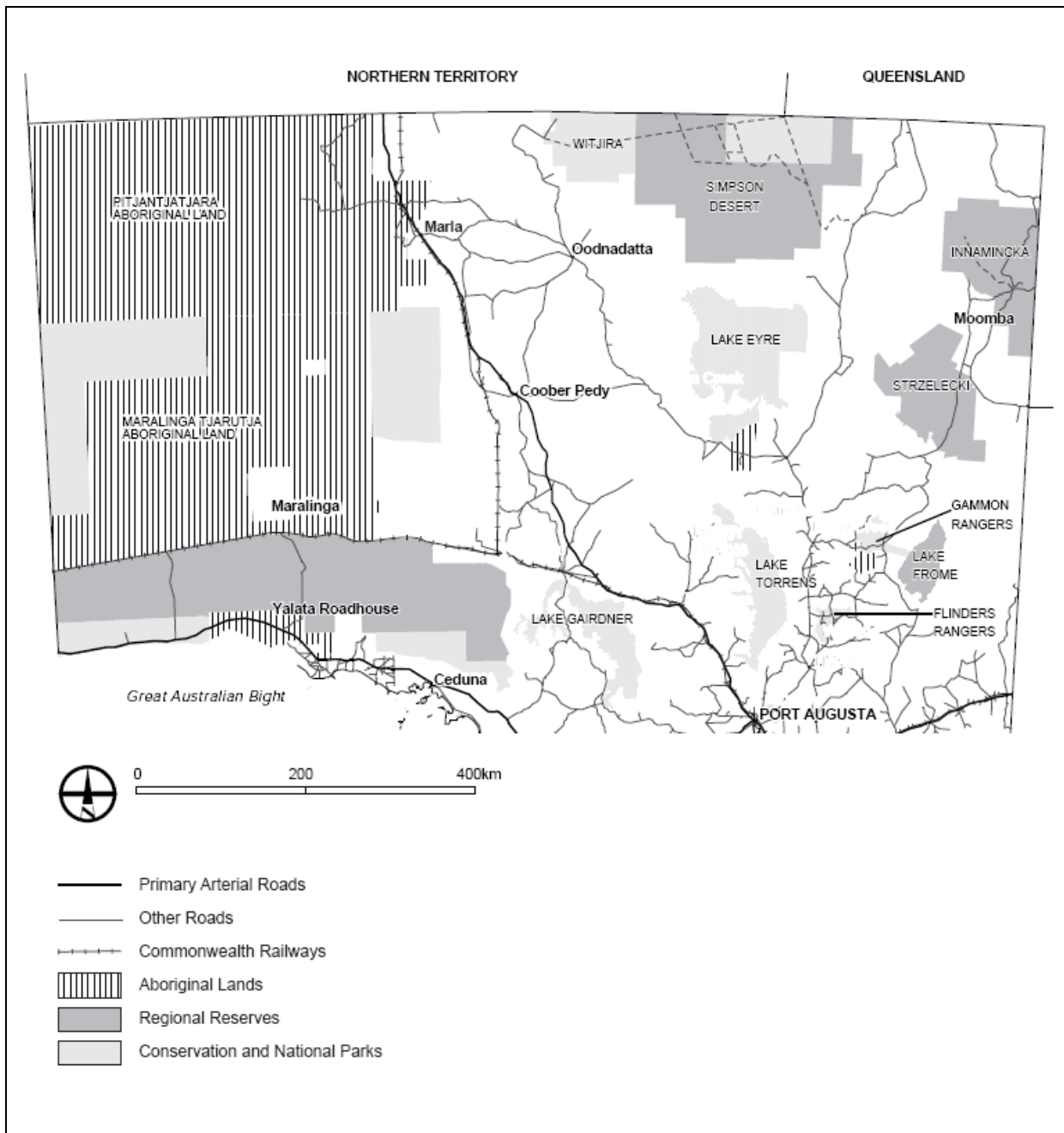


FIGURE 2.1 Map showing the designation of Aboriginal lands

3 PERFORMANCE REQUIREMENTS

- 3.1 The following performance requirements are additional to the performance requirements of the *Building Code* and the *Plumbing Code*.
- 3.2 To avoid creating unsafe or unhealthy conditions in areas where access to maintenance and repairs is limited, a Class 1 building located on *designated Aboriginal lands* must be constructed using materials, fittings and forms of construction that-
- (a) are capable of resisting damage and deterioration; and
 - (b) minimise the need for regular maintenance and repairs.
- 3.3 To maintain the health and amenity of building occupants, a Class 1 building located on *designated Aboriginal lands* must be designed and constructed so that-
- (a) water and waste overflow from fixtures or fittings in a *wet area* is prevented from flowing into adjacent rooms; and
 - (b) windows are located so that entry of airborne dust particles into habitable spaces is minimised; and
 - (c) animals are prevented from accessing the underfloor space whilst still allowing efficient and easy means of maintaining healthy underfloor spaces.
- 3.4 To reduce heating and cooling loads, a Class 1 building located on *designated Aboriginal lands* must be provided with a covered outdoor area suitable for outdoor living.

4 DEEMED TO SATISFY PROVISIONS

- 4.1 Performance requirements 3.2, 3.3 and 3.4 can be satisfied by compliance with the acceptable construction practices in 4.2 to 4.9 below.

4.2 Wet area requirements

- 4.2.1 Subject to 4.2.2 and 4.2.3, the floor of a *wet area* must be set-down a minimum of 50mm below the floor level of the house or be graded to an outer edge (away from house) that is not less than 50mm lower than the floor level of the house (refer to **Table 4.2.1** and **Figures 4.2.1, 4.2.2** and **4.2.3** below), to provide a pathway for any water or waste overflow to move towards-
- (a) the threshold of an external doorway that is not less than 50mm below the floor level of the house; or
 - (b) an overflow outlet that discharges to the outside above ground or paving level.
- 4.2.2 In a room containing only a water closet, an overflow outlet to the outside must be provided in accordance with 4.2.1(b).
- 4.2.3 The floor of a *wet area* in an outbuilding located not less than 5m away from the main house need not be set-down as required by 4.2.1.
- 4.2.4 An overflow outlet provided in accordance with 4.2.1(b) or 4.2.2 must-
- (a) pass through an external wall of the *wet area* and fall to the outside;
 - (b) discharge above the ground or paving; and
 - (c) have the internal invert at 50mm below the finished floor level of the main building;
 - (d) have a vermin proof flap and a minimum openable area of 7850mm².

4.2.5 Floors in a *wet area* must be graded to achieve falls-

- (a) between 1:50 and 1:65 in a shower area; and
- (b) between 1:40 and 1:100 in other areas (refer **Figures 4.1.5(a)** and **4.1.5(b)**).

4.2.5 Where there are no floor finishes applied to a graded concrete floor in a *wet area* or a floor finish is applied directly to a graded concrete floor, a shower tray or shower base is not required to be installed to meet the waterproofing requirements of the *Building Code*.

Unenclosed distance between buildings (UDB)*	Required set-down (mm)
UDB* < 5000mm	Not less than 50mm
UDB* ≥ 5000mm	No Set Down Required

Table 4.2.1 - Set-downs required by 4.2.1 for *wet areas*

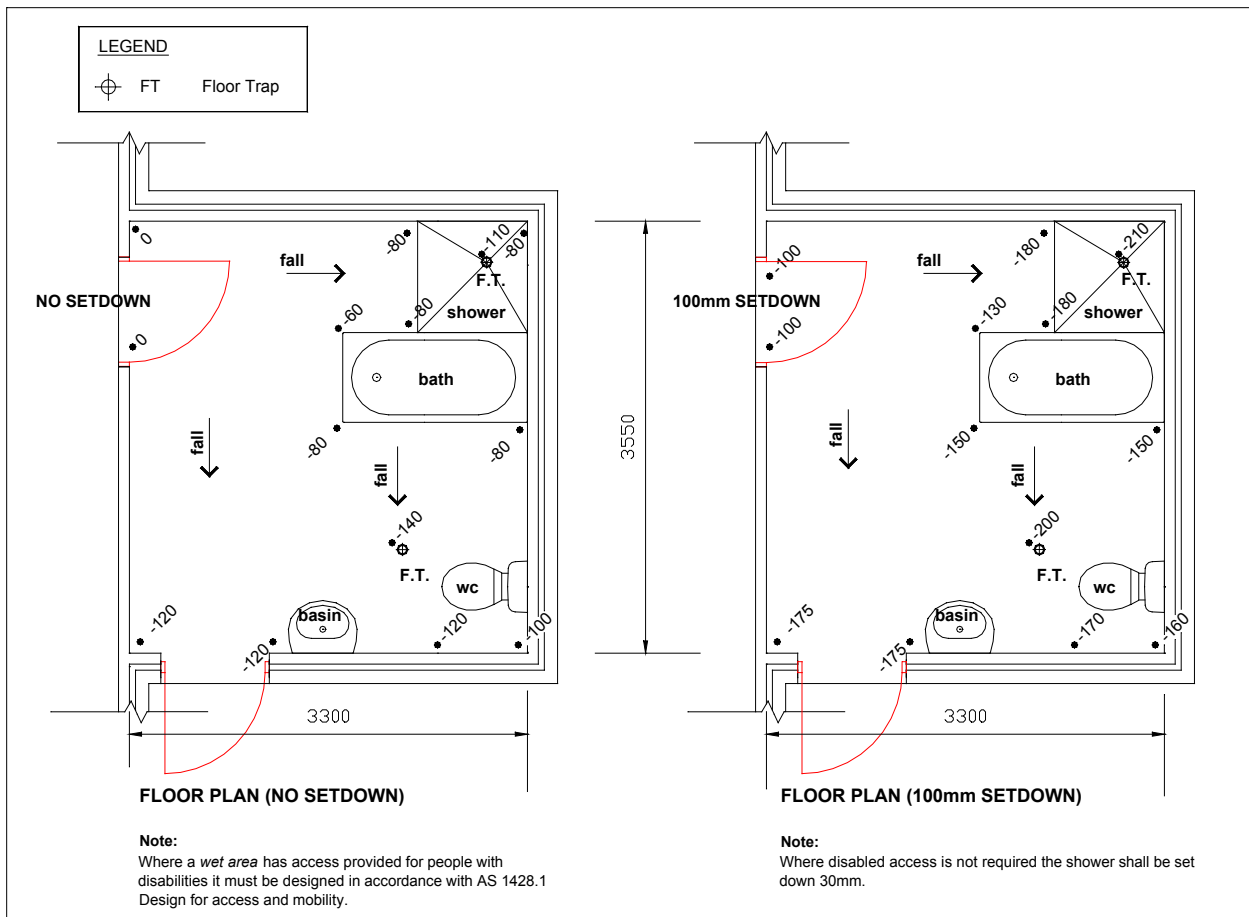


Figure 4.2.1 - Worked examples of *wet areas* with and without set-downs.

Not to scale

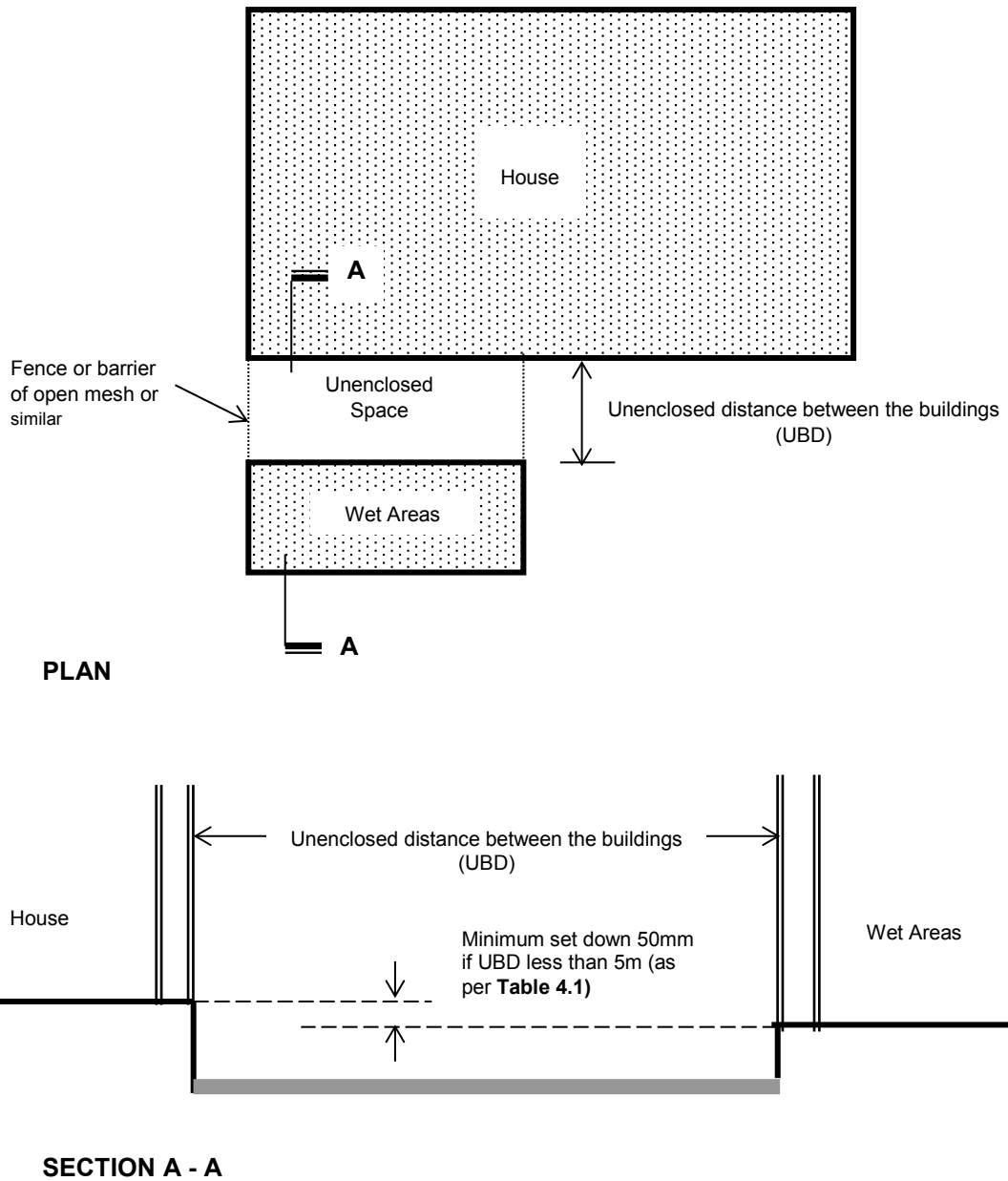


Figure 4.2.2- Wet area located in an outbuilding, with the space between the buildings unenclosed
Diagrammatic, not to scale

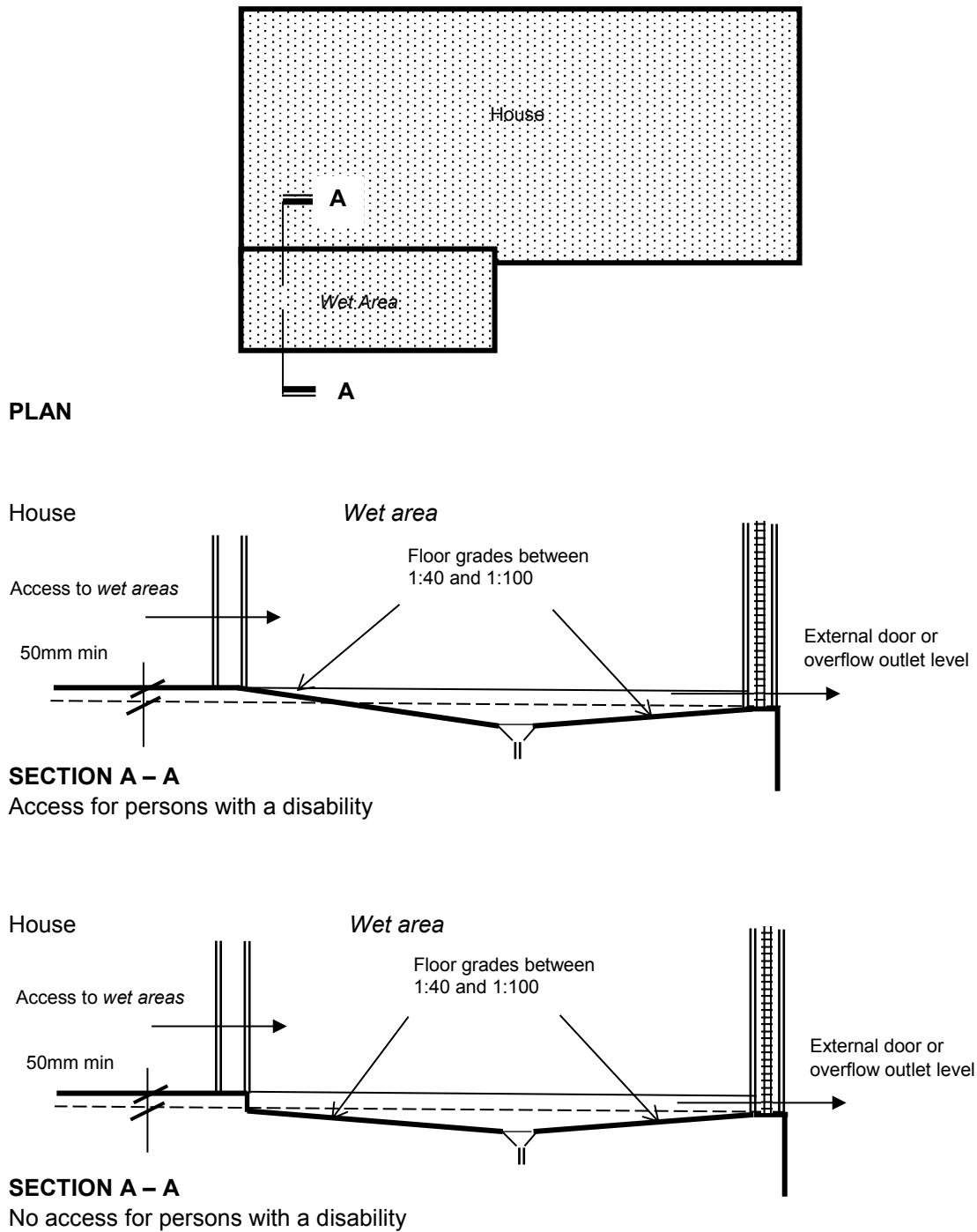


Figure 4.2.3 - Wet area located within the house
Diagrammatic, not to Scale

4.3 Sanitary drainage requirements

4.3.1 The amount of underfloor plumbing for a Class 1 building must be kept to a minimum.

4.3.1 Notwithstanding the requirements of the *Plumbing Code*-

- (a) with the exception of pipework branches to the hot water system tundish, laundry trough, washing machine, wash basin and bath, all underfloor pipework must be not less than DN100 sewer grade uPVC pipe; and
- (b) *Shower wastes* and *shower waste* gullies must be not less than DN100 and must be connected to DN100 uPVC pipe and DN150/DN100 polypropylene stormwater grates may be used; and
- (c) *Floor waste* gullies must be not less than DN100 and must be connected to a DN100 uPVC waste pipe draining to an *approved* waste disposal system and DN150/DN100 polypropylene stormwater grates may be used.

4.4 Termite protection

4.4.1 *Primary building elements* of a Class 1 building must be constructed of materials considered to be resistant to termite attack (as listed in clause 3.1.4.2 of the *Building Code*).

4.4.2 Chemical termite protection methods that require regular maintenance are not to be used for Class 1 buildings.

4.4.3 The flooring of a Class 1 building must be of termite resistant material.

4.5 Underfloor access restrictions

4.5.1 Every Class 1 building must have a solid barrier provided around the perimeter of the building to restrict animal access to the underfloor space.

4.5.2 A barrier required by 4.5.1 must-

- (a) be constructed of materials resistant to termite attack, such as masonry, concrete or the like; and
- (b) extend to a depth of not less than 300mm below the ground surface level; and
- (c) incorporate sub-floor ventilation where such ventilation is required by the *Building Code*.

4.6 Energy efficiency

4.6.1 A Class 1 building must be provided with at least one outdoor living space that can either be attached to the Class 1 building or a separate structure; and which has-

- (a) a covered area not less than 10m² in area; and
- (b) a width not less than 2400mm; and
- (c) two or more sides open and not less than one third of its perimeter open.

4.7 Materials and forms of construction

4.7.1 **Roof gutter brackets** - Brackets supporting roof gutters on Class 1 buildings must be spaced at not more than 900mm centres.

4.7.2 Walls – Walls of a Class 1 building must be constructed in accordance with the following-

- (a) all walls when completed must achieve a stiffness so that when a live load of 0.75 kN/m is applied to the wall at 1200mm above the floor, the maximum deflection at the line of applied force is not more than 6mm or the height of the wall divided by 400, whichever is the more severe; and
- (b) subject to (c) and (d), the following internal wall linings supported on 75 x 32 x 1mm thick steel C section studs at not more than 600mm centres are suitable for use in Class 1 buildings-
 - (i) pre-finished, pre-coloured fluted or profiled steel sheeting; and
 - (ii) not less than 9mm thick plywood (treated to resist termite attack); and
 - (iii) not less than 9mm thick fibre-cement sheeting.
- (c) alternative materials to those listed in (b) may be used, provided that they demonstrate the same soft and hard body impact resistance as one of the materials listed in (b) when tested by a Registered Testing Authority as defined in the *Building Code*; and
- (d) internal wall linings to *wet areas* must be not less than 9mm thick fibre-cement sheeting or the walls must be of rendered masonry; and
- (e) all internal wall linings must have a washable finish.

4.7.3 Windows – Windows in Class 1 buildings must comply with the following-

- (a) the lowest openable part of each window must be not less than 1000mm above the adjacent finished ground level; and
- (b) openable parts of windows must be fitted with security screens, and
- (c) where security screens are fitted to bedroom windows and there is no external door to the bedroom, the security screen to at least one openable sash must be fitted with an identified escape system.

4.7.4 Doors – All flush panel doors must be solid core doors with either interior quality or exterior quality particle board or medium density fibreboard cores as appropriate to the location of the door and manufactured in accordance with *Australian Standard AS 2688 – Timber and composite doors*.

4.7.5 Glazing – glazed areas in Class 1 buildings must-

- (a) be fully framed and glazed with clear or translucent polycarbonate sheet selected to have a maximum short dimension to suit the relevant wind speed and thickness in accordance with **Table 4.7.5(a)** below;
- (b) frames for glazing must incorporate sufficient rebate depth to accommodate the thermal expansion and contraction allowances and the depth of engagement required for polycarbonate sheeting as set out in **Table 4.7.5(b)** and **Figure 4.7.5** below; and
- (c) sealants and gaskets used for glazing must be compatible with polycarbonate glazing.

POLYCARBONATE SHEET THICKNESS (mm)	REGIONAL WIND SPEED (m/s)		
	28	33	41
4.5	1.21m	1.12m	0.98m
6	1.60m	1.50m	1.36m
9.5	1.99m	1.88m	1.73m
12.7	2.40m	2.40m	2.40m

Table 4.7.5(a) - Maximum short side dimension of polycarbonate glazing permitted for the applicable wind speed and polycarbonate thickness being used

	MAXIMUM LONG SIDE DIMENSION OF GLAZING (mm)						
	Up to 600mm	601 – 900mm	901 – 1200mm	1201 – 1500mm	1501 – 1800mm	1801 – 2100mm	2101 – 2400mm
Edge engagement (Fig. 5) (use LONG dimension)	8	12.5	15.9	19	22.2	25.4	31.8
Expansion 0.8	0.8	1.6	2.4	2.4	3.2	4	4.8
Contraction 0.8	0.8	1.6	2.4	2.4	3.2	4	4.8
Total Rebate Depth	9.6	15.7	20.7	23.8	28.6	33.4	41.4

Table 4.7.5(b) - Expansion and contraction allowances, edge engagement and rebate depths required for varying sheet thickness of polycarbonate sheet (based on a $\pm 27.8^{\circ}\text{C}$ temperature change from installation).

The long side glazing dimension shown in **Table 4.7.5(b)** must be reduced in size by the amount of expansion shown for the relevant glazing size and the glazing frame rebate must be of sufficient depth to accommodate the amount of likely expansion, contraction and depth of engagement required by the table.

The rebate depth (shown in **Figure 4.7.5** below) is therefore the sum of the required edge engagement + amount of expansion + amount contraction shown in **Table 4.7.5(b)** for the relevant sheet size.

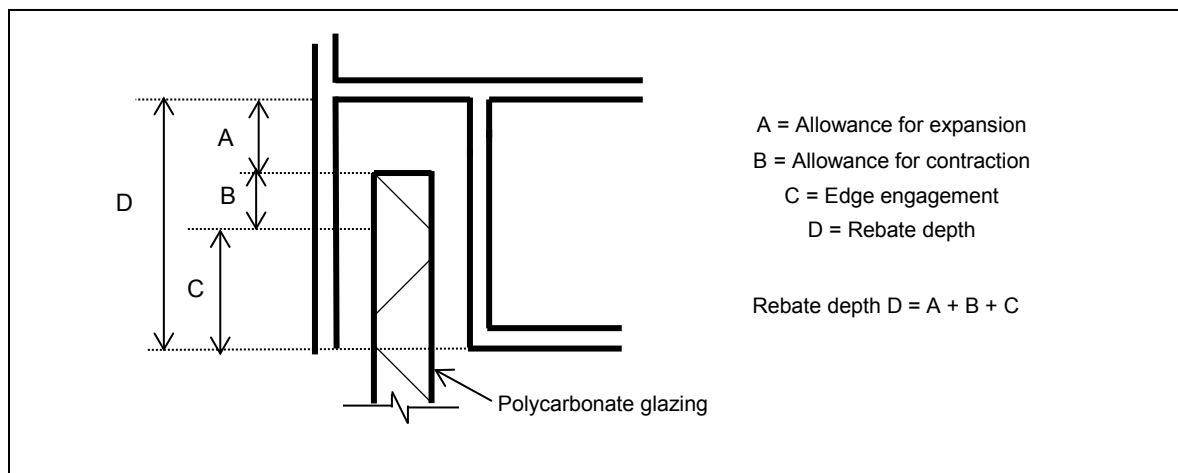


Figure 4.7.5 – Rebate depth detail

4.7.6 Floor finishes – Floor finishes in Class 1 buildings must be non-textile, hard wearing and washable.

4.8 Stormwater

4.8.1 Stormwater drainage, including overflows from rain water tanks, must be directed a minimum of 1.2 metres away from the building footings.

4.9 Smoke alarms

4.9.1 Where a smoke alarm is to be attached to a metal ceiling lining, the smoke alarm may be powered by a 10-year life, non-replaceable, non-removable, permanently connected battery, in lieu of being connected to the consumer mains power as required by the *Building Code*.

APPENDIX A – INTERPRETATION

Act means the *Planning, Development and Infrastructure Act 2016*.

Approved for the purpose of this standard means approved by the relevant authority (the SCAP or a building certifier).

Building Code means Volume Two of the National Construction Code as published by the Australian Building Codes Board as amended from time to time.

Floor waste means a grated inlet within a graded floor, intended to drain the floor.

R2, R3 means the designated level of thermal resistance of an element of the building, measured in m².K/W. R2 and R3 is equivalent to a thermal resistance of 2 m².K/W and 3 m².K/W respectively.

Plumbing Code means Volume Three of the National Construction Code as published by the Australian Building Codes Board as amended from time to time.

Regulations means the Planning, Development and Infrastructure (General) Regulations 2017.

Required means required by this standard.

Shower base means a pre-formed, pre-finished vessel which is installed as the finished floor of a shower compartment and which is provided with a connection point to a shower waste.

Shower tray means a waterproof liner which is installed in a shower compartment prior to the application of the floor and wall finishing system and which is drained into a drainage flange in the shower waste, and where applicable, the floor waste.

Shower waste means a floor waste in the floor of a shower enclosure.

UDB means unenclosed distance between buildings

Wet area, for the purpose of this standard, means a room containing a shower, bath, hand basin, vanity bowl, water closet, washing machine or wash trough.

APPENDIX B – NON MANDATORY FIXTURES AND FITTINGS

The following recommendations, which fall outside the legislative requirements, are included for information only.

Class 1 buildings on designated Aboriginal lands should incorporate fixtures and fittings that comply with the following-

B1 General power outlets (GPOs) and light switches

B1.1 GPOs and light switches should be-

- (a) impact resistant and weatherproof; and
- (b) positioned at sufficient height (1400mm minimum above finished floor level) to be inaccessible to young children; or
- (c) where access for persons with a disability is required by the *Building Code*, positioned in accordance with the requirements of the *Building Code* (at not less than 900mm and not more than 1100mm above the finished floor level).

B2 Light fittings

B2.1 Fluorescent lights (generally 18 watt) should be used wherever possible to reduce power consumption.

B3 Fencing

B3.1 Fencing should not be woven chain wire mesh. Open fencing should be steel welded mesh manufactured from 6mm diameter wire at 100mm centres in both directions.

B4 Internal fixtures

B4.1 Internal fixtures such as cupboards and shelving should be moisture resistant (painted moisture resistant medium density fibreboard is acceptable).

B4.2 Bench tops in the kitchen should be stainless steel for durability and ease of cleaning.

B4.3 Cupboard and shelf units should have an internal steel frame.

B5 Rainwater tanks

B5.1 Notwithstanding the requirements for rainwater tanks in the South Australian addition SA 2 in Volume Two of the National Construction Code, each Class 1 building should be provided with a supplementary water supply by way of a rainwater tank or tanks with a capacity of not less than 13,000 litres.

B5.2 All rainwater from the roof of a Class 1 building should be collected and discharge into the rainwater tank or tanks.