Ministerial Building Standard MBS 008

Designated bushfire prone areas - additional requirements

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1.0 SCOPE

1.1 This Standard is published as a Ministerial Building Standard as 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 (the Regulations).

1.2 This Standard includes delineation of *designated bushfire prone areas* for the purposes of the *Building Code* and additional fire safety provisions to those required by the *Building Code* for bushfire resistance of new Class 1, 2 and 3 buildings in *designated bushfire prone areas*.

2.0 DESIGNATED BUSHFIRE PRONE AREAS

2.1 For the purposes of the *Building Code* and this Standard, a building is in a *designated bushfire prone area* if it is in an area identified in a bushfire hazard overlay to the *Planning and Design Code* (P&D Code) as-

(a) a general, medium or high bushfire risk area; or

(b) an area within an urban interface area that is within 500m of a high bushfire risk area.

2.2 For the purposes of the *Building Code* and this Standard, in a *designated bushfire prone area,* the bushfire attack level (BAL) for a *site* is determined using one of the following methods-

(a) the simplified procedure outlined in Australian Standard *AS 3959 - Construction of buildings in bushfire-prone areas* (AS 3959);

(b) the detailed procedure outlined in AS 3959; or

(c) the deemed to apply BAL levels outlined in **2.3**.

2.3 The following BAL levels are deemed to apply in *designated bushfire prone areas*-

(a) Within areas identified as Bushfire - General Risk in a Hazard Overlay to the P&D Code – BAL Low.

(b) Within areas identified as Bushfire – Medium Risk in a Hazard Overlay to the P&D Code – BAL 12.5.

(c) Within areas identified as Bushfire – High Risk in a Hazard Overlay to the P&D Code – the relevant BAL for the *site* identified by a *site* assessment carried out in accordance with AS 3959.

(d) Within areas identified as Bushfire – Urban Interface in a Hazard Overlay to the P&D Code that are within 500 m of a high bushfire risk area and no closer than 100m of the high bushfire risk area – BAL Low.

(e) Within areas identified as Bushfire – Urban Interface in a Hazard Overlay to the P&D Code that are within 100 m of a high bushfire risk area – the relevant BAL for the *site* identified by a *site* assessment carried out in accordance with AS 3959.

2.4 Where the BAL is determined in accordance with AS 3959, the basis of that determination must be included in the building consent application documentation.

Availability of *water supply*	**Minimum *water supply* (litres) and fittings *required* for the *site***		
	Allotment size	**Connected to mains**	**Not connected to mains**
Within a general or medium bushfire risk area Within an urban interface area that is within 500m of a high bushfire risk area	Any allotment size	2000 litres with *domestic fittings*	5000 litres with *domestic fittings*
Within a high bushfire risk area or an urban interface area that is within 100m of a high bushfire risk area and assessed as **BAL-12.5** or **BAL-19**	<500m²	2000 litres with *domestic fittings*	5000 litres with *domestic fittings*
	500m² - 1500m²	5000 litres with *fire fittings*	10 000 litres with *fire fittings*
	≥1500m²	10 000 litres with *fire fittings*	10 000 litres with *fire fittings*
Within a high bushfire risk area or an urban interface area that is within 100m of a high bushfire risk area and assessed as **BAL-29**, **BAL-40** or **BAL-FZ**	<500m²	10 000 litres with *fire fittings*	10 000 litres with *fire fittings*
	≥500m²	22 000 litres with *fire fittings*	22 000 litres with *fire fittings*

Table 5.2.1 - Capacity and fittings *required* for a dedicated *water supply*

Notes to Table 5.2.1:

1. The water supply capacities in this table do not take into account any water that might be needed to supply a non-required sprinkler protection system or water tanks required for water saving purposes under the Building Code.

2. The minimum water supply required may be combined with water for domestic use, provided that the outlet for domestic use is located above the dedicated fire water supply (in order for it to remain as a dedicated supply).

5.2.5 Where a *water supply* facility is *required* by **Table 5.2.1** to have a *fire fitting* the fitting must be-

(a) via a fire service adaptor fitted in the wall of the water storage facility near the bottom of the water storage facility, with a minimum outlet of 50mm terminating in a 65mm Storz outlet with a gate or ball valve for use by the relevant *fire brigade*; or

(b) through a 200mm removable 'inspection opening' in the top of a closed water storage tank or directly from an open *water supply* such as a swimming pool, provided-

(i) a hardened ground surface for fire appliance access is available within 3 metres of the access hole or *water supply;* and

(ii) the opening is not more than 1.*5m* above ground level and no lower than 5m to the lowest point of the water source.

5.2.6 Except as permitted by **5.2.7**, where the *water supply* is an above-ground water tank, the tank (including any support structure) must be constructed of *non-combustible* material, such as concrete or metal.

5.2.7 Where a *water supply* is *required* by **Table 5.2.1**, a tank constructed of an alternative material to that *required* by **5.2.6** may be considered by the relevant authority under a performance solution, provided that consideration is given to-

(a) the exposure of the tank to 'classified vegetation' under AS 3959, that could pose a potential bushfire risk;

(b) any *shielding* or sprinklers provided to protect the tank from direct exposure to a potential bushfire risk; and

(c) the safety risk to persons who may be exposed to a potential bushfire while accessing the *water supply* for fire-fighting purposes.

5.3 Pumps

5.3.1 For the purposes of occupants being able to access a *water supply* for fire-fighting purposes, a *water supply required* by **Table 5.2.1** to have a *fire fitting* must be pressurised by provision of a pump that-

(a) has a minimum inlet diameter of 38mm;

(b) is powered by a petrol or diesel engine or other *approved* power source that operates independently of mains electricity; and

(c) has a power rating of at least 3.7 kW (5hp).

5.3.2 A pump provided in accordance with **5.3.1** and any flexible connections connecting it to the *water supply* must be-

(a) protected by a *non-combustible* cover or *shielding* that also provides adequate air ventilation for efficient pump operation;

(b) positioned on a hard surface, away from any hazardous vegetation; and

(c) maintained so that it is always operable during a fire danger season and on fire ban days.

5.4 Pipework

5.4.1 Water pipes and connections between a *water supply* facility and a pump must not be smaller in diameter than the diameter of the pump inlet.

5.4.2 All non-metal *water supply* pipework (other than flexible connections and hoses for fire-fighting) must be buried below ground to a minimum depth of 300mm with no non-metal parts exposed above ground level.

5.5 Hoses

5.5.1 Where a *water supply* is *required* to be pressurised by a pump, a fire hose (or hoses) complying with **5.5.2** and suitable for connection to the pump must be provided for fire-fighting purposes.

5.5.2 A fire hose (or hoses) used for fire-fighting purposes must-

(a) be located so that all parts of the building are within reach of the nozzle end of the hose and if more than one hose is necessary they should be positioned to provide maximum coverage of the building and surrounds (ie at opposite ends of a dwelling);

(b) be capable of withstanding the pressures of the available water supply;

(c) be of reinforced construction manufactured in accordance with Australian Standard *AS 1221 - Fire hose reels*;

(d) have a minimum nominal internal diameter of 18mm;

(e) have an adjustable metal nozzle; or an adjustable PVC nozzle manufactured in accordance with Australian Standard *AS 1221 - Fire hose reels*;

(f) have a maximum length of 36m; and

(g) be readily available for use at all times.

5.5.3 Where a *water supply* is sourced from a swimming pool or an in-ground tank, an additional hose suitable for drawing water from the pool or tank must be provided and fitted to the pump.

APPENDIX A – INTERPRETATION

Approved means approved by the relevant authority undertaking the building rules assessment.

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

Designated bushfire prone area means an area identified as such in this Standard where the construction requirements for buildings in bushfire prone areas under the *Building Code* apply and the additional requirements in this standard for protecting buildings during a bushfire apply.

Domestic fittings means standard household taps that enable an occupant to access the *water supply* with domestic hoses or buckets for extinguishing minor fires.

Fire authority means the South Australian Metropolitan Fire Service or the Country Fire Service.

Fire brigade means an operational unit of the South Australian Metropolitan Fire Service or the Country Fire Service that will be attending a fire in the relevant area where a *site* is located.

Fire fittings means specialised fittings that enable the *fire brigade* to access and use the *water supply* for fire-fighting purposes.

Fire-fighting equipment – means fittings and equipment that enable a *required water supply* to be used by the occupants or the *fire brigade* to fight a potential bushfire.

Non-combustible has the same meaning as defined in the *Building Code.*

Required means required by this Standard or by the *Building Code*.

Shielding means *non-combustible* obstruction or construction that will protect a tank or pump from the source of bushfire attack.

Water supply for the purposes of this standard means a source of water that may be held in a tank, swimming pool which is available at all times for fire-fighting purposes.

NOTE RE REFERENCED STANDARDS

A reference in this Standard to an Australian Standard is to the edition that is current at the time an application for building consent is made.