

53.02 BUSHFIRE PLANNING

31/07/2018
VC148

Purpose

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.

To ensure that the location, design and construction of development appropriately responds to the bushfire hazard.

To ensure development is only permitted where the risk to life, property and community infrastructure from bushfire can be reduced to an acceptable level.

To specify location, design and construction measures for a single dwelling that reduces the bushfire risk to life and property to an acceptable level.

53.02-1 Application

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This clause applies to an application under Clause 44.06 - Bushfire Management Overlay, unless the application meets all of the requirements specified in a schedule to Clause 44.06.

Clause 53.02-3 applies to an application to construct a single dwelling or construct or carry out works associated with a single dwelling if all of the following requirements are met:

- The land is zoned Neighbourhood Residential Zone, General Residential Zone, Residential Growth Zone, Urban Growth Zone, Low Density Residential Zone, Township Zone or Rural Living Zone.
- There is only one dwelling on the lot.
- The application meets all of the approved measures contained in Clause 53.02-3.

Clause 53.02-4 applies to all other applications.

53.02-2 Operation

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The provisions of this clause contain:

- **Objectives.** An objective describes the outcome that must be achieved in a completed development.
- **Approved measures (AM).** An approved measure meets the objective.
- **Alternative measures (AltM).** An alternative measure may be considered where the responsible authority is satisfied that the objective can be met. The responsible authority may consider other unspecified alternative measures.
- **Decision guidelines.** The decision guidelines set out the matters that the responsible authority must consider before deciding on an application, including whether any proposed alternative measure is appropriate.

A schedule to Clause 44.06 may specify substitute approved measures, additional alternative measures and additional or substitute decision guidelines.

A substitute approved measure specified in a schedule to Clause 44.06 substitutes the applicable approved measure contained in this clause.

53.02-3 Dwellings in existing settlements – Bushfire protection objective

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To specify bushfire design and construction measures for a single dwelling or alteration and extension to an existing dwelling that reduces the risk to life and property to an acceptable level.

Approved measures

Measure	Requirement
AM 1.1	A building is sited to ensure the site best achieves the following:

Measure	Requirement
	<ul style="list-style-type: none"> ▪ The maximum separation distance between the building and the bushfire hazard. ▪ The building is in close proximity to a public road. ▪ Access can be provided to the building for emergency service vehicles.
AM 1.2	<p>A building provides the defensible space in accordance with Table 1 Columns A, B, C, D or E and Table 6 to Clause 52.47-3. Adjoining land may be included as defensible space where there is a reasonable assurance that the land will remain or continue to be managed in that condition as part of the defensible space.</p> <p>A building is constructed to the bushfire attack level:</p> <ul style="list-style-type: none"> ▪ That corresponds to the defensible space provided in accordance with Table 1 to Clause 53.02-5, or ▪ The next lower bushfire attack level that corresponds to the defensible space provided in accordance with Table 1 to Clause 53.02-5 where all of the following apply: <ul style="list-style-type: none"> · A private bushfire shelter (a Class 10c building within the meaning of the Building Regulations 2006) is constructed on the same land as the dwelling. · A minimum bushfire attack level of BAL12.5 is provided in all circumstances.
AM 1.3	<p>A building is provided with:</p> <ul style="list-style-type: none"> ▪ A static water supply for fire fighting and property protection purposes specified in Table 4 to Clause 53.02-5. The water supply may be in the same tank as other water supplies provided that a separate outlet is reserved for fire fighting water supplies. ▪ Vehicle access that is designed and constructed as specified in Table 5 to Clause 53.02-5.

53.02-3.1 Decision guidelines

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Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider:

- The Municipal Planning Strategy and the Planning Policy Framework.
- The bushfire hazard site assessment and the bushfire management statement submitted with the application.
- Whether all of the the approved measures have been incorporated into the application.

53.02-4 Bushfire protection objectives

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53.02-4.1 Landscape, siting and design objectives

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Development is appropriate having regard to the nature of the bushfire risk arising from the surrounding landscape.

Development is sited to minimise the risk from bushfire.

Development is sited to provide safe access for vehicles, including emergency vehicles.

Building design minimises vulnerability to bushfire attack.

Approved measures

Measure	Requirement
AM 2.1	The bushfire risk to the development from the landscape beyond the site can be mitigated to an acceptable level.

Measure	Requirement
AM 2.2	A building is sited to ensure the site best achieves the following: <ul style="list-style-type: none"> ▪ The maximum separation distance between the building and the bushfire hazard. ▪ The building is in close proximity to a public road. ▪ Access can be provided to the building for emergency service vehicles.
AM 2.3	A building is designed to be responsive to the landscape risk and reduce the impact of bushfire on the building.

53.02-4.2 Defendable space and construction objective

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Defendable space and building construction mitigate the effect of flame contact, radiant heat and embers on buildings.

Approved measures

Measure	Requirement
AM 3.1	A building used for a dwelling (including an extension or alteration to a dwelling), a dependent person's unit, industry, office or retail premises is provided with defendable space in accordance with: <ul style="list-style-type: none"> ▪ Table 2 Columns A, B or C and Table 6 to Clause 53.02-5 wholly within the title boundaries of the land; or ▪ If there are significant siting constraints, Table 2 Column D and Table 6 to Clause 53.02-5. <p>The building is constructed to the bushfire attack level that corresponds to the defendable space provided in accordance with Table 2 to Clause 53.02-5.</p>
AM 3.2	A building used for accommodation (other than a dwelling or dependent person's unit), a child care centre, an education centre, a hospital, leisure and recreation or a place of assembly is: <ul style="list-style-type: none"> ▪ Provided with defendable space in accordance with Table 3 and Table 6 to Clause 53.02-5 wholly within the title boundaries of the land. ▪ Constructed to a bushfire attack level of BAL12.5.

Alternative measures

Measure	Requirement
AltM 3.3	Adjoining land may be included as defendable space where there is a reasonable assurance that the land will remain or continue to be managed in that condition as part of the defendable space.
AltM 3.4	Defendable space and the bushfire attack level is determined using Method 2 of <i>AS3959:2009 Construction of buildings in bushfire prone areas</i> (Standards Australia) subject to any guidance published by the relevant fire authority.
AltM 3.5	A building used for a dwelling (including an extension or alteration to a dwelling) may provide defendable space to the property boundary where it can be demonstrated that: <ul style="list-style-type: none"> ▪ The lot has access to urban, township or other areas where: <ul style="list-style-type: none"> • Protection can be provided from the impact of extreme bushfire behaviour. • Fuel is managed in a minimum fuel condition. • There is sufficient distance or shielding to protect people from direct flame contact or harmful levels of radiant heat. ▪ Less defendable space and a higher construction standard is appropriate having regard to the bushfire hazard landscape assessment.

Measure	Requirement
	<ul style="list-style-type: none"> The dwelling is constructed to a bushfire attack level of BAL FZ. <p>This alternative measure only applies where the requirements of AM 3.1 cannot be met.</p>
AltM 3.6	<p>A building used for accommodation (other than a dwelling or dependent person's unit), child care centre, education centre, hospital, leisure and recreation or place of assembly may provide defendable space in accordance with Table 2 Columns A, B or C and Table 6 to Clause 53.02-5 where it can be demonstrated that:</p> <ul style="list-style-type: none"> An integrated approach to risk management has been adopted that considers: <ul style="list-style-type: none"> The characteristics of the likely future occupants including their age, mobility and capacity to evacuate during a bushfire emergency. The intended frequency and nature of occupation. The effectiveness of proposed emergency management arrangements, including a mechanism to secure implementation. Less defendable space and a higher construction standard is appropriate having regard to the bushfire hazard landscape assessment.

53.02-4.3 Water supply and access objectives

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A static water supply is provided to assist in protecting property.

Vehicle access is designed and constructed to enhance safety in the event of a bushfire.

Approved measures

Measure	Requirement
AM 4.1	<p>A building used for a dwelling (including an extension or alteration to a dwelling), a dependent person's unit, industry, office or retail premises is provided with:</p> <ul style="list-style-type: none"> A static water supply for fire fighting and property protection purposes specified in Table 4 to Clause 53.02-5. Vehicle access that is designed and constructed as specified in Table 5 to Clause 53.02-5. <p>The water supply may be in the same tank as other water supplies provided that a separate outlet is reserved for fire fighting water supplies.</p>
AM 4.2	<p>A building used for accommodation (other than a dwelling or dependent person's unit), child care centre, education centre, hospital, leisure and recreation or place of assembly is provided with:</p> <ul style="list-style-type: none"> A static water supply for fire fighting and property protection purposes of 10,000 litres per 1,500 square metres of floor space up to 40,000 litres. Vehicle access that is designed and constructed as specified in Table 5 to Clause 53.02-5. An integrated approach to risk management that ensures the water supply and access arrangements will be effective based on the characteristics of the likely future occupants including their age, mobility and capacity to evacuate during a bushfire emergency. <p>The water supply may be in the same tank as other water supplies provided that a separate outlet is reserved for fire fighting water supplies.</p>

53.02-4.4 Subdivision objectives

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To provide lots that are capable of being developed in accordance with the objectives of Clause 53.02.

To specify at the subdivision stage bushfire protection measures to develop a lot with a single dwelling on land zoned for residential or rural residential purposes.

Measure	Requirement
AM 5.1	An application to subdivide land, other than where AM 5.2 applies, demonstrates that each proposed lot is capable of meeting: <ul style="list-style-type: none"> The defensible space in accordance with Table 2 Columns A, B or C and Table 6 to Clause 53.02-5. The approved measures in Clause 53.02-4.1 and Clause 53.02-4.3.
AM 5.2	An application to subdivide land zoned for residential or rural residential purposes must be accompanied by a plan that shows: <ul style="list-style-type: none"> Each lot satisfies the approved measure in AM 2.1. A building envelope for a single dwelling on each lot that complies with AM 2.2 and provides defensible space in accordance with: <ul style="list-style-type: none"> Columns A or B of Table 2 to Clause 53.02-5 for a subdivision that creates 10 or more lots; or Columns A, B or C of Table 2 to Clause 53.02-5 for a subdivision that creates less than 10 lots. <p>The bushfire attack level that corresponds to the defensible space provided in accordance with Table 2 to Clause 53.02-5 must be noted on the building envelope.</p> Defensible space wholly contained within the boundaries of the proposed subdivision. Defensible space may be shared between lots within the subdivision. Defensible space for a lot may utilise communal areas, such as roads, where that land can meet the requirements for defensible space. Vegetation management requirements in accordance with Table 6 to implement and maintain the defensible space required under this approved measure. Water supply and vehicle access that complies with AM 4.1.
AM 5.3	An application to subdivide land to create 10 or more lots provides a perimeter road adjoining the hazardous vegetation to support fire fighting.
AM 5.4	A subdivision manages the bushfire risk to future development from existing or proposed landscaping, public open space and communal areas.

Alternative measure

Measure	Requirement
AltM 5.5	A building envelope for a subdivision that creates 10 or more lots required under AM 5.2 may show defensible space in accordance with Table 2 Column C and Table 6 to Clause 53.02-5 where it can be demonstrated that: <ul style="list-style-type: none"> All other requirements of AM 5.2 have been met. Less defensible space and a higher construction standard is appropriate having regard to the bushfire hazard landscape assessment.

53.02-4.5 Decision guidelines

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Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider:

- The Municipal Planning Strategy and the Planning Policy Framework.
- The bushfire hazard landscape assessment, the bushfire hazard site assessment and the bushfire management statement submitted with the application.

- The impact of any State, regional or local bushfire management and prevention actions occurring around the site and in the wider area on the bushfire hazard and the level of risk to the proposed development.
- Whether the proposed development meets the objectives of Clause 53.02-4 regardless of other measures which may be available, including private bushfire shelters, community shelters and the presence of places of last resort.
- Whether the proposed measures can be practically implemented and maintained in conjunction with the ongoing use of the land.
- Whether the use of an alternative measure meets the relevant objective having regard to the bushfire hazard and the nature of any constraint that prevents the applicable approved measure from being implemented.
- If one or more of the objectives in Clause 53.02-4 will not be achieved in the completed development, whether the development will, taking all relevant factors into account, reduce the bushfire risk to a level that warrants it proceeding.
- Whether the risk arising from the broader landscape can be mitigated to an acceptable level or warrants the development not proceeding.

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Tables : Defendable space, construction, water supply, vehicle access, vegetation management and outbuilding construction requirements

Table 1 Defendable space and construction

Slope	Vegetation type	Defendable space distance from building facade (metres)				
		Column A	Column B	Column C	Column D	Column E
All upslopes and flat land (0 degrees)	Forest	48	35	25	19	< 19
	Woodland	33	24	16	12	< 12
	Scrub	27	19	13	10	< 10
	Shrubland	19	13	9	7	< 7
	Mallee/Mulga	17	12	8	6	< 6
	Rainforest	23	16	11	8	< 8
	Grassland	19	13	9	6	< 6
Downslope >0 to 5 degrees	Forest	57	43	32	24	< 24
	Woodland	41	29	21	15	< 15
	Scrub	31	22	15	11	< 11
	Shrubland	22	15	10	7	< 7
	Mallee/Mulga	20	13	9	7	< 7
	Rainforest	29	20	14	10	< 10
		BAL 12.5	BAL19	BAL29	BAL40	BALFZ
	Grassland	22	15	10	7	< 7
Downslope >5 to 10 degrees	Forest	69	53	39	31	< 31
	Woodland	50	37	26	20	< 20
	Scrub	35	24	17	12	< 12
	Shrubland	25	17	11	8	< 8
	Mallee/Mulga	23	15	10	7	< 7

Slope	Vegetation type	Defendable space distance from building facade (metres)				
		Column A	Column B	Column C	Column D	Column E
	Rainforest	36	26	18	13	< 13
	Grassland	25	17	11	8	< 8
Downslope >10 to 15 degrees	Forest	82	64	49	39	< 39
	Woodland	60	45	33	25	< 25
	Scrub	39	28	19	14	< 14
	Shrubland	28	19	13	9	< 9
	Mallee/Mulga	26	18	11	8	< 8
	Rainforest	45	33	23	17	< 17
	Grassland	28	20	13	9	< 9
Downslope >15 to 20 degrees	Forest	98	78	61	50	< 50
	Woodland	73	56	41	32	< 32
	Scrub	43	31	21	15	< 15
	Shrubland	31	22	15	10	< 10
	Mallee/Mulga	29	20	13	9	< 9
	Rainforest	56	42	29	22	< 22
	Grassland	32	23	15	11	< 11
		BAL 12.5	BAL19	BAL29	BAL40	BALFZ
Downslope >20 degrees	All vegetation	Defendable space and the bushfire attack level is determined using Method 2 of AS3959:2009 Construction of buildings in bushfire prone areas (Standards Australia) subject to any guidance published by the relevant fire authority.				
All slopes	Low threat vegetation	Defendable space is to be provided for a distance of 50 metres, or the property boundary whichever is the lesser, for buildings constructed to all bushfire attack levels. The minimum construction standard is BAL 12.5.				
All slopes	Modified vegetation	Defendable space is to be provided for a distance of 50 metres, or the property boundary whichever is the lesser, for buildings constructed to all bushfire attack levels. The minimum construction standard is BAL 29.				

Note 1: Slope and vegetation type is determined through the bushfire hazard site assessment.

Note 2: Modified vegetation is vegetation that doesn't fit into the vegetation classifications in AS3959:2009 Construction of buildings in bushfire prone areas (the standard) because it:

- has been modified, altered or is managed due to urban development, or gardening,
- has different fuel loads from those assumed in the standard,
- has limited or no understorey vegetation, or
- is not low-threat or low-risk vegetation as defined in the standard.

Table 2 Defendable space and construction

Slope	Vegetation type	Defendable space distance from building facade (metres)			
		Column A	Column B	Column C	Column D
All upslopes	Forest	48	35	25	19

and flat land (0 degrees)	Woodland	33	24	16	12
	Scrub	27	19	13	10
	Shrubland	19	13	9	7
	Mallee/ Mulga	17	12	8	6
	Rainforest	23	16	11	8
	Grassland	19	13	9	6
Downslope >0 to 5 degrees	Forest	57	43	32	24
	Woodland	41	29	21	15
	Scrub	31	22	15	11
	Shrubland	22	15	10	7
	Mallee/ Mulga	20	13	9	7
	Rainforest	29	20	14	10
	Grassland	22	15	10	7
Downslope >5 to 10 degrees	Forest	69	53	39	31
	Woodland	50	37	26	20
	Scrub	35	24	17	12
	Shrubland	25	17	11	8
	Mallee/ Mulga	23	15	10	7
	Rainforest	36	26	18	13
	Grassland	25	17	11	8
Downslope >10 to 15 degrees	Forest	82	64	49	39
	Woodland	60	45	33	25
	Scrub	39	28	19	14
	Shrubland	28	19	13	9
	Mallee/ Mulga	26	18	11	8
	Rainforest	45	33	23	17
	Grassland	28	20	13	9
Downslope >15 to 20 degrees	Forest	98	78	61	50
	Woodland	73	56	41	32
	Scrub	43	31	21	15
	Shrubland	31	22	15	10
		BAL12.5	BAL19	BAL29	BAL40
	Mallee/ Mulga	29	20	13	9
	Rainforest	56	42	29	22
	Grassland	32	23	15	11
		BAL12.5	BAL19	BAL29	BAL40

Downslope >20 degrees	All vegetation	Defendable space and the bushfire attack level is determined using Method 2 of AS3959:2009 Construction of buildings in bushfire prone areas (Standards Australia) subject to any guidance published by the relevant fire authority.
All slopes	Low threat vegetation	Defendable space is to be provided for a distance of 50 metres, or the property boundary whichever is the lesser, for buildings constructed to all bushfire attack levels. The minimum construction standard is BAL 12.5.
All slopes	Modified vegetation	Defendable space is to be provided for a distance of 50 metres, or the property boundary whichever is the lesser, for buildings constructed to all bushfire attack levels. The minimum construction standard is BAL 29.

Note 1: Slope and vegetation type is determined through the bushfire hazard site assessment.

Note 2: Modified vegetation is vegetation that doesn't fit into the vegetation classifications in AS3959:2009 Construction of buildings in bushfire prone areas (the standard) because it:

- has been modified, altered or is managed due to urban development, or gardening,
- has different fuel loads from those assumed in the standard,
- has limited or no understorey vegetation, or
- is not low-threat or low-risk vegetation as defined in the standard.

Table 3 Defendable space

Vegetation class	Defendable space distance from building facade (metres)				
	Upslope and flat land (0 degrees)	Downslope (degrees)			
		>0-5	>5-10	>10-15	>15-20
Forest	60	70	85	105	125
Woodland	40	50	62	75	95
Shrubland	25	28	32	36	41
Scrub	35	40	45	50	55
Mallee/Mulga	23	26	30	35	40
Rainforest	30	36	46	60	70
Grassland	35	40	45	50	55

Table 4 Water supply requirements

Capacity, fittings and access

Lot sizes (square meters)	Hydrant available	Capacity (litres)	Fire authority fittings and access required
Less than 500	Not applicable	2,500	No
500-1,000	Yes	5,000	No
500-1,000	No	10,000	Yes
1,001 and above	Not applicable	10,000	Yes

Note 1: A hydrant is available if it is located within 120 metres of the rear of the building

Fire authority requirements

Unless otherwise agreed in writing by the relevant fire authority, the water supply must:

- Be stored in an above ground water tank constructed of concrete or metal.
- Have all fixed above ground water pipes and fittings required for firefighting purposes made of corrosive resistant metal.

- Include a separate outlet for occupant use.

Where a 10,000 litre water supply is required, fire authority fittings and access must be provided as follows:

- Be readily identifiable from the building or appropriate identification signs to the satisfaction of the relevant fire authority.
- Be located within 60 metres of the outer edge of the approved building.
- The outlet/s of the water tank must be within 4 metres of the accessway and unobstructed.
- Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65 millimetre) and coupling (64 millimetre CFA 3 thread per inch male fitting).
- Any pipework and fittings must be a minimum of 65 millimetres (excluding the CFA coupling).

Table 5 Vehicle access design and construction

Vehicle access (or part thereof) of a length specified in Column A implements the design and construction requirements specified in Column B.

Column A	Column B
Length of access is less than 30 metres	There are no design and construction requirements if fire authority access to the water supply is not required under AM4.1 .
Length of access is less than 30 metres	Where fire authority access to the water supply is required under AM4.1 fire authority vehicles should be able to get within 4 metres of the water supply outlet.
Length of access is greater than 30 metres	The following design and construction requirements apply: <ul style="list-style-type: none"> ▪ All-weather construction. ▪ A load limit of at least 15 tonnes. ▪ Provide a minimum trafficable width of 3.5 metres. ▪ Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically. ▪ Curves must have a minimum inner radius of 10 metres. ▪ The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres. ▪ Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle.
Length of access is greater than 100 metres	A turning area for fire fighting vehicles must be provided close to the building by one of the following: <ul style="list-style-type: none"> ▪ A turning circle with a minimum radius of eight metres. ▪ A driveway encircling the dwelling. ▪ The provision of other vehicle turning heads – such as a T or Y head – which meet the specification of Austroad Design for an 8.8 metre Service Vehicle.
Length of access is greater than 200 metres	<ul style="list-style-type: none"> ▪ Passing bays must be provided at least every 200 metres. ▪ Passing bays must be a minimum of 20 metres long with a minimum trafficable width of 6 metres.

Note 1: The length of access should be measured from a public road to either the building or the water supply outlet, whichever is longer.

Table 6 Vegetation management requirement

Vegetation management requirement

Defendable space is provided and is managed in accordance with the following requirements:

- Grass must be short cropped and maintained during the declared fire danger period.
- All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
- Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.
- Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the building.
- Shrubs must not be located under the canopy of trees.
- Individual and clumps of shrubs must not exceed 5 square metres in area and must be separated by at least 5 metres.
- Trees must not overhang or touch any elements of the building.
- The canopy of trees must be separated by at least 5 metres.
- There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

Unless specified in a schedule or otherwise agreed in writing to the satisfaction of the relevant fire authority.

Table 7 Outbuilding construction requirement

Building construction condition

The proposed outbuilding is separated from the adjacent building by a wall that extends to the underside of a non-combustible roof covering and:

- has a FRL of not less than 60/60/60 for loadbearing walls and -/60/60 for non-load bearing walls when tested from the attached structure side, or
- is of masonry, earth wall or masonry-veneer construction with the masonry leaf of not less than 90 millimetres in thickness.

Any openings in the wall shall be protected in accordance with the following:

- i. Doorways – by FLR -/60/30 self-closing fire doors
- ii. Windows – by FRL -/60/- fire windows permanently fixed in the closed position
- iii. Other openings – by construction with a FRL of not less than -/60/-

Note: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not comply with Item iii.

Note 1: These conditions are required for some non habitable outbuildings ancillary to a dwelling that do not require referral to the relevant fire authority. Applications for non habitable outbuildings can also use the bushfire protection measures in Clause 52.47 however referral to the relevant fire authority will be required.