

SECTION 3 CONSTRUCTION GENERAL

3.1 GENERAL

This Section specifies general requirements for the construction of buildings for all Bushfire Attack Levels (BALs).

NOTE: There are a number of Standards that specify requirements for construction; however, where this Standard does not provide construction requirements for a particular element, the other Standards apply.

The BALs and the corresponding Sections for specific construction requirements are listed in Table 3.1.

TABLE 3.1

BUSHFIRE ATTACK LEVELS AND CORRESPONDING SECTIONS FOR SPECIFIC CONSTRUCTION REQUIREMENTS

Bushfire Attack Level (BAL)	Classified vegetation within 100 m of the site and heat flux exposure thresholds	Description of predicted bushfire attack and levels of exposure	Construction Section
BAL—LOW	See Clause 2.2.3.2	There is insufficient risk to warrant specific construction requirements	4
BAL—12.5	$\leq 12.5 \text{ kW/m}^2$	Ember attack	3 and 5
BAL—19	$>12.5 \text{ kW/m}^2$ $\leq 19 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers to greater with increasing heat flux	3 and 6
BAL—29	$>19 \text{ kW/m}^2$ $\leq 29 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers to greater with increasing heat flux	3 and 7
BAL—40	$>29 \text{ kW/m}^2$ $\leq 40 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers to greater with increasing heat flux with the increased likelihood of exposure to flames	3 and 8
BAL—FZ	$>40 \text{ kW/m}^2$	Direct exposure to flames from fire front in addition to heat flux and ember attack	3 and 9

3.2 CONSTRUCTION REQUIREMENTS FOR SPECIFIC STRUCTURES

3.2.1 Attached structures

Where any part of a garage, carport, veranda or similar roofed structure is attached to, or shares a common roof space with, a building required to comply with this Standard, the entire garage, carport, veranda or similar roofed structure shall comply with the construction requirements of this Standard, as applicable to the subject building.

Alternatively, the structure shall be separated from the subject building by a wall that extends to the underside of a non-combustible roof covering, and that complies with one of the following:

- (a) The wall shall have an FRL of not less than 60/60/60 for loadbearing walls and -/60/60 for non-loadbearing walls when tested from the attached structure side and shall have openings protected as follows:
- (i) Doorways by FRL /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 an FRL not less than /60/ .
- NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not comply with the above [Item (iii)].

OR

- (b) The wall shall be of masonry, earth wall or masonry-veneer construction with the masonry leaf of not less than 90 mm in thickness and shall have openings protected as follows:

- (i) Doorways by FRL /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 an FRL not less than /60/ .
- NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not comply with the above [Item (iii)].

3.2.2 Garages and carports below the subject building

Where a garage or carport is below a building required to comply with this Standard, it shall comply with the construction requirements of this Standard, as applicable to the subject building.

Alternatively, any construction separating the garage or carport (including walls and flooring systems) from the remainder of the building shall comply with one of the following:

- (a) The separating construction shall have an FRL of not less than 60/60/60 for loadbearing construction and -/60/60 for non-loadbearing construction when tested from the garage or carport side and shall have openings protected in accordance with the following:
- (i) Doorways by /60/30 self-closing fire doors.
- (ii) Windows by /60/ fire windows permanently fixed in the closed position.
- (iii) Other openings by construction with an FRL not less than /60/ .
- NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not comply with the above [Item (iii)].

OR

- (b) Where part or all of the separating construction is a wall, the wall need not comply with Item (a) above, provided the wall is of masonry, earth wall or masonry-veneer construction with the masonry leaf of not less than 90 mm in thickness and the wall has openings protected in accordance with the following:

- (i) Doorways by /60/30 self-closing fire doors.
- (ii) Windows by /60/ fire windows permanently fixed in the closed position.
- (iii) Other openings by construction with an FRL not less than /60/ .
- NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not comply with the above [Item (iii)].

3.2.3 Adjacent structures

Where any garage, carport, or similar roofed structure is not attached to a building required to comply with this Standard, the entire garage, carport, or similar roofed structure on the subject allotment shall comply with the construction requirements of this Standard.

Alternatively, the adjacent structure shall be separated from the subject building by one of the following:

- (a) A distance of not less than 6 m from the building required to comply with this Standard.
- OR
- (b) A wall that extends to the underside of a non-combustible roof covering and has an FRL of not less than 60/60/60 for loadbearing walls and /60/60 for non-loadbearing walls when tested from the attached structure side. Any openings in the wall shall be protected in accordance with the following:
- (i) Doorways by FRL /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 an FRL not less than /60/ .
- NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not comply with the above [Item (iii)].
- OR
- (c) A wall that extends to the underside of a non-combustible roof covering and is of masonry, earth wall or masonry-veneer construction with the masonry leaf of not less than 90 mm in thickness. Any openings in the wall shall be protected in accordance with the following:
- (i) Doorways by FRL /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 an FRL not less than /60/ .
- NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not comply with the above [Item (iii)].

3.3 EXTERNAL MOULDINGS

Unless otherwise required in Sections 4 to 9, combustible external mouldings, jointing strips, trims and sealants may be used for decorative purposes or to cover joints between sheeting material.

3.4 HIGHER LEVELS OF CONSTRUCTION

Construction requirements specified for a particular Bushfire Attack Level (BAL) shall be acceptable for a lower level. For example, if the site has been assessed at BAL 12.5, BAL 12.5 construction is required, however any element or combination of elements contained BAL 19, BAL 29, BAL 40 and BAL FZ levels of construction may be used to satisfy this Standard.

3.5 REDUCTION IN CONSTRUCTION REQUIREMENTS DUE TO SHIELDING

The construction requirements for the next lower BAL than that determined for the site may be applied to an elevation of the building where the elevation is not exposed to the source of bushfire attack. An elevation is deemed to be not exposed to the source of bushfire attack if all of the straight lines between that elevation and the source of bushfire attack are obstructed by another part of the building (see Figure 3.1).

The construction requirements for a shielded elevation shall be not less than that required for BAL 12.5, except where the exposed elevations have been determined as BAL LOW.

ISSUE	DATE	REVISION	SCALE:
○	13.11.13	Issued for approval & construction	NOT TO SCALE
* IT IS THE RESPONSIBILITY OF THE BUILDER TO CONFIRM ALL NEW DIMENSIONS BEFORE THE COMMENCEMENT OF ANY BUILDING WORK AND THE ORDERING OF MATERIALS. - DO NOT SCALE OFF DRAWING use all specified dimensions.			DATE: 13th November 2013
			SHEET: BF1
			ISSUE: ○

**PROPOSED RESIDENCE AT
LOT 2342 GREENWOOD DRIVE, JORDAN SPRINGS.
for: Klinsic Constructions Pty Ltd
BAL 19 BUSHFIRE REQUIREMENTS**

3.6 VENTS, WEEPHOLES AND GAPS

Where a circular probe of 3 mm diameter is capable of being passed through external vents, weepholes or gaps, the vents, weepholes and gaps shall be screened as specified in Sections 3, 5, 6, 7, 8 and 9, except for weepholes from the frames of windows and glazed doors.

To determine the maximum aperture size of screening material, it shall not be possible to pass a circular probe of 2 mm diameter through the aperture.

Gaps between doors and the door jambs, heads or sills (thresholds) shall be as shown in Figure 3.2. Alternatively, gaps shall be protected by draught excluders.

C3.6 Weepholes from the frames of windows and glazed doors and those gaps between doors and door jambs, heads or sills (thresholds) that may exceed 3 mm (see Figure 3.2) are exempt from screening because they do not provide a direct passage for embers to the interior of the building or building cavity.

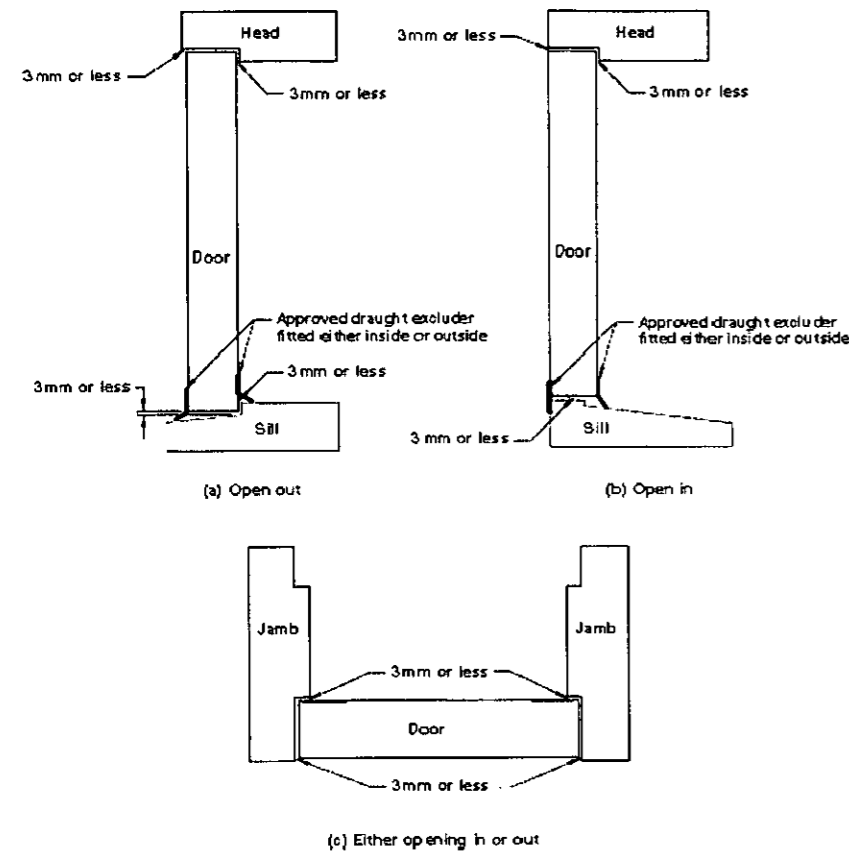


FIGURE 3.2 GAPS BETWEEN DOORS AND THE DOOR JAMBS, HEADS OR SILLS (THRESHOLDS)

3.7 BUSHFIRE SHUTTERS

Bushfire shutters shall

- (a) be fixed to the building and be non-removable;
- (b) when in the closed position, have no gap greater than 3 mm between the shutter and the wall, the sill or the head;
- (c) be readily manually operable from either inside or outside;
- (d) protect the entire window assembly or door assembly;
- (e) consist of materials specified in Clauses 5.5.1, 6.5.1, 7.5.1, 8.5.1 and 9.5.1 for the relevant BAL; and
- (f) where perforated, have
 - (i) uniformly distributed perforations with a maximum aperture of 3 mm when the shutter is providing radiant heat protection or 2 mm when the shutter is also providing ember protection (such as where the openable portion of the window is not screened in accordance with the requirements of the respective BAL); and
 - (ii) a perforated area no greater than 20% of the shutter.

If bushfire shutters are fitted to all external doors then at least one of those shutters shall be operable from the inside to facilitate safe egress from the building.

3.8 TESTING TO AS 1530.8

Where any material, element of construction or system satisfies the test criteria of either AS 1530.8.1, for BAL 12.5, BAL 19, BAL 29 and BAL 40 or AS 1530.8.2 for BAL FZ, it satisfies the requirements of that BAL.

If any material, element of construction or system satisfies the test criteria without screening for ember protection, the requirements of this Standard for screening of openable parts of windows or doors shall still apply.

3.9 GLAZING

Glazing requirements shall be in accordance with Sections 5 to 9 of this Standard.

See AS 1288 for an explanation of the terminologies used to describe various types of glass in this Standard.

SECTION 6 CONSTRUCTION FOR BUSHFIRE ATTACK LEVEL 19 (BAL-19)

6.1 GENERAL

A building assessed in Section 2 as being BAL 19 shall comply with Section 3 and Clauses 6.2 to 6.8.

NOTE: There are a number of Standards that specify requirements for construction; however, where this Standard does not provide construction requirements for a particular element, the other Standards apply.

Any element of construction or system that satisfies the test criteria of AS 1530.8.1 may be used in lieu of the applicable requirements contained in Clauses 6.2 to 6.8 (see Clause 3.8).

NOTE: BAL 19 is primarily concerned with protection from ember attack and radiant heat greater than 12.5 kW/m² up to and including 19 kW/m².

6.2 SUBFLOOR SUPPORTS

This Standard does not provide construction requirements for subfloor support posts, columns, stumps, piers and poles.

NOTE: The exclusion of requirements for subfloor supports applies to the principal building only and not to verandas, decks, steps, ramps and landings (see Clause 6.7).

C6.2 Ideally, storage of combustible materials beneath a floor at this BAL would not occur and on this assumption, there is no requirement to enclose the subfloor space or to protect the subfloor supports, or the bearers, joists and flooring from bushfire attack; however, should combustible materials be stored, it is recommended the area be protected as materials stored in the subfloor space may be ignited by embers and cause an impact to the building.

6.3 FLOORS

6.3.1 Concrete slabs on the ground

This Standard does not provide construction requirements for concrete slabs on ground.

6.3.2 Elevated floors

This Standard does not provide construction requirements for elevated floors, including bearers, joists and flooring.

6.4 EXTERNAL WALLS

6.4.1 Walls

That part of an external wall surface that is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall (see Figure D3, Appendix D) shall be made from

- (a) non-combustible material, or
- (b) fibre-cement external cladding, a minimum of 6 mm in thickness; or
- (c) bushfire-resisting timber (see Appendix F); or
- (d) a timber species as specified in Paragraph E1, Appendix E; or
- (e) a combination of any of Items (a), (b), (c) or (d) above.

		SCALES: NOT TO SCALE	
ISSUE	DATE	REVISION	
○	13.11.13	Issued for approval & construction	
		DATE: 13th November 2013	
		SHEET: BF2	ISSUE: ○
<p>IT IS THE RESPONSIBILITY OF THE BUILDER TO CONFIRM ALL NEW DIMENSIONS BEFORE THE COMMENCEMENT OF ANY BUILDING WORK AND THE ORDERING OF MATERIALS.</p> <p>DO NOT SCALE OFF DRAWING use all specified dimensions.</p>			

**PROPOSED RESIDENCE AT
LOT 2342 GREENWOOD DRIVE, JORDAN SPRINGS.
for: Klinic Constructions Pty Ltd
BAL 19 BUSHFIRE REQUIREMENTS**

This Standard does not provide construction requirements for external wall surfaces 400 mm or more from the ground or for external wall surfaces 400 mm or more above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall (see Figure D3, Appendix D).

6.4.2 Joints

All joints in the external surface material of walls shall be covered, sealed, overlapped, backed or butt-jointed to prevent gaps greater than 3 mm.

Alternatively, sarking-type material may be applied over the outer face of the frame prior to fixing any external cladding.

6.4.3 Vents and weepholes

Vents and weepholes in external walls shall be screened with mesh with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium, except where they are less than 3 mm (see Clause 3.6), or are located in an external wall of a subfloor space.

6.5 EXTERNAL GLAZED ELEMENTS AND ASSEMBLIES AND EXTERNAL DOORS

6.5.1 Bushfire shutters

Where fitted, bushfire shutters shall comply with Clause 3.7 and be made from

- (a) non-combustible material; *or*
- (b) a timber species as specified in Paragraph E1, Appendix E; *or*
- (c) bushfire-resisting timber (see Appendix F); *or*
- (d) a combination of any of Items (a), (b), or (c) above.

6.5.1A Screens for windows and doors

Where fitted, screens for windows and doors shall have a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium. Gaps between the perimeter of the screen assembly and the building element to which it is fitted shall not exceed 3 mm.

The frame supporting the mesh or perforated sheet shall be made from

- (a) metal; *or*
- (b) bushfire-resisting timber (see Appendix F); *or*
- (c) a timber species as specified in Paragraph E2, Appendix E.

6.5.2 Windows

Window assemblies shall comply with one of the following:

- (a) They shall be completely protected by a bushfire shutter that complies with Clause 6.5.1.
or
- (b) They shall be completely protected externally by screens that comply with Clause 6.5.1A. *or*

(c) They shall comply with the following:

- (i) For window assemblies less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings, having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the window frame (see Figure D3, Appendix D), window frames and window joinery, shall be made from one of the following:
 - (A) Bushfire-resisting timber (see Appendix F).
or
 - (B) A timber species as specified in Paragraph E2, Appendix E.
or
 - (C) Metal.
or
 - (D) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the frame and the sash shall satisfy the design load, performance and structural strength of the member.
- (ii) Externally fitted hardware that supports the sash in its functions of opening and closing, shall be metal.
- (iii) Where glazing is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings, having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the window frame (see Figure D3, Appendix D), the glazing shall be toughened glass minimum 5 mm, or glass blocks with no restriction on glazing methods.
NOTE: Where double-glazed units are used, the above requirements apply to the external face of the window assembly only.
- (iv) Where glazing is other than that specified in Item (iii) above, annealed glass may be used. Where annealed glass is used, both the fixed and openable portions of windows shall be screened externally with screens that comply with Clause 6.5.1A.
- (v) Where toughened glass is used, it shall be toughened glass of minimum 5 mm and the openable portions of windows shall be screened internally or externally with screens that comply with Clause 6.5.1A.
- (vi) Glazed elements that are designed to take internal screens shall use toughened glass of minimum 5 mm and the openable portion shall be screened with screens that comply with Clause 6.5.1A.

6.5.3 Doors—Side-hung external doors (including French doors, panel fold and bi-fold doors)

Side-hung external doors, including French doors, panel fold and bi-fold doors, shall comply with one of the following:

- (a) They shall be protected by a bushfire shutter that complies with Clause 6.5.1.
or
- (b) They shall be completely protected externally by screens that comply with Clause 6.5.1A.
or

(c) They shall comply with the following:

- (i) Doors shall be
 - (A) non-combustible; *or*
 - (B) a solid timber door, having a minimum thickness of 35 mm for the first 400 mm above the threshold; *or*
 - (C) a door, including a hollow core door, with a non-combustible kickplate on the outside for the first 400 mm above the threshold; *or*
 - (D) a fully framed glazed door, where the framing is made from materials specified for bushfire shutters (see Clause 6.5.1), or from a timber species as specified in Paragraph E2, Appendix E.
- (ii) Where doors incorporate glazing, the glazing shall be toughened glass minimum 5 mm.
- (iii) Doors shall be tight-fitting to the door frame and to an abutting door, if applicable.
- (iv) Where the door frame is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the door (see Figure D3, Appendix D), the door frame shall be made from one of the following:
 - (A) Bushfire-resisting timber (see Appendix F).
or
 - (B) A timber species as specified in Paragraph E2, Appendix E.
or
 - (C) Metal.
or
 - (D) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the door assembly shall satisfy the design load, performance and structural strength of the member.
- (v) Weather strips, draught excluders or draught seals shall be installed at the base of side-hung external doors.

6.5.4 Doors—Sliding doors

Sliding doors shall comply with one of the following:

- (a) They shall be completely protected by a bushfire shutter that complies with Clause 6.5.1.
or
- (b) They shall be completely protected externally by screens that comply with Clause 6.5.1A.
or

			SCALES: NOT TO SCALE		PROPOSED RESIDENCE AT LOT 2342 GREENWOOD DRIVE, JORDAN SPRINGS. for: Klinsic Constructions Pty Ltd
○	13.11.13	Issued for approval & construction	DATE: 13th November 2013		
ISSUE	DATE	REVISION	SHEET: BF3	ISSUE: ○	BAL 19 BUSHFIRE REQUIREMENTS
* IT IS THE RESPONSIBILITY OF THE BUILDER TO CONFIRM ALL NEW DIMENSIONS BEFORE THE COMMENCEMENT OF ANY BUILDING WORK AND THE ORDERING OF MATERIALS. - DO NOT SCALE OFF DRAWING use all specified dimensions.					

(c) They shall comply with the following:

- (i) Any glazing incorporated in sliding doors shall be toughened glass minimum 5 mm.
- (ii) Both the door frame supporting the sliding door and the framing surrounding any glazing shall be made of one of the following:
 - (A) Bushfire-resisting timber (see Appendix F).
 - OR
 - (B) A timber species as specified in Paragraph E2, Appendix E.
 - OR
 - (C) Metal.
 - OR
 - (D) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the frame and the sash shall satisfy the design load, performance and structural strength of the member.
- (iii) There is no requirement to screen the openable part of the sliding door. However, if screened, the screens shall comply with Clause 6.5.1A.
 NOTE: The construction of manufactured sliding doors should prevent the entry of embers when the door is closed. There is no requirement to provide screens to the openable part of these doors as it is assumed that a sliding door will be closed if occupants are not present or during a bushfire event. Screens of materials other than those specified may not resist ember attack.
- (iv) Sliding doors shall be tight-fitting in the frames.

6.5.5 Doors—Vehicle access doors (garage doors)

The following apply to vehicle access doors:

- (a) The lower portion of a vehicle access door that is within 400 mm of the ground when the door is closed (see Figure D4, Appendix D) shall be made from
 - (i) non-combustible material; OR
 - (ii) bushfire-resisting timber (see Appendix F); OR
 - (iii) fibre-cement sheet, a minimum of 6 mm in thickness; OR
 - (iv) a timber species as specified in Paragraph E1, Appendix E; OR
 - (v) a combination of any of Items (i), (ii), (iii) or (iv) above.
- (b) Panel lift, tilt doors or side-hung doors shall be fitted with suitable weather strips, draught excluders, draught seals or guide tracks, as appropriate to the door type, with a maximum gap no greater than 3 mm.
- (c) Roller doors shall have guide tracks with a maximum gap no greater than 3 mm and shall be fitted with a nylon brush that is in contact with the door (see Figure D4, Appendix D).
- (d) Vehicle access doors shall not include ventilation slots.

6.6 ROOFS (INCLUDING VERANDA AND ATTACHED CARPORT ROOFS, PENETRATIONS, EAVES, FASCIAS, GABLES, GUTTERS AND DOWNPIPES)

6.6.1 General

The following apply to all types of roofs and roofing systems:

- (a) Roof tiles, roof sheets and roof-covering accessories shall be non-combustible.
- (b) The roof/wall junction shall be sealed, to prevent openings greater than 3 mm, either by the use of fascia and eaves linings or by sealing between the top of the wall and the underside of the roof and between the rafters at the line of the wall.
- (c) Roof ventilation openings, such as gable and roof vents, shall be fitted with ember guards made of non-combustible material or a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.

6.6.2 Tiled roofs

Tiled roofs shall be fully sarked. The sarking shall

- (a) have a flammability index of not more than 5, when tested to AS 1530.2;
- (b) be located directly below the roof battens;
- (c) cover the entire roof area including the ridge; and
- (d) be installed so that there are no gaps that would allow the entry of embers where the sarking meets fascias, gutters, valleys and the like.

6.6.3 Sheet roofs

Sheet roofs shall

- (a) be fully sarked in accordance with Clause 6.6.2, except that foil-backed insulation blankets may be installed over the battens; OR
- (b) have any gaps greater than 3 mm under corrugations or ribs of sheet roofing and between roof components sealed at the fascia or wall line and at valleys, hips and ridges by
 - (i) a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium; OR
 - (ii) mineral wool; OR
 - (iii) other non-combustible material; OR
 - (iv) a combination of any of Items (i), (ii), or (iii) above.

6.6.4 Veranda, carport and awning roofs

The following apply to veranda, carport and awning roofs:

- (a) A veranda, carport or awning roof forming part of the main roof space [see Figure D1(a), Appendix D] shall meet all the requirements for the main roof, as specified in Clauses 6.6.1, 6.6.2, 6.6.3, 6.6.5 and 6.6.6.
- (b) A veranda, carport or awning roof separated from the main roof space by an external wall [see Figures D1(b) and D1(c), Appendix D] complying with Clause 6.4 shall have a non-combustible roof covering.

NOTE: There is no requirement to line the underside of a veranda, carport or awning roof that is separated from the main roof space.

6.6.5 Roof penetrations

The following apply to roof penetrations:

- (a) Roof penetrations, including roof lights, roof ventilators, roof-mounted evaporative cooling units, aerials, vent pipes and supports for solar collectors shall be adequately sealed at the roof to prevent gaps greater than 3 mm. The material used to seal the penetration shall be non-combustible.
- (b) Openings in vented roof lights, roof ventilators or vent pipes shall be fitted with ember guards made from a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.
- (c) All overhead glazing shall be Grade A safety glass complying with AS 1288.
- (d) Glazed elements in roof lights and skylights may be of polymer provided a Grade A safety glass diffuser, complying with AS 1288, is installed under the glazing. Where glazing is an insulating glazing unit (IGU), Grade A toughened safety glass of minimum 4 mm shall be used in the outer pane of the IGU.
- (e) Flashing elements of tubular skylights may be of a fire-retardant material, provided the roof integrity is maintained by an under-flashing of a material having a flammability index no greater than 5.
- (f) Evaporative cooling units shall be fitted with butterfly closers at or near the ceiling level, or the unit shall be fitted with non-combustible covers with a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.

6.6.6 Eaves linings, fascias and gables

The following apply to eaves linings, fascias and gables:

- (a) Gables shall comply with Clause 6.4.
- (b) Eaves penetrations shall be protected the same as for roof penetrations, as specified in Clause 6.6.5.
- (c) Eaves ventilation openings greater than 3 mm shall be fitted with ember guards made of non-combustible material or a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.

Joints in eaves linings, fascias and gables may be sealed with plastic joining strips or timber storm moulds.

This Standard does not provide construction requirements for fascias, bargeboards and eaves linings.

6.6.7 Gutters and downpipes

This Standard does not provide material requirements for

- (a) gutters, with the exception of box gutters; and
- (b) downpipes.

If installed, gutter and valley leaf guards shall be non-combustible.

Box gutters shall be non-combustible and flashed at the junction with the roof with non-combustible material.

			SCALES: NOT TO SCALE		PROPOSED RESIDENCE AT LOT 2342 GREENWOOD DRIVE, JORDAN SPRINGS. for: Klinsic Constructions Pty Ltd BAL 19 BUSHFIRE REQUIREMENTS
○	13.11.13	Issued for approval & construction	DATE: 13th November 2013		
ISSUE	DATE	REVISION	SHEET: BF4	ISSUE: ○	
- IT IS THE RESPONSIBILITY OF THE BUILDER TO CONFIRM ALL NEW DIMENSIONS BEFORE THE COMMENCEMENT OF ANY BUILDING WORK AND THE ORDERING OF MATERIALS. - DO NOT SCALE OFF DRAWING use all specified dimensions.					

6.7 VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS

6.7.1 General

Decking may be spaced.

There is no requirement to enclose the subfloor spaces of verandas, decks, steps, ramps or landings.

C6.7.1 Spaced decking is nominally spaced at 3 mm (in accordance with standard industry practice); however, due to the nature of timber decking with seasonal changes in moisture content, that spacing may range from 0-5 mm during service. The preferred dimension for gaps is 3 mm (which is in line with other 'permissible gaps' in other parts of this Standard. It should be noted that recent research studies have shown that gaps at 5 mm spacing afford opportunity for embers to become lodged in between timbers, which may contribute to a fire. Larger gap spacings of 10 mm may preclude this from happening but such a spacing regime may not be practical for a timber deck.

6.7.2 Enclosed subfloor spaces of verandas, decks, steps, ramps and landings

6.7.2.1 Materials to enclose a subfloor space

This Standard does not provide construction requirements for the materials used to enclose a subfloor space except where those materials are less than 400 mm from the ground.

Where the materials used to enclose a subfloor space are less than 400 mm from the ground, they shall comply with Clause 6.4.

6.7.2.2 Subfloor supports

This Standard does not provide construction requirements for subfloor support posts, columns, stumps, stringers, piers and poles.

6.7.2.3 Framing

This Standard does not provide construction requirements for the framing of verandas, decks, ramps or landings (i.e., bearers and joists).

6.7.2.4 Decking, stair treads and the trafficable surfaces of ramps and landings

This Standard does not provide construction requirements for decking, stair treads and the trafficable surfaces of ramps and landings that are more than 300 mm from a glazed element.

Decking, stair treads and the trafficable surfaces of ramps and landings less than 300 mm (measured horizontally at deck level) from glazed elements that are less than 400 mm (measured vertically) from the surface of the deck (see Figure D2, Appendix D) shall be made from

- (a) non-combustible material; or
- (b) bushfire-resisting timber (see Appendix F); or
- (c) a timber species as specified in Paragraph E1, Appendix E; or
- (d) a combination of any of Items (a), (b), or (c) above.

6.7.3 Unenclosed subfloor spaces of verandas, decks, steps, ramps and landings

6.7.3.1 Supports

This Standard does not provide construction requirements for support posts, columns, stumps, stringers, piers and poles.

6.7.3.2 Framing

This Standard does not provide construction requirements for the framing of verandas, decks, ramps or landings (i.e., bearers and joists).

6.7.3.3 Decking, stair treads and the trafficable surfaces of ramps and landings

This Standard does not provide construction requirements for decking, stair treads and the trafficable surfaces of ramps and landings that are more than 300 mm from a glazed element.

Decking, stair treads and the trafficable surfaces of ramps and landings less than 300 mm (measured horizontally at deck level) from glazed elements that are less than 400 mm (measured vertically) from the surface of the deck (see Figure D2, Appendix D) shall be made from

- (a) non-combustible material; or
- (b) bushfire-resisting timber (see Appendix F); or
- (c) a timber species as specified in Paragraph E1, Appendix E; or
- (d) a combination of any of Items (a), (b), or (c) above.

6.7.4 Balustrades, handrails or other barriers

This Standard does not provide construction requirements for balustrades, handrails and other barriers.

6.8 WATER AND GAS SUPPLY PIPES

Above-ground, exposed water and gas supply pipes shall be metal.

			SCALES: NOT TO SCALE		PROPOSED RESIDENCE AT LOT 2342 GREENWOOD DRIVE, JORDAN SPRINGS. for: Klinsic Constructions Pty Ltd
ISSUE	DATE	REVISION	DATE: 13th November 2013		
- IT IS THE RESPONSIBILITY OF THE BUILDER TO CONFIRM ALL NEW DIMENSIONS BEFORE THE COMMENCEMENT OF ANY BUILDING WORK AND THE ORDERING OF MATERIALS. - DO NOT SCALE OFF DRAWING use all specified dimensions.			SHEET: BF5	ISSUE: O	BAL 19 BUSHFIRE REQUIREMENTS