



**Bush Fire Prone Land**

**Addendum to Construction Certificate Specifications**

**Bushfire Attack Level (BAL) 19**

Lot _____ Sec _____ Deposited Plan _____
Street Address. _____
Locality _____
Building Description _____
Applicant _____ Date _____
Development Consent No. _____

**ATTACK LEVEL 19 (BAL — 19)**

**SUBFLOOR**

**Please tick appropriate box**

**1. Unenclosed Subfloor Supports**

The support posts, columns, stumps, piers and poles shall be—

- (a) of non-combustible material; OR
- (b) of bushfire-resisting timber (see Appendix 1); OR
- (c) a combination of Items (i) and (ii) above

**2. Unenclosed Subfloor Space – Bearers, Joists & Flooring**

- (a) bearers, joists & flooring **greater** than 400mm above finished ground level OR

Bearers, joists & flooring **less** than 400mm above finished ground level shall be one of the following:

- (b) non-combustible; OR
- (c) bushfire-resisting timber (see Appendix 1); OR
- (d) a combination of any of Items (a), (b)

Flooring shall be—

- (a) non-combustible; OR
- (b) bushfire-resisting timber (see Appendix 1); OR
- (c) timber (other than bushfire-resisting timber), particleboard or plywood flooring where the underside is lined with sarking-type material or mineral wool insulation; OR
- (d) a combination of any of Items (a), (b) or (c) above OR
- (e) A system complying with AS 1530.8.1.

**3. Enclosed Subfloor Space**

- (a) There are no construction requirements for supports, bearers, joists and flooring when the subfloor is enclosed with a wall that complies with section 4 OR
- (b) a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion resistant steel, bronze or aluminium; OR
- (c) a combination of Items, specify

**EXTERNAL WALLS**

**4. Walls**

Walls 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) shall be of—

- (a) non-combustible material of a minimum 90mm thickness ; **OR**
- (b) fibre-cement external cladding, a minimum of 6 mm in thickness; **OR**
- (c) bushfire-resisting timber (see Appendix 1); **OR**
- (d) a timber species as specified in Paragraph 1, Appendix 2; **OR**
- (e) Timber logs of a species with a density of 680kg/m<sup>3</sup> or greater at 12% moisture content; of a minimum nominal overall thickness of 90mm and a minimum thickness of 70mm; and gauge planed
- (f) a combination of any of Items (a), (b), (c), (d) or (e) above, specify

## 5. Sarking

- Sarking should be non-combustible; or comply with AS4200.1, be installed on the outside of the frame and have a flammability index of not more than 5 as determined by AS1530.2

## 6. Joints

- (a) 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 **OR**
- (b) Sarking-type material may be applied over the outer face of the frame prior to fixing any external cladding.

## 7. Vents and weepholes

- Vents and weepholes in external walls shall be screened with a mesh with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium, except where the vents and weepholes are less than 3 mm.

## EXTERNAL GLAZED ELEMENTS AND ASSEMBLIES AND EXTERNAL DOORS

### 8. Bushfire shutters

- Where fitted, bushfire shutters shall be fixed to the building and be **non-removable**; when in the closed position, have no gap greater than 2 mm between the shutter and the wall, the sill or the head; be readily manually operable from either inside or outside; protect the entire window assembly or door assembly;
- consist of materials being either non-combustible material; **OR**
- a timber species as specified in Paragraph 1, Appendix 2; **OR**
- bushfire-resisting timber (see Appendix 1); **OR**  
a combination of any of the above **and**  
where perforated, the area shall be no greater than 20% of the shutter and have—
- (a) uniformly distributed perforations with a maximum aperture of 2 mm when the shutter is providing radiant heat protection **OR**
- (b) 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**

(c) When 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.

## 9 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—  
metal; or bushfire-resisting timber (see Appendix 1); or a timber species as specified in Appendix 2 table 2

## 10. Windows

Window assemblies shall comply with one of the following:

(a) Completely protected by a bushfire shutter that complies with clause 7 OR

(b) Completely protected externally by screens complying with clause 8 OR

(c) They shall comply with the following: 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:

(d) Bushfire-resisting timber (see Appendix 1).OR

(e) A timber species as specified in table 2, Appendix 2.OR

(f) Metal.OR

(g) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the frame and sash shall satisfy the design load, performance and structural strength of the member. **and**

(h) 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), the glazing shall be toughened glass 5mm, or glass blocks with no restriction on glazing methods.

(i) Where glazing is other than that specified in Item (h) 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 8 OR

(j) 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 8 OR

(k) 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 8.

## 11. Side hung external 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 7 OR

- (b) They shall be completely protected externally by screens that comply with Clause 8 **OR** they shall comply with the following:  
doors shall be
- (c) non-combustible; **OR**
- (d) a solid timber door, having a minimum thickness of 35 mm for the first 400 mm above the threshold; **OR**
- (e) a door, including a hollow core door, with a non-combustible kickplate on the outside for the first 400 mm above the threshold; **OR**
- (f) a fully framed glazed door, where the framing is made from materials required for bushfire shutters (see Clause 7), **OR**
- (g) a timber species as specified in table 2, Appendix 2 **and**
- (h) Where doors incorporate glazing, the glazing shall be toughened glass minimum 5mm and doors shall be tight-fitting to the door frame and to an abutting door, if applicable **and**
- (i) Where any part of 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), the door frame shall be made from one of the following:
- (j) Bushfire-resisting timber (see Appendix 1). **OR**
- (k) A timber species as specified in table 2, Appendix 2. **OR**
- (l) Metal. **OR**
- (m) 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 **also**
- (o) Weather strips, draught excluders or draught seals shall be installed at the base of side-hung external doors.

## 12. Sliding doors

Sliding doors shall comply with one of the following:

- (a) They shall be protected by a bushfire shutter that complies with Clause 7. **OR**
- (b) They shall be completely protected externally by screens that comply with Clause 8 **OR**
- (c) They shall comply with the following:  
Any glazing incorporated in sliding doors shall be toughened glass minimum 5mm **and** both the door frame supporting the sliding door and the framing surrounding any glazing shall be made from one of the following:
- (d) Bushfire-resisting timber (see Appendix 1). **OR**
- (e) A timber species as specified in table 2, Appendix 2. **OR**
- (f) Metal **OR**
- (g) 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 **and**
- (h) Sliding doors shall be tight-fitting in the frames.

## 13. Vehicle access doors (garage 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) shall be made from—

- (i) non-combustible material; OR
  - (ii) bushfire-resisting timber (see Appendix 1); OR
  - (iii) fibre-cement sheet, a minimum of 6 mm in thickness; OR
  - (iv) a timber species as specified in table 1, Appendix 2; 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 OR
- (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) and
- (d) Where vehicle access doors include ventilation slots it shall be protected in accordance with Clause 7.

## **ROOFS (INCLUDING VERANDAHS AND ATTACHED CARPORT ROOFS, PENETRATIONS, EAVES, FASCIAS, GABLES, GUTTERS AND DOWNPIPES)**

### **14. Roofs – The following applies to all roofs and roofing systems**

Roof tiles, roof sheets and roof-covering accessories shall be non-combustible. The roof/wall junction shall be sealed, to prevent openings greater than 3 mm, either by the use of fascia and eaves linings or sealing between the top of the wall and the underside of the roof and between the rafters at the line of the wall. 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. Only evaporative coolers manufactured with AS 60335.2.98 shall be used. Evaporative coolers with an internal damper to prevent the entry of embers into the roof space need not be screened externally.

### **15. Tiled roofs**

Tiled roofs shall be fully sarked. The sarking shall be

- (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.

### **16. Sheet roofs**

Sheet roofs shall—

- (a) be fully sarked in accordance with Clause 14, 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—a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium; or mineral wool; or other non-combustible material; or a combination of any of Items in b.

## 17. Roof penetrations

The following apply to roof penetrations:

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.

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.

All overhead glazing shall be Grade A safety glass complying with AS 1288.

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 minimum 4 mm, shall be used in the outer pane of the IGU.

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.

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.

## 18. Eaves linings, fascias and gables

The following apply to eaves linings, fascias and gables:

Gables shall comply with Clause 4.

Eaves penetrations shall be protected the same as for roof penetrations, as specified in Clause 16.

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.

## 19. Veranda posts

(a) must be timber mounted on galvanised mounted shoes or stirrups with a clearance of a minimum 75 mm above the adjacent finished ground level; or

(b) Less than 400mm (measured vertically) from the surface of the deck or ground, shall be made from -

- (i) non combustible material
- (ii) bushfire resisting timber
- (iii) a timber species as specified in Appendix 2; or
- (iv) a combination of any items

## 20. Verandah, carport and awning roofs

The following apply to verandah, carport and awning roofs:

(a) A verandah, carport or awning roof forming part of the main roof space [see Figure D1(a)] shall meet all the requirements for the main roof, as specified in Clauses 13-17.

(b) A verandah, carport or awning roof separated from the main roof space by an external wall [see Figures D1(b) and D1(c)] complying with Clause 4 shall have a non-combustible roof covering.

## 21. Box Gutters

Box gutters shall be non-combustible and flashed at the junction with the roof with non-combustible material. If installed, gutter and valley leaf guards shall be non-combustible.

## **VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS**

### **Unenclosed Subfloor Spaces**

#### **22. Supports**

Support posts, columns, stumps, stringers, piers and poles shall be—

- (a) of non-combustible material; **OR**
- (b) of bushfire-resisting timber (see Appendix 1); **OR**
- (c) a combination of Items (a) and (b) above.

#### **23. Bearers and Joists**

shall be—

- (a) of non-combustible material; **OR**
- (b) of bushfire-resisting timber (see Appendix 1); **OR**
- (c) a combination of Items (a) and (b) above.

#### **24. Decking**

Decking, stair treads and the trafficable surfaces of ramps and landings shall be—

- (a) of non-combustible material; **OR**
- (b) of bushfire-resisting timber (see Appendix 1); **OR**
- (c) a combination of Items (a) and (b) above **and**
- (d) the gaps between the decking shall be 3mm or 10mm

### **Enclosed Subfloor Spaces**

**25.** There are not construction requirements for supports, bearers and joists when the subfloor is enclosed. The subfloor spaces of verandahs, decks, steps, ramps and landings are considered to be enclosed' when—

- (a) the material used to enclose the subfloor space complies with Clause 4; **OR**
- (b) a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion resistant steel, bronze or aluminium; **OR**
- (c) a combination of Items (a) and (b) above.

#### **26. Balustrades, handrails or other barriers**

Those parts of the handrails and balustrades less than 125 mm from any glazing or any combustible wall shall be—

- (a) of non-combustible material; **OR**
- (b) bushfire-resisting timber (see Appendix 1); **OR**
- (c) a combination of Items (i) and (ii) above.

#### **27. Attached Structures**

(a) any part of a garage, carport, verandah or similar roofed structure that is attached to, or shares a common roof space with the dwelling, the entire garage,



carport, verandah or similar roofed structure shall comply with the construction requirements of this BAL OR

(b) the structure shall be separated from the dwelling by a wall that extends to the underside of a non-combustible roof covering, and that complies with the following: The wall shall be of masonry, earth wall or masonry-veneer construction with the masonry leaf of not less than 90 mm in thickness OR

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/–.

Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not comply with the above [Item (iii)].

## 28. Garages and carports below a dwelling

(a) Shall comply with the construction requirements of this BAL OR

(b) any construction separating the garage or carport (including walls and flooring systems) from the remainder of the dwelling shall comply with the following:

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 or if a wall 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 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

(d) if separating construction is a wall, be of masonry, earth wall or masonry-veneer construction with the masonry leaf of not less than 90 mm in thickness

## 29. Adjacent Structures

(a) Adjacent garage, carport, or similar roofed structures shall comply with the construction requirements of this BAL or

The adjacent structure shall be separated from the dwelling by one of the following:

(b) A distance of not less than 6m 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 or 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 and 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)].

## WATER AND GAS SUPPLY PIPES

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

**I agree to install and implement all of the above methods of construction/building elements at the development described in the development application.**

Signed by the applicant: \_\_\_\_\_

Date: \_\_\_\_\_

Name (*please print*): \_\_\_\_\_

### Appendix 1

Standard trade name	Botanical name
Ash, silvertop	Eucalyptus sieberi
Blackbutt	Eucalyptus pilularis
Gum, red, river	Eucalyptus camaldulensis
Gum, spotted	Corymbia maculata
	Corymbia henryi
	Corymbia citriodora
Ironbark, red	Eucalyptus sideroxylon
Kwila (Merbau)	Intsia bijuga
Turpentine	Syncarpia glomulifera

### Appendix 2

#### GENERAL CONSTRUCTION

Timber with a density of 750 kg/m<sup>3</sup> or greater at a 12 percent moisture content is suitable for construction where specified in BAL 12.5 and BAL 19. Examples of suitable timber species are listed in table.

Densities of timber species not listed in table may be found in AS 1720.2.

Many of the timber species listed in table from various regions of Australia may not be available in all areas.

#### TIMBER SPECIES WITH A DENSITY OF 750 kg/m<sup>3</sup> OR GREATER

Table 1

Standard trade name	Botanical name
Ash, Crow's	Flindersia australis
Ash, silvertop	Eucalyptus sieberi

Balau (selangan batu)	Shorea spp.
Bangkirai	Shorea laevifolia
Belian	Eusideroxylon zwageri
Blackbutt	Eucalyptus pilularis
Blackbutt, New England	Eucalyptus andrewsii
	Eucalyptus campanulata
Box, brush	Lophostemon confertus
Box, grey	Eucalyptus microcarpa
Box, grey, coast	Eucalyptus bosistoana
Box, white-topped	Eucalyptus quadrangulata
Box, yellow	Eucalyptus melliodora
Brownbarrel	Eucalyptus fastigata
Candlebark	Eucalyptus rubida
Gum, blue, southern	Eucalyptus globulus
Gum, blue, Sydney	Eucalyptus saligna
Gum, grey	Eucalyptus propinqua
Gum, grey, mountain	Eucalyptus cypellocarpa
Gum, Maiden's	Eucalyptus maidenii
Gum, manna	Eucalyptus viminalis
Gum, red, forest	Eucalyptus tereticornis
Gum, red, river	Eucalyptus camaldulensis
Gum, rose	Eucalyptus grandis
Gum spotted	Corymbia maculate
<b>Standard trade name</b>	<b>Botanical name</b>

Gum spotted

	Corymbia henryi
	Corymbia citriodora
Gum, sugar	Eucalyptus cladocalyx
Hardwood, Johnstone River	Backhousia bancroftii
Ironbark, grey	Eucalyptus paniculata
Ironbark, red	Eucalyptus sideroxylon
Jarrah	Eucalyptus marginata
Kapur	Dryobalanops spp.
Karri	Eucalyptus diversicolor
Kempas	Koompassia malaccensis
Keruing	Dipterocarpus spp.
Kwila (Merbau)	Intsia bijuga
Mahogany red	Eucalyptus resinifera
Mahogany, southern	Eucalyptus botryoides
Mahogany, white	Eucalyptus acmenoides
Messmate	Eucalyptus obliqua
Messmate, Gympie	Eucalyptus cloeziana
Northern Box (Pelawan)	Tristaniopsis spp.
Oak, American	Quercus spp.
Peppermint, narrow-leaved	Eucalyptus australiana
Satinay	Syncarpia hillii
Stringybark, Blackdown	Eucalyptus sphaerocarpa
Stringybark, blue-leaved	Eucalyptus agglomerata
Stringybark, brown	Eucalyptus baxteri
Stringybark, silvertop	Eucalyptus laevopinea
Stringybark, white	Eucalyptus eugenioides
Stringybark, yellow	Eucalyptus muelleriana
Tallowwood	Eucalyptus microcorys

Turpentine  
Woollybutt

*Syncarpia glomulifera*  
*Eucalyptus longifolia*

## 2 WINDOWS AND DOORS

Timber species with a density of 650 kg/m<sup>3</sup> or greater at a 12 percent moisture content is suitable for window joinery, door frames and the framing surrounding any glazing where specified in Bal 12.5 and BAL 19. Examples of suitable timber species are listed in Table 2.

Densities of timber species not listed in Table E2 may be found in AS 1720.2.

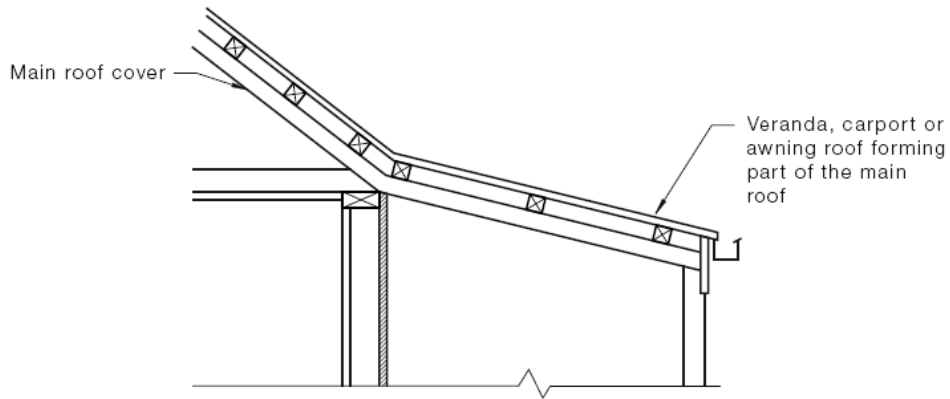
Many of the timber species listed in Table E2 from various regions of Australia may not be available in all areas.

### SOME TIMBER SPECIES WITH A DENSITY OF 650 kg/m<sup>3</sup> OR GREATER

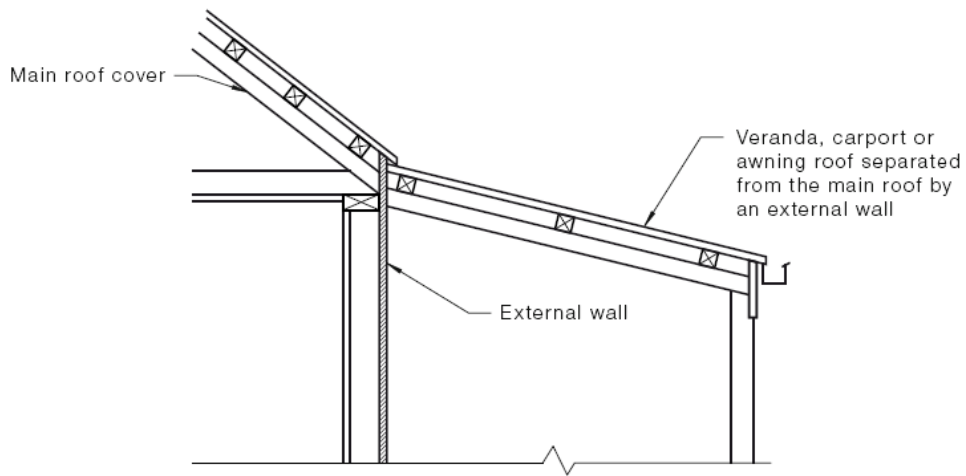
Table 2

Standard trade name	Botanical name
Ash, alpine	<i>Eucalyptus delegatensis</i>
Ash, Crow's	<i>Flindersia australis</i>
Ash, mountain	<i>Eucalyptus regnans</i>
Ash, silvertop	<i>Eucalyptus sieberi</i>
Balau (selangan batu)	<i>Shorea</i> spp.
Bangkirai	<i>Shorea laevifolia</i>
Beech, myrtle	<i>Nothofagus cunninghamii</i>
Belian	<i>Eusideroxylon zwageri</i>
Blackbutt	<i>Eucalyptus pilularis</i>
Blackbutt, New England	<i>Eucalyptus andrewsii</i>
	<i>Eucalyptus campanulata</i>
Blackwood	<i>Acacia melanoxylon</i>
Box, brush	<i>Lophostemon confertus</i>
Box, grey	<i>Eucalyptus microcarpa</i>
Box, grey, coast	<i>Eucalyptus bosistoana</i>
Box, white-topped	<i>Eucalyptus quadrangulata</i>
Box, yellow	<i>Eucalyptus melliodora</i>
Brownbarrel	<i>Eucalyptus fastigata</i>
Candlebark	<i>Eucalyptus rubida</i>
Cypress	<i>Callitris glaucophylla</i>
Gum, blue, southern	<i>Eucalyptus globulus</i>
Gum, blue, Sydney	<i>Eucalyptus saligna</i>
Gum, grey	<i>Eucalyptus propinqua</i>
Gum, grey, mountain	<i>Eucalyptus cypellocarpa</i>
Gum, Maiden's	<i>Eucalyptus maidenii</i>
Gum, manna	<i>Eucalyptus viminalis</i>
Gum, mountain	<i>Eucalyptus dalrympleana</i>
Gum, red, forest	<i>Eucalyptus tereticornis</i>
Gum, red, river	<i>Eucalyptus camaldulensis</i>
Gum, rose	<i>Eucalyptus grandis</i>
Gum, shinning	<i>Eucalyptus nitens</i>
Gum, spotted	<i>Corymbia maculata</i>
	<i>Corymbia henryi</i>
	<i>Corymbia citriodora</i>
Gum, sugar	<i>Eucalyptus cladocalyx</i>
Hardwood, Johnstone River	<i>Backhousia bancroftii</i>

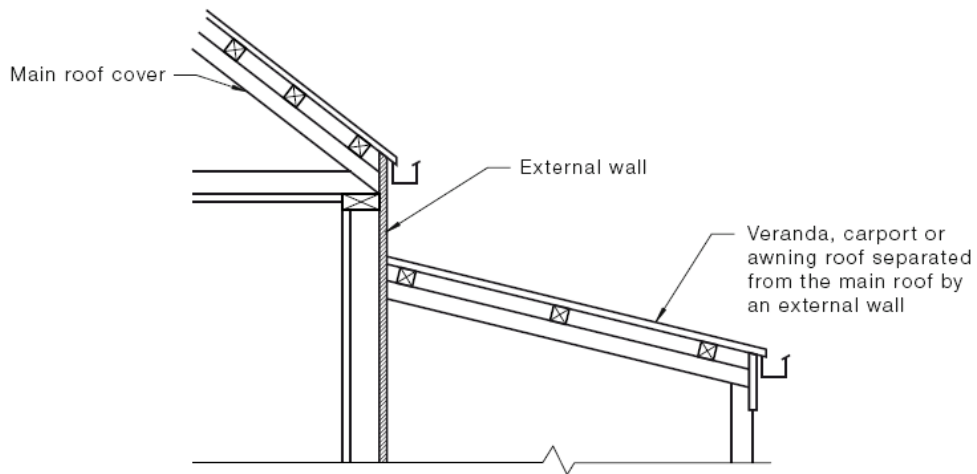
Ironbark, grey	<i>Eucalyptus paniculata</i>
Ironbark, red	<i>Eucalyptus sideroxylon</i>
Jarrah	<i>Eucalyptus marginata</i>
Kapur	<i>Dryobalanops</i> spp.
Karri	<i>Eucalyptus diversicolor</i>
Kempas	<i>Koompassia malaccensis</i>
Keruing	<i>Dipterocarpus</i> spp.
Kwila (Merbau)	<i>Intsia bijuga</i>
Mahogany, Philippine red, dark	<i>Shorea</i> spp.
Mahogany red	<i>Eucalyptus resinifera</i>
Mahogany, southern	<i>Eucalyptus botryoides</i>
Mahogany, white	<i>Eucalyptus acmenoides</i>
Messmate	<i>Eucalyptus obliqua</i>
Messmate, Gympie	<i>Eucalyptus cloeziana</i>
Northern Box (Pelawan)	<i>Tristaniopsis</i> spp.
Oak , American	<i>Quercus</i> spp.
Peppermint, narrow-leaved	<i>Eucalyptus australiana</i>
Pine, celery-top	<i>Phyllocladus asplenifolius</i>
Pine, slash	<i>Pinus elliotii</i>
Ramin	<i>Gonystylus</i> spp.
Rosewood, New Guinea	<i>Pterocarpus indicus</i>
Satinay	<i>Syncarpia hillii</i>
Stringybark, Blackdown	<i>Eucalyptus sphaerocarpa</i>
<b>Standard trade name</b>	<b>Botanical name</b>
Stringybark, blue-leaved	<i>Eucalyptus agglomerata</i>
Stringybark, brown	<i>Eucalyptus baxteri</i>
Stringybark, silvertop	<i>Eucalyptus laevopinea</i>
Stringybark, white	<i>Eucalyptus eugenioides</i>
Stringybark, yellow	<i>Eucalyptus muelleriana</i>
Tallowwood	<i>Eucalyptus microcorys</i>
Taun	<i>Pometia pinnata</i>
Turpentine	<i>Syncarpia glomulifera</i>
Vitex, New Guinea	<i>Vitex cofassus</i>
Woollybutt	<i>Eucalyptus longifolia</i>



(a) Continuous roof



(b) Continuous roof with veranda, carport or awning roof separated from main roof



(c) Discontinuous roof

FIGURE D1 VERANDA, CARPORT OR AWNING ROOFS SHOWING CONTINUOUS AND DISCONTINUOUS ROOF TYPES

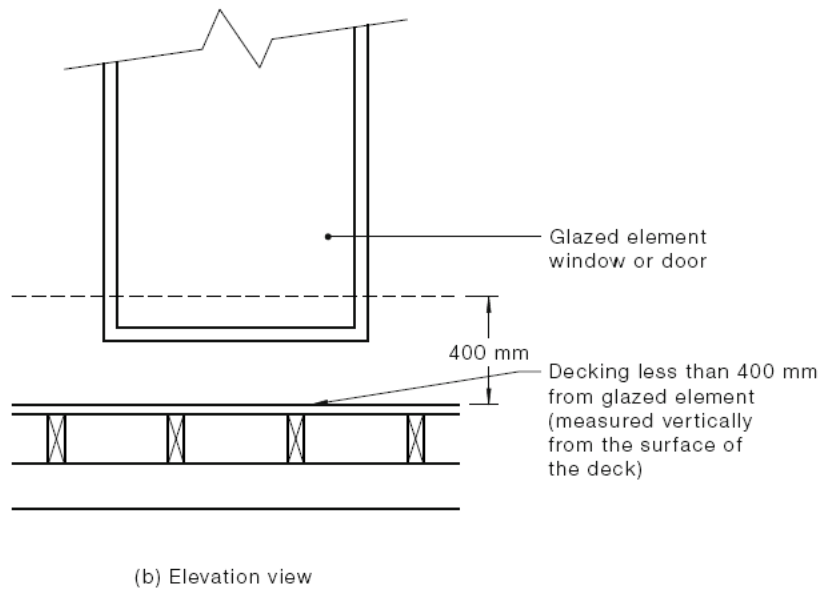
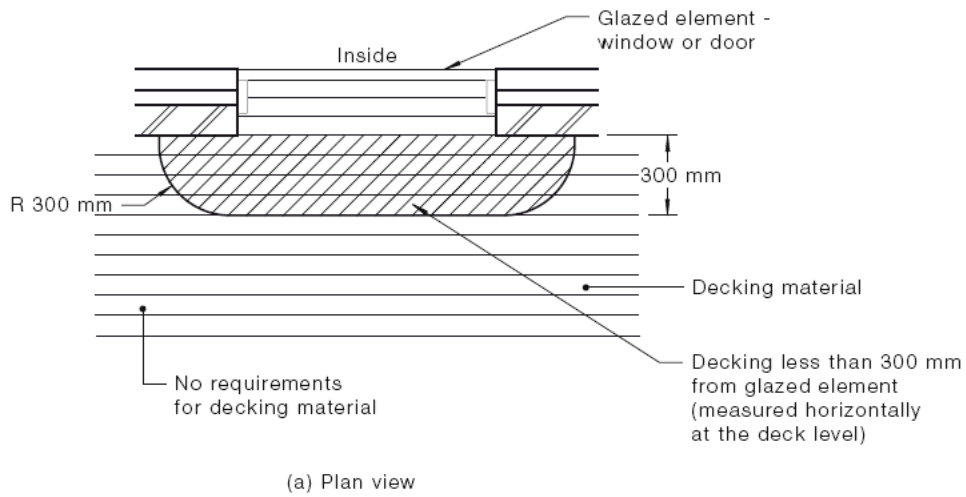
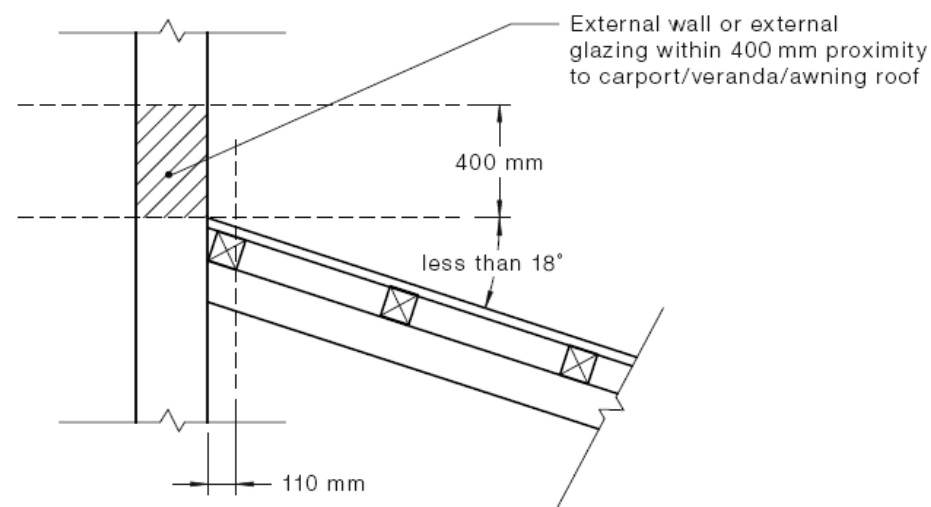
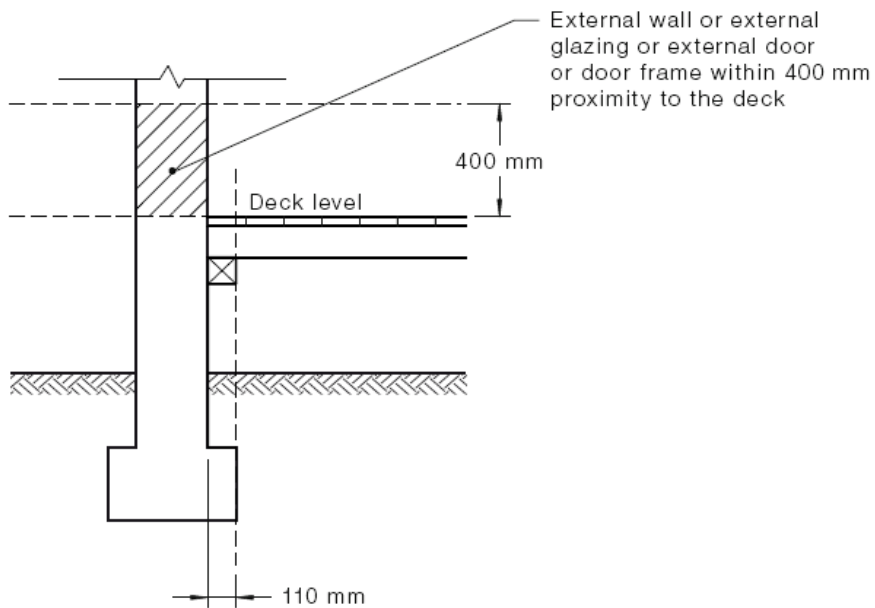
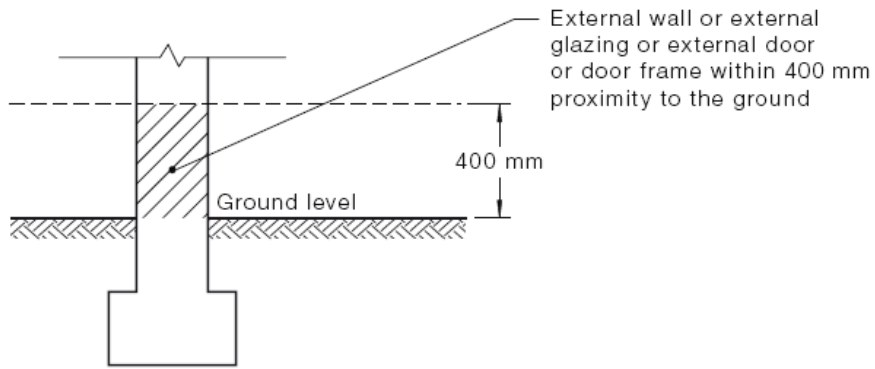


FIGURE D2 DECKING WITHIN HORIZONTAL AND VERTICAL LIMITS OF GLAZED ELEMENTS



DIMENSIONS IN MILLIMETRES

FIGURE D3 EXTERNAL WALLS OR EXTERNAL GLAZING, OR EXTERNAL DOORFRAMES WITHIN LIMITS ABOVE GROUND, DECKS, CARPORT ROOFS



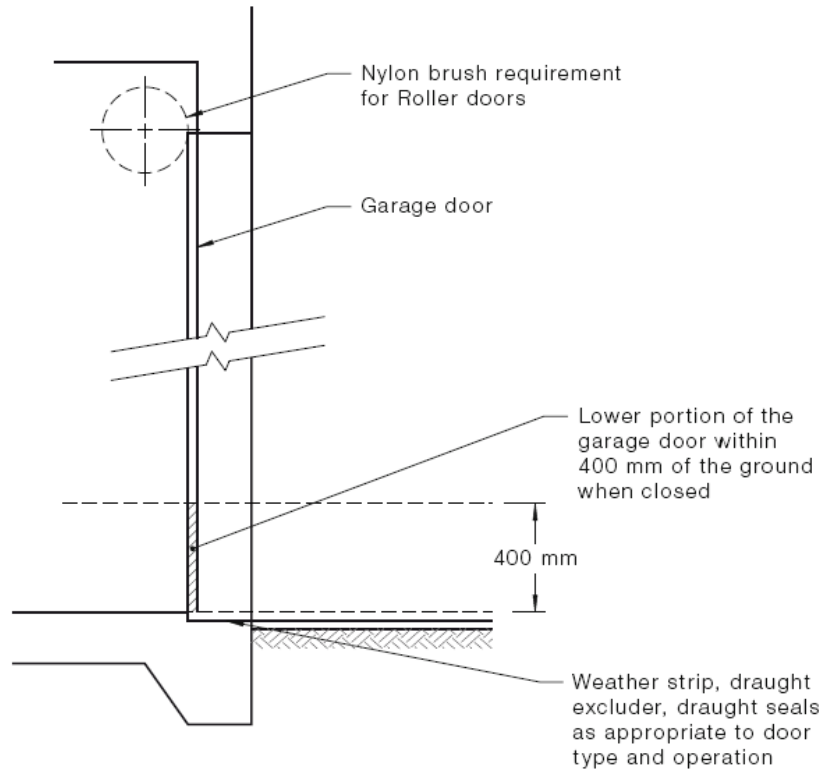


FIGURE D4 VEHICLE ACCESS DOORS (GARAGE DOORS)