



Bush Fire Prone Land

Addendum to Construction Certificate Specifications

Bushfire Attack Level (BAL) 40

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



ATTACK LEVEL 40 (BAL — 40)

SUBFLOOR

Please tick appropriate box

1. Enclosed Subfloor Space

There are not construction requirements for supports, bearers, joists and flooring when the subfloor is enclosed with a wall that complies with section 4.

2. Unenclosed Subfloor Supports

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

- (a) of non-combustible material; OR
- (b) a system complying with AS 1530.8.1; OR
- (c) a combination of Items (i) and (ii) above

3. Unenclosed Subfloor Space – Bearers, Joists & Flooring

The bearers, joists & flooring shall be one of the following:

- (a) non-combustible; OR
- (b) have the underside of the combustible elements of the floor system protected with a non-combustible material (e.g., fibre-cement sheet or metal sheet); OR
- (c) be a system complying with AS 1530.8.1; OR
- (d) a combination of any of Items (a), (b) or (c) above.

EXTERNAL WALLS

4. Walls

Walls shall be one of the following:

- (a) Walls made from non-combustible material (e.g., full masonry, brick veneer, mud brick, concrete, aerated concrete). OR
- (b) Timber-framed or steel-framed walls that are sarked on the outside of the frame and clad with—fibre-cement external cladding, a minimum of 9 mm in thickness; steel sheeting; a system complying with AS 1530.8.1. or a combination of Items in b

5. 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 can be applied over the frame prior to fixing any external cladding.

6. 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 or bronze, except where the vents and weepholes are less than 3 mm.

EXTERNAL GLAZED ELEMENTS AND ASSEMBLIES AND EXTERNAL DOORS

7. Bushfire shutters

Where fitted, bushfire shutters shall (a) be fixed to the building and be non-removable and (b) when in the closed position, have no gap greater than 3 mm between the shutter and the wall, the sill or the head and (c) be readily manually operable from either inside or outside and (d) protect the entire window assembly or door assembly and (e) consist of non-combustible materials and (f) where perforated, have—uniformly distributed perforations with a maximum aperture of 3 mm when the shutter is providing radiant heat protection or (g) 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; and (h) a perforated area shall be no greater than 20% of the shutter and 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.

8. 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 or bronze. Gaps between the perimeter of the screen assembly and the building element to which it is fitted shall not exceed 3 mm and the frame supporting the mesh or perforated sheet shall be metal.

9. Windows

Window assemblies shall comply with one of the following:

(a) They shall be completely protected by a bushfire shutter that complies with Clause 7. **OR**

They shall comply with the following

(b) Window frames and hardware shall be metal; glazing shall be toughened glass minimum 6 mm; both the openable and fixed portions of the window shall be screened externally with screens that comply with Clause 8 and seals to stiles, head and sills or thresholds shall be manufactured from materials having a flammability index no greater than 5 or from silicone.

10. Side-Hung External Doors

Side-hung external doors, including French doors, panel fold and bi-fold doors, shall be

(a) They shall be protected by a bushfire shutter that complies with Clause 7 **OR**

They shall comply with the following: the doors shall be

(b) non-combustible; **OR**

(c) a solid timber door, having a minimum thickness of 35 mm for the first 400 mm above the threshold and protected on the outside by a metal framed

screen door with a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel or bronze; **or**

(d) Panels and frame of a fully framed glazed door shall be made from metal **and**

(e) Externally fitted hardware that supports the panel in its functions of opening and closing shall be made of metal, Trims or other components may use materials other than metal **and**

(f) Where doors incorporate glazing, the glazing shall be toughened glass minimum 6 mm **and**

(g) 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 door (see Figure D3), that portion of the glazing shall be screened externally with a screen that complies with Clause 8 **and**

(h) Seals to stiles, head and sills or thresholds shall be manufactured from materials with a flammability index no greater than 5 or from silicone **and**

(i) Door frames shall be metal **and**

(j) Doors shall be tight-fitting to the door frame and to an abutting door, if Applicable **and**

(k) Weather strips, draught excluders or draught seals shall be installed at the base of side-hung external doors.

11. Sliding External 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) Both the door frame supporting the sliding door and the framing surrounding any glazing shall be metal and (c) Externally fitted hardware that supports the panel in its functions of opening and closing shall be metal and (d) Where sliding doors incorporate glazing, the glazing shall be toughened glass minimum 6 mm and both the fixed and openable portions of doors shall be screened externally with screens that comply with Clause 8 and (e) Seals to stiles, head and sills or thresholds shall be manufactured from materials with a flammability index no greater than 5 or from silicone and (f) Sliding doors shall be tight-fitting in the frames.

12. Vehicle access doors

The following apply to vehicle access doors:

(a) Vehicle access doors shall be non-combustible and (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 and (b) 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 (c) Vehicle access doors shall not include ventilation slots.

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

13. Roofs – All

- (a) Roof tiles, roof sheets and roof-covering accessories shall be non-combustible and
- (b) The roof/wall junction shall be sealed, to prevent openings greater than 3 mm, either by the use of fascia and eave 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 and
- (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 or bronze and
- (d) A pipe or conduit that penetrates the roof covering shall be non-combustible and
- (e) Roof-mounted evaporative coolers are not permitted.

14. Tiled Roofs

- Tiled roofs shall be fully sarked and the sarking shall have a flammability index of not more than 5, when tested to AS15 30.2) and be located directly below the roof battens and cover the entire roof area including the ridge and extend into gutters and valleys.

15. 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— (i) a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel or bronze ; or (ii) mineral wool; or (iii) other non-combustible material; or (iv) a combination of any of Items (i), (ii) or (iii) above.

16. Roof Penetrations

The following apply to roof penetrations:

- (a) Roof penetrations, including roof lights, roof ventilators, 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 flash the penetration shall be non-combustible and
- (b) Glazed assemblies for roof lights and skylights shall have an FRL of -/30/- and
- (c) External single pane glazed elements of roof lights and skylights, where the pitch of the glazed element is 18 degrees or less to the horizontal, shall be protected with ember guards made from a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel or bronze.

17. Eaves Linings, Fascias and Gables

The following apply to eaves linings, fascias and gables:

- (a) Joints in eaves linings, fascias and gables may be sealed with plastic joining strips or timber storm moulds and
- (b) Gables shall comply with Clause 4 and
- (c) Fascias and bargeboards shall comply with AS1530.8.1 and eaves linings shall be—
- (d) fibre-cement sheet, a minimum of 6 mm in thickness; or
- (e) calcium silicate sheet, a minimum of 6 mm in thickness; or
- (f) a combination of Items (d) and (e) above.
- (g) Eaves penetrations shall be protected the same as for roof penetrations as specified in Clause 16 and
- (h) 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 or bronze

18. 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 and (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 and the support structure shall be either (i) of non-combustible material; or (ii) timber rafters lined on the underside with fibre-cement sheeting a minimum of 6 mm in thickness, or with material complying with AS 1530.8.1; or (iii) a system complying with AS 1530.8.1; or (iv) a combination of any of Items (i), (ii) or (iii) above.

19. Gutters

(a) If installed, gutter and valley leaf guards shall be non-combustible and (b) Gutters shall be non-combustible and (c) Box gutters shall be non-combustible and flashed at the junction with the roof with non-combustible material.

VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS

20. Enclosed Subfloor Spaces

There are no construction requirements for support posts, columns, stumps, stringers, piers, poles, bearers and joists when the subfloor is enclosed with (a) materials complying with Clause 4 and (b) all openings greater than 3 mm are screened with a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel or bronze

Unenclosed Subfloor Spaces

21. Supports

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

(a) of non-combustible material; or (b) a system complying with AS1530.8.1 or (c) a combination of Items (a) and (b) above.

22. Bearers and Joists

shall be—

(a) of non-combustible material; or (b) a system complying with AS1530.8.1; or (c) a combination of Items (a) and (b) above.

23. Decking

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

(a) of non-combustible material; or (b) a system complying with AS1530.8.1; or (c) a combination of Items (a) and (b) above and (d) decking shall not be spaced

24. 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 of non-combustible material;

25. Veranda Posts

- shall be made from non-combustible material

26. 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
- (c) 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
- (d) openings shall be 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)].

27. 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
- (c) a wall 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

28. 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 6 m 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)].

29. Water & Gas Supply Pipes

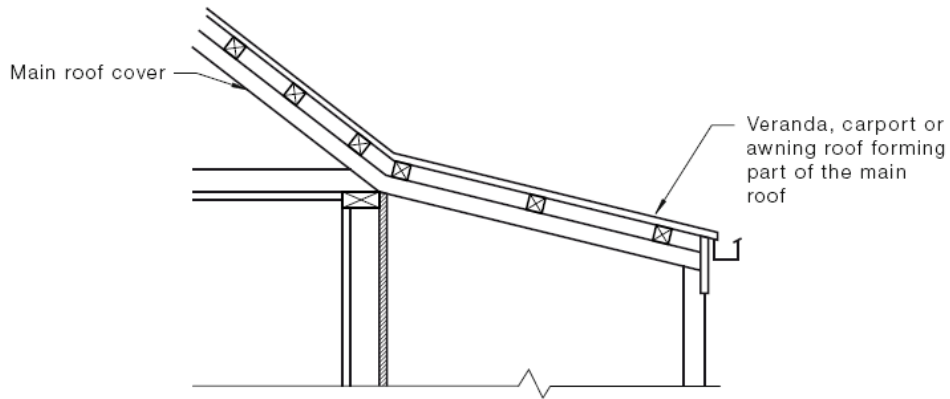
Above-ground, exposed water and gas supply pipes shall be metal.

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

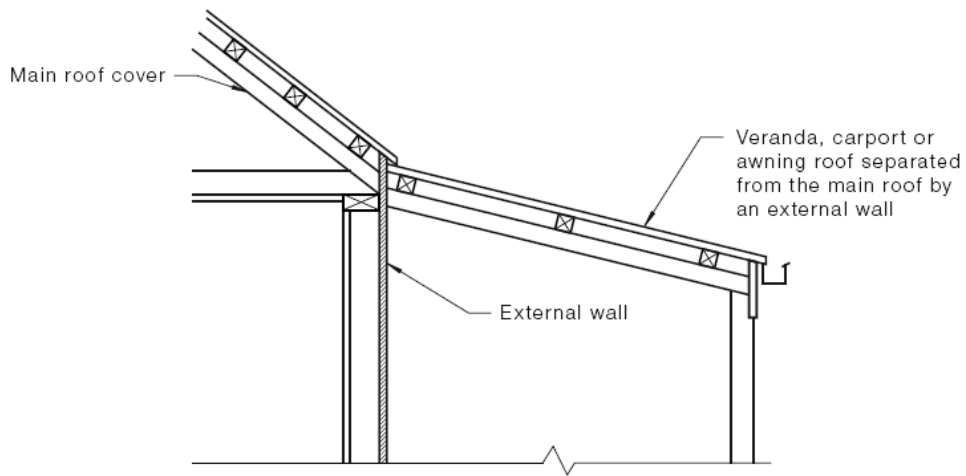
Signed by the applicant: _____

Date: _____

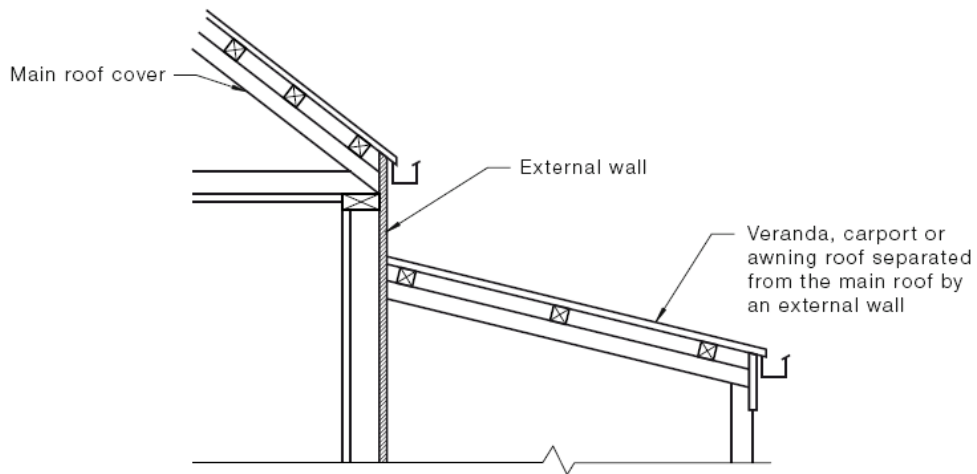
Name (*please print*): _____



(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

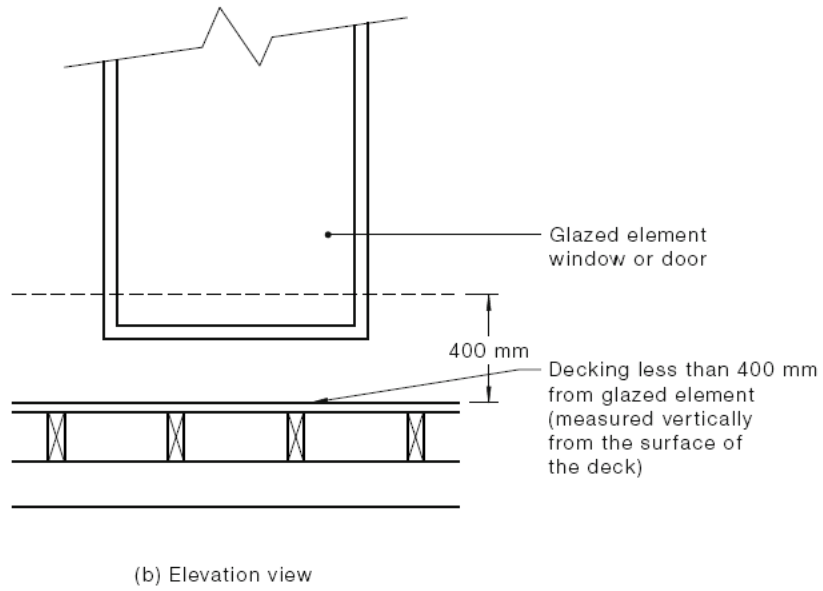
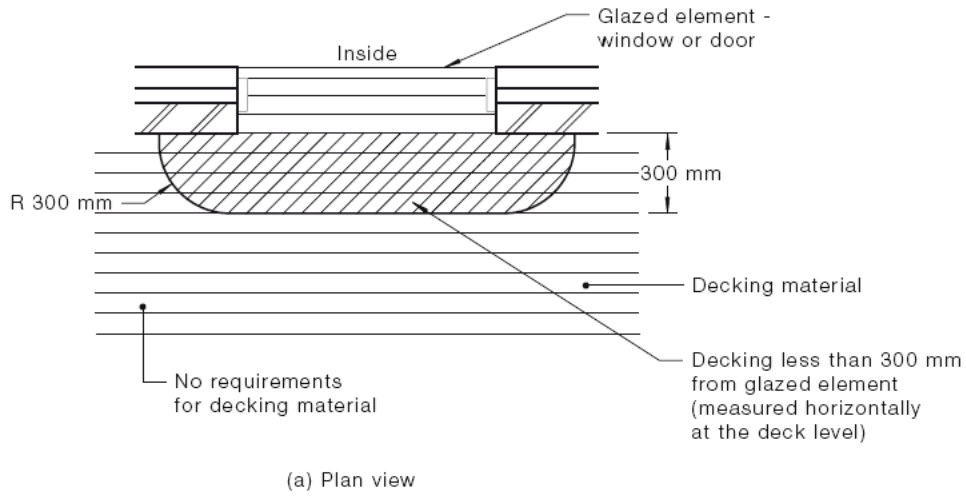
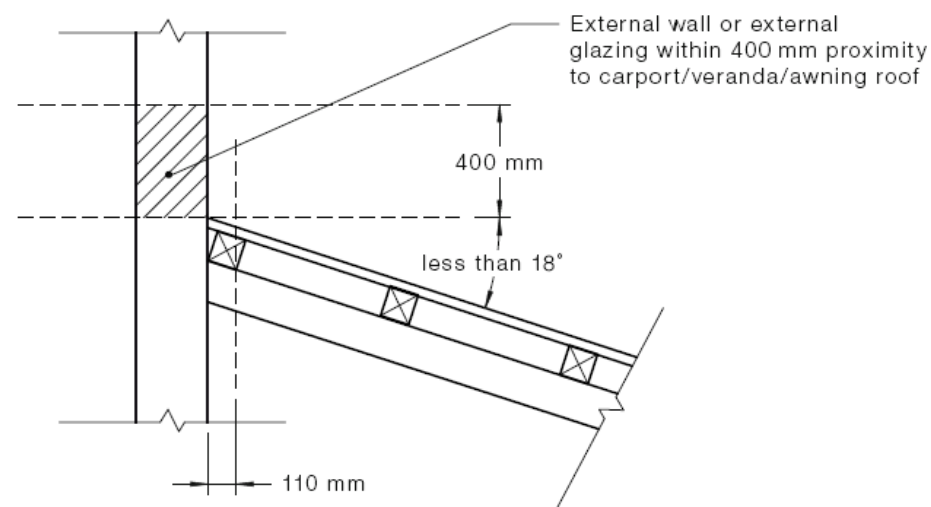
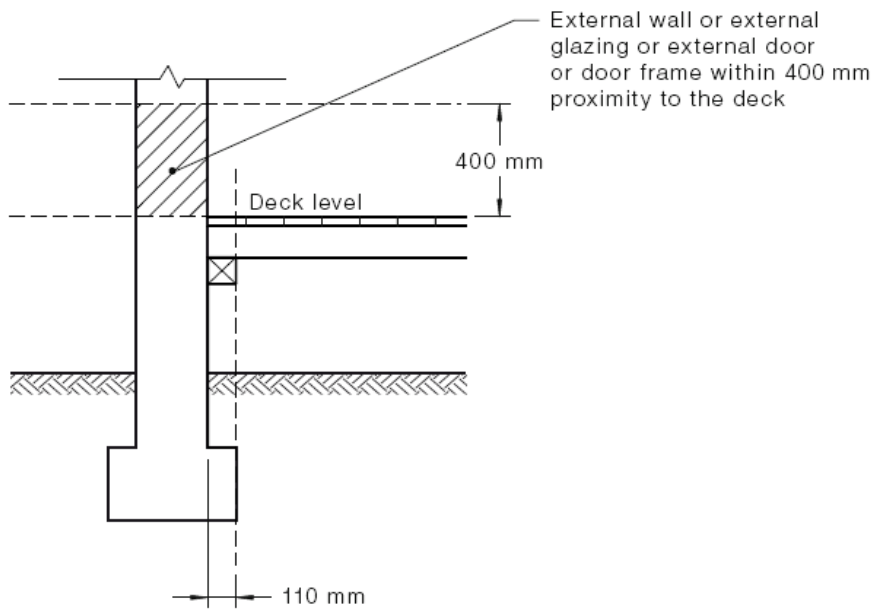
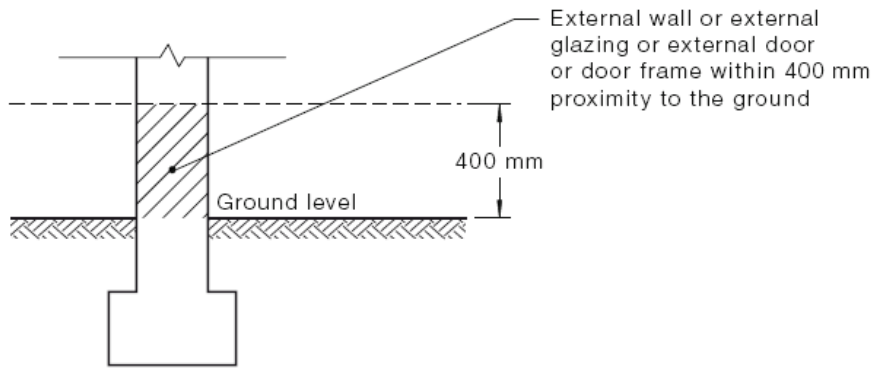


FIGURE D2 DECKING WITHIN HORIZONTAL AND VERTICAL LIMITS OF GLAZED ELEMENTS



DIMENSIONS IN MILLIMETRES

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

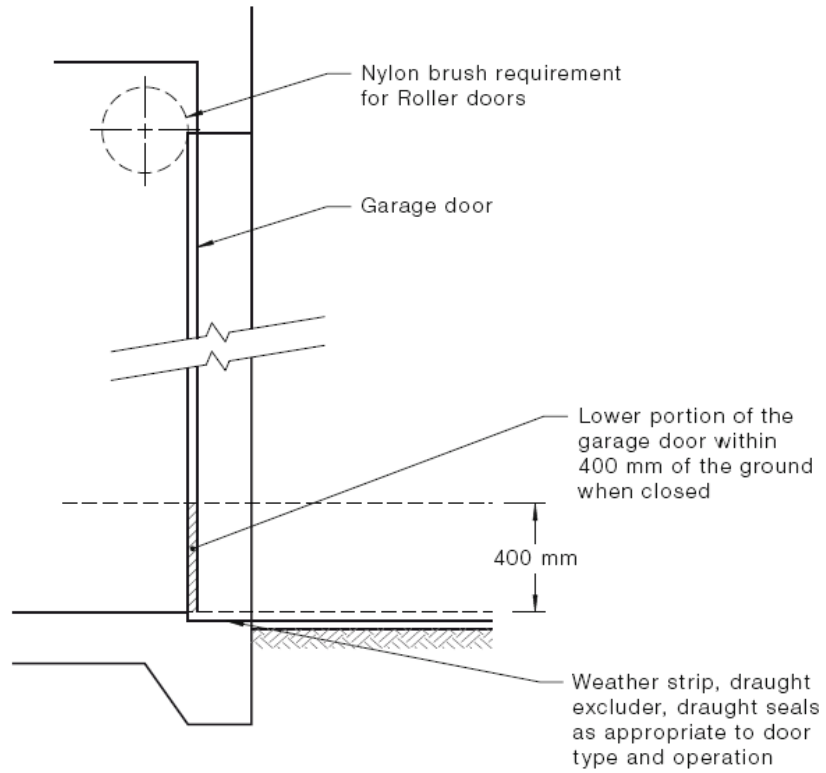


FIGURE D4 VEHICLE ACCESS DOORS (GARAGE DOORS)