AS 3959 – 2018 Construction of Buildings in Bushfire-prone areas

One of the changes to the National Construction Code (NCC) 2019 edition includes the referencing of the 2018 version of AS 3959 Construction of Buildings in Bushfire-prone areas.

There have been a number of changes to the 2018 version of AS 3959 and this information sheet provides an overview of the some of those changes.

Some of the main changes include:

- The site assessment in Section 2 has been simplified to address interpretational issues related to slope, grasslands and low threat vegetation.

- Changes have been made to Section 3 to clarify that the shielding concessions relate only to the elements of the wall and do not apply to the subfloor or roofs.

- The protection of gaps and openings requirements have been altered by requiring suitable measures for doors and windows and providing for other gaps to be suitably sealed. This will likely mean greater attention will need to be paid to gaps around hung doors.

- The requirements for floors for buildings located in BAL-12.5 and BAL-19 relating to bearers, joists and flooring within 400 mm above finished ground level have increased in stringency and now align with those for buildings in BAL-29. This includes either shielding the subfloor or using bushfire resistant timber or steel.

- Introducing new requirements for weather strips/seals to be provided for garage doors for buildings located in BAL 19 and above and that the seals need to meet a flammability index of no greater than five.

- Roofs can now include certain translucent or transparent roof coverings at BAL-12.5 and BAL-19 for verandas, carports or awnings where the roof is separated from the main building.

- A greater suite of window configurations now permissible.

- Veranda Posts in BAL 12.5 and BAL 19 must be either timber fixed on a galvanised shoe or stirrup 75mm above the adjacent finished surface or where less than 400mm from the surface of the deck be non-combustible or bushfire resistant timber or a timber species specified in Appendix E.

- Water and gas pipes have been required to be metal above ground and now the metal pipe must also extend 400mm into the wall and 100mm underground. This applies in all BAL levels.

- Editorial changes have been made for consistency with Section 2 and relocating tables with the relevant sections of the site assessment methodology. Appendices F and H have been combined.

Below provides an overview of the changes to the relevant section of AS 3959.

**Section 2 determining BAL**

- The notes to figure 2.1 relating to the measuring distance between fuel and house has been amended. The 2018 version has removed the reference to small decks and landing under 1m
as an exemption to the measurement distance. Therefore a small concrete pad or landing on the side of the house is now the point to measure from.

Section 3 General construction requirements

- Changes have been made to clarify that when considering shielding from the building to lower the BAL to the shielded side, this provision cannot be used to lower the BAL of a roof or subfloor. It only applies to the wall(s) of the building.

  For example a building which is FZ on one side and BAL-40 on all other sides, the roof and subfloor will still be required to be FZ conforming.

- The provision for gaps, vent and weep holes not to be screened if a probe of 3mm can pass through the vent has been removed. All vents, weep holes and gaps now must be screened except for weepholes in the sills of windows and doors.

- Figure 3.2 has been amended and removes the requirement for 3mm gaps to the door/window head, stile and stiles. These will now have to be tight fitting and provided with a seal at the head and stiles and draught excluders at the sill.

Section 5 BAL 12.5

- New requirements for Garage doors – the subclause clarifies that where guide tracks are used they do not need to be fitted with nylon brushes, provided they satisfy clause 3.6 for gap requirements (tight fitting).

  Note: Guide tracks are considered not to provide a direct passage for embers into the building.

- Veranda Posts in BAL 12.5 and BAL 19 must be either timber fixed on a galvanised shoe or stirrup 75mm above the adjacent finished surface or where less than 400mm from the surface of the deck be non-combustible or bushfire resistant timber or a timber species specified in Appendix E.

- Water and gas pipes are required to be metal above ground and now the metal pipe must also extend 400mm into the wall and 100mm underground.

Section 7 BAL-29

- The same stringency increases listed above for section 5 (BAL-12.5) apply in section 7 BAL-29 with the exception of veranda posts which must be either non-combustible or Hardwood (treated pine posts on 75mm shoe or stirrup are not permitted)

Section 8 BAL-40 & Section 9 BAL-FZ

- Veranda post must be non-combustible

- Water and gas pipes are required to be metal above ground and now the metal pipe must also extend 400mm into the wall and 100mm underground.

State and Territory variations

It is also important to check with your local authority or administration for any specific State or Territory provisions in relation to building in bushfire prone areas that may override the NCC or Australian Standards provisions.

You should also check with your local authority or administration regarding transitional arrangements and to what version of the standard applies to your project.

For further information on the changes HIA members can contact HIA’s Building Services team on 1300 650 620 or email hia_technical@hia.com.au