



Building in bush fire prone areas

In Western Australia building work is required to comply with the requirements of the Building Code of Australia (BCA). The BCA is a performance based document that provides minimum technical requirements for the construction of buildings. The BCA forms Volumes One and Two of the National Construction Code series.

The BCA includes specific bushfire construction requirements for certain residential buildings in 'designated bush fire prone areas' that aim to reduce the risk of ignition from a bush fire. Bush fire construction requirements are not new. They have been in the BCA since the 1990s.

As part of the State Government's approach to addressing recommendations from the Keelty Report into the Perth Hills bush fire of 2011, a Map of Bush Fire Prone Areas has been created that identifies areas of Western Australia designated as bush fire prone, by order of the Fire and Emergency Services (FES) Commissioner.

From 8 December 2015, properties that are located in designated bush fire prone areas, as indicated on the map, may require additional assessment of the bush fire risk as part of any planning or building approval processes. A four month transition period is provided in new designated bush fire prone areas.

New planning requirements have also been introduced for development in designated bush fire prone areas. For further information on the planning requirements, please visit the Department of Planning website at www.planning.wa.gov.au/bushfire.

Which residential buildings are required to comply with the BCA bush fire construction requirements?

The BCA bush fire construction requirements apply to the following classes of residential buildings located in designated bush fire prone areas:

Class 1a — A single dwelling being a detached house, or row houses, duplexes, town houses, terrace houses or villa units where attached dwellings are separated by a fire resisting wall.

Class 1b — Includes the following:

- boarding houses, guest houses, hostels or the like in which not more than 12 people would ordinarily be resident and with a total area of all floors not exceeding 300m²; or
- four or more single dwellings located on one allotment and used for short term holiday accommodation.

Class 2 — Dwellings such as apartments and flats in a building containing two or more units.

Class 3 — A residential building which is a common place of long term or transient living for a number of unrelated persons, including:

- a boarding or lodging house, guest house, hostel, or backpackers accommodation;
- a residential part of a hotel or motel;
- a residential part of a school;
- accommodation for the aged, children or people with disabilities;

- a residential part of a health-care building which accommodates members of staff; or
- a residential part of a detention centre.

Class 10a buildings and decks associated with Class 1a, Class 1b, Class 2 or Class 3 buildings. Class 10a buildings include non-habitable buildings such as garages, carport, shed, or the like.

Is there a transition period for newly designated bush fire prone areas?

Yes. Under the Building Regulations 2012 there is a four month transition period before the bush fire construction requirements of the BCA are triggered for certain residential buildings. This four month transition period starts from the date that an order designating a new area as bush fire prone by the FES Commissioner comes into operation.

Once the four month transition period ends, applications for building approval for certain residential buildings in those areas, will need to address compliance with the bush fire construction requirements of the BCA.

The four month transition period does not apply if an area was identified prior to 8 December 2015 in any way under a local planning scheme as an area that is subject, or likely to be subject, to bush fires.

How do I know if I am in a designated bush fire prone area?

The BCA defines a designated bush fire prone area as being land identified under a power in legislation as being subject, or likely to be subject, to bush fires. Until recently, a local government was able to identify and designate bush fire prone areas through its local planning schemes or similar existing legal mechanisms. Bush fire prone areas are now designated by the FES Commissioner and identified on the Map of Bush Fire Prone Areas.

The map is given legislative power by an order made by the FES Commissioner under section 18P of the *Fire and Emergency Services Act 1998*. The first FES Commissioner order came into operation on 8 December 2015. This order designates as bush fire prone any areas identified on the map.

Properties that are located in designated bushfire prone areas on the map, as highlighted in pink, may require further assessment of the bushfire risk as part of planning and/or building approval processes.

The map has been developed by the Office of Bushfire Risk Management (OBRM) within the Department of Fire and Emergency Services (DFES) and is available from the DFES website at www.dfes.wa.gov.au/bushfireproneareas. An updated version of the map will be published within six months of its initial release and on an annual basis thereafter.

What is a further assessment of bush fire risk?

The BCA requires an assessment of the potential intensity of bush fire attack for specific classes of residential buildings located in designated bush fire prone areas.

Australian Standard AS 3959 - *Construction of buildings in bushfire-prone areas* (2009, incorporating Amendment Nos 1, 2, and 3) provides methods for measuring the severity of the building's potential exposure to ember attack, radiant heat and direct flame contact.

The determination of a property's Bush fire Attack Level (BAL) is a site specific assessment that takes into consideration a number of factors including the slope of the land, the types of surrounding vegetation and the distance of the building to that vegetation. At the end of the assessment the location of the building will be assigned one of six BALs. The assigned BAL determines the level of bush fire resistant construction required for the building.

The BALs are as follows:

- BAL-LOW - very low risk (bushfire resistant construction is not required)
- BAL-12.5 - low risk
- BAL-19 - moderate risk
- BAL-29 - high risk
- BAL-40 - very high risk
- BAL-FZ - extreme risk (Flame Zone)

The State Government has developed a framework for the accreditation of practitioners who provide bush fire risk assessment services. It is recommended that assessment of bush fire risk be undertaken by practitioners accredited at the appropriate level to undertake such work. For more information of the bush fire accreditation framework please visit the Department of Planning website, www.planning.wa.gov.au/bushfire. Regardless, the certifying building surveyor for the particular building needs to be satisfied that the assessment of bush fire risk meets the requirements of the BCA.

How can my building demonstrate compliance with the BCA bush fire requirements?

Compliance with BCA Performance Requirements G5.1 (in BCA Volume One) and P2.3.4 (in BCA Volume 2) for certain residential buildings in designated bush fire prone areas can be demonstrated by:

- Prescriptive Solutions (also known as Deemed-to-Satisfy Solutions);
- Performance Solutions (also known as Alternative Solutions); or
- a combination of both Prescriptive and Performance Solutions.

For Class 1a or Class 1b buildings and associated Class 10a buildings or decks, Prescriptive Solutions include compliance with:

- Australian Standard AS 3959 – *Construction of buildings in bushfire-prone areas* (2009, incorporating Amendment Nos 1, 2, and 3); or
- National Association of Steel Housing (NASH) Standard - *Steel Framed Construction in Bushfire Areas*.

For Class 2 or Class 3 buildings and associated Class 10a buildings or decks, Prescriptive Solutions include compliance with:

- Australian Standard AS 3959 – *Construction of buildings in bushfire-prone areas* (2009, incorporating Amendment Nos 1, 2, and 3).

Who determines if my proposed building complies with the BCA bush fire requirements?

As part of the building approval process, a registered independent building surveyor is required to sign a Certificate of Design Compliance (BA 3 Form) stating that if the building is completed in accordance with the plans and specifications it will comply with the applicable building standards, being the BCA.

This will include checking compliance with the BCA bushfire construction requirements for Class 1a, Class 1b, Class 2 or Class 3 buildings and associated Class 10a buildings or decks located in designated bush fire prone areas.

Who is responsible for complying with the BCA bush fire requirements?

Generally the person who is named as builder on the building permit is responsible for ensuring that:

- the building or incidental structure to which the permit applies is completed in accordance with the plans and specifications that are specified in the applicable Certificate of Design Compliance;

- the building work otherwise complies with the building permit including each condition that applies to the permit; and
- on completion of the building or incidental structure to which the building permit applies, that the building or incidental structure complies with each applicable building standard (being the BCA).

For building work that can lawfully be done without a building permit then the owner is responsible for ensuring that on completion of the building or incidental structure, that the building or incidental structure complies with each applicable building standard (being the BCA).

The local government and/or permit authority have powers to enforce these requirements.

Who can I contact about the BCA bush fire construction requirements for my building?

In the first instance queries about the application of the BCA bush fire construction requirements should be referred to the building surveyor who will be signing, or has signed, the relevant Certificate of Design Compliance for the building.

For uncertified building permit applications, this may be the building surveyor at the permit authority. For certified building permit applications this may be either the building surveyor at the permit authority (if the permit authority provides that service) or a building surveying contractor (private building surveyor).

What about alterations and additions to existing residential buildings in designated bush fire prone areas?

During the four month transition period alterations and additions to existing residential buildings will not be required to comply with the bush fire construction requirements of the BCA

unless the existing residential building is in an area that was identified in any way under a local planning scheme as being bush fire prone prior to 8 December 2015.

From 8 April 2016 all major alterations and additions to certain residential buildings in designated bush fire prone areas are required to comply with the bush fire construction requirements of the BCA. Consideration is being given to provide a transition period to the application of the bush fire construction requirements to minor alterations and additions. Regulations giving effect to this proposal are expected to be finalised during the four month transition period.

My existing house is now located in a designated bush fire prone area. Do I need to upgrade my house?

Building standards and regulations are generally not retrospective. Therefore an existing residential building located in an area that has been declared a designated bush fire prone area after the building was constructed is not required to retrospectively upgrade to the BCA bush fire construction requirements so long as there is no change to the building. However the building has now been identified as being in an area at risk of bush fires. Owners may wish to consider voluntarily improving their building's resistance to bush fires.

Buildings undergoing a change of classification, for example from a Class 1a dwelling to Class 1b bed and breakfast or Class 5 office to Class 2 apartment building, are required to demonstrate compliance with the BCA for the new classification. This includes compliance with the BCA bush fire requirements if the existing building has been located in a designated bush fire prone area for more than four months.

This publication is available in alternative formats upon request.
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