

Purchaser Information

Dwelling Construction – Bushfire Requirements

Background

Sunrise at Wellard is situated adjacent to Kwinana Freeway, which contains areas of native bushland. Native bushland can support bushfires, and as a result of this a number of measures have been accommodated within Sunrise at Wellard to ensure the long term safety of residents and their properties. Since the Black Saturday bushfires in Victoria in 2009, it has become relatively common for dwellings within 100 m of bushland to require higher construction standards, to improve their resilience to bushfire should it occur. More recently in Western Australia, requirements have been introduced to the planning and building process to ensure everyone is considering bushfire in the same way.

This information has been prepared to inform purchasers of the increased construction standards in accordance with Australian Standard AS 3959-2009 Construction of buildings in bushfire prone areas (AS 3959).

AS 3959 Requirements

AS 3959 was first released in 2009 following the Black Saturday fires in Victoria. It specifies six categories relating to increasing levels of predicted exposure of a dwelling to bushfire attack (i.e. embers, radiant heat and flames) under certain environmental conditions (i.e. fire weather, fuel and slope). These categories are referred to as Bushfire Attack Level (BAL) ratings, and each BAL rating has associated construction requirements for dwellings. A dwelling designed to the specified construction requirements of AS 3959 is more likely to survive a bushfire compared to those not built to specification.

The lowest BAL rating is BAL-LOW which means there is insufficient risk to warrant increased construction standards for a dwelling. The next level, BAL-12.5, deals mainly with ember attack and low levels of radiant heat exposure. BAL-19 and BAL-29 include construction elements within the dwelling to cope with short term exposure of the building components to higher radiant heat levels. Levels above these (BAL-40 and BAL-FZ) relate to a dwelling potentially exposed to direct flame contact.

The acceptable BAL ratings for development in Western Australia are BAL-LOW, BAL-12.5, BAL-19, and BAL-29. BAL-40 and BAL-FZ are generally not accepted in Western Australia without specific approval from the relevant planning approval authorities.

BAL Assessments

As part of the planning approvals process a Bushfire Management Plan and BAL Assessment has been prepared for Sunrise at Wellard, and includes consideration of the potential exposure to bushfire that may be experienced by future dwellings within 100 metres of identified bushfire hazards.

The BAL Assessment details the BAL ratings for all lots created through subdivision, and have been prepared for relevant stages within Sunrise Estate. These BAL ratings (where BAL-12.5 or greater) have then been reflected in the relevant Local Development Plan (LDP) and have also been the basis for notifications on lot titles highlighting to potential purchasers the need for increased construction standards. The BAL rating on the LDP (which is based on the BAL assessment) prepared for Sunrise at Wellard can be used by your builder to inform the design of your dwelling, and the LDP or BAL Assessment prepared for Sunrise at Wellard can be used to address the requirement for a BAL assessment at the building licence stage.

Table 1 below sets out a summary of the construction requirements according to the BAL ratings determined for future dwellings. This table is intended as a guide only, and AS 3959 should be referred to for full technical construction details.

Table 1: Guide to AS 3959 increased construction standard requirements

	BAL-12.5	BAL-19	BAL-29
Subfloor supports	No special construction requirements	No special construction requirements	Enclosure by external wall or by steel, bronze or aluminium mesh, non-combustible supports where the subfloor is unenclosed, naturally fire resistant timber stumps or posts on 75 mm metal stirrups
Floors	No special construction requirements	No special construction requirements	Concrete slab on ground, enclosure by external wall, metal mesh as above or flooring less than 400 mm above ground level to be non-combustible, naturally fire resistant timber or protected on the underside with sarking or mineral wool insulation
External walls	As for BAL-19	External walls – Parts less than 400 mm above ground or decks etc to be of non-combustible material, 6 mm fibre cement clad or bushfire resistant/naturally fire resistant timber	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete), timber framed, steel framed walls sarked on the outside and clad with 6 mm fibre cement sheeting or steel sheeting or bushfire resistant timber
External doors	As for BAL-19 except that door framing can be naturally fire resistant (high density) timber	Protected by bushfire shutter, or screened with steel, bronze or aluminium mesh or glazed with 5 mm toughened glass, non-combustible or 35 mm solid timber for 400 mm above threshold, metal or bushfire resisting timber framed for 400 mm above ground, decking, etc, tight-fitting with weather strips at base	Protected by bushfire shutter, or screened with steel, bronze or aluminium mesh or non-combustible, or 35 mm solid timber for 400 mm above threshold. Metal or bushfire resisting timber framed tight-fitting with weather strips at base
Roofs	As for BAL-19	Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked	Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked
Verandas/decks etc.	As for BAL-19	Enclosed sub-floor space – no special requirement for materials except within 400 mm of ground. No special requirements for supports or framing. Decking to be non-combustible or bushfire resistant within 300 mm horizontally and 400 mm vertically from a glazed element	Enclosed sub-floor space or non-combustible or bushfire resistant timber supports. Decking to be non-combustible

(Source: A guide to building in Victoria after the bushfires (Government of Victoria 2009))

Purchaser Information Dwelling Construction – Bushfire Requirements

Bushfire and quiet house design

If your lot has a BAL rating of BAL 12.5 or higher as well as quiet house design requirements, you should ask your builder about how your dwelling can be constructed to meet both. Most of the quiet house design construction requirements will meet or exceed the increased construction standards for bushfire.

Lot owner's responsibilities

The owners/occupiers of lots within the development are responsible for maintaining a reduced level of risk from bushfire, and are responsible for implementing measures to protect their own assets (and people under their care) from the threat and risk of bushfire.

The lot owners' responsibilities include (but are not limited to):

- Ensure that their lot complies with the local government's published firebreak notice (where applicable) when issued annually.
- Maintain their property in good order to minimise bushfire fuels.
- Ensure the construction of their dwelling complies with the applicable AS 3959 standards (where applicable).
- Ensure landscaping is considered in garden design to incorporate a low fuel zone around the dwelling.
- Ensure that hydrants are not obstructed and remain visible at all times.
- If dwellings are subject to additional construction in the future such as renovations, AS 3959 compliance will be required.

Additional information

Community bushfire safety is a shared responsibility between individuals, the community, government and fire agencies. The Department of Fire and Emergency Services (DFES) has an extensive Community Bushfire Education Program including a range of publications, a website and Bushfire Ready Groups. The guidance document Prepare. Act. Survive. (DFES, 2012) provides excellent advice on preparing for and surviving the bushfire season.

Further information is available from the following sources:

DFES

www.dfes.wa.gov.au/safetyinformation/fire/bushfire

Department of Planning

<http://www.planning.wa.gov.au/7963.asp>

City of Kwinana

<http://www.kwinana.wa.gov.au/bushfires>