



# Guidelines for Planning in Bushfire Prone Areas



Department of **Planning, Lands and Heritage**  
Department of **Fire & Emergency Services**



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Planning  
Commission

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These *Guidelines for Planning in Bushfire Prone Areas* (Guidelines) have been prepared by the Western Australian Planning Commission (WAPC), with substantial input and information from the Department of Fire and Emergency Services (DFES).

This document is based on the *Planning for Bush Fire Protection Guidelines* (WAPC 2010), which was jointly prepared by the Department of Planning and the then Fire and Emergency Services Authority (now DFES).

Thank you to all stakeholders who have made submissions on the draft Guidelines and continue to provide constructive comments.

We extend our appreciation to the Country Fire Authority of Victoria for supplying illustrations from their 2012 publication: *Planning for Bushfire Victoria*.

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## SPECIAL NOTE

The Department of Planning, Lands and Heritage was established on 1 July 2017, incorporating the functions of the former Department of Planning. All references in these Guidelines to the Department of Planning should be read as the Department of Planning, Lands and Heritage until such time that the document is fully updated.

VERSION	DATE	DETAILS	
1.0	Dec 2015	As published	As published
1.1	Feb 2017	Performance Principle P1 - Deleted 'minor development' in areas of BAL-40 or BAL-FZ for referral to DFES.	Appendix 4, Element 1, P1 (page 55).
1.1	Feb 2017	Acceptable Solution A2.1 Asset Protection Zone – Clarification of APZ requirements.	Appendix 4, Element 2, A2.1 (page 56).
1.1	Feb 2017	Acceptable Solution A2.2 Hazard Separation Zone (HSZ) and Explanatory Notes E2.2 removed.	Appendix 4, Element 2, A2.2 and E2.2 (pages 56-61).
1.1	Feb 2017	Element 2 Explanatory Notes updated, including further guidance on APZ requirements.	Appendix 4, Element 2, E2 and E2.1 (pages 57-61).
1.2	Aug 2017	Clearer definitions provided on what constitutes a vulnerable land use and the information required to be provided in an emergency evacuation plan.	Section 5.5 Proposing a vulnerable land use in a bushfire prone area (page 33)
1.2	Aug 2017	Appendix two – Bushfire Hazard Level assessment amended to include an updated assessment methodology.	Appendix two – Bushfire Hazard Level assessment (pages 50 – 52)
1.2	Aug 2017	Appendix three – BAL Contour Map amended to include an updated assessment methodology.	Appendix three – BAL Contour Map (pages 53 – 54)
1.3	Dec 2017	Revised Appendix three – BAL Contour Map to clarify assessment methodology	Appendix three – BAL Contour Map (pages 53 – 54)
1.3	Dec 2017	Revised subsection 4.5.2 How to Apply the Criteria to provide further guidance on how to present a performance principle-based solution.	Subsection 4.5.2 How to Apply the Criteria (page 21)
1.3	Dec 2017	Revised section 4.6 Bushfire Management Plans to align with the revised appendix 5.	Section 4.6 Bushfire Management Plans (pages 22 – 24)
1.3	Dec 2017	Revised Appendix 5 Bushfire Management Plan to clarify the layout and information to be provided within a Bushfire Management Plan.	Appendix 5 Bushfire Management Plan Checklist

## Disclaimer

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# 1. INTRODUCTION

These revised Guidelines replace the *Planning for Bush Fire Protection (Edition 2) Guidelines* (WAPC 2010) and the draft *Planning for Bushfire Risk Management Guidelines* (WAPC 2014). These Guidelines should be read in conjunction with *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) (WAPC 2015) and the *Planning and Development (Local Planning Schemes) Amendment Regulations 2015* (LPS Amendment Regulations 2015).

## 1.1 PURPOSE OF THESE GUIDELINES

These Guidelines provide supporting information for decision-making authorities, planners, landowners/proponents, referral agencies, Level 1 Bushfire Attack Level (BAL) Assessors and Bushfire Planning Practitioners, to implement SPP 3.7. Specifically, they assist in:

- determining appropriate land use planning in relation to bushfire prone areas across the State of Western Australia;
- specifying the requirements to be met at each stage of the planning process; and
- ensuring that necessary bushfire protection measures are incorporated into development.

These Guidelines are designed to assist in the interpretation of SPP 3.7's objectives and policy measures. They provide advice on how bushfire risk is to be addressed when planning, designing or assessing a planning proposal within a bushfire prone area. It is intended that these Guidelines will be reviewed regularly to ensure they reflect best practice.

The Office of Bushfire Risk Management has endorsed these Guidelines as their standard. As an endorsed standard, these Guidelines, in conjunction with SPP 3.7, are the predominant documents in the State for use by decision-making authorities and referral agencies, during the consideration of strategic planning proposals, subdivisions and development applications.

It is important to note that a bushfire's intensity and spread is dependent on a range of factors, including weather conditions, fuel loads and topography. Adherence to these Guidelines do not guarantee the survivability of a building that has incorporated the appropriate bushfire protection criteria; rather they reduce the risk of ignition by wind-borne embers, radiant heat and direct flame attack, in conjunction with ongoing site management.

## 1.2 WHERE THESE GUIDELINES APPLY

These Guidelines apply to all higher order strategic planning documents, strategic planning proposals, subdivisions and development applications located in designated bushfire prone areas. These Guidelines also apply where an area is not yet designated as bushfire prone but is proposed to be developed in a way that introduces a bushfire hazard (as outlined in section 3.2.2).

A designated bushfire prone area is an area that has been identified and designated by an order of the Fire and Emergency Services Commissioner under section 18P of the *Fire and Emergency Services Act 1998* (as amended). Such areas are identified on the *Map of Bush Fire Prone Areas*, which can be sourced on the Department of Fire and Emergency Services' website [www.dfes.wa.gov.au/bushfireproneareas](http://www.dfes.wa.gov.au/bushfireproneareas). Designation of an area as bushfire prone reflects the potential of bushfire to affect that site. It acts as a mechanism for initiating further assessment in the planning process.

## 1.3 HOW TO USE THESE GUIDELINES

These Guidelines have been developed to provide an overview of the Western Australian planning process as it relates to bushfire protection. As such, some sections will be more applicable than others depending on the user's requirements and the relevant stage of the planning process, as well as the type and scale of the planning proposal.

These Guidelines are available online to ensure that necessary changes or amendments can be made and the document is up to date. It is important to check the Department of Planning website at [www.planning.wa.gov.au/bushfire](http://www.planning.wa.gov.au/bushfire) to ensure the most up-to-date version of these Guidelines is being used to guide planning and decision-making processes.

Where there is a discrepancy between these Guidelines and *Australian Standard 3959 Construction of Buildings in Bushfire-Prone Areas* (AS 3959), AS 3959 prevails.

## 1.4 SUPPORTING FACT SHEETS AND TECHNICAL NOTES

The Western Australian Planning Commission may prepare fact sheets where supplementary information and advice is required on how to apply these Guidelines to specific scenarios. These fact sheets will be prepared and managed by the Department of Planning and form part of these Guidelines where approved by the Western Australian Planning Commission.

The Department of Fire and Emergency Services and the Building Commission may prepare technical notes and industry bulletins on elements of bushfire risk management and construction standards that are complementary to the information contained in these Guidelines. Any technical notes will be owned and managed by the respective agencies and will not form part of these Guidelines, but should be considered where applicable to the planning process.

All relevant technical notes, industry bulletins, Western Australian Planning Commission fact sheets or similar will be listed on the PlanningWA bushfire web page at [www.planning.wa.gov.au/bushfire](http://www.planning.wa.gov.au/bushfire) for reference.

In addition, local governments may prepare supplementary fact sheets or local planning policies regarding locally specific matters to support the implementation of SPP 3.7 and these Guidelines.

## 1.5 DEEMED PROVISIONS RELATING TO BUSHFIRE RISK MANAGEMENT

The LPS Amendment Regulations 2015 are given effect under section 257B of the *Planning and Development Act 2005* and introduce deemed provisions relating to bushfire risk management at Schedule 2 Part 10A of the *Planning and Development (Local Planning Scheme) Regulations 2015*. These provisions apply to all local planning schemes made under Part 5 of the *Planning and Development Act 2005*.

There are some areas of the State where the deemed provisions relating to bushfire risk management do not apply. This includes land where there is no existing local planning scheme, or where a local planning scheme has ceased to have legal effect (such as land under the *Metropolitan Redevelopment Authority Act 2011* or subject to the *Hope-Valley Wattleup Redevelopment Act 2000*). Adoption of the deemed provisions in these localities is at the discretion of the relevant authority.

The deemed provisions relating to bushfire risk management make reference to the Fire and Emergency Services Commissioner's power to make orders to designate bushfire prone areas of the State. This designation triggers the application of appropriate bushfire construction standards for applicable building classes (i.e. residential buildings) under the Building Code of Australia. Local governments may apply other bushfire risk management conditions for the site to any development approval granted for non-residential buildings.

The deemed provisions relating to bushfire risk management provide a mechanism to require a development approval, and through this, the application of SPP 3.7, to development on sites with extreme bushfire risk (BAL-40 or BAL-Flame Zone ie. BAL-FZ). They specifically require a BAL assessment or BAL Contour Map be undertaken for any habitable or specified building (excluding single houses and ancillary dwellings on lots less than 1,100m<sup>2</sup>) within a designated bushfire prone area, and development approval obtained prior to commencing any applicable development where the BAL indicates BAL-40 or BAL-FZ. The requirement for development approval applies even in circumstances where the need for development approval would otherwise be exempt under the relevant local planning scheme (for example, single houses that are compliant

with the R-Codes do not require development approval in accordance with clause 61 of the Regulations). This approach provides an opportunity to apply SPP 3.7 and these Guidelines to ensure that bushfire risk management measures are implemented holistically and are supported by a technical assessment of bushfire risk where required. The LPS Amendment Regulations 2015 only apply if an area has been designated as bushfire prone for more than four months. This is to ensure landowners/proponents and the development industry have time to adequately prepare for any additional requirements. However, SPP 3.7 and its requirements for development assessment, apply immediately.

**If a landowner/proponent develops a building within a designated bushfire prone area without complying with the LPS Regulations 2015, the landowner would be liable to enforcement measures for unauthorised development under sections 162 and 223 of the *Planning and Development Act 2005*.**

#### 1.5.1 INTERACTION BETWEEN EXISTING LOCAL PLANNING SCHEME PROVISIONS RELATING TO BUSHFIRE AND DEEMED PROVISIONS

The deemed provisions relating to bushfire risk management override any existing local planning scheme provisions relating to bushfire, including any inconsistent provisions, apart from special control areas. In accordance with Section 78B (2) of the LPS Amendment Regulations 2015, the requirements of the deemed provisions relating to bushfire risk management are in addition to any provisions relating to development in a bushfire prone area that apply in a special control area.

Under section 73(2A) of the *Planning and Development Act 2005*, a local planning scheme may supplement the deemed provisions relating to bushfire risk management to address any special circumstances for which provisions have not been prescribed. The deemed provisions can be supplemented but not varied or exempted. Any new supplemental provisions require a special control area to be implemented under the scheme amendment process set out in the *Planning and Development Act 2005*.



## 2. POLICY FRAMEWORK OVERVIEW

### 2.1 BUSHFIRE IN THE PLANNING CONTEXT

Western Australia's planning system includes strategic and statutory planning functions and is set out in the *Planning and Development Act 2005*. The planning system is hierarchical, requiring increasing levels of detail as a proposal progresses through regional, district and local planning to subdivision and development of individual sites (Figures 1 and 2).

**Figure 1:** Western Australian planning hierarchy



Strategic planning focuses on long-term activities and integrates a wide range of issues from economic, social and environmental perspectives to provide context for statutory planning functions. Bushfire risk management should be addressed at the strategic planning stages to ensure bushfire risk management is incorporated into the development landscape where urban, rural and conservation land uses interface. Higher order strategic planning documents may include frameworks and sub-regional planning strategies, whilst strategic planning proposals may include region scheme amendments, local planning strategies and district or local structure plans.

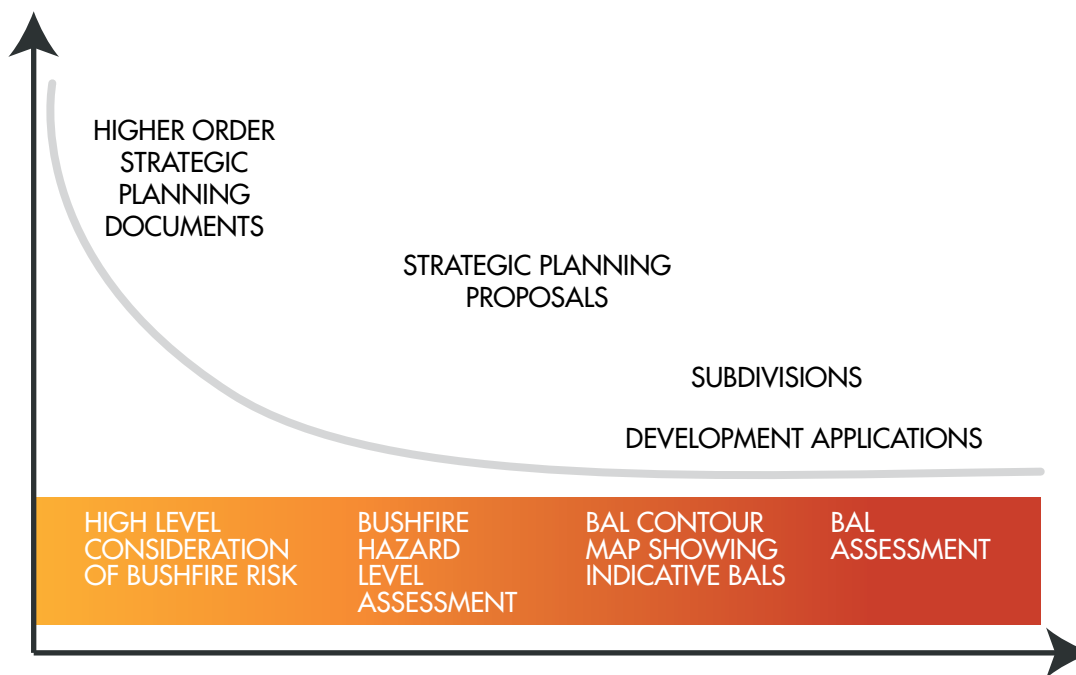
At the regional and sub-regional scale, the planning assessment should consider the likely bushfire hazard in areas proposed for future development, and potential bushfire risk management of such areas.

At the district scale, the planning assessment should consider the appropriate use and zoning of land in areas proposed for future development. A Bushfire Hazard Level assessment should be used to inform how future development could be generally sited to ensure the bushfire protection criteria can be achieved at subsequent stages of the planning process. Approval of a proposal should be based on strong certainty that the bushfire risk can be reduced or managed to an appropriate level to support future development.

Statutory planning is founded on legislation and regulations and is guided by strategic planning documents. Statutory planning controls land uses and development through assessment and determination of subdivision applications, local development plans and development applications.

Planning proposals in designated bushfire prone areas must be consistent with bushfire considerations in strategic planning documents to ensure coordinated, holistic bushfire risk management measures are achieved. Bushfire risk management measures should not be left to the statutory planning stage.

**Figure 2:** Applicability of bushfire assessment to stages of the planning process



## 2.2 PLANNING APPROVAL PROCESS IN BUSHFIRE PRONE AREAS

Section 5 of these Guidelines provides details of how SPP 3.7 is to be applied at each stage of the planning hierarchy, in alignment with Table 1.

The policy measures of SPP 3.7 and these Guidelines are not to be applied retrospectively. Existing approvals will not be subject to further bushfire planning requirements; however this should not preclude landowners/proponents from striving to achieve better outcomes.

Under the LPS Amendment Regulations 2015, a BAL assessment or BAL Contour Map is required for the development of all habitable buildings or specified buildings (excluding single houses and ancillary dwellings on lots less than 1,100m<sup>2</sup>) if the development is located in a designated bushfire prone area (as identified on the *Map of Bush Fire Prone Areas*).

If a BAL Contour Map has been prepared for a previous subdivision approval, this may be used in place of a BAL assessment where the decision-maker is satisfied the BAL Contour Map is sufficient. If the BAL shown on the Contour Map and/or BAL assessment is BAL-40 or BAL-FZ, development approval is always required.

A BAL assessment or BAL Contour Map is also required under SPP 3.7 before commencing any other development (i.e. not a habitable or specified building) in a designated bushfire prone area (as identified on the *Map of Bush Fire Prone Areas*).

Under the Building Code of Australia, additional building construction requirements apply to residential buildings (Class 1, 2 and 3 buildings and associated Class 10a buildings and decks) in a designated bushfire prone area, regardless of the site area.

Table 1: SPP 3.7 in the planning process

PLANNING STAGE	SCALE	PURPOSE OF STAGE AND SCOPE TO ADDRESS BUSHFIRE RISK	POLICY REQUIREMENTS
<b>Higher order strategic planning documents</b>			
Frameworks Region schemes Sub-regional strategies Sub-regional structure plans	Multiple local government areas	<p>Frameworks and sub-regional structure plans are high-level strategic documents that guide land use and infrastructure planning at a regional scale for up to 50 years. They do not have statutory effect.</p> <p>Other State-initiated land use planning instruments include region schemes, planning control areas and Ministerial Orders under the <i>Planning and Development Act 2005</i>.</p> <p><i>High level consideration of bushfire risk when identifying potential land for future development.</i></p>	<p>Application of SPP 3.7.</p> <p>Section 5.1</p>
<b>Strategic Planning Proposals</b>			
Region scheme amendments	Multiple local government areas	<p>Region schemes coordinate land use and zoning across different local government areas. They facilitate the reservation of land for public purposes.</p> <p>Region schemes have statutory effect; however, much of the State is not covered by a region scheme.</p> <p><i>Strategic ability to address bushfire risk.</i></p>	<p>Application of SPP 3.7.</p> <p>Bushfire Hazard Level assessment or BAL Contour Map (where the lot layout is already known).</p> <p>Consideration of bushfire protection criteria. This can be in the form of a Bushfire Management Plan.</p> <p>Section 5.2.1</p> <p>Section 4.1 Section 4.2 Appendix 2 Appendix 3</p> <p>Section 4.5 Appendix 4</p>
District structure plans	Part of a sub region to show general pattern of development/ or Several suburbs and cross local government boundaries	<p>Structure plans act as a zoning overlay, providing an indicative design for future subdivision and development.</p> <p><i>Strategic ability to address bushfire risk.</i></p>	<p>Application of SPP 3.7.</p> <p>Bushfire Hazard Level assessment or BAL Contour Map (where the lot layout is already known).</p> <p>Consideration of bushfire protection criteria. This can be in the form of a Bushfire Management Plan (new or updated).</p> <p>Section 5.2.2</p> <p>Section 4.1 Section 4.2 Appendix 2 Appendix 3</p> <p>Section 4.5 Section 4.6 Appendix 4 Appendix 5</p>



PLANNING STAGE	SCALE	PURPOSE OF STAGE AND SCOPE TO ADDRESS BUSHFIRE RISK	POLICY REQUIREMENTS
Local planning strategies	Single local government area	Local planning strategies guide local land use planning over 10–15 years. They outline considerations that need to be addressed in order for land to be rezoned. Local planning strategies guide the preparation and review of statutory local planning schemes. <i>Strategic ability to address bushfire risk.</i>	Application of SPP 3.7. Bushfire Hazard Level assessment (new or updated). Consideration of bushfire protection criteria. Section 5.2.3 Section 4.1 Appendix 2 Section 4.5 Appendix 4
Local planning schemes and amendments	Single local government area	Local planning schemes provide overarching statutory basis for land use planning at the local government level. They provide for land use zoning, land use permissibilities, and include provisions for structure plans and special control areas. Special control areas are a zoning overlay which may set out an alternative planning process to follow, or specific provisions applying to an identified area. Generally required as part of a full scheme review. <i>Strategic ability to address bushfire risk.</i>	Application of SPP 3.7. Bushfire Hazard Level assessment (new or updated) or BAL Contour Map (where the lot layout is already known). Consideration of bushfire protection criteria. This is to be in the form of a Bushfire Management Plan. Section 5.2.4 Section 4.1 Section 4.2 Appendix 2 Appendix 3 Section 4.5 Section 4.6 Appendix 4 Appendix 5
Local structure plans and master plans	Generally cover a single residential estate or local area	Non-statutory plans act as a zoning overlay and provide an indicative design for future subdivision and development. They identify matters that need to be addressed at subdivision and development stages. Local structure plans and master plans should make provision for all bushfire criteria to be met at the earliest stage of development. <i>Strategic ability with localised scope to address bushfire risk.</i>	Application of SPP 3.7. Bushfire Hazard Level assessment (new or updated) or BAL Contour Map (where the lot layout is already known). Consideration of bushfire protection criteria. This is to be in the form of a Bushfire Management Plan (new or updated). Section 5.2.5 Section 4.1 Section 4.2 Appendix 2 Appendix 3 Section 4.5 Section 4.6 Appendix 4 Appendix 5

PLANNING STAGE	SCALE	PURPOSE OF STAGE AND SCOPE TO ADDRESS BUSHFIRE RISK	POLICY REQUIREMENTS
<b>Subdivisions</b>			
Subdivision applications	Varies from two lots to hundreds of lots	Subdivision applications enable the creation of new lots and reserves.  <i>Localised scope to address bushfire risk.</i>	<p>Application of SPP 3.7.</p> <p>Section 5.3</p>
			<p>BAL Contour Map (new or updated) or BAL assessment for small-scale subdivision.</p> <p>Section 4.2 Section 5.3.1 Appendix 3</p>
			<p>Assessment against the bushfire protection criteria. This is to be in the form of a Bushfire Management Plan (new or updated) where required.</p> <p>Section 4.5 Section 4.6 Appendix 4 Appendix 5</p>
			<p>Notification on Title.</p> <p>Section 4.6.4 Section 5.3.2</p>
<b>Development Applications</b>			
Development applications (excludes single houses and ancillary dwellings on a lot less than 1,100m <sup>2</sup> )  (includes Local Development Plans)	Typically an individual lot but may cover more than one lot	Development applications provide for approval of land uses and development.  <i>Site-specific scope to address bushfire risk.</i>	<p>Application of SPP 3.7.</p> <p>Section 5.4</p>
			<p>BAL Contour Map (new or updated) or BAL assessment.</p> <p>Section 4.2 Section 4.3 Appendix 3</p>
			<p>Assessment against bushfire protection criteria. This can be in the form of a Bushfire Management Plan (new or updated) where required.</p> <p>Section 4.5 Section 4.6 Appendix 4 Appendix 5</p>
			<p>Notification on Title.</p> <p>Section 4.6.4</p>

## 2.3 BUSHFIRE RISK MANAGEMENT AND ENVIRONMENTAL CONSERVATION

Many bushfire prone areas also have high biodiversity values. Policy objective 5.4 recognises the need to consider bushfire risk management measures alongside environmental, biodiversity and conservation values. Such areas may include wetlands, foreshores, Bush Forever sites, remnant vegetation, threatened species and ecological communities, nature reserves and coastal reserves.

In implementing policy objective 5.4, planning assessments should consider:

- existing planning policies and publications, such as:
  - *SPP 2: Environment and Natural Resources Policy* (WAPC 2003);
  - *SPP 2.6: State Coastal Planning Policy* (WAPC 2013);
  - *SPP 2.8: Bushland Policy for the Perth Metropolitan Region* (WAPC 2010);
  - *SPP 2.9: Water Resources* (WAPC 2006);
  - *Visual Landscape Planning in Western Australia* (WAPC 2007); and
  - any local government biodiversity strategies or similar;
- whether the site, or a portion of the site, has been identified as a vegetation corridor, as an environmentally-sensitive site or otherwise identified in a planning document as being, or proposed to be, reserved for a conservation or environmental protection purpose (such as an ecological linkage, local natural area, foreshore area or wetland buffer);
- any landscape issues, including any landscape plans that have been prepared over the site; and
- requirements of relevant environmental legislation.

Policy objective 5.4 is most effectively addressed at the strategic planning stage where biodiversity and bushfire concerns can be considered collectively to help determine the most appropriate location, type, form, scale and intensity of future development in an area.

Establishing development in bushfire prone areas can adversely affect the retention of native vegetation through clearing associated with the creation of Hazard Separation Zones (HSZ) and Asset Protection Zones (APZ)

(formerly known as building protection zones). Where loss of vegetation is not acceptable or causes conflict with landscape or environmental objectives then it may be necessary to reduce lot yield, cluster development, comply with the applicable bushfire construction requirements of the Building Code of Australia relevant to the BAL of the site (as set out in AS 3959), or modify the development location in order to minimise the removal or modification of remnant vegetation (Figure 3).

Planning proposals should satisfy bushfire protection requirements within the boundaries of the land being developed so as not to impact on the bushfire and environmental management of neighbouring reserves, properties or conservation covenants. Where revegetation of waterway foreshores, wetland or coastal buffers is necessary for their protection or management, it may be necessary to modify the development location or reduce lot yield to provide adequate hazard separation from the future vegetation boundary.

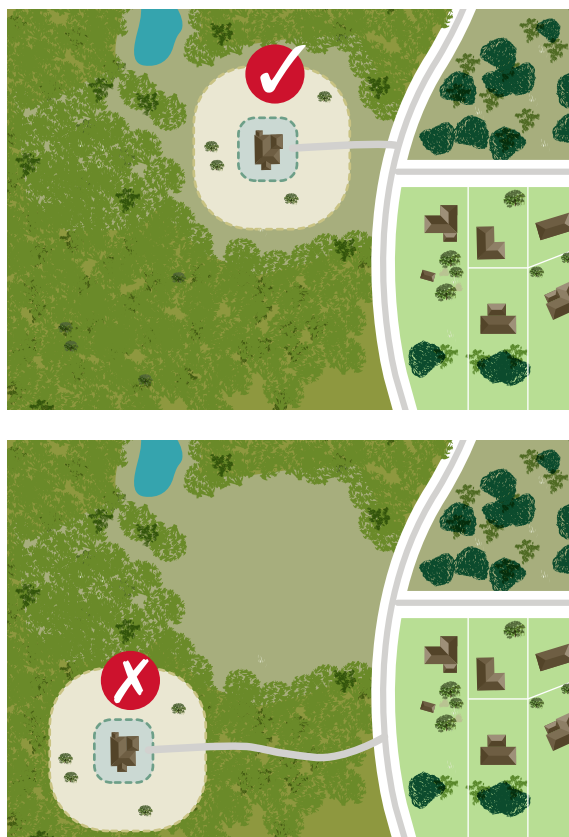
In instances where biodiversity management conflicts with bushfire risk management measures and significant clearing of native vegetation is the only means of managing bushfire risk the proposal should generally not be supported.

Application of the precautionary principle and advice from the relevant agencies responsible for environmental protection and biodiversity conservation will be sought and considered as part of the decision-making process for applications proposing to:

- clear vegetation within environmentally sensitive areas protected under State or Commonwealth legislation;
- environmentally significant native vegetation, including foreshore areas and wetland buffers;
- substantial clearing of locally significant native vegetation; and/or
- where development is adjacent to vegetated land managed by those agencies.

The application may be refused if the value of the vegetation is high and the landowner/proponent proposes achieving an acceptable bushfire risk through vegetation clearing without consideration and inclusion of other management measures.





Where possible, development should be located in existing cleared areas and close to the property entrance.



#### CLASSIFIABLE VEGETATION

- Manicured Garden
- Grassland
- Woodland
- APZ

**Figure 3:** Location of development should minimise environmental impact

In addition to referrals to the relevant agency responsible for environmental protection and biodiversity conservation, the decision-maker is to seek the advice of the relevant agency responsible for water resource management when making decisions on applications where clearing of vegetation may adversely impact water resources, including waterway foreshore areas.

For proposals located within 100 metres of Kings Park or Bold Park, it is recommended that the decision-maker forward a copy of the application to the Botanic Gardens and Parks Authority for comment and advice.

Clearing of native vegetation in Western Australia requires a clearing permit under Part V, Division 2 of the *Environmental Protection Act 1986* unless the clearing is for an exempt purpose. Exemptions from requiring a clearing permit are contained in Schedule 6 of the Environmental Protection Act or are prescribed in the Environmental Protection Regulations. Clearing required for compliance with subdivision conditions of approval is one example of where an exemption applies. However, the exemptions under the Environmental Protection Regulations do not apply in environmentally sensitive areas.

## 2.4 CLIMATE CHANGE IMPACT

Climate change impacts on Western Australia during the last century have included a rise in average temperatures and rainfall across the State as well as a significant decrease in annual rainfall in south-west Western Australia. Future projections indicate that across the State, rainfall will decrease by up to 20 per cent and summer temperatures will increase by up to 2.1°C by 2030, relative to 1960 – 1990 levels.

Significant likely impacts of climate change for the State include the increased risk of bushfire and drought and decreased average rainfall in south-west Western Australia.

## 2.5 DISCRETIONARY DECISION-MAKING AND THE PRECAUTIONARY PRINCIPLE

Planning decisions must be made on the merit of a proposal and include holistic consideration of a number of planning issues. For strategic planning proposals, subdivisions and development applications in bushfire prone areas, discretionary decision-making will involve the application of the precautionary principle contained in policy measure 6.11. The outcome of this policy measure means that the potentially serious threat of bushfire to people, property and infrastructure warrants a conservative approach to decision-making being taken.

The decision-maker is to exercise judgement when considering the merits of proposals that do not satisfy the policy objectives and measures of SPP 3.7 or the acceptable solutions in the bushfire protection criteria. Bushfire risk to people, property and infrastructure should be addressed at a scale that is consistent with the proposal being considered and based on appropriate levels of information. In exercising judgement, the decision-maker should consider:

- the intent, objectives and policy measures of SPP 3.7 and these Guidelines;
- the need to apply the precautionary principle;
- compliance with any provisions of the local planning scheme or local planning policy relating to bushfire;
- whether the bushfire hazard can be reduced to an acceptable level;

- whether the proposed measures can be practically implemented and maintained for the life of the development or land use;
- whether the proposal demonstrates an improvement or innovation in bushfire risk management that improves the bushfire outcome on the site and surrounds; and
- advice received from relevant referral agencies.

Achieving the objectives and measures set out in SPP 3.7 should not be at the expense of achieving consistency with other policies and publications, particularly in relation to environmental and biodiversity management and landscape amenity. Where, in order to preserve life, property or infrastructure, the objectives of other relevant planning policies or publications would be compromised, it may be the case that the proposal may not be suitable on planning grounds.



## 3. BUSHFIRE PRONE AREAS

### 3.1 IDENTIFICATION AND REVIEW OF BUSHFIRE PRONE AREAS

SPP 3.7 applies to land which has been designated as being bushfire prone by the Fire and Emergency Services Commissioner under powers provided in the Fire and Emergency Services Act 1998. This designation is made in the form of an order published in the Government Gazette that refers to the Map of Bush Fire Prone Areas. Areas identified as being bushfire prone to which

SPP 3.7 and these Guidelines apply are coloured 'pink' on the map. The remaining areas are not considered bushfire prone for the purpose of implementing additional development requirements; however SPP 3.7 also applies to areas not yet designated bushfire prone when they are proposed to be developed in a way that introduces a bushfire hazard, as outlined in section 3.2.2. A sample of the Map is provided in Figure 4.

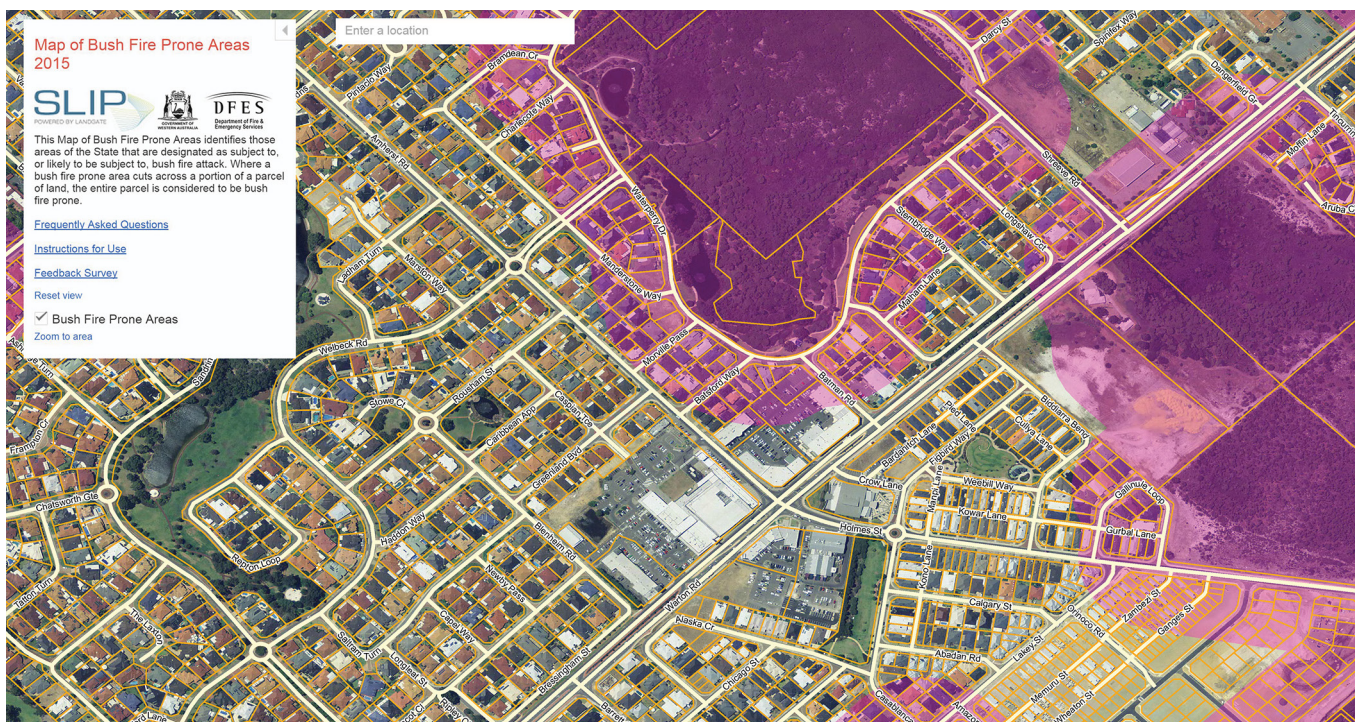
The Map of Bush Fire Prone Areas has been developed by the Office of Bushfire Risk Management in consultation with local governments to incorporate localised information. The Office of Bushfire Risk Management

is an independent office within the Department of Fire and Emergency Services reporting directly to the Fire and Emergency Services Commissioner. The Office of Bushfire Risk Management is responsible for preparing, maintaining and administering the Map of Bush Fire Prone Areas. Local governments have a role in the ongoing review of bushfire prone areas within their administrative boundaries to inform the accuracy of the Map of Bush Fire Prone Areas through the annual review process.

Designated areas as shown on the Map of Bush Fire Prone Areas are referenced in the deemed provisions relating to bushfire risk management. However, the Map of Bush Fire Prone Areas should not be adopted as a local planning scheme map under section 4 of the *Planning and Development Act 2005* as it will be updated annually to reflect when development has taken place or new information has become available.

The *Map of Bush Fire Prone Areas* provides a single means of identifying whether a site is designated under law as being bushfire prone at the state level. This means

Figure 4: Extract from *Map of Bush Fire Prone Areas*





that land identified as being within a bushfire prone area on the *Map of Bush Fire Prone Areas* is subject to, or likely to be subject to, bushfire attack. The *Map of Bush Fire Prone Areas* acts as a trigger to determine whether bushfire protection planning and building requirements apply. Individual local planning schemes may also contain special control areas that designate areas as bushfire prone which may have more detailed hazard mapping and additional planning requirements.

In accordance with SPP 3.7, all strategic planning proposals, subdivisions and development applications<sup>1</sup> within a designated bushfire prone area will need to be accompanied by either a Bushfire Hazard Level assessment, a BAL Contour Map and/or a BAL assessment.

Under the LPS Amendment Regulations 2015, if a single house or ancillary dwelling on a lot or lots of 1,100m<sup>2</sup> or greater is proposed in a designated bushfire prone area, a BAL assessment is required. This also applies to any other habitable or specified buildings, regardless of lot size, in a designated bushfire prone area. In each case, where a BAL Contour Map has been prepared for previous subdivision approval in relation to the subject site, this may be used in place of a site-specific BAL assessment.

If the BAL Contour Map or BAL assessment indicate a rating of BAL-40 or BAL-FZ, development approval is required before applying for a building permit, despite any exemption that would normally exist. The BAL rating of a site can also be used to determine the level of bushfire resistant construction that may apply to the building under the Building Code of Australia.

The LPS Amendment Regulations 2015 include a four month transitional period from the date the area is designated, unless there are existing special control areas, scheme provisions, existing maps and/or policies that are consistent with the *Map of Bush Fire Prone Areas*.

This transitional period will also occur to newly designated areas following every update of the *Map of Bush Fire Prone Areas*. Once the transitional provisions have expired, existing local government bushfire maps will no longer provide for the designation of areas as being bushfire prone, unless the area is identified in a special control area. Any inconsistencies between the *Map of Bush Fire Prone Areas* and local government

bushfire mapping must be identified to the Office of Bushfire Risk Management by local governments for consideration in their annual map review as per the review procedures outlined in the *Mapping Standard for Bush Fire Prone Areas* (OBRM 2015, as amended).

Bushfire prone vegetation is determined according to the criteria outlined in the *Mapping Standard for Bush Fire Prone Areas* and is identified on the *Map of Bush Fire Prone Areas* prepared by the Office of Bushfire Risk Management. Further information on how the map is prepared and updated can be found in the *Mapping Standard for Bush Fire Prone Areas*.

The *Map of Bush Fire Prone Areas* is available on the Department of Fire and Emergency Services' website [www.dfes.wa.gov.au/bushfireproneareas](http://www.dfes.wa.gov.au/bushfireproneareas) using the Shared Location Information Platform (SLIP) managed by Landgate. While the map should not be made to form part of a local planning scheme, local governments will be able to include the mapping of their current bushfire prone areas within their geospatial information systems (GIS) to inform their planning decisions. When a State map is released, local governments will be able to access the new layer from SLIP.

<sup>1</sup> Development applications exclude applications for single houses and ancillary dwellings on a lot or lots less than 1,100m<sup>2</sup>.

## 3.2 AREAS WHERE THERE IS NO APPARENT HAZARD

If a proposal is in a designated bushfire prone area and the relevant assessment results in a property having either a Bushfire Hazard Level classification of Low, or achieves a BAL-LOW rating across the entire portion of developable land, then the planning proposal or development application does not require application of SPP 3.7 or these Guidelines despite the fact that it is designated within the *Map of Bush Fire Prone Areas*.

### 3.2.1 BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT (BASIC) FOR DESIGNATED AREAS WHERE THERE IS NO CURRENT HAZARD

A Bushfire Attack Level (BAL) assessment (basic) is a BAL assessment prepared where there is no apparent bushfire hazard. Circumstances where these may be prepared would be limited to instances where

- land has been cleared since the *Map of Bush Fire Prone Areas* was released and the site no longer contains, or is within 100 metres of bushfire prone vegetation<sup>2</sup>; or
- the site is of a significant enough size that the building envelope to which the proposal relates is not within 100 metres of bushfire prone vegetation.

In these instances, the decision-maker may choose to accept the BAL assessment (basic) prepared by the landowner/proponent. Evidence such as aerial photography demonstrating the absence of vegetation should be submitted with the BAL (basic) assessment to assist the decision-maker. Where the decision-maker is not satisfied that the proposal is outside 100 metres of bushfire prone vegetation, they may require a BAL assessment to form part of the planning proposal.

Where local government is satisfied that the subject land has been cleared since the *Map of Bush Fire Prone Areas* was released, local government should contact the Office of Bushfire Risk Management to request that the area be reconsidered and the *Map of Bush Fire Prone Areas* amended on the next revised version, as per the annual review procedures outlined in the *Mapping Standard for Bush Fire Prone Areas*.

Where there is no apparent hazard the landowner/proponent may utilise the information contained in the Department of Planning's fact sheets to assist in completion of a BAL assessment (basic). For residential buildings (Class 1, 2 and 3 buildings and Class 10a buildings and decks associated with Class 1, 2 and 3 buildings), a registered building surveyor will need to be satisfied that the BAL assessment (basic) is correct prior to signing the relevant certificate of compliance for the building.

### 3.2.2 AREAS THAT POSE A FUTURE HAZARD BUT ARE NOT YET DESIGNATED

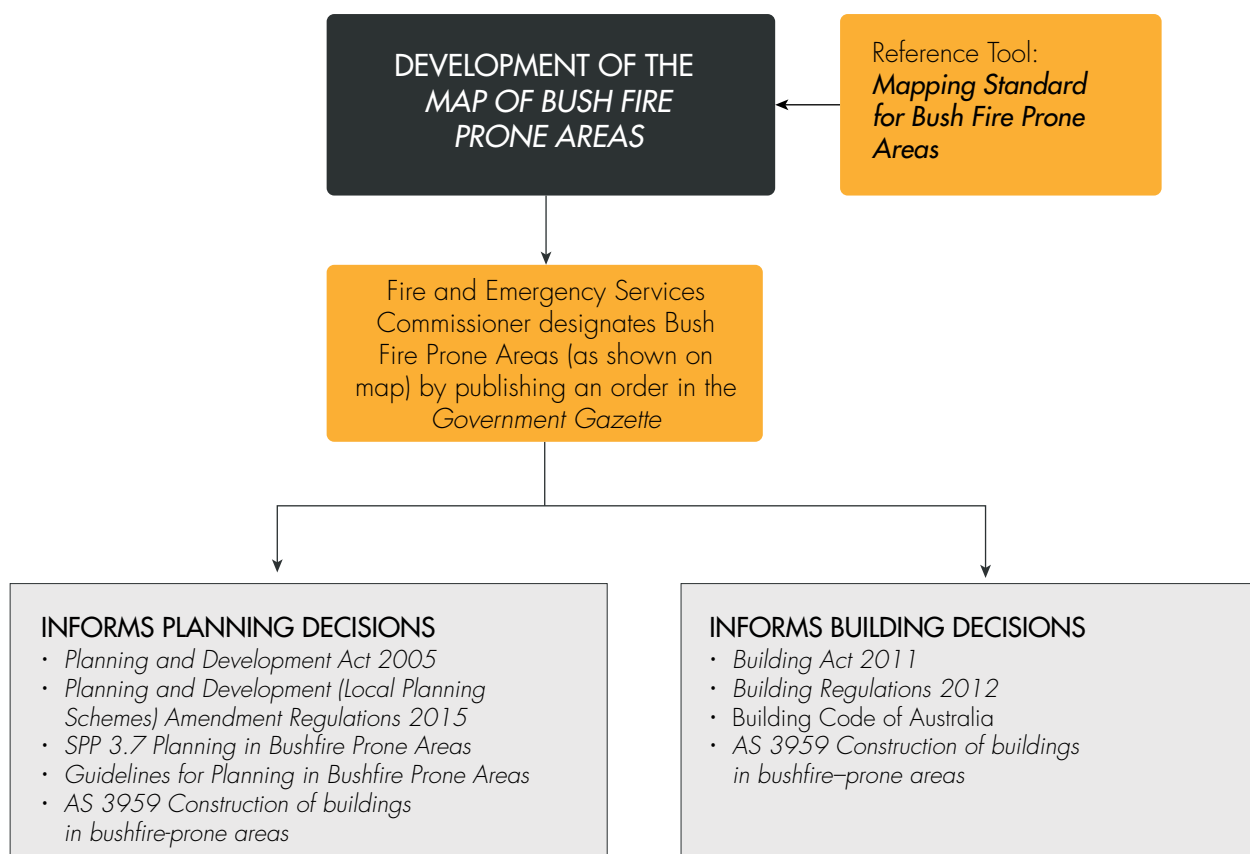
Where a site is not yet identified as a designated bushfire prone area but is proposed to be developed in a way that introduces a bushfire hazard, for example it incorporates the revegetation of wetlands or foreshores, then the decision-maker will need to inform the Office of Bushfire Risk Management to reconsider this area so it is reflected in the next revised version of the map, as per the review procedures outlined in the *Mapping Standard for Bush Fire Prone Areas*.

Any such planning approval should identify proposed new bushfire prone areas and address the hazard as if it currently existed. A Notification on Title to the effect that the land is within a bushfire prone area and may be subject to a Bushfire Management Plan should be a condition of approval. It should be noted that any future building permit applications in these areas will potentially have a higher BAL than when the planning approval was granted.

In this situation, as there is no formal designation in effect on the site, the relevant registered building surveyor is not required to assess the building for compliance with the Building Code of Australia's bushfire requirements. However, where planning approval is required, the landowner/proponent will need to demonstrate that they have complied, or are complying with, the requirements of their planning approval under the *Planning and Development Act 2005*, where relevant. In these circumstances, the voluntary application of bushfire construction standards is recommended to ensure the future bushfire risk is addressed.

<sup>2</sup> Sites where the surrounding area is consistent with the exclusions contained within AS 3959 at section 2.2.3.2 are not considered to contain bushfire prone vegetation.

**Figure 5:** The Western Australian Bushfire Prone Areas statutory and policy framework flowchart



## 4. ASSESSING BUSHFIRE RISK IN THE PLANNING CONTEXT

In SPP 3.7, 'bushfire risk' is defined as "the chance of a bushfire igniting, spreading and causing damage to people, property and infrastructure" and in this context, 'bushfire risk management' is "the application of the bushfire protection criteria contained in these Guidelines".

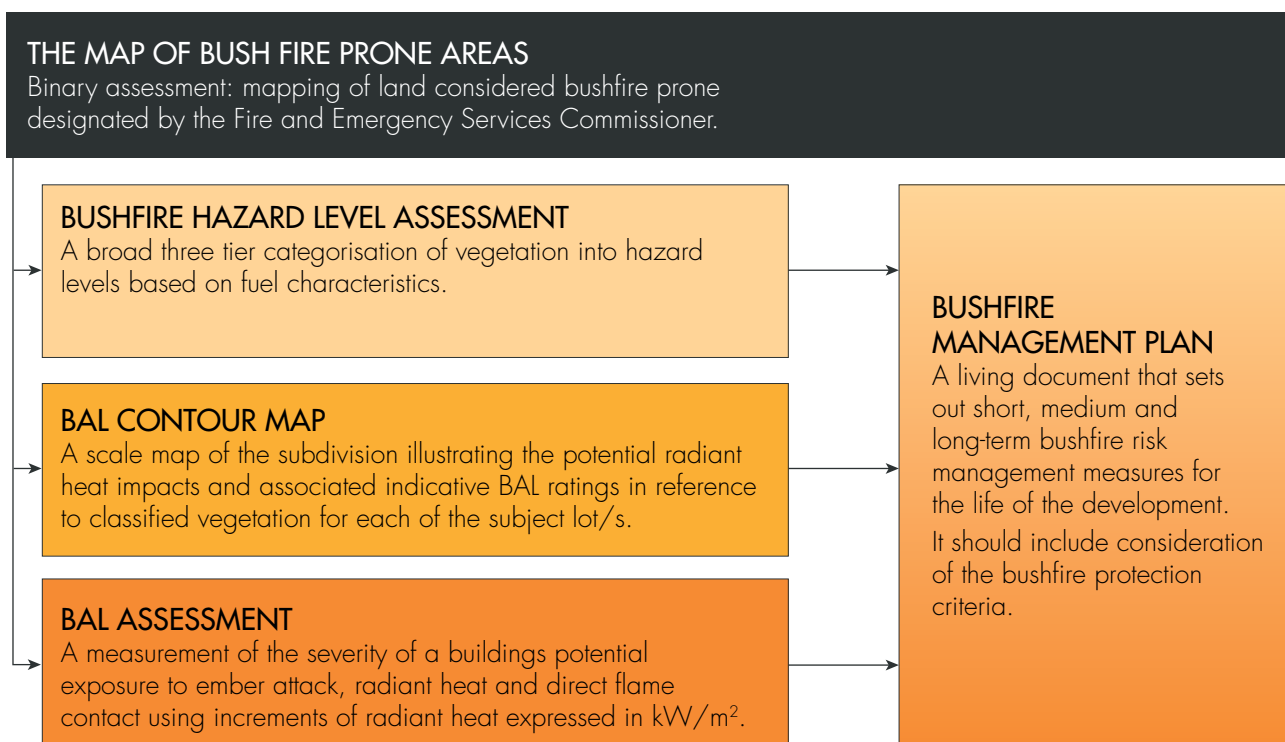
Before a strategic planning proposal, subdivision or development application can be considered, it is necessary to understand the extent of the bushfire hazard and its potential to affect people, property and infrastructure. An assessment of bushfire risk is a key component of deciding whether a strategic planning proposal, subdivision or development application should be approved in an area with potential bushfire threat. Planning for, and assessing bushfire risk, is most effective when properly addressed at the earliest stage in the planning process.

This section sets out the interrelationships between, and requirements for, various assessment tools used to assess bushfire risk in the planning context, as prescribed by SPP 3.7 (Figure 6):

- Bushfire Hazard Level assessment;
- Bushfire Attack Level (BAL) Contour Map;
- Bushfire Attack Level (BAL) assessment;
- Bushfire protection criteria; and
- Bushfire Management Plan.

The level of detail required as part of these assessments will depend on the planning stage for which it has been prepared. For example, for a strategic planning proposal, a Bushfire Management Plan would apply broad consideration of the bushfire protection criteria such as locating development nodes away from extreme areas. At the structure plan stage the Bushfire Management Plan would need to include more specific consideration to ensure Hazard Separation Zones and Asset Protection Zones can be established at subdivision and development. Information is successively more detailed at each planning stage.

**Figure 6:** Assessing bushfire risk in the planning context





Additionally, the decision-maker has the discretion to consider site-specific conditions that may preclude the requirement for a full Bushfire Management Plan for an individual development. A simplified Plan may be acceptable in these isolated incidents. A Department of Planning fact sheet will provide further guidance as to when a simplified Plan would be appropriate and the level of detail required in such a Plan. If the documents are prepared by an individual accredited at the level appropriate to the work required, the decision-maker should have confidence that they are consistent with SPP 3.7 and these Guidelines. However, this does not prevent the decision-maker from querying the Bushfire Management Plan or assessment if it has reason to believe that it does not adequately address SPP 3.7 and these Guidelines.

All landowners/proponents, irrespective of tenure, will be responsible for the ongoing management of any bushfire risk.

## 4.1 BUSHFIRE HAZARD LEVEL ASSESSMENT

A Bushfire Hazard Level assessment provides a 'broad-brush' means of determining the potential intensity of a bushfire for a particular area. The Bushfire Hazard Level assessment assists in informing the suitability of land contained within strategic planning proposals for future subdivision and development.

The Bushfire Hazard Level assessment categorises land within a designated bushfire prone area as having a low, moderate or extreme bushfire hazard level (Appendix 2). Different hazard levels may be assigned to different parts of individual lots. Bushfire Hazard Level assessments are required to accompany all strategic planning proposals, including:

- region planning scheme amendments;
- local planning strategies;
- local planning schemes and amendments; and
- structure plans (district, local and activity centre scales) and master plans.

Bushfire Hazard Level assessments allow for early strategic consideration of bushfire risk which can then be used to inform the more detailed stages that follow, ensuring all issues are considered, identified and properly addressed at the earliest possible time. When the design of the strategic planning proposal contains sufficient detail to determine the future lot layout, a BAL Contour Map will be more appropriate, as this is more useful in demonstrating the potential site risks.

Bushfire Hazard Level assessments may form part of a Bushfire Management Plan that includes consideration of how the bushfire protection criteria will be met at subsequent stages of the planning process. It is strongly recommended that both the Bushfire Hazard Level assessment and the Bushfire Management Plan are prepared by an accredited Bushfire Planning Practitioner on behalf of the landowner/proponent and should be provided upfront with all strategic planning proposals.

A Bushfire Hazard Level assessment may indicate that the site currently contains a moderate or extreme hazard level. In such instances, the proposal should contain information in the form of a Bushfire Management Plan as to how the hazard level will be initially reduced and maintained for the life of the development. This will enable the decision-maker to ensure that appropriate bushfire risk management measures are in place to achieve and maintain a low or moderate hazard level.

Where a site's hazard level cannot be reduced to a low or moderate level, the application should only be considered if it is to include 'unavoidable development' (refer section 5.7). Conversely, if the proposal seeks to create a site where the future hazard level would be low, then a Bushfire Management Plan may not be required.

Strategic planning proposals that are to be developed in a staged approach are to be considered using the current bushfire risk for each individual stage. This ensures that the bushfire risk is taken into account throughout the planning process, should subsequent stages not be completed or be affected by an amended plan.

A landowner/proponent, including government agencies is strongly recommended to use an accredited Bushfire Planning Practitioner to undertake a Bushfire Hazard Level assessment. Decision-makers may have confidence that Bushfire Hazard Level assessments prepared by a Bushfire Planning Practitioner are consistent with the endorsed methodology of SPP 3.7 and these Guidelines.

## 4.2 BUSHFIRE ATTACK LEVEL (BAL) CONTOUR MAP

A Bushfire Attack Level (BAL) Contour Map is a scale map of the subject lot/s illustrating the potential radiant heat impacts and associated indicative BAL ratings in reference to any vegetation remaining within 100 metres of the assessment area after subdivision works are complete. It is typically used for bushfire risk assessment at the subdivision stage of the planning process, but is also appropriate for strategic planning proposals where the lot layout of a proposal is already determined.

As with all assessments, where a strategic planning proposal or subdivision is proposed to be developed with a staged approach, a new BAL Contour Map should be prepared for each stage and the hazard addressed appropriately for each stage.

In accordance with SPP 3.7 and the LPS Amendment Regulations 2015, where a BAL Contour Map exists for a previous subdivision approval, the BAL Contour Map may be used in place of a site-specific BAL assessment at the development application stage. They may also be used at the building permit stage. Notwithstanding this, the decision-maker and/or registered building surveyor have the discretion to request a new BAL Contour Map or a site-specific BAL assessment if they are of the opinion the existing BAL Contour Map is inappropriate. This may include instances where there has been a significant time delay since the original assessment was done, the proposal design has altered, the site conditions have changed or where they consider there to be an error in the original BAL Contour Map.

A BAL rating needs to be allocated to all areas identified as being bushfire prone on the *Map of Bush Fire Prone Areas*. Where a BAL-LOW applies, the decision-maker should notify the Office of Bushfire Risk Management of the requirement to update the Map as part of their annual review process, in accordance with the *Mapping Standard for Bush Fire Prone Areas*. Further guidance and a sample map are provided at Appendix 3.

An accompanying Fact Sheet has been developed and will provide more detailed methodology. This can be found on the Department of Planning's website [www.planning.wa.gov.au/bushfire](http://www.planning.wa.gov.au/bushfire).

A landowner/proponent should engage a Bushfire Planning Practitioner to complete a compliance certificate or report for the BAL Contour Map relating to the approved subdivision. This would generally occur after the subdivisions works have been completed and before the issuing of titles. A compliance certificate or report will

allow any future decision-makers to have confidence that the BAL Contour Map, prepared prior to the approval of a subdivision application, is still valid for use at future development or building permit application stages. If the subdivision layout and design has been altered, the site conditions have changed or the Bushfire Planning Practitioner considers there was an error in the original BAL Contour Map, a new BAL Contour Map may be required before a compliance certificate or report will be issued.

**Landowners/proponents, including government agencies, are strongly recommended to use an accredited Bushfire Planning Practitioner to prepare a BAL Contour Map. Decision-makers may have confidence that BAL Contour Maps prepared by a Bushfire Planning Practitioner are consistent with the principles of AS 3959, SPP 3.7 and these Guidelines.**

## 4.3 BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT

A Bushfire Attack Level (BAL) assessment is the means of measuring the severity of a buildings' potential exposure to ember attack, radiant heat and direct flame contact using increments of radiant heat expressed in kW/ m<sup>2</sup>. They form the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire.

A BAL assessment classifies an area of land into one of six categories (Table 2 and Figure 7). BAL assessments are a point in time assessment and are used at the development application and building permit stage to determine whether a site will require additional bushfire risk management measures in order to respond to a potential bushfire hazard. For planning purposes, a BAL assessment is usually undertaken for land in a bushfire prone area after a Bushfire Hazard Level assessment or BAL Contour Map has been prepared and/or where the plans are at a scale where lots and building envelopes are identified. Land capability and suitability for development should already be determined through the strategic planning stage prior to a BAL assessment being prepared.

The BAL descriptions and assessment methodologies are located in AS 3959, referenced in the Building Code of Australia and reprinted in Table 2. The BAL may be used to determine the construction standard required.

**Table 2:** BAL and corresponding descriptions of the predicted levels of exposure and heat flux exposure thresholds

BAL	DESCRIPTION (Source: AS 3959-2009, Appendix G)
BAL-LOW	The risk is considered to be VERY LOW. There is insufficient risk to warrant any specific construction requirements but there is still some risk.
BAL-12.5	The risk is considered to be LOW. There is a risk of ember attack. The construction elements are expected to be exposed to a heat flux not greater than 12.5kW/m <sup>2</sup> .
BAL-19	The risk is considered to be MODERATE. There is a risk of ember attack and burning debris ignited by wind-borne embers and a likelihood of exposure to radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 19kW/m <sup>2</sup> .
BAL-29	The risk is considered to be HIGH. There is an increased risk of ember attack and burning debris ignited by wind-borne embers and a likelihood of exposure to an increased level of radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 29kW/m <sup>2</sup> .
BAL-40	The risk is considered to be VERY HIGH. There is a much increased risk of ember attack and burning debris ignited by wind-borne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux not greater than 40kW/m <sup>2</sup> .
BAL-Flame Zone (FZ)	The risk is considered to be EXTREME. There is an extremely high risk of ember attack and burning debris ignited by wind-borne embers, and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux greater than 40kW/m <sup>2</sup> .

**Figure 7:** BAL construction levels in context



Landowners/proponents, including government agencies, are strongly recommended to use an accredited Level 1 BAL Assessor or an accredited Bushfire Planning Practitioner to undertake a BAL assessment. Decision-makers may have confidence that BAL assessments prepared by a Level 1 BAL Assessor or Bushfire Planning Practitioner are consistent with SPP 3.7 and these Guidelines.

A BAL assessment completed by an individual other than an accredited person in accordance with AS 3959, may be approved if the development is for a single house or ancillary dwelling on land that is located more than 50 kilometres from the boundary of a gazetted town site, as identified by the Department of Planning. A map showing the designated town sites is provided on the Department of Planning's website [www.planning.wa.gov.au/bushfire](http://www.planning.wa.gov.au/bushfire). The decision-maker will need to be satisfied that the BAL assessment is appropriate.

*AS 3959 Construction of Buildings in Bushfire-Prone Areas* (2009, as amended) is developed and maintained by Standards Australia. Copies of the standard can be obtained from the SAI Global website at: <https://www.saiglobal.com/Standards>

AS 3959 is not free of charge. In order to make it accessible to members of the community, the Building Commission has provided local governments a reference copy of AS 3959 for viewing by the public.

#### 4.4. BUSHFIRE ATTACK LEVEL (BAL) CONTOUR MAPS AND BAL ASSESSMENTS IN THE BUILDING CONTEXT

The Building Code of Australia contains bushfire construction requirements that are applied to most residential classes of buildings (being Class 1, 2 and 3 buildings and Class 10a buildings or decks associated with Class 1, 2 or 3 buildings) in designated bushfire prone areas. When lodging a building permit for these buildings in designated bushfire prone areas, a BAL assessment or existing BAL Contour Map should be lodged with the building permit application (refer to Section 5.8.1 of these Guidelines for more information).

Generally, a BAL assessment or BAL Contour Map prepared for planning purposes would be suitable for use as part of the building approval process, if prepared using the methodology set out in AS 3959. However, the registered building surveyor has the discretion to request a new BAL assessment if they are of the opinion that the site conditions have changed or where they consider there to be an error in the original BAL Contour Map or BAL assessment.

#### 4.5 BUSHFIRE PROTECTION CRITERIA

##### 4.5.1 HOW THE CRITERIA ARE TO BE READ

The bushfire protection criteria (Appendix Four) are a performance-based system of assessing bushfire risk management measures. An assessment against the criteria is to be undertaken for any strategic planning proposal, subdivision and development application for a site that has or will, on completion, have a bushfire hazard level above 'Low' or a BAL rating above BAL-LOW.

The bushfire protection criteria consist of four elements:

- **Element 1:** Location
- **Element 2:** Siting and design of development
- **Element 3:** Vehicular access
- **Element 4:** Water



Each element has the following components:

- an intent, which outlines the desired outcome for the element, and reflects identified planning and policy requirements in respect of each issue;
- acceptable solutions, which provide one way of meeting the element's intent. Examples are provided as potential solutions of acceptable design outcomes. Acceptable solutions contained within this document are intended to provide a straightforward pathway to assessment and approval. Compliance with the acceptable solutions contained within this document automatically achieves the intent of the relevant bushfire protection element; and
- a performance principle, which is a general statement of how best to achieve the intent of the relevant bushfire element. Performance principles provide landowners/proponents with an opportunity to develop a variety of design responses to address each bushfire protection element outside those specified in the acceptable solutions contained within this document.

#### 4.5.2 HOW TO APPLY THE CRITERIA

For a proposal to be considered compliant with SPP 3.7, the intent of each element of the bushfire protection criteria, as listed in Appendix 4 of these Guidelines must be satisfied. To satisfy compliance with the 'intent', either the acceptable solutions or the performance principles must be demonstrated. This assessment should be in the form of a Bushfire Management Plan or a statement addressing the bushfire protection criteria (refer to section 4.6) and must be provided upfront with any planning proposal that has, or will, on approval, have a bushfire hazard level above Low or a BAL rating above BAL-LOW.

##### 4.5.2.1 ACCEPTABLE SOLUTIONS

An acceptable solution prescribes the minimum requirements that a planning proposal should adhere to achieve compliance with SPP 3.7. If all applicable acceptable solutions have been utilised to address the bushfire protection criteria element, then it may be presumed that the proposal has achieved compliance with that element.

##### 4.5.2.2 PERFORMANCE PRINCIPLE-BASED SOLUTIONS

The performance principles have been designed so they may be used where a proposal cannot comply with the acceptable solution(s) or it may be inappropriate to do so, to achieve the intent of each element. Where a solution is provided to demonstrate compliance with the performance principle, it should be labelled a performance principle-based solution. Performance principle based solution(s) propose an alternative to those set out in the acceptable solution(s); it is not a justification for non-compliance. They provide for flexibility and innovative, evidence-based solutions for bushfire risk management. All performance principle-based solution(s) require discretion on the part of the decision-maker, informed by advice from the Department of Fire and Emergency Services (refer to section 2.5: Discretionary decision-making in bushfire prone areas, and section 6.5).

To demonstrate compliance, the performance principle-based solution(s) must provide substantiated evidence and clearly demonstrate/document how the proposal, product, design or material can meet or exceed the intent and performance principle of the element, and more broadly, the objectives of the State planning policy. The following submission requirements apply for all performance principle-based solution(s):

- a statement of the extent to which the proposed principle based solution(s) conforms with, or deviates from the acceptable solution(s)
- evidence including calculations and diagrams to support how the use of a material, form of construction or design achieves the performance principle(s)
- verification methods such as a test, inspection, calculation or other method that determines whether a principle-based solution(s) complies with the relevant performance principle(s). All verification methods must be acceptable to the Department of Fire and Emergency Services.

#### 4.5.3 LOCAL OR REGIONAL VARIATIONS TO BUSHFIRE PROTECTION CRITERIA

Local governments may seek to add to or modify the acceptable solutions to recognise special local or regional circumstances (e.g. topography/vegetation/climate) which reinforce the intent of a particular bushfire protection element and apply across a defined locality.

These additional acceptable solutions are to be endorsed in writing by both the Western Australian Planning Commission and the Department of Fire and Emergency Services before they can be considered in planning assessments. Such requests will be assessed on a case-by-case basis and will need to be supported by a justification that clearly:

- explains the reasons why the modification is required; and
- demonstrates to the satisfaction of both the Western Australian Planning Commission and the Department of Fire and Emergency Services that the modifications comply with the corresponding performance principles.

Endorsed regional or local variations should form part of a planning instrument, such as a scheme amendment or special control area, as opposed to being included in a local planning policy or similar.

**Regional and local variations to the bushfire protection criteria are to be used where a particular acceptable solution is required across a locality. Such variations are not the same as site-specific alternative solutions that may be approved by the decision-maker as part of considering a strategic planning proposal, subdivision or development application.**

## 4.6 BUSHFIRE MANAGEMENT PLANS

### 4.6.1 PURPOSE

A Bushfire Management Plan (BMP) is required to accompany strategic planning proposals, subdivision and development applications<sup>3</sup> in areas above BAL-Low or areas with a bushfire hazard level above low (refer to clause 6.2b). A BMP includes the bushfire assessment, identification of the bushfire hazard issues arising from the relevant assessment and a clear demonstration that compliance with the bushfire protection criteria contained within Appendix 4 of these Guidelines, is or can be achieved.

### 4.6.2 PREPARING THE BMP

It is strongly recommended BMPs are prepared by an accredited Bushfire Planning Practitioner at the level appropriate to the information required. Level 2 and 3 Bushfire Planning Practitioner capabilities are outlined at section 6.14 of these Guidelines.

The BMP should be prepared as early as possible in the planning process and progressively refined or reviewed as the level of detail increases. The level of detail provided within a BMP should be commensurate with the applicable planning stage and scale of the proposal or application. Clauses 6.3, 6.4, 6.5, 6.6 and 6.7 of SPP 3.7, detail the information to be included within a BMP for each stage of the planning process. Further guidance on the information to be included in a BMP is contained within Appendix 5 of these Guidelines.

Planning approval will be informed by the BMP, including the demonstration of compliance with the bushfire protection criteria. As the BMP is a document that should apply for the life of the development, the decision-maker should require modifications to the document in the event there are discrepancies, prior to endorsement and/or approval of the planning application being granted. Conditional approval should not be granted prior to the BMP being prepared and endorsed.

<sup>3</sup> Excluding development applications for single houses and ancillary dwellings on a lot or lots less than 1,100m<sup>2</sup>.

#### 4.6.3 IMPLEMENTING THE BMP

The BMP should include an implementation table that clearly identifies the bushfire risk management measures necessary to achieve compliance with the bushfire protection criteria. The table should identify roles and responsibilities and at what stage of the planning process the measures should be undertaken.

For strategic planning proposals, it is acknowledged details may not be known and so it may be more appropriate to identify the risk management measures that will need to be considered at subsequent stages of the planning process.

BMPs prepared for development applications must consider the ongoing responsibility of the landowner/occupier in maintaining the bushfire risk management measures for the life of the development.

Subdivision and development applications accompanied by a BMP may be conditionally approved, subject to the placement of a notification on the title of the property advising that the land is in a designated bushfire prone area and is subject to a BMP. This ensures potential purchasers are aware of the BMP and requirement for ongoing management of the property.

Local governments should ensure annual Fire Break Notices (section 33 notice) clearly reference the need for owners to comply with any existing BMPs on their land, and not simply refer to the need to maintain a generic asset protection zone, as this may not meet the requirements of the BMP.

Local governments should keep a register or record of sites that have an existing BMP, to identify servicing and infrastructure gaps and help inform district-level bushfire risk management planning. Local governments are also encouraged to make the BMPs readily available for landowners and to publish all BMPs online..

#### 4.6.4 REVIEWING AN EXISTING BMP

When submitting a new application for a strategic planning proposal, subdivision or development application, a landowner/proponent may use an existing BMP if it remains relevant.

Circumstances where a BMP may require updating include:

- where the original BMP was prepared prior to the release of SPP 3.7 in December 2015
- where site conditions have changed
- where further details are available at subsequent stages of the planning process
- to reflect new methodologies or practice as identified in revisions of these Guidelines.

The decision-maker retains the right to request the landowner/proponent to update the BMP if it has reason to believe that the site conditions have substantially changed.

### 4.7 BUSHFIRE RISK MANAGEMENT PLANS

Bushfire Risk Management Plans are high-level documents prepared outside of the planning process for a particular local government, in collaboration with the Department of Fire and Emergency Services. Bushfire Risk Management Plans have a broader scope and are tenure-blind, providing an overview of the bushfire hazards and risk treatment strategies across a locality to determine wider impacts.

They differ from Bushfire Management Plans in that the latter provide more specific information relating to a particular precinct or lot under development. They are typically prepared by the landowner/proponent to support a planning proposal in a bushfire prone area.

Bushfire Risk Management Plans may be referred to as part of the preparation or review of strategic planning documents, with the intention of establishing synergies between planning proposals and known infrastructure gaps, such as improving road access or the location of evacuation centres through incentivising development in under-resourced areas.

## 5. APPLYING STATE PLANNING POLICY 3.7

SPP 3.7 and the Guidelines are applicable to every stage of the planning process. It is intended that bushfire planning and management measures be addressed as early as possible in the planning process, with the level of information provided being progressively more detailed.

Table 1 in Section 2.2 provides an overview of how bushfire risk should be addressed at each stage of the planning process, which is addressed in further detail below. The process for developing in bushfire prone areas is outlined in Section 5.4-5.8.

### 5.1 HIGHER ORDER STRATEGIC PLANNING DOCUMENTS IN BUSHFIRE PRONE AREAS

Higher order strategic planning documents such as frameworks, region schemes, sub-regional strategies and sub-regional structure plans should include high level consideration of bushfire risk when identifying land for future investigation and/or potential development. A broad consideration of the potential bushfire risk is required in order to appropriately plan for future urban expansion and essential state infrastructure networks.

These documents are typically the Western Australian Planning Commission's highest level of strategic plans and prepared at a state or regional scale, often for the Perth metropolitan area and large urban centres. They provide a coordinated direction for application of land uses, reserves and infrastructure over more than one local government area in the medium to long term. They are also used as a guide for local planning scheme zones and reservations.

Consideration of bushfire at this level may include the identification of development nodes away from bushfire prone areas, the retention of significant vegetation for conservation purposes or rural areas not suitable for urban development. Such areas will require Bushfire Hazard Level assessments during future strategic planning proposal stages.

### 5.2 STRATEGIC PLANNING PROPOSALS IN BUSHFIRE PRONE AREAS

All bushfire prone areas that exist within the boundary of a strategic planning proposal should be identified to flag where further assessment of a bushfire hazard will be required and highlight the potential for land use conflicts. Existing and proposed land uses within bushfire prone areas, as well as surrounding areas, should also be considered as well as the provision of the appropriate separation distances to bushfire prone vegetation.

#### 5.2.1 REGION PLANNING SCHEME AMENDMENTS

Region schemes outline objectives for regional development and provide a statutory mechanism to assist strategic planning. They also set out broad land use zones. There are currently three region schemes in Western Australia.

When a region scheme is proposed to be amended, it is referred to the Environmental Protection Authority and undergoes public consultation. At this level, it provides one of the most effective means to prevent inappropriate development in unsuitable locations where extreme bushfire hazards exist. A Bushfire Hazard Level assessment is required at this stage to inform the suitability of the area for rezoning and the suitability of proposed future land uses.

Where the Bushfire Hazard Level assessment includes areas that are identified as extreme, the amendment should be referred to the Department of Fire and Emergency Services in relation to bushfire risk management measures. If vegetation removal is proposed to manage the threat, the advice of the Department of Environment Regulation, Department of Parks and Wildlife and the local government should also be sought.

If the planning for the proposed amendment area is advanced to the stage where the future lot layout has already been determined, a BAL Contour Map showing the indicative BAL ratings for each lot should be prepared instead of a Bushfire Hazard Level assessment. In this context a BAL Contour Map provides more detailed information with respect to the extent of the potential impacts on individual lots.



The supporting documentation for the scheme amendment should identify any issues arising from the bushfire risk assessment/s and consider how compliance with the bushfire protection criteria (Appendix 4) can be achieved in subsequent planning stages. This can be in the form of a Bushfire Management Plan.

### 5.2.2 DISTRICT STRUCTURE PLANS

District structure plans are usually prepared over land that is either not yet zoned for urban land use or development, or on land that requires a guiding framework to ensure coordination is achieved in subsequent stages of the planning process.

A district structure plan shows a more detailed general pattern of development in a particular part of a sub-region. It may include the location of specific land uses such as activity centres, schools and regional or district open spaces as well as district water management requirements, movement networks, and the coordination of regional and district infrastructure provision.

At this level a Bushfire Hazard Level assessment provides the opportunity to prevent inappropriate development in areas where extreme bushfire hazards exist. The Bushfire Hazard Level assessment allows for the identification of potential areas of land use conflict, especially in relation to residential, vulnerable or high-risk land uses. It also identifies bushfire hazard areas which will require further investigation in subsequent planning stages. Where the future lot layout has already been determined, a BAL Contour Map showing the indicative BAL ratings should be prepared, instead of a Bushfire Hazard Level assessment, to provide more detailed information with respect to the extent of the potential impacts on individual lots.

With consideration given to how compliance with the bushfire protection criteria can be achieved in subsequent planning stages, the following issues should be specifically addressed (preferably within a Bushfire Management Plan) as part of the preparation of a district level structure plan that includes bushfire prone areas:

- the location of bushfire prone areas within and adjacent to the structure plan area and the need for further assessment of the risk in such areas;
- the avoidance of land use and development intensification in any areas likely to maintain or generate a hazard level of extreme;

- existing fire fighting infrastructure such as response or suppression capacity, water tanks, brigades etc.;
- the existing and proposed road network and its likely effectiveness in a bushfire emergency;
- biodiversity issues and their interrelationships with bushfire prone areas;
- means of protection for areas with high conservation values to accommodate biodiversity objectives such as, adequate separation from existing or proposed buffers for wetlands and foreshores; and
- the location of any vulnerable or high-risk land uses within identified bushfire prone areas and whether such uses may require management strategies to be prepared.

### 5.2.3 LOCAL PLANNING STRATEGIES

Local planning strategies are required to be prepared under the LPS Regulations 2015 as part of the process of a local planning scheme review, and therefore influence land use and development controls. Local planning strategies link to frameworks, sub-regional structure plans and region planning schemes where they exist providing the foundation for land use decisions for a particular local government area, usually for a period of 10 to 15 years.

Local planning strategies provide the rationale for land use planning decisions at the local level by identifying development constraints and opportunities in a local government area, and balancing these with broader planning considerations as well as the aspirations of the local community.

Local planning strategies should assess bushfire risk alongside other relevant planning matters including environmental, economic and social considerations to holistically inform and shape future expansion, as a precursor to local planning scheme zoning and reservations.

When preparing or reviewing a local planning strategy, local government should refer to the *Map of Bush Fire Prone Areas* to help determine any areas of land use conflict. Where these exist, a Bushfire Hazard Level assessment should be undertaken to inform the suitability of the area for future development. Broad objectives for bushfire risk management should be identified with recommendations and actions to achieve these objectives.

If a Bushfire Hazard Level assessment has already been prepared at a higher stage of planning, it may be used and updated with more locally specific content at this stage.

The Bushfire Hazard Level assessment should be used to allocate permissible land uses away from extreme hazard areas and flag where further assessment of the bushfire risk is required. Areas where a hazard level of extreme exists or is expected should generally not be identified for further development, intensification or rezoning. Should such an area be identified for development, it should be clearly stated that further bushfire risk management planning is required to reduce the hazard level before development, intensification or rezoning may be considered.

Where relevant, local planning strategies should identify areas where, due to the age and/or general nature of existing development, non-compliance with SPP 3.7 is expected if future development occurs. Enhanced bushfire risk management measures should be incorporated at future planning and development stages to provide improved community protection in the form of improved access, water infrastructure, emergency services and vegetation management.

With consideration given to how compliance with the bushfire protection criteria can be achieved in subsequent planning stages, a local planning strategy should specifically address the following issues:

- the location of bushfire prone areas and the need for further assessment of the hazard in such areas;
- the avoidance of land use and development intensification in any areas likely to maintain or generate a hazard level of extreme;
- fire fighting infrastructure;
- the existing and proposed road network, and its likely effectiveness in a bushfire emergency;
- biodiversity issues, their interrelationships with bushfire prone areas and means of protection for areas with high conservation values; and
- the location of any vulnerable or high-risk land uses within identified bushfire prone areas and whether such uses may require management strategies to be prepared.

## 5.2.4 LOCAL PLANNING SCHEMES AND AMENDMENTS

Local planning schemes provide a mechanism to prevent development in inappropriate locations through suitable zoning and land use permissibility controls, consistent with strategic-level planning documents.

All local planning schemes include the deemed provisions relating to bushfire risk management as set out in the LPS Amendment Regulations 2015 at Schedule 2, Part 10A, Clauses 61(3) 78A–78G. Where considered appropriate, local planning schemes may include additional subdivision and development requirements related to bushfire risk management in line with the policy measures in SPP 3.7 and Planning Bulletin 111/2015, as amended (WAPC 2015). Clause 78B (2) of the LPS Amendment Regulations 2015 specifically acknowledges that requirements relating to development in a bushfire prone area contained within a special control area will apply, in addition to the provisions contained within the LPS Amendment Regulations 2015.

When reviewing a local planning scheme, the zoning tables should be reviewed to ensure that the type of development permissible through the zoning table is compatible with the level of risk associated with any identified bushfire hazard in the local planning strategy. Vulnerable and high-risk land uses within bushfire prone areas should be given special consideration. The locations where these types of uses are not permitted may be listed in a schedule of the local planning scheme in order to establish strengthened bushfire risk management measures. These should form part of a special control area. Where a use is likely to have a hazard level of extreme that cannot be addressed through an amended planning proposal or approval conditions, there may be a need to establish it as a restricted use area.

New local planning schemes and scheme reviews containing bushfire prone areas are to be accompanied by a Bushfire Hazard Level assessment and, where there are areas identified as moderate or extreme, a Bushfire Management Plan. The scheme should be referred to the Department of Fire and Emergency Services for advice as well as the Department of Environment Regulation and the Department of Parks and Wildlife if any vegetation removal is proposed.

#### 5.2.4.1 LOCAL SCHEME AMENDMENTS WITHIN BUSHFIRE PRONE AREAS

For scheme amendments proposing the rezoning of an area, consideration should be given to whether the rezoning will increase the bushfire risk in that area. Bushfire risk may be increased by introducing higher fuel loads or changing the land use intensity or vulnerability, particularly through increased residential development and settlement.

**Land use intensification in bushfire prone areas refers to proposals that would expose a greater number of individuals to a bushfire. Land use intensification in extreme bushfire hazard areas is strongly discouraged.**

A conservative approach should be taken in relation to any proposed local planning scheme or amendment which proposes to facilitate intensified settlement or development; in particular rural residential subdivisions within a bushfire prone area. All rezoning amendments in bushfire prone areas should be accompanied by a Bushfire Hazard Level assessment. The rezoning proposal should demonstrate that the land proposed to be rezoned has, or can be made to have, a low to moderate bushfire hazard level. For scheme amendments where the potential lot layout is already proposed, a BAL Contour Map showing the indicative BAL ratings is required, instead of a Bushfire Hazard Level assessment, to provide more detailed information with respect to the extent of the potential impacts on individual lots.

The supporting documentation for the scheme amendment should identify any issues arising from the bushfire risk assessment/s and consider how compliance with the bushfire protection criteria can be achieved in subsequent planning stages. This is to be in the form of a Bushfire Management Plan.

Where a local planning scheme amendment has been endorsed by the Western Australian Planning Commission prior to the publication of SPP 3.7 and does not contain bushfire risk management measures, discretion may be required for subsequent determinations based on the precautionary principle in such instances, as the SPP is not intended to be retrospectively applied.

#### 5.2.4.2 SPECIAL CONTROL AREAS WITHIN BUSHFIRE PRONE AREAS

Special control areas are a tool used by local government to identify areas which are significant for a particular reason and where special provisions may need to apply. They are shown on the scheme map in addition to the zones and reserves that apply to the land, essentially creating a layer that operates as an overlay to the scheme map. In this regard, a local planning scheme amendment may be initiated to create special control areas that provide for special consideration of bushfire-related issues within specific locations.

This might include the provision of:

- more detailed bushfire hazard mapping where it exists, to the extent it is consistent with the *Map of Bush Fire Prone Areas*; and/or
- additional requirements in relation to bushfire risk assessment and management, for instance, the provisions could require that all Bushfire Management Plans, Bushfire Hazard Level and BAL assessments are prepared by an accredited individual.

The special control area provisions should set out the purpose and objectives of the special control area, any specific development requirements, the process for referring applications to relevant agencies and matters to be taken into account in determining development proposals. Local governments proposing to initiate a special control area for bushfire purposes are encouraged to liaise with the Western Australian Planning Commission and the Department of Fire and Emergency Services prior to lodging their scheme amendment.

#### 5.2.4.3 USING LOCAL PLANNING POLICIES TO ADDRESS BUSHFIRE

Local planning policies are prepared by local governments to help inform and guide the preparation, assessment and discretionary decision-making of planning applications at the local government level. Local planning policies relating to bushfire risk management can complement a local planning scheme's bushfire provisions. This includes the deemed provisions relating to bushfire risk management and may be used as a means of clarifying the application of SPP 3.7 and the Department of Fire and Emergency Services requirements for a particular locality.

Local planning policies do not form part of a local planning scheme and have no statutory weight. As such, they cannot be used to establish mandatory development requirements or override scheme provisions. However, they may be given 'due regard' in planning decision-making. Local governments may choose to adopt additional bushfire scheme provisions if they wish to impose mandatory development requirements to strengthen bushfire protection measures within their locality.

In a bushfire planning context it is recognised that carefully drafted local planning policies may be useful to provide additional guidance or locally specific acceptable solutions in addition to those contained in the bushfire protection criteria (Appendix 4). For example, they may include particular fuel loads and fire break requirements that are not appropriate for inclusion in a mandatory scheme provision.

Local governments are encouraged to refer their local planning policies that address bushfire issues to the Western Australian Planning Commission and the Department of Fire and Emergency Services for advice prior to being adopted and implemented. In finalising the draft local planning policy, the local government is to consider any advice received and incorporate it into the final document. If advice is not incorporated and the local planning policy is made inconsistent with SPP 3.7 or these Guidelines, then SPP 3.7 and these Guidelines will prevail in any areas of conflict or interpretation. In such instances, the local planning policy will be open to legal challenge in addition to any right of review as provided for under Part 14 of the *Planning and Development Act 2005*.

### 5.2.5 LOCAL STRUCTURE PLANS AND MASTER PLANS

Local structure plans are non-statutory documents that are to be given 'due regard' in decision-making. Structure plans are approved by the Western Australian Planning Commission. Any subdivision or development application is generally required to be in accordance with an approved structure plan.

Structure plans are to be accompanied by a Bushfire Management Plan, which includes a Bushfire Hazard Level assessment or BAL Contour Map. In most cases, as the lot layout will be already determined, a BAL Contour Map showing the indicative BAL ratings will

be more appropriate as this can provide more detailed information with respect to the extent of the potential impacts on individual lots. It is strongly recommended that the Bushfire Management Plan is prepared by an accredited Bushfire Planning Practitioner. It is important that structure plans consider the requirements of the bushfire protection criteria at this level, to ensure that Hazard Separation Zones and Asset Protection Zones can be established at a subsequent planning stage.

Specifically, the following issues should be addressed in the Bushfire Management Plan as part of the preparation of a structure plan that includes bushfire prone areas:

- location of bushfire prone areas within and adjacent to the structure plan area and the need for further assessment of the risk in such areas;
- avoidance of land use and development intensification in any areas likely to maintain or generate a hazard level of extreme;
- existing fire fighting infrastructure such as response or suppression capacity, water tanks, brigades etc.;
- existing and proposed road network, its' likely effectiveness in a bushfire emergency, and any gaps in the local access network from a bushfire safety perspective;
- biodiversity issues and their interrelationships with bushfire prone areas;
- means of protection for areas with high conservation values to accommodate biodiversity objectives such as, adequate separation from existing or proposed buffers for wetlands and foreshores;
- accommodation of biodiversity objectives such as, adequate separation from existing or proposed buffers for wetlands and foreshores; and
- location of any vulnerable or high-risk land uses within identified bushfire prone areas and whether such uses may require management strategies to be prepared.

Where staged development is proposed, structure plans should make provision for all bushfire protection criteria to be met during all stages of development. That is, bushfire risk management should not be conditional to a subsequent stage being developed. Any applicable staging plan, as well as local development plan, should ensure that development can be logically progressed and the overall bushfire risk managed. Specifically,



the structure plan should identify and avoid pockets of development within unmanaged bushland, include the location of all access roads in and out of the development, and allow sufficient vegetation modification and/or clearing to ensure all lots within the approved stages are reasonably protected from bushfire hazards.

Where the opportunity arises, bushfire risk management measures could be established to enhance community resilience for surrounding development, such as the provision of an additional access road or increased water availability for fire fighting.

Where a structure plan has been endorsed by the Western Australian Planning Commission prior to the publication of SPP 3.7 and does not contain bushfire risk management measures, discretion may be required for subsequent approvals based on the precautionary principle. Where little or no subdivision has taken place and/or the majority of the area is yet to be developed, the local government are advised to work with the proponent to consider best practice in bushfire risk management and amend the designs to achieve outcomes that align with policy objectives of SPP 3.7 and these Guidelines where possible.

## 5.3 SUBDIVISION IN BUSHFIRE PRONE AREAS

A well-designed subdivision can greatly reduce the exposure of people, property and infrastructure to bushfire hazard and assist in bushfire mitigation activities, suppression operations and community recovery before and during a bushfire event.

Subdivision proposals should be used as an opportunity to consider the location, siting and design, vehicular access and water infrastructure available to the lots to achieve a combination of bushfire protection measures.

Subdivisions in bushfire prone areas should:

- be located within close proximity to existing settlements;
- minimise the interface between the subdivision area and the bushfire hazard;
- avoid placing development on steep slopes;
- provide for at least two safe access routes;

- consider landscape plans to ensure public open space and reserves avoid increasing the threat of bushfire to new and existing properties;
- carefully consider the creation and location of vegetation corridors where they may enable a passage of fire to enter the subdivision area;
- consider establishing or retaining recreational areas to have a dual purpose as public refuge areas and/or separation areas;
- have access to adequate water and infrastructure; and
- new development should be located in existing cleared areas wherever possible to minimise exposure to the bushfire hazard and avoid the need for further vegetation clearing.

### 5.3.1 APPLYING FOR SUBDIVISION

All subdivision applications in bushfire prone areas are to be lodged with a Western Australian Planning Commission Application Form 1A that ticks the box '*bushfire prone area*' and is to be accompanied by a BAL Contour Map that indicates the likely BALs for the proposed lots. If a BAL Contour Map does not exist then a BAL assessment for each individual lot may be used on smaller scale subdivisions. A BAL assessment for smaller subdivisions may be more cost effective than producing a BAL Contour Map. If a Bushfire Hazard Level assessment was prepared at an earlier stage, this should also be included.

Bushfire hazard issues arising from the BAL Contour Map should be identified and an assessment undertaken against the bushfire protection criteria of these Guidelines. If all of the proposed lots have a BAL-LOW indicated, a Bushfire Management Plan is not required.

If the BAL Contour Map or BAL assessment indicates any lots will have a BAL-12.5 to BAL-29, a Bushfire Management Plan is required to be submitted with the subdivision application. The subdivision of lots where a BAL-40 or BAL-FZ will apply should only be considered if it meets the definition of unavoidable development. If a Bushfire Management Plan was prepared in a prior planning stage, it may be used if current (refer to section 4.6) and updated with the appropriate level of detail.

Lot layout should provide for adequate separation from existing or proposed buffers for wetlands, foreshores and other conservation areas. Where revegetation is required, consideration should be given to the

bushfire threat implications of a fully vegetated area. Agreements between neighbouring landowners/proponents in order to meet a specific BAL rating are not supported, as approvals relate to the subject property and there is no legal basis for the decision-maker or any other public agency to enforce compliance by the adjoining landowner/proponent. However, exceptional circumstances will be considered where hazard separation areas are already in place (such as maintained parks and gardens or low threat vegetation as defined in AS 3959).

In a staged subdivision, at least two access routes (public roads) providing safe access or egress to two different destinations and all emergency access ways should be constructed in the first stage. Lots should either include a 100 metre buffer to bushfire prone vegetation or comply with the bushfire construction requirements of the Building Code of Australia appropriate to the current BAL rating (with the exception of BAL-40 or BAL-FZ which are not acceptable on planning grounds). This applies regardless of whether there are any stages to be constructed in the future, or if adjoining land is to be developed at a later time and that would result in a reduction in the current BAL rating of the existing lots. As long as the hazard exists, the bushfire construction requirements of the current BAL apply.

Where subdivision proposals contain features that do not comply with the acceptable solutions in the bushfire protection criteria (i.e. alternative solutions are proposed), the proposal should only be supported where the landowner/proponent provides written advice in support of the proposal from the relevant local government and the Department of Fire and Emergency Services. Subdivision applications that propose to create lots where construction levels of BAL-40 or BAL-FZ would be necessary are unlikely to be supported unless they meet the definition of unavoidable development.

When a subdivision has been designed in accordance with an endorsed structure plan that did not include consideration of bushfire risk, the decision-maker will need to apply the precautionary principle in determining the application, having regard to SPP 3.7 and the bushfire protection criteria contained in these Guidelines. There may be situations where information becomes available subsequent to the approval of structure plans which warrant planning measures being taken to address previously unidentified hazards. This may include refusal of subdivision deemed inappropriate on the grounds of bushfire risk.

### 5.3.2 BUSHFIRE SUBDIVISION CONDITIONS

Policy measure 6.10 refers to the Western Australian Planning Commission's ability to impose conditions relating to bushfire risk management on subdivision applications. The Western Australian Planning Commission has a set of model subdivision conditions and advice notes that are typically applied to subdivision approvals.

The following type of condition may be imposed:

- **prepare and implement an approved detailed plan demonstrating the location and capacity of fire emergency infrastructure.** This condition ensures the provision of fire emergency infrastructure in new streets.
- **that a notification on title be placed on proposed lots that are in a designated bushfire prone area and may be subject to a Bushfire Management Plan.** This condition ensures that landowners/proponents (and prospective purchasers) are aware that their lot is in a designated bushfire prone area. The notification on title is only required for new lots created where BAL-12.5 or above is indicated on the BAL Contour Map. If a Bushfire Management Plan was required as a condition of the subdivision or has accompanied a subdivision application, the notification on title may also include that the site is subject to a Bushfire Management Plan.
- **complete a compliance certificate/report for the BAL Contour Map relating to the approved subdivision, before the issuing of titles.** This condition allows any future decision-makers to have confidence that a BAL Contour Map, prepared prior to the approval of a subdivision application is still valid for use at future development or building permit supplication stages.

It should be noted that the Western Australian Planning Commission has the discretion to include additional bushfire risk management related conditions in addition to the types listed above.

### 5.3.3 CLEARING OF CONDITIONS FOR AN APPROVED SUBDIVISION

This stage of the planning process involves clearing subdivision conditions applied by the Western Australian Planning Commission. Local government plays an important role in this process as the clearing agency for the majority of subdivision conditions.

The local government or relevant decision-maker is responsible for contacting the Office of Bushfire Risk Management to advise of any changes to the *Map of Bush Fire Prone Areas* arising as a result of the development, as per the annual review procedures outlined in the *Mapping Standard for Bush Fire Prone Areas*.

## 5.4 DEVELOPMENT APPLICATIONS IN BUSHFIRE PRONE AREAS

All development applications<sup>4</sup> in bushfire prone areas are to be accompanied by a BAL assessment. Where a BAL Contour Map has been prepared for the subject site for a previous subdivision approval, this may be used in place of a BAL assessment providing it is at a scale that is appropriate for the development (refer to Appendix 3). BAL Contour Maps should be prepared by an accredited Bushfire Planning Practitioner, while BAL assessments should be completed by an accredited Level 1 BAL Assessor or an accredited Bushfire Planning Practitioner. A BAL assessment completed by an individual other than an accredited person in accordance with AS 3959, may be approved if the development is for a single house or ancillary dwelling on land that is located more than 50 kilometres from a gazetted town site or in accordance with section 3.2.1, at the discretion of the decision-maker.

The LPS Amendment Regulations 2015 and SPP 3.7 specifically exclude development applications for single houses and ancillary dwellings on a lot or lots less than 1,100m<sup>2</sup> from requiring further assessment. In these situations, planning can only play a limited role in reducing the bushfire risk to those properties. Where lots of less than 1,100m<sup>2</sup> have already been created, the application of the appropriate construction standard at the building permit stage is the instrument used to

reduce the residual bushfire risk to those properties. In all instances, the assessment of future planning proposals will aim to ensure that lots are not created in areas that pose an unacceptable risk to property.

The development application is to include:

- a BAL Contour Map or a BAL assessment;
- the identification of any issues arising from the BAL Contour Map or BAL assessment; and
- an assessment against the bushfire protection criteria contained within these Guidelines demonstrating compliance within the boundary of the development application.

When assessing development applications in bushfire prone areas decision-makers are to consider:

- the existing requirements of the relevant scheme;
- the objectives and policy measures contained in SPP 3.7 and these Guidelines, including the bushfire protection criteria;
- any existing Bushfire Hazard Level assessment, BAL Contour Map, BAL assessment or similar existing document in relation to the subject site;
- any applicable or indicative BAL for the subject site;
- the vulnerability or high risk nature of the land use;
- the proximity of the site to existing settlement areas;
- the capacity of existing fire fighting infrastructure; and
- any existing local biodiversity strategy or conservation plan.

Where all bushfire protection criteria contained in these Guidelines have been met, the development application is considered to be compliant with the requirements of SPP 3.7. Compliance with the bushfire protection criteria will be required in all instances, unless the proposal is considered to be minor development or unavoidable development in accordance with policy measure 6.7.

<sup>4</sup> Excluding development applications for single houses and ancillary dwellings on a lot or lots less than 1,100m<sup>2</sup>.

#### 5.4.1 MINOR DEVELOPMENT IN AREAS WHERE BAL-40 OR BAL-FZ APPLIES

Minor development<sup>5</sup> as outlined in policy measure 6.7.1 of SPP 3.7 refers to the development of land on an existing lot in a predominantly residential built-out area, that may or may not have been subject to consideration of bushfire threat in the past, and for which compliance with SPP 3.7 cannot be achieved. In most cases, this type of development will be constrained by pre-existing lot layout and nearby existing land uses. Consequently, each proposal should be given a merit-based assessment based on the principles outlined in policy measure 6.7.1.

In addition to the requirements for development applications, an application should demonstrate to the fullest extent possible how the bushfire protection criteria have been addressed and provide justification for any criteria that cannot be fully met. It is not sufficient to simply state that the criteria cannot be met. The desire for views or privacy may also conflict with the objectives of SPP 3.7; however, the siting of buildings should always be optimised to reduce the impact of bushfire.

The precautionary principle remains applicable to minor development applications. It may be that some sites have poor access, inadequate water supply, are in a remote location or on sloping topography which would pose an unacceptable risk even if the development was constructed to AS 3959. In these instances, there is a strong argument for refusal of the proposal even when it meets the definition of minor development. However, each case will be assessed on its merit.

Over time, existing developments may be re-purposed to accommodate another land use. Applications for a change of land use in bushfire prone areas requires consideration of whether land use intensification will occur and therefore require upgrades to water infrastructure or access routes, and so on. The precautionary principle should be applied in such instances to ensure that a change of land use does not increase the risk of bushfire impacting on people or property.

### 5.5 PROPOSING A VULNERABLE LAND USE IN A BUSHFIRE PRONE AREA

#### 5.5.1 VULNERABLE LAND USES

Policy measure 6.6 of SPP 3.7 applies to vulnerable land uses, and refers specifically to subdivision and development applications. However, if a scheme amendment or structure plan identifies a site for a vulnerable land use, then the policy requirements should be addressed.

Typically, vulnerable land uses are those where persons may be less able to respond in a bushfire emergency. These can be categorised as one or more of the following:

- land uses and associated infrastructure that are designed to accommodate groups of people with reduced physical or mental ability such as the elderly, children (under 18 years of age), and the sick or injured in dedicated facilities such as aged or assisted care, nursing homes, education centres, family day care centres, child care centres, hospitals and rehabilitation centres;
- facilities that, due to building or functional design, offer limited access or the number of people accommodated may present evacuation challenges, such as corrective institutions (prisons) and detention centres;
- short stay accommodation or visitation uses that involve people who are unaware of their surroundings and who may require assistance or direction in the event of a bushfire, such as bed and breakfast, caravan park and camping ground, holiday house, holiday accommodation, home business, serviced (short stay) apartment, tourist development and workers' accommodation.

##### 5.5.1.1 RESIDENTIAL-BASED LAND USES CONSIDERED MINOR DEVELOPMENT

Where a proposed use will be contained within an existing single residential development or ancillary dwelling or associated outbuilding, and at a scale consistent with that of a typical existing residential dwelling, there may be reason for these to be treated as 'minor development' (refer to the definition in SPP 3.7). These uses may include bed and breakfast, family day care or home business.

<sup>5</sup> LPS Amendment Regulations 2015 exclude development applications for single houses and ancillary dwellings on a lot or lots less than 1,100m<sup>2</sup>.



It is recognised there may be limited ability to achieve the bushfire protection criteria for existing residential development, however if deemed to be 'minor development' and where full compliance with clause 6.5 of SPP 3.7 cannot be achieved, if justification can be provided, there may be cause to support the proposal. It will be necessary to address clause 6.7.1 of SPP 3.7.

Consideration should also be given to emergency evacuation and included within the statement against the bushfire protection criteria or bushfire management plan. This should reflect the nature and scale of the development.

If the proposal does not constitute 'minor development', it should adhere to policy measure 6.2 of SPP 3.7.

### 5.5.2 DEVELOPING A BUSHFIRE EMERGENCY EVACUATION PLAN

In the event of an emergency, many buildings have procedures to assist in the evacuation of occupants to an assembly point in the immediate vicinity of the building. Emergency evacuation plans prepared in accordance with Australian Standard 3745-2010 'Planning for Emergencies in Facilities' (AS 3745-2010) and Australian Standard 4083-1997 'Planning for Emergencies – Health Care Facilities' (AS 4083-1997), generally do not address situations where, in the event of a bushfire it may be more practicable to remain in the building or to relocate by vehicle to a safe area beyond the immediate vicinity. Bushfire considerations can be considered in a stand-alone document or can form part of an emergency evacuation plan, prepared in accordance with AS 3745-2010 or AS 4083-1997.

SPP 3.7 states "*provision for emergency evacuation should be provided at the subdivision stage and an Emergency Evacuation Plan should be prepared at the development application stage*".

At the **subdivision stage** there is likely to be limited detail on the occupancy arrangement for the proposed development, however it should be demonstrated that in the event of a bushfire, emergency evacuation will be possible. This may include consideration of the wider road network and the remoteness of the development.

At the **development application stage** an emergency evacuation plan should provide detailed site specific information. The bushfire risk will include an assessment of the vulnerability of the development and location, and the extent of the hazard. This includes consideration of the bushfire risk beyond the immediate site.

The emergency evacuation plan should be concise and consider:

- the number of people at the facility
- whether the occupants are permanent or transient
- whether there is a caretaker onsite
- whether there are people with a disability, medically dependent, young children or the elderly
- identification of a safe alternative location if there was a need for evacuation/relocation
- a proposed method of movement of occupants to safe location(s)
- details of suitable access/egress routes for the expected type/volume of traffic, including alternatives when suitable roads are inaccessible, insufficient or inappropriate
- transport options for those without access to private vehicles
- options to shelter in place as a last resort<sup>6</sup>
- roles and responsibilities of facility personnel and emergency services.

The emergency evacuation plan should consider if actions will change based on a series of triggers, such as:

- effective warning methods appropriate for the occupants (including consideration of at risk persons and the demographics of the occupants)
- closure of facility and early relocation of occupants appropriate to the fire danger rating (FDR) and bushfire warnings
- any local government bushfire requirements (for example, harvest and vehicle movement bans).

A suitably qualified emergency management professional should prepare the emergency evacuation plan in collaboration with relevant stakeholders including the landowner/developer and the local government (refer to section 6.14 of the Guidelines).

<sup>6</sup> should be limited to vulnerable land uses where functional requirements or reduced physical or mental ability may cause evacuation challenges.

## 5.6 PROPOSING A HIGH-RISK LAND USE IN A BUSHFIRE PRONE AREA

SPP 3.7 recognises that vegetation is not necessarily the only fuel in a bushfire event and that certain land uses may potentially ignite a bushfire, prolong its duration, or increase its intensity. Such uses may also expose the community, fire fighters and the environment to dangerous, uncontrolled substances during a bushfire event. High-risk land uses may include, but are not limited to: service stations, landfill sites, bulk storage of hazardous materials, fuel depots and certain heavy industries as well as military bases, power generating land uses, saw-mills, highways and railways, among other uses meeting the definition.

Proposals for non-residential, high-risk land uses in bushfire prone areas are to comply with policy measure 6.6 which requires a Bushfire Management Plan jointly endorsed by the local government and the Department of Fire and Emergency Services. This may include establishing an appropriate Asset Protection Zone or Hazard Separation Zone, and should be supported by a risk management plan that addresses bushfire risk management measures for any flammable on-site hazards. It may determine that a reduction in on-site flammable material or appropriate storage of such material, would be required to reduce the threat, among other considerations.

Local governments should consider identifying high-risk land uses as restricted uses in a schedule of a special control area in order to establish strengthened bushfire risk management measures for such uses.

The bushfire construction requirements of the Building Code of Australia only apply to certain types of residential buildings (being Class 1, 2 or 3 buildings and/or Class 10a buildings or decks associated with a Class 1, 2 or 3 building) in designated bushfire prone areas.

As such, AS 3959 does not apply to all buildings. Only vulnerable or high-risk land uses that fall within the relevant classes of buildings as set out in the Building Code of Australia will be required to comply with the bushfire construction requirements of the Building Code of Australia. As such, the planning process focuses on the location and siting of vulnerable and high risk land uses rather than the application of bushfire construction requirements.

## 5.7 UNAVOIDABLE DEVELOPMENT IN A BUSHFIRE PRONE AREA

SPP 3.7 policy measure 6.7.2 states there is a presumption against approving any strategic planning proposal, subdivision or development application<sup>7</sup> that will result in the introduction or intensification of development or land use in an area that has or will, on completion, have an extreme bushfire hazard level and/or where BAL-40 or BAL-FZ applies unless it meets the definition of unavoidable development.

For the purposes of this policy, unavoidable development is defined as *“development that in the opinion of the decision-maker represents exceptional circumstances where full compliance with SPP 3.7 would be unreasonable as no alternative location exists and it can be proven that it is not contrary to the public interest”*. In all instances, the intent of the bushfire protection criteria, as outlined in these Guidelines, should be met.

There would be an extremely limited number of proposals deemed unavoidable development. For example, proposals for intensification of development or land uses, such as rural-residential development or an increase in residential densities would not be considered unavoidable development.

Unavoidable development may include critical State infrastructure such as railway lines, telecommunication facilities, electricity infrastructure and associated development, development associated with the preservation of historical or cultural sites, or emergency services such as evacuation centres, fire stations/brigades, police or ambulance facilities.

Applications for unavoidable development will only be supported where they meet the policy requirements of SPP3.7. It is the landowner/proponent's responsibility to justify why their proposal should be considered as unavoidable development. In such cases the proponent must also identify how significant reductions in the bushfire risk level to the community can be achieved. In addition, provide a clear indication of the benefits and how these outweigh the costs to adjacent landowners/proponents, government and the general community. The application must also be accompanied by a Bushfire

<sup>7</sup> Excluding development applications for single houses and ancillary dwellings on a lot or lots less than 1,100m<sup>2</sup>.

Management Plan jointly endorsed by the relevant local government and the Department of Fire and Emergency Services. In the absence of sufficient justification the proposal will not be supported.

## 5.8 PLANNING APPROVALS AND BUILDING PERMITS IN WESTERN AUSTRALIA

Given the strong relationship between planning and building to development in bushfire prone areas, this section identifies the operational stages of the planning process as it relates to development applications on individual lots. Specific enquiries on the building permit stage should be directed towards the relevant local government's building department.

Under the *Building Act 2011* and its associated *Building Regulations 2012*, the majority of development in Western Australia requires a building permit before construction can commence. This process typically occurs after the planning process. The building legislation also adopts the Building Code of Australia as the minimum technical requirements for the design and construction of buildings and certain other structures in Western Australia. The Building Code references a number of other documents, such as Australian Standards, as ways of demonstrating compliance with the mandatory performance requirements.

### 5.8.1 HABITABLE BUILDINGS AND SPECIFIED BUILDINGS

The LPS Amendment Regulations 2015 specifically require development involving single houses or ancillary dwellings on sites of 1,100m<sup>2</sup> or greater, and any other habitable and specified buildings regardless of lot size, to undertake a BAL assessment where a BAL Contour Map does not exist. Development approval is required where the BAL is BAL-40 or BAL-FZ (Figures 8 and 9). This applies regardless of whether any existing exemptions under the scheme exist. If planning approval is required it should be obtained prior to submitting the building permit application.

The LPS Amendment Regulations 2015 specifically exempt alterations, extensions and additions from requiring planning approval.

### 5.8.2 RESIDENTIAL BUILDINGS (CLASS 1, 2 OR 3 BUILDINGS AND ASSOCIATED CLASS 10A BUILDINGS AND DECKS) IN BUSHFIRE PRONE AREAS

The Building Code of Australia contains bushfire construction requirements that are applied to residential classes of development, being Class 1, 2, 3 buildings in designated bushfire prone areas, or Class 10a buildings or decks associated with Class 1, 2 or 3 buildings in designated bushfire prone areas. In general, the Building Code requires these buildings to be designed and constructed to reduce the risk of ignition from a bushfire, appropriate to the potential for ignition from burning embers, radiant heat and flame, and the intensity of the bushfire attack on the building.

The Building Code of Australia references AS 3959 as a deemed to satisfy solution that provides one way of demonstrating compliance with the Building Code's bushfire performance requirements. AS 3959 provides specific construction requirements for buildings in bushfire prone areas to improve resistance to bushfire attack setting out:

- the process of assessing and determining a BAL; and
- applicable construction requirements for a building, based on the assigned BAL.

The bushfire construction requirements of the Building Code of Australia are only triggered for applicable classes of buildings when those buildings are located in a bushfire prone area designated under law (refer to Part 3: Identifying bushfire prone areas). Once an area is identified as being a designated bushfire prone area, the person responsible for building works (i.e. the builder named on the building permit) is responsible for ensuring that the building complies with the bushfire construction requirements of the Building Code. The local government has the necessary statutory power to enforce these requirements.

The registered building surveyor for a Class 1, 2 or 3 building in designated bushfire prone area, or 10a building or deck associated with Class 1, 2 or 3 building in designated bushfire prone area, may require the preparation of a BAL assessment under the requirements of the Building Code of Australia to determine relevant construction provisions as part of the building approval

process. Where a BAL Contour Map exists for a previous subdivision approval, this may be used in place of a site-specific BAL assessment at the discretion of the registered building surveyor.

An accredited Level 1 BAL Assessor or Bushfire Planning Practitioner may only provide general advice on the bushfire construction requirements contained in AS 3959. Specific queries regarding bushfire construction requirements should be directed to a registered building surveyor, who is required to certify compliance with the Building Code of Australia, including any bushfire construction requirements. The relevant local government's building department or the Building Commission may be contacted for general information on the application of AS 3959.

For development of Class 1, 2 or 3 buildings or Class 10a buildings or decks associated with Class 1, 2 or 3 buildings in a bushfire prone area, the bushfire construction requirements of the Building Code of Australia will be applied at the building permit stage irrespective of the planning assessment process.

### 5.8.3 ALL OTHER BUILDINGS (CLASS 4 TO CLASS 9 BUILDINGS)

In the local planning scheme, Class 4 to Class 9 buildings usually require planning approval. The planning process will apply the bushfire protection criteria to ensure that the optimal outcome is achieved for bushfire protection, such as appropriate siting of the building on the lots/s, the provision of water tanks and passing bays, and so on.

The bushfire construction provisions of the Building Code of Australia do not apply to Class 4 to Class 9 buildings. In these instances the applicant has the discretion to utilise any or all of the elements of AS 3959 in the construction of the building that they deem appropriate.

### 5.8.4 SHEDS AND DECKS (CLASS 10A)

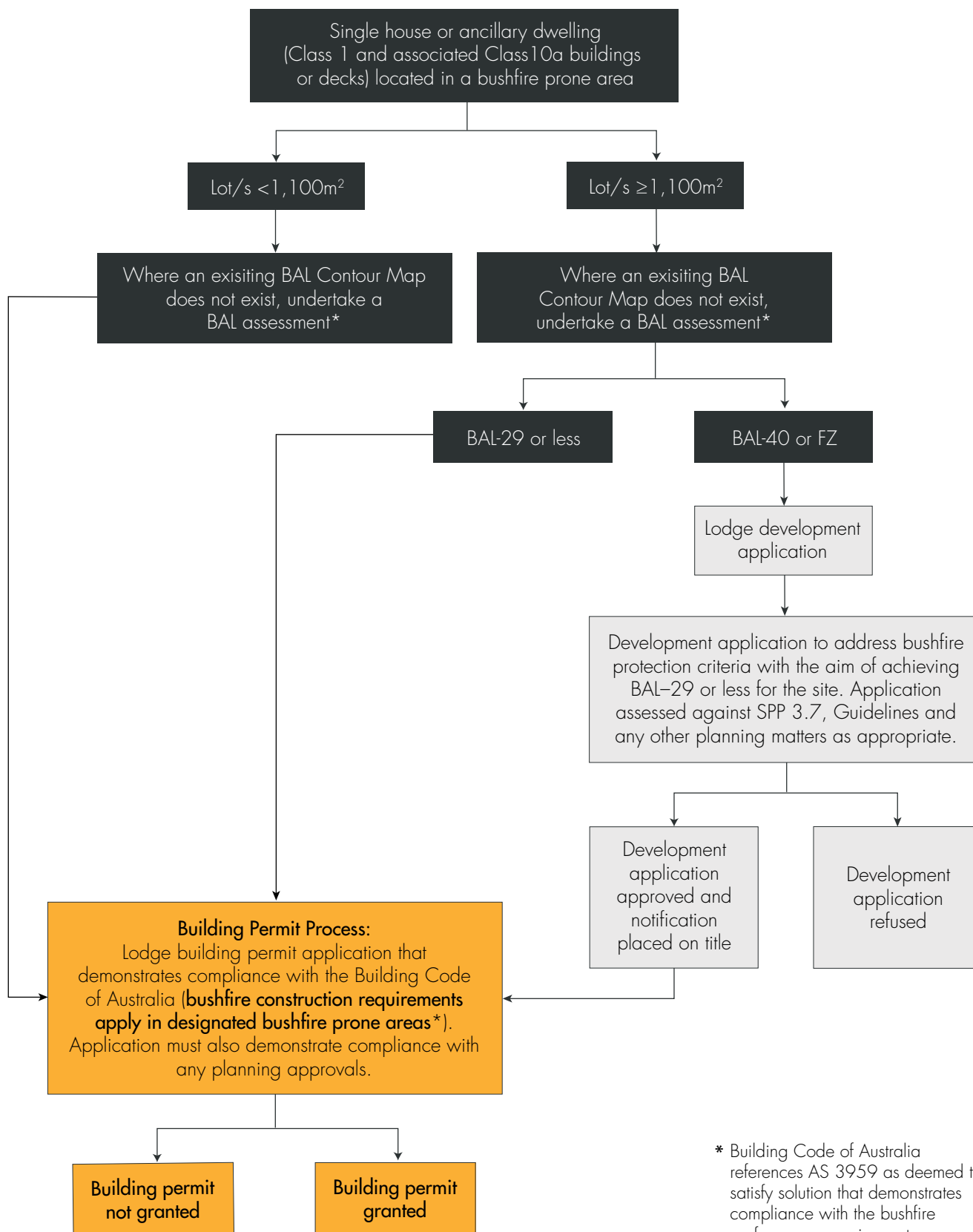
Under the LPS Amendment Regulations 2015, unless a shed is a specified building or is used for a habitable purpose, planning approval in BAL-40 or BAL-FZ is not required.

Typically, when a shed is associated with a dwelling it may be classed as a Class 10a structure under the Building Code of Australia. This requires the bushfire construction requirements of the Building Code to be applied through the building permit process.

For a non-habitable shed not associated with a dwelling, no planning approval is required unless the scheme requires it. Similarly, the bushfire construction requirements under the Building Code of Australia do not apply if the shed is not associated with the main dwelling. Therefore, an Asset Protection Zone is not required in these instances.

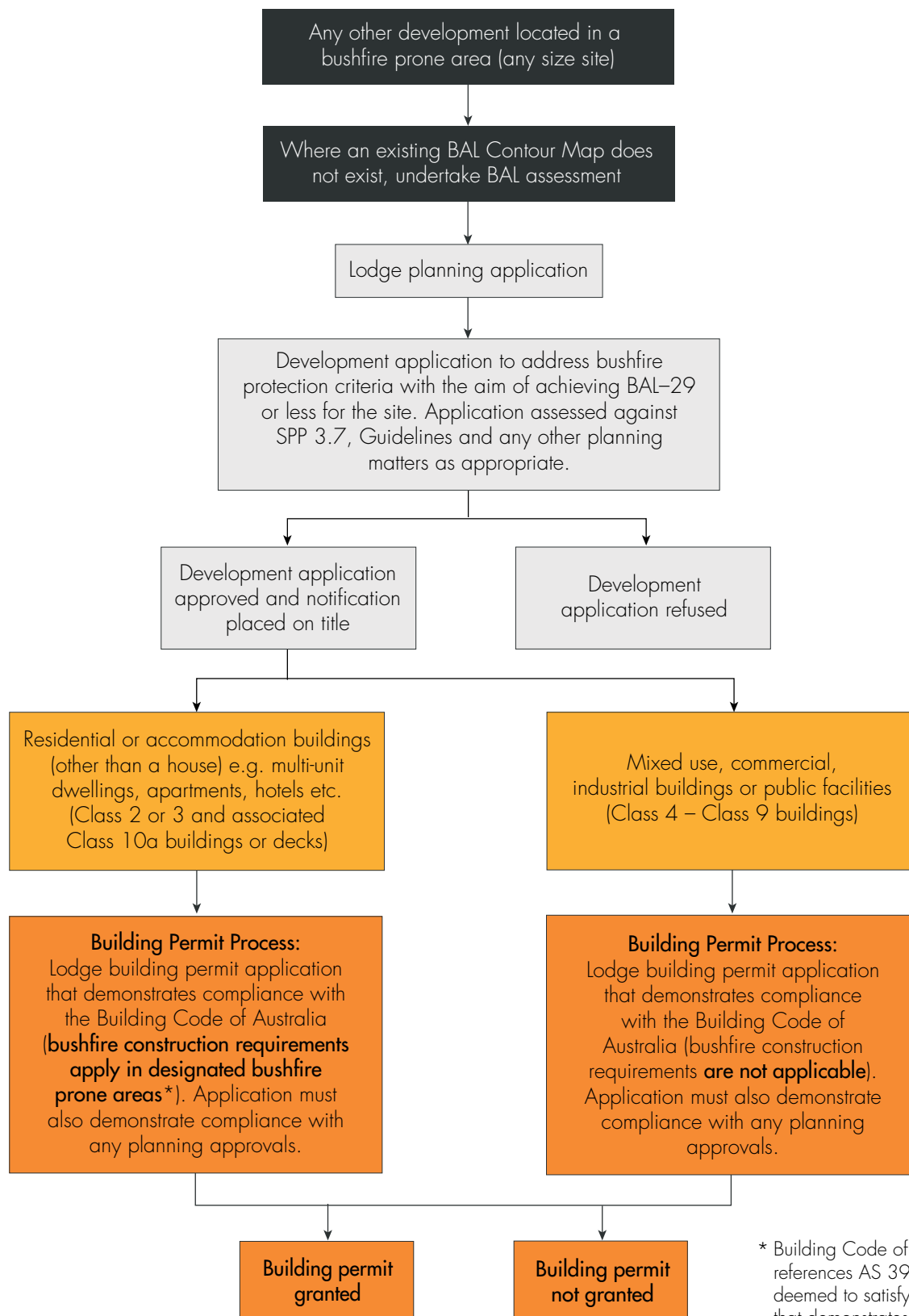


**Figure 8:** Application process for single houses and ancillary dwellings in designated bushfire prone areas



\* Building Code of Australia  
references AS 3959 as deemed to  
satisfy solution that demonstrates  
compliance with the bushfire  
performance requirements.

**Figure 9:** Application processes for all other buildings in designated bushfire prone areas



\* Building Code of Australia references AS 3959 as deemed to satisfy solution that demonstrates compliance with the bushfire performance requirements.

## 5.9 OTHER BUSHFIRE PROTECTION MEASURES NOT COVERED IN THE BUSHFIRE PROTECTION CRITERIA

### 5.9.1 PRIVATE BUSHFIRE SHELTERS (BUSHFIRE BUNKERS)

The installation of a well-designed and constructed private bushfire shelter has the potential to provide a level of protection from a bushfire while the fire front passes. However, private bushfire shelters are not a stand-alone solution and they will not guarantee elimination of the risk of serious injury or fatality, and their use should be considered with extreme caution. The existence of a private bushfire shelter does not remove the need for the policy objectives and measures of SPP 3.7, these Guidelines or building construction standards to be applied to the site.

The 2009 Victorian Bushfires Royal Commission stated that *"extreme caution should be taken in the use of bushfire bunkers as part of a household's fire plan. While a well-designed and constructed bunker may provide a temporary place of refuge during the passage of the fire front, bunkers are not a panacea. Misplaced reliance on a bunker can be life threatening"*.

Currently, the Building Code of Australia classifies private bushfire shelters as a non-habitable Class 10c structure. The Building Code contains performance requirements that apply to the construction of private bushfire shelters. Where a private bushfire shelter is installed, it must comply with the requirements of the Building Code of Australia. The construction of a private bushfire shelter would generally require the granting of a building permit.

### 5.9.2 ADDITIONAL MITIGATION MEASURES

Some landowners/proponents may wish to consider additional mitigation measures. Such systems may reduce the chances of ignition of the building during a bushfire. If a landowner/proponent chooses to consider additional mitigation measures, they should be manufactured and installed in accordance with appropriate standards. These measures are not considered to be an alternative solution on their own and would be in addition to the requirements set out in SPP 3.7 and these Guidelines.

## 6. ROLES AND RESPONSIBILITIES

The management of bushfire related risk is the shared responsibility of landowners/proponents, government, industry and the community. This section summarises the key responsible authorities and stakeholders, and their respective responsibilities in implementing SPP 3.7. It also outlines the functions that professionals accredited under the Western Australia Bushfire Accreditation Framework may undertake.

### 6.1 LANDOWNERS/PROONENTS

Landowners/proponents prepare planning and building applications and provide information to support their application. They may be landowners/proponents or consultants acting on behalf of a landowner/proponent, such as a planning consultant, accredited Bushfire Planning Practitioner or property developer. Landowners/proponents should consult closely with the decision-making authority during all stages of the planning process in bushfire prone areas to minimise the risk to an acceptable level in line with SPP 3.7, these Guidelines and any other applicable bushfire related requirements. Landowners/proponents' responsibilities in addressing SPP 3.7 and these Guidelines include:

- being aware of the bushfire risk potentially affecting their property, with an understanding that bushfire threat can never be fully removed;
- seeking to prepare a Bushfire Hazard Level assessment, BAL Contour Map and/or BAL assessment to support their application where required. These should be prepared by an accredited Level 1 BAL Assessor or accredited Bushfire Planning Practitioner;
- providing applications that are supported by sufficient technical analysis of the site's bushfire risk in the form of a Bushfire Management Plan prepared by an accredited Bushfire Planning Practitioner, where required;
- consulting with the Department of Fire and Emergency Services in relation to any elements of their proposal that do not conform to the acceptable solutions in the bushfire protection criteria or where a performance-based assessment is proposed;
- consulting with the Department of Environment Regulation in relation to any clearing permit requirements ahead of lodging a planning application;

- consulting with the Department of Parks and Wildlife in relation to potential Environmentally Sensitive Areas or areas with significant environmental conservation values;
- consulting with local government in relation to locally significant native vegetation and other planning requirements;
- consulting with the Department of Water for proposals abutting waterways or which have other water resources implications;
- ensuring the ongoing implementation of any Bushfire Management Plan applying to their property;
- preparing and implementing contingency measures in the event a bushfire should occur onsite; and
- responding to and complying with fire protection or hazard management notices issued by the local government.

### 6.2 LOCAL GOVERNMENTS

Local governments have the following responsibilities in relation to the implementation of SPP 3.7 and these Guidelines:

- ensuring local planning instruments, including strategies, schemes, scheme amendments and structure plans consider and address areas identified on the *Map of Bush Fire Prone Areas*;
- advising the Office of Bushfire Risk Management of amendments required to the *Map of Bush Fire Prone Areas* in accordance with the *Mapping Standard for Bush Fire Prone Areas* where:
  - there is no apparent bushfire prone vegetation;
  - there are inconsistencies between the *Map of Bush Fire Prone Areas* and local government mapping, and/or;
  - where an area is proposed to be developed in a way that introduces a bushfire hazard, for example it incorporates the revegetation of wetlands or foreshores;
- administering development controls in accordance with the local planning scheme, with due regard to SPP 3.7 and other policies and publications outlined in these Guidelines;



- applying the precautionary principle to development in areas with extreme bushfire hazard levels;
- seeking Western Australian Planning Commission and the Department of Fire and Emergency Services comments and advice in relation to bushfire local planning policies;
- ensuring related documents, such as biodiversity strategies, address and respond to the bushfire provisions of the local planning scheme;
- ensuring Bushfire Management Plans lodged to support strategic planning proposals, subdivision and development applications align with the objectives and measures of SPP 3.7 and these Guidelines, in consultation with the Department of Fire and Emergency Services in situations outlined in section 6.5 in these Guidelines;
- where land subject to a planning proposal is vested in the control of the local government, ensuring Bushfire Hazard Level assessments, BAL Contour Maps, BAL assessments and/or Bushfire Management Plans are prepared in accordance with SPP 3.7 and these Guidelines. These should be prepared by an accredited Level 1 BAL Assessor or accredited Bushfire Planning Practitioner, as appropriate;
- for proposals that do not comply with the acceptable solutions of the bushfire protection criteria, the local government request a performance-based assessment, liaising with the Department of Fire and Emergency Services for advice;
- referring proposals that have significant environmental implications to the Environmental Protection Authority, and proposals abutting Department of Parks and Wildlife managed land to the Department of Parks and Wildlife, and proposals abutting waterways or which have other water resource implications to the Department of Water;
- providing advice where the clearing of locally significant vegetation is proposed;
- seeking compliance with Bushfire Management Plans, including the annual issuing of Firebreak Notices under section 33 of the *Bush Fires Act 1954*;
- issuing of building permits (where they are the permit authority); and
- certifying uncertified building permit applications.

## 6.3 WESTERN AUSTRALIAN PLANNING COMMISSION

The Western Australian Planning Commission has responsibilities including the following in relation to the implementation of SPP 3.7 and these Guidelines:

- assessing and determining strategic planning proposals, subdivision and development applications in accordance with SPP 3.7 and these Guidelines;
- applying the precautionary principle to rezoning, subdivision or development in areas with extreme bushfire hazard levels;
- ensuring higher order strategic planning documents and strategic planning proposals identify bushfire prone areas and establish controls that can be implemented through the local planning scheme;
- assessing proposed local government supplementary provisions to the deemed provisions relating to bushfire risk management contained in the LPS Amendment Regulations 2015 in consultation with the Department of Fire and Emergency Services, if required;
- advising the Office of Bushfire Risk Management of amendments required to the *Map of Bush Fire Prone Areas* in accordance with the *Mapping Standard for Bush Fire Prone Areas* including where an area is proposed to be developed in a way that introduces a bushfire hazard, for example, it incorporates the revegetation of wetlands or foreshores;
- ensuring a Bushfire Planning Practitioner undertakes Bushfire Hazard Level assessments, BAL Contour Mapping and/or BAL assessments where land subject to a planning proposal is vested in the control of the Western Australian Planning Commission; and
- monitoring the implementation and effectiveness of SPP 3.7 and these Guidelines.

## 6.4 DEPARTMENT OF PLANNING

The Department of Planning has the following responsibilities in relation to the implementation of SPP 3.7 and these Guidelines:

- ensuring regional planning instruments determined or developed under delegated authority, including strategies, schemes and scheme amendments and structure plans consider and address areas identified on the *Map of Bush Fire Prone Areas*;

- advising the Office of Bushfire Risk Management of amendments required to the *Map of Bush Fire Prone Areas* in accordance with the *Mapping Standard for Bush Fire Prone Areas* where an area is proposed to be developed in a way that introduces a bushfire hazard, for example, it incorporates the revegetation of wetlands or foreshores;
- assessing and recommending strategic planning proposals, subdivision and development applications under delegated authority in accordance with SPP 3.7 and these Guidelines;
- seeking the Department of Fire and Emergency Services comments and advice in relation to bushfire local planning policies;
- ensuring Bushfire Management Plans lodged to support strategic planning proposals, subdivision and development applications align with the objectives and measures of SPP 3.7 and these Guidelines, in consultation with the Department of Fire and Emergency Services in situations outlined in section 6.4 in these Guidelines;
- for proposals that do not comply with the acceptable solutions of the bushfire protection criteria, the local government request a performance-based assessment, liaising with the Department of Fire and Emergency Services for advice;
- referring proposals that have significant environmental implications to the Environmental Protection Authority, and proposals abutting Department of Parks and Wildlife managed land to Department of Parks and Wildlife, and proposals abutting waterways or which have other water resource implications to the Department of Water;
- applying the precautionary principle to rezoning, subdivision or development in areas with extreme bushfire hazard levels under delegated authority;
- ensuring sub-regional structure plans and local planning strategies identify bushfire prone areas and establish controls that can be implemented through the local planning scheme;
- assessing proposed local government supplementary provisions to the deemed provisions relating to bushfire risk management contained in the LPS Amendment Regulations 2015 in consultation with the Department of Fire and Emergency Services, if required; and
- monitoring the implementation and effectiveness of SPP 3.7 and these Guidelines.

## 6.5 DEPARTMENT OF FIRE AND EMERGENCY SERVICES

The Fire and Emergency Services Commissioner is responsible for designating bushfire prone areas for the purpose of triggering planning and building requirements under the *Fire and Emergency Services Act 1998* (as amended). The Department of Fire and Emergency Services is responsible for fire management across the State. Decision-makers are reliant on the Department of Fire and Emergency Services to provide formal, technical fire-related advice used to help guide decision-making on planning proposals and development applications. It is responsible for providing formal advice to the decision-maker where:

- a bushfire hazard assessment has been prepared in support of a sub-regional structure plan or local planning strategy, district level structure plan or the like;
- additional/alternative measures to comply with bushfire protection criteria are proposed;
- a proposal contains unavoidable development, or a vulnerable or high-risk land use as specified in SPP 3.7;
- local government seek to make local variations to the bushfire protection criteria;
- the Western Australian Planning Commission has received from local government a proposed Local Planning Scheme amendment containing supplementary provisions in addition to the deemed provisions relating to bushfire risk management contained in the LPS Amendment Regulations 2015;
- the Western Australian Planning Commission has received a draft bushfire local planning policy;
- technical assessment of bushfire related issues associated with Bushfire Management Plans that apply alternative solutions that apply;
- there is a conflict of opinion between local government/Western Australian Planning Commission and/or the landowner/proponent concerning a Bushfire Management Plan;
- technical notes in relation to peripheral issues affecting the implementation of these Guidelines are required;
- expert technical advice to decision-makers in cases where refusal of the planning application is recommended;
- expert technical evidence is required for the State Administrative Tribunal on bushfire risk and its consequences to planning decisions; and
- on other occasions where a bushfire safety point of view is required to support planning decision-making.

If an application meets all the acceptable solutions and does not otherwise trigger a referral as listed above, the advice of Department of Fire and Emergency Services is not required.

## 6.6 OFFICE OF BUSHFIRE RISK MANAGEMENT

The Office of Bushfire Risk Management is an independent office within the Department of Fire and Emergency Services that reports to the Fire and Emergency Services Commissioner and is responsible for:

- setting standards addressing bushfire risk management, including the development of the *Map of Bush Fire Prone Areas* and the *Mapping Standard for Bush Fire Prone Areas*;
- reviewing the *Map of Bush Fire Prone Areas* and associated standards; and
- facilitating the coordination of key authorities concerning the management, auditing and reporting of bushfire-related risk matters.

## 6.7 DEPARTMENT OF COMMERCE (BUILDING COMMISSION)

The Building Commission is responsible for:

- administering the *Building Act 2011* and *Building Regulations 2012* that set out the building approval process for Western Australia, including the requirement to obtain a building permit to carry out building work;
- administering and applying the Building Code of Australia in Western Australia;
- responding to general enquiries in relation to the application of the Building Code of Australia;
- registering builders and building surveyors;
- carrying out auditing of building work and registered practitioners (such as builders and building surveyors); and
- providing a dispute resolution process for complaints about registered practitioners.

## 6.8 DEPARTMENT OF ENVIRONMENT (AUSTRALIAN GOVERNMENT)

The Australian Government Department of Environment administers the *Environmental Protection and Biodiversity Conservation Act 1999*. Under the Act, a proposal requires referral to the Department of Environment for assessment if it has, or is likely to have, a significant impact on matters of national environmental significance, being nationally and internationally important flora, fauna, ecological communities and heritage places.

## 6.9 DEPARTMENT OF ENVIRONMENT REGULATION

The Department of Environment Regulation is responsible for assessing vegetation clearing proposals associated with land development. Clearing of native vegetation in Western Australia is an offence under Part V, Division 2 of the *Environmental Protection Act 1986* unless the clearing is done in accordance with a clearing permit, or an exemption applies. Exemptions are contained in Schedule 6 of that Act or are prescribed in the *Environmental Protection Regulations 1987*. The exemptions under regulations do not apply in environmentally sensitive areas. Clearing for permanent hazard reduction may not be exempt, and a clearing permit may be required. Clearing permit enquiries should be directed to the Department of Environment Regulation.

## 6.10 DEPARTMENT OF PARKS AND WILDLIFE

The Department of Parks and Wildlife is responsible for providing referral advice on applications abutting reserves and land under its management, including State land that is managed by agreement with the Department of Lands. Department of Parks and Wildlife considers biodiversity, flora and fauna, wetlands and ecological communities as well as nature conservation covenants on freehold land and fire management issues in relation to adjoining reserves. General conservation enquiries should be directed to Department of Parks and Wildlife.

## 6.11 DEPARTMENT OF WATER

The Department of Water is responsible for providing referral advice on the management of water resources in accordance with *Better Urban Water Management* (WAPC 2008) and water resource management legislation, policies and guidelines. Referral to the Department of Water should be undertaken for existing or proposed bushfire prone areas which affect water resources, including waterways and their foreshore reserves.

## 6.12 OFFICE OF THE ENVIRONMENTAL PROTECTION AUTHORITY

The Office of the Environmental Protection Authority is responsible for determining whether to assess schemes, scheme amendments and development proposals in order to protect the environment. The Environmental Protection Authority provides advice to help prevent, control and abate environmental harm.

## 6.13 STATE ADMINISTRATIVE TRIBUNAL

The State Administrative Tribunal is a body that reviews decisions made by government where it is empowered to do so by State legislation. The *Planning and Development Act 2005* and local planning schemes give power to State Administrative Tribunal to review decisions made pursuant to the Act, local and regional planning schemes and the *Metropolitan Redevelopment Authority Act 2011*.

## 6.14 WESTERN AUSTRALIAN BUSHFIRE ACCREDITATION FRAMEWORK

The Western Australian Bushfire Accreditation Framework (the Framework) has been established by the Western Australian government to enable effective, professional and consistent advice for land use planning and building decision processes. It aims to improve bushfire risk management measures being applied to land uses and development.

The Framework will provide individuals with a professional standing and expertise at three different levels to ultimately improve the safety of local communities and strengthen community resilience to bushfire events. The establishment of a recognised professional industry will provide developers, landowners/proponents and decision-makers, such as local government and State government agencies, with the confidence that the service provider has met certain professional standards and has the skills and knowledge to provide consistent and professional services. Further information on the different levels of accreditation is located in the *Guidelines for organisations seeking to become accrediting bodies in Western Australia: Level 1 Bushfire Attack Level Assessor, Level 2 Bushfire Planning Practitioner – Prescriptive and Level 3 Bushfire Planning Practitioner – Performance* (Department of Planning 2015).

Government approved accrediting bodies are required to maintain a list of all individuals accredited under the Framework.

### 6.14.1 LEVEL 1 BAL ASSESSOR

Level 1 BAL Assessors are accredited to provide services limited to:

- determining the appropriate BAL using Method 1 (simplified method) of AS 3959 as referenced by the Building Code of Australia; and
- providing general advice on the design and construction requirements of AS 3959.



### 6.14.2 LEVEL 2 BUSHFIRE PLANNING PRACTITIONER – PRESCRIPTIVE

Level 2 Bushfire Planning Practitioners – Prescriptive are accredited to provide services limited to:

- Bushfire Hazard Level assessments for strategic planning proposals according to these Guidelines;
- developing BAL Contour Maps where the lot layout is known for strategic planning proposals and subdivision applications according to these Guidelines and relevant practice notes issued by the Department of Planning and the Building Commission;
- application of bushfire protection criteria to develop acceptable solutions for planning designs according to these Guidelines;
- development of Bushfire Management Plans according to these Guidelines but **excluding** those for 'vulnerable land use', 'high-risk land use', 'unavoidable development' and 'minor development in areas where BAL-40 or BAL-FZ' applies;
- provision of advice for planning proposals and development applications;
- the activities described for an Accredited Level 1 BAL Assessor, which includes determining the appropriate BAL using only Method 1 (simplified method) of AS3959; and
- other limited activities prescribed in practice notes issued by the Department of Planning from time to time.

### 6.14.3 LEVEL 3 BUSHFIRE PLANNING PRACTITIONER – PERFORMANCE

Level 3 Bushfire Practitioners – Performance are accredited to provide services limited to:

- determining the appropriate BAL using Method 2 (detailed method) of AS 3959, as referenced by the Building Code of Australia;
- application of the bushfire protection criteria to develop designs that are outside of those specified in the acceptable solutions<sup>8</sup> within these guidelines;
- development of Bushfire Management Plans for planning proposals and development applications that involve 'vulnerable land use', 'high-risk land use', 'unavoidable development' and 'minor development in areas where BAL-40 or BAL-FZ' in accordance with SPP 3.7 and these Guidelines;
- development of Bushfire Management Plans and provision of advice for 'unavoidable development' applications in accordance with SPP 3.7 and these Guidelines;
- where required, provision of advice for Bushfire Risk Management Plans; and
- the activities described for a Level 1 BAL Assessor and Level 2 Bushfire Planning Practitioner – Prescriptive.

<sup>8</sup> Note this reference to 'alternative solutions' is not a reference to those developed under the Building Code of Australia.

# APPENDICES



## APPENDIX ONE DEFINITIONS

These definitions apply in the context of SPP 3.7 and these Guidelines.

**AS 3959:** *Australian Standard 3959 Construction of Buildings in Bushfire-Prone Areas.*

**Asset Protection Zone:** A low fuel area immediately surrounding a building.

**BAL:** Bushfire Attack Level (BAL) as set out in the *Australian Standard 3959 Construction of Buildings in Bushfire-Prone Areas* (AS 3959), as referenced in the Building Code of Australia (as amended).

**BAL assessment:** An assessment prepared in a manner and form set out in AS 3959 to determine a BAL. It is strongly recommended that BAL assessments are prepared by accredited Level 1 BAL Assessors, unless otherwise exempted in these Guidelines.

**BAL Contour Map:** A BAL Contour Map is a scale map of the subject lot/s illustrating the potential radiant heat impacts and associated indicative BAL ratings in reference to any classified vegetation remaining within 100 metres of the assessment area after the development is complete. The intent of the BAL Contour Map is to identify land suitable for development based on the indicative BAL rating. It is strongly recommended that BAL Contour Maps are prepared by an accredited Bushfire Planning Practitioner.

**Bushfire:** An unplanned fire burning in vegetation. A generic term which includes grass fires, forest fires and scrub fires both with and without a suppression objective.

**Bushfire hazard:** The potential or existing flammability of vegetation that, in association with topography and slope, when ignited may cause harm to people and/or damage property and/or infrastructure.

**Bushfire Hazard Level assessment:** A Bushfire Hazard Level assessment provides a measure of the likely intensity of a bushfire and the likely level of bushfire attack on a site determined by categorising and mapping land as having a low, moderate or extreme Bushfire Hazard Level in accordance with the methodology set out in these Guidelines. It is strongly recommended that Bushfire Hazard Level assessments are prepared by an accredited Bushfire Planning Practitioner.

**Bushfire Management Plan:** A document that sets out short, medium and long-term risk management strategies for the life of the development. It is strongly recommended that Bushfire Management Plans are prepared by accredited Bushfire Planning Practitioners in accordance with the requirements set out in these Guidelines on behalf of the landowner/proponent with the assistance of the responsible authority for emergency services where required.

**Bushfire Planning Practitioner:** A person who holds, Level Two or Level Three accreditation under the Western Australian Bushfire Accreditation Framework.

**Bushfire prone area:** An area that has been designated by the Fire and Emergency Services Commissioner under s. 18P of the *Fire and Emergency Services Act 1998* as an area that is subject, or likely to be subject, to bushfires. Such areas are identified on the *Map of Bush Fire Prone Areas* and can be found on the Department of Fire and Emergency Services website.

**Bushfire protection criteria:** A performance-based system of assessing bushfire risk management measures contained in these Guidelines and applied to all strategic planning proposals, subdivisions and development applications.

**Bushfire risk:** The chance of a bushfire igniting, spreading and causing damage to people, property and infrastructure.

**Bushfire risk management:** Means the application of the bushfire protection criteria contained in these Guidelines.

**Decision-maker:** The Minister for Planning, State Administrative Tribunal, Western Australian Planning Commission, Development Assessment Panel, any other State decision-making authorities, and/or the relevant local government and their delegates that make decisions regarding the application these Guidelines.

**Development application:** An application for approval to carry out development or change a land use under either a local planning scheme or region planning scheme, this includes local development plans but excludes applications for single houses and ancillary dwellings on a lot or lots less than 1,100m<sup>2</sup>.

**Guidelines:** Refers to the *Guidelines for Planning in Bushfire Prone Areas* (WAPC 2015, as amended).

**Hazard Separation Zone:** A physical separation from bushfire prone vegetation.

**Higher order strategic planning documents:** Any higher order strategic planning documents including frameworks, region schemes, sub-regional strategies and sub-regional structure plans.

**High-risk land use:** A land use which may lead to the potential ignition, prolonged duration and/or increased intensity of a bushfire. Such uses may also expose the community, fire fighters and the surrounding environment to dangerous, uncontrolled substances during a bushfire event. Examples of what constitutes a high-risk land use are provided in the Guidelines.

**Level 1 BAL Assessor:** A person who holds Level 1 BAL Assessor accreditation under the Western Australian Bushfire Accreditation Framework.

**Minor development:** Refers to applications in residential built-out areas at a scale which may not require full compliance with the relevant policy measures. Classes of development considered under this definition, with the exclusion of applications for unavoidable development, are:

- a single house on an existing lot 1,100m<sup>2</sup> or greater;
- an ancillary dwelling on a lot of 1,100m<sup>2</sup> or greater; and
- change to a vulnerable land use in an existing residential development.

**Precautionary principle:** The presumption against approving further strategic planning proposals, subdivision and development applications or intensification of land uses, where there is a lack of certainty that the potential for significant adverse impacts can be adequately reduced or managed in the opinion of the decision-maker.

**Strategic planning proposal:** Any strategic-level planning proposal including: region scheme amendments; district structure plans; local planning strategies; local planning schemes and amendments; and structure plans and master plans - but does not include subdivision and development applications.

**Unavoidable development:** Development that, in the opinion of the decision-maker, represents exceptional circumstances where full compliance with this policy would be unreasonable; no alternative location exists; it is not minor development; and it is not contrary to the public interest. Examples of what constitutes unavoidable development are provided in these Guidelines.

**Vulnerable land use:** A land use where persons may be less able to respond in a bushfire emergency. Examples of what constitutes a vulnerable land use are provided in these Guidelines.

**WAPC:** Western Australian Planning Commission.



## APPENDIX TWO BUSHFIRE HAZARD LEVEL (BHL) ASSESSMENT METHODOLOGY

### What is a BHL assessment

A Bushfire Hazard Level (BHL) assessment provides a 'broad brush' means of determining the potential intensity of a bushfire in a particular area. The BHL assessment is a pre-development decision-making tool used to inform the suitability of strategic planning proposals for future subdivision and development.

### When should a BHL assessment be used

A BHL assessment should be undertaken for any area identified for intensification of land use in a strategic planning proposal where lot layout is not yet known.

### Who can conduct a BHL assessment

It is recommended landowners/proponents seek the assistance of an accredited Level 2 or Level 3 Bushfire Planning Practitioner to conduct a BHL assessment.

### BHL assessment methodology

A BHL assessment should be prepared in accordance with this Appendix with consideration for the predominant classified vegetation for a site as per Australian Standard (AS) 3959.

The assessment methodology categorises the bushfire hazard level as low, moderate or extreme based on the vegetation and slope within 150 metres of a site. This provides an indication of the likely impact of a bushfire event as it interacts with the bushfire hazard on and close to a site. It provides a measure of the likely intensity of a bushfire and the likely level of bushfire attack on a site by categorising the hazard.

**Table 3:** BHL and classified vegetation (as per AS-3959)

HAZARD LEVEL	CHARACTERISTICS
<b>Extreme</b>	<ul style="list-style-type: none"> <li>Class A: Forest</li> <li>Class B: Woodland (05)</li> <li>Class D: Scrub</li> <li>Any classified vegetation with a greater than 10 degree slope</li> </ul>
<b>Moderate</b>	<ul style="list-style-type: none"> <li>Class B: Open woodland (06), Low woodland (07), Low open woodland (08), Open shrubland (09)*</li> <li>Class C: Shrubland</li> <li>Class E: Mallee/Mulga</li> <li>Class G: Grassland, including sown pasture and crops</li> <li>Vegetation that has a low hazard level but is within 100 metres of vegetation classified as a moderate or extreme hazard, is to adopt a moderate hazard level.</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>Low threat vegetation may include areas of maintained lawns, golf courses, public recreation reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.</li> <li>Managed grassland in a minimal fuel condition (insufficient fuel is available to significantly increase the severity of the bushfire attack). For example, short-cropped grass to a nominal height of 100 millimetres.</li> <li>Non-vegetated areas including waterways, roads, footpaths, buildings and rock outcrops.</li> </ul>

\* As per AS-3959 Table 2.3, Note 2 – Overstoreys of open woodland, low open woodland, tall open shrubland and low open shrubland should be classified to the vegetation type on the basis of their understoreys; others to be classified on the basis of their overstoreys.

### Step One: Determine the area to be assessed

- The BHL assessment area is the defined subject site and all land within 150 metres of the external boundary of the subject site.
- Use an appropriate aerial image (where available) to define the area that is the subject of the BHL assessment. The aerial image should be as current as possible and scaled to clearly show the vegetation density and structure.

### Step Two: Identify vegetation type(s) and slope

- Classify all vegetation within the BHL assessment area, preferably through a site inspection and in accordance with Table 3 to identify the predominant vegetation type(s) on the site.
- Provide photographic evidence in addition to aerial imagery and/or vegetation mapping data to verify low or moderate BHL areas. Where evidence of the vegetation height is required (i.e. shrubland), a height stick or other appropriate indicator of height should be included in the images.
- Further evidence may be required if the decision-maker is not satisfied with the photographic evidence provided.
- All slopes within the BHL assessment area need to be defined with land contour information.

### Step Three: Map the BHL results

#### Information to include in a Vegetation Classification Map

- An aerial image of the BHL assessment area should form the base map and be overlaid with the following information:
  - areas of classified vegetation and excluded vegetation (if any) in the form of plots
  - land contours for slope calculation
  - areas where vegetation is proposed to be cleared or revegetated (if applicable)
  - photo points to indicate where images of vegetation have been taken

- any other features of the assessment area that are relevant bushfire considerations
- canopy crown density information should be provided for vegetation classifications that do not apply the worst case scenario.
- The Vegetation Classification Map should be presented separately to the BHL Assessment Map to ensure the information is legible.
- The 'broad brush' vegetation classification accepted at a BHL level will require further analysis and supporting evidence for the preparation of a BAL Contour Map and/or BAL assessment, particularly in relation to extreme BHL areas.

#### Information to include in a BHL Assessment Map




- Create a BHL assessment based on an analysis of the results.
- The assessment should be appropriately scaled (maximum 1:25,000).
- An aerial image of the BHL assessment area should form the base map and be overlaid with the following information:
  - boundaries of the subject site and surrounding 150 metre area
  - assigned hazard levels for vegetation in the assessment area based on the vegetation classification and slope.

#### BHL Assessment Map specifications

The colour code for each hazard level is shown in Table 4.

The bushfire hazard level colours should be displayed at a transparency level of 25 per cent and no more than 35 per cent, as the colour boundary differentiation is compromised. This provides for clear distinction between the hazard levels; and for the vegetation on the underlying aerial image to be 'visible', allowing for informed decision making as the vegetation can be 'seen' in its context.

**Table 4:** BHL Assessment Map colour codes

Hazard level	Colour	RGB Code	Hex Code	Colour Patch
Extreme	Red	R=238, G=50, B=36	EE3224	
Moderate	Yellow	R=255, G=238, B=0	FFEE00	
Low	Light Blue	R=206, G=237, B=255	CEEDFF	



**Figure 10:** Sample Vegetation Classification Map (BHL assessment)

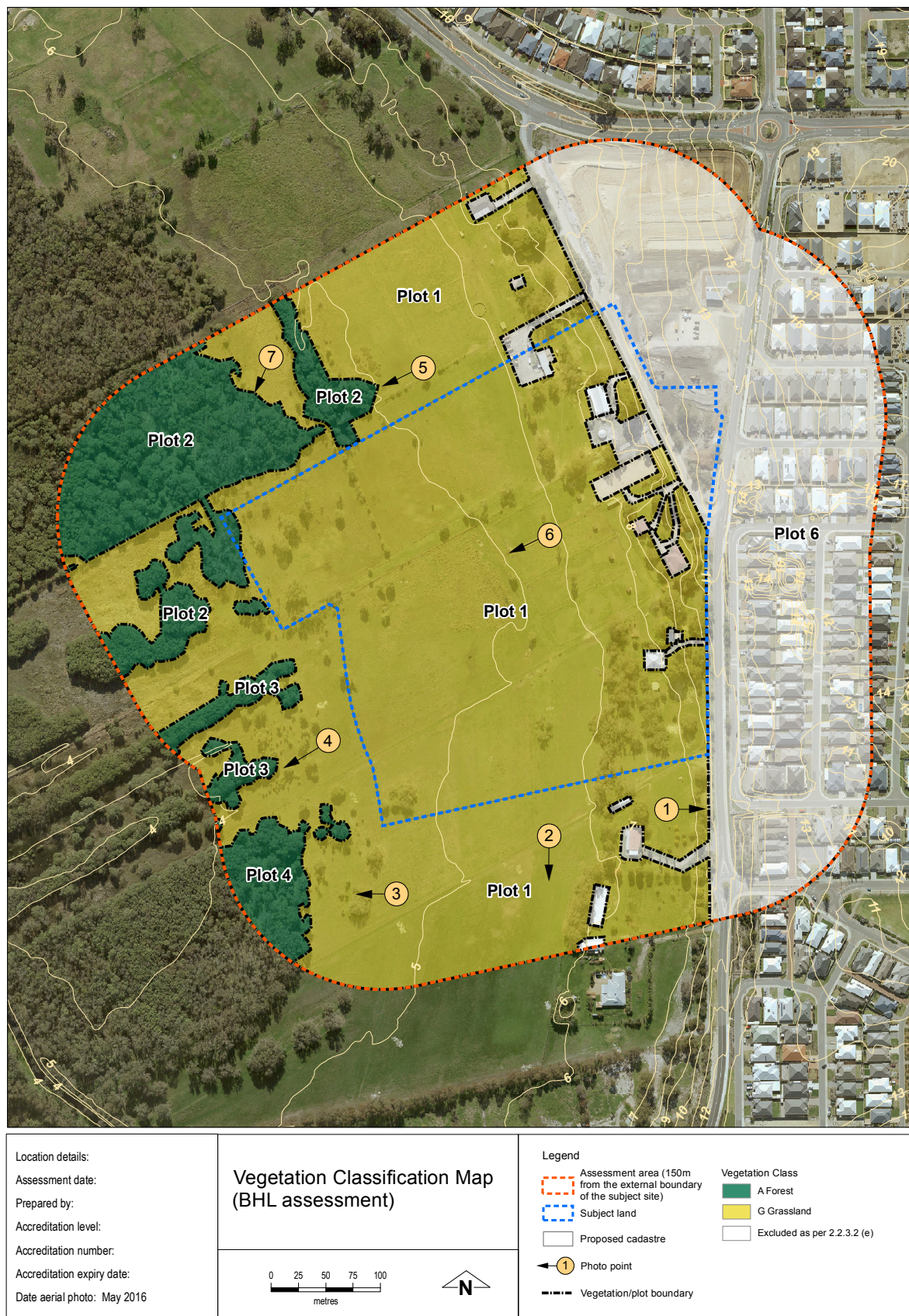
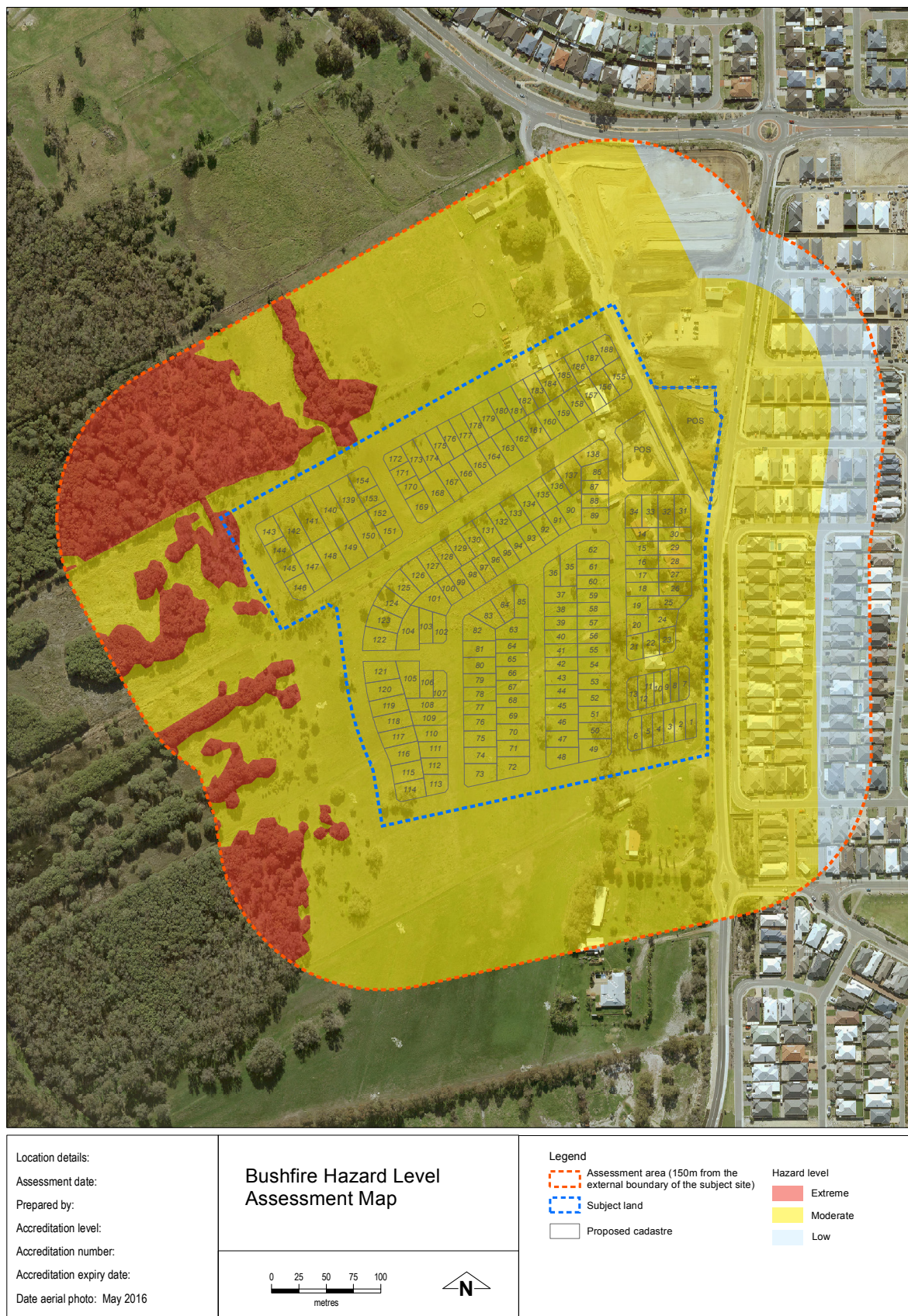




Figure 11: Sample BHL Assessment Map





## APPENDIX THREE BAL CONTOUR MAP

### What is a BAL Contour Map

A Bushfire Attack Level (BAL) Contour Map is a scale map of the subject lot/s showing the potential radiant heat impacts and associated indicative BAL ratings in reference to any classified vegetation remaining within the assessment area.

The BAL Contour Map sets a range of indicative BAL ratings that are determined on the intended end state of the subject site once earthworks, clearing and/or landscaping have been completed.

### When a BAL Contour Map should be used

A BAL Contour Map should be used for strategic planning proposals where appropriate and at the subdivision stage. The BAL contours will assist by identifying:

- land suitable for development; and
- bushfire risk management measures to reduce the potential bushfire impact to an acceptable level, such as BAL-29 or below.

The BAL Contour Map should be revised for each stage of a subdivision; and where a strategic planning proposal or subdivision design is modified in a way that would affect the indicative BAL ratings.

### Who can prepare a BAL Contour Map

A BAL Contour Map should be prepared by an accredited Level 2 or Level 3 Bushfire Planning Practitioner as appropriate in accordance with this Appendix.

### BAL Contour Map Assessment Methodology

A BAL Contour Map should be prepared in accordance with this Appendix and the principles of Australian Standard (AS) 3959.

#### Step One: Identify vegetation type(s) and slope (Output: Vegetation Classification Map)

##### How to create a Vegetation Classification Map

- Include the subject site and all land within 150 metres of the external boundary of the subject site in the vegetation assessment area.

- Use an appropriate aerial photo (where available) to define the vegetation assessment area that is to be the subject of the Vegetation Classification Map. The aerial photo should be as current as possible and at a scale that clearly shows the vegetation density and structure.
- Classify all vegetation within the vegetation assessment area through a site inspection and provide photographic evidence for all relevant locations on the BAL Contour Map area. The vegetation should be classified in accordance with Table 2.3 and figures 2.4 (A) to 2.4 (G) of AS 3959, to identify which vegetation type(s) predominate the site.
- Analyse land contour information and define the slope for each assessment transect.
- Record the inputs for classified vegetation (in the form of plots) and defined slope in a table format.

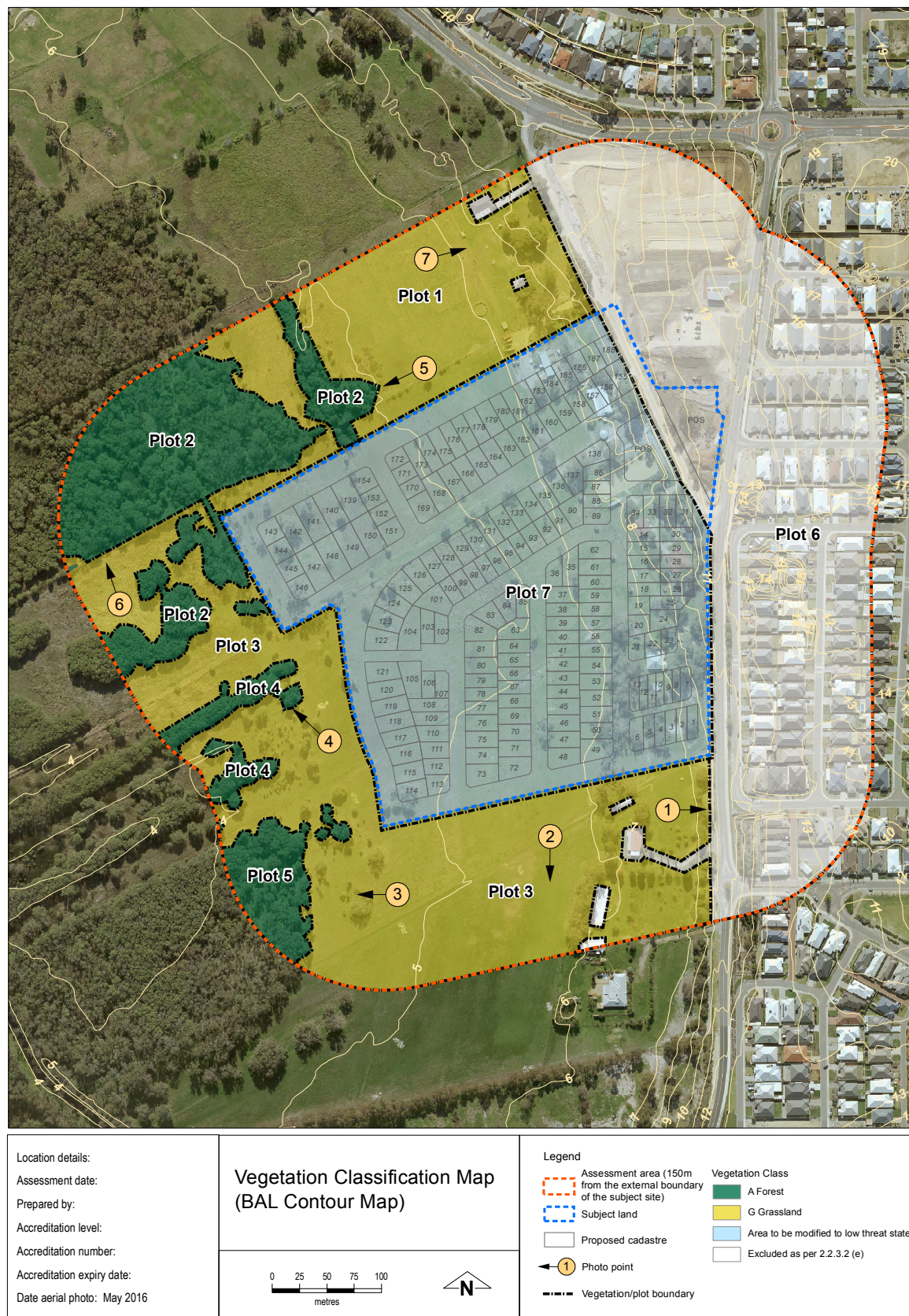
##### Information to include in a Vegetation Classification Map

- A Vegetation Classification Map should be at a scale where individual lots can be clearly identified.
- An aerial image of the vegetation assessment area should form the base map and be overlaid with the following information:
  - areas of classified vegetation and excluded vegetation (if any) in the form of plots
  - land contours for slope calculation
  - areas where vegetation is proposed to be cleared or revegetated (if applicable)
  - photo points to indicate where images of vegetation have been taken
  - any other features of the subject site that are relevant bushfire considerations
  - canopy crown density information should be provided for vegetation classifications that do not apply the worst case scenario.

The Vegetation Classification Map should be presented separately from the BAL Contour Map to ensure the information is legible.



Figure 12: Sample Vegetation Classification Map (BAL Contour Map)





## Step Two: Map the BAL contours (Output: BAL Contour Map)

### How to create a BAL Contour Map based on analysis of the resultant BAL ratings

- Use an appropriate aerial photo (where available) out to 150 metres from the subject site and indicate this as the vegetation assessment area. The aerial photo should be as current as possible and at a scale that clearly shows the vegetation density and structure.
- Define the BAL Contour assessment area that is to be the subject of the BAL Contour Map by indicating the area within 100 metres of the external boundary of the subject site.
- When determining the BAL rating for each assessment transect, identify the slope of the land under the classified vegetation, predominate vegetation type(s) and apply the worst case combination scenario.
- The contour measurements need to be done at the frequency and locations dictated by site conditions to represent the worst case scenario. This is typically where the slope or vegetation changes.
- Where there are no changes to vegetation or slope, the contour measurements should be at intervals to provide a worst case scenario measurement for each lot, or of no more than 50 metres for large lots.
- The BAL contours will be formed by combining the BAL assessment at each of the assessment transects. An indicative BAL rating should be allocated to all areas within the BAL Contour Map area, even when these areas fall outside the mapped extent of the BAL contours (i.e. areas of BAL-LOW).

- Where multiple BAL ratings apply to an area, the higher BAL rating should apply.
- Assessment should be on the future state of the site (i.e. when the land has been cleared and subdivision works have been undertaken) including any vegetation that will remain or will be introduced when the works are complete.
- The inputs used to determine the BAL contours (i.e. lot number, vegetation classification, effective slope, actual separation distance, indicative BAL rating-output) should be included in the Bushfire Management Plan (BMP) in a table format with a row matched to each BAL assessment transect along the contour.

### Information to include in a BAL Contour Map

- A BAL Contour Map should be at a scale where individual lots can be clearly identified.
- An aerial image of the subject site and surrounding area should form the base map and be overlayed with the following information:
  - boundaries of the subject site, the surrounding 150 metre vegetation assessment area and 100 metre BAL Contour assessment area
  - the proposed lot layout, including proposed lot numbers, building envelope and building footprint (if appropriate)
  - BAL contours and proposed BAL ratings.

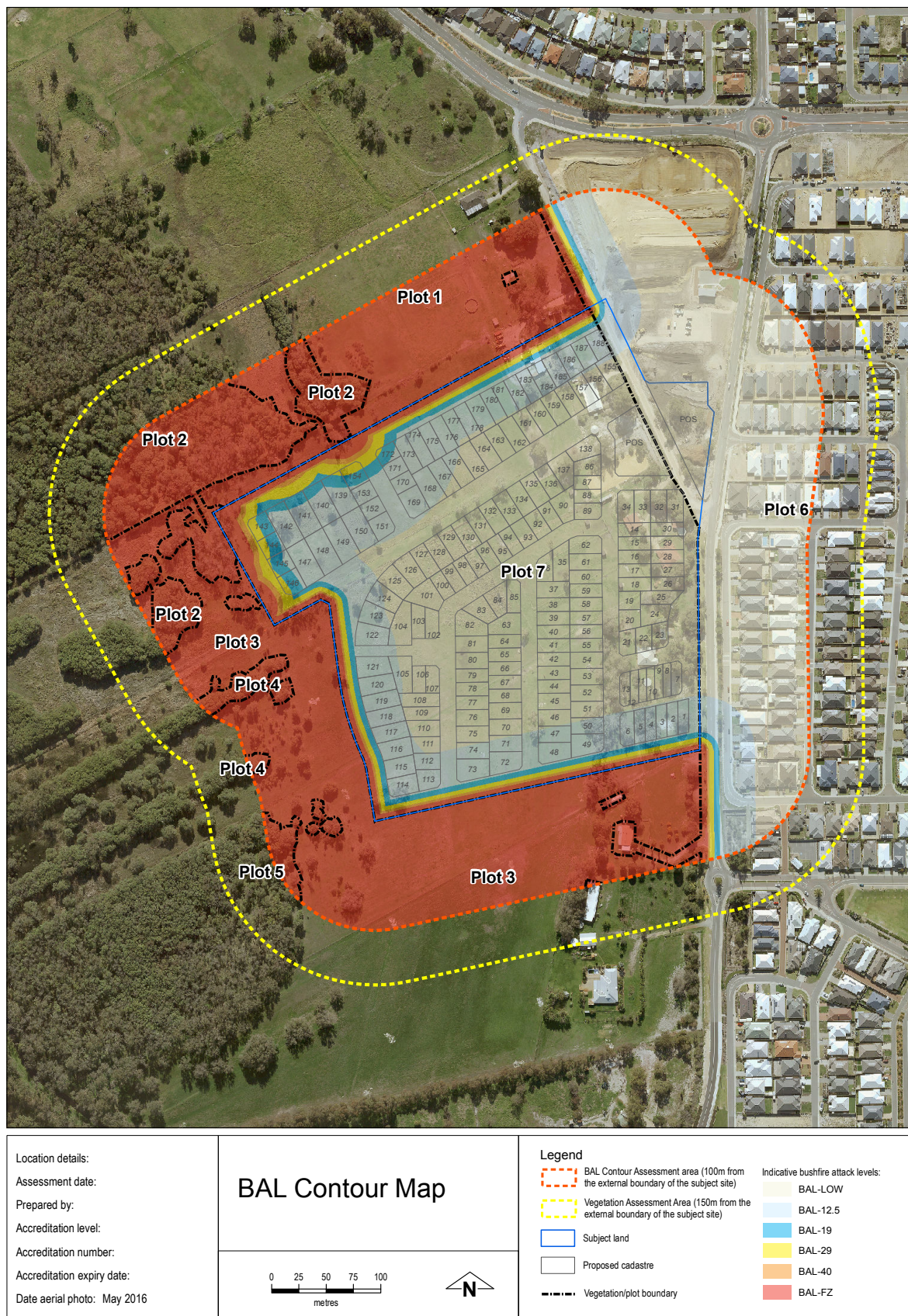
**Table 5:** BAL Contour Map colour codes

Hazard level	Colour	RGB Code	Hex Code	Colour Patch
BAL-FZ	Red	R=238, G=50, B=36	EE3224	
BAL-40	Orange	R=248, G=152, B=40	F89828	
BAL-29	Yellow	R=255, G=238, B=0	FFEE00	
BAL-19	Blue	R=0, G=174, B=239	00AEEF	
BAL-12.5	Light Blue	R=206, G=237, B=255	CEEDFF	
BAL-LOW	Beige	R=245, G=245, B=220	F5F5DC	

The colour code for each BAL is shown in Table 5. The BAL Contour Map colours should be displayed at a transparency level of 25 per cent and no more than 35 per cent, as the colour boundary differentiation is compromised. This provides for clearer distinction between the BAL contours; and for the vegetation on the underlying aerial image to be 'visible', providing for informed decision making as the vegetation can be 'seen' in its context.



Figure 13: Sample BAL Contour Map





### **Compliance certification**

Where a BAL Contour Map has been prepared to support a subdivision application, certification that the indicative BAL ratings are still accurate should be provided after the subdivision works or stage of works have been completed.

An 'implementation table' should form part of the statement addressing the bushfire protection criteria (Statement) or BMP (refer to Appendix 5 of these Guidelines). The 'implementation table' should list the bushfire measures to be undertaken at each stage of the development including at the subdivision stage. The local government should request a condition of subdivision approval be the implementation of the endorsed Statement or BMP. The compliance certification will essentially be a tick box check that these measures have been completed. The relevant local government will be responsible for the 'clearance' of the condition.

The compliance certification should be undertaken by the Bushfire Planning Practitioner who prepared the original BAL Contour Map. Alternatively, an accredited Level 2 or Level 3 Bushfire Planning Practitioner or the relevant local government is able to undertake this compliance check.

Certification will ensure prospective purchasers are aware of the identified BAL rating at which the lot can be developed.

### **At the development application or building permit stage**

Where a BAL Contour Map has been prepared at a preceding planning stage, it may be used in place of a site-specific BAL assessment at the development application stage and/or building permit stage.

Where the indicative BAL ratings identified as part of a BAL Contour Map have not been certified subsequent to the subdivision having been completed, this should be undertaken prior to issue of the building permit or development application.

The compliance certification should be undertaken by the Bushfire Planning Practitioner who prepared the original BAL Contour Map. Alternatively, an accredited Level 2 or Level 3 Bushfire Planning Practitioner or the local government is able to undertake this compliance check.

The decision-maker retains the discretion to request a site-specific BAL assessment.

## APPENDIX FOUR BUSHFIRE PROTECTION CRITERIA

The bushfire protection criteria have been provided to assist in the assessment of proposed bushfire risk management measures required for strategic planning proposals, subdivision or development applications in bushfire prone areas. The depth of information required to demonstrate compliance with the bushfire protection criteria should be commensurate with the applicable stage in the planning process. For example, a strategic planning proposal will only need to demonstrate that compliance with the criteria can be achieved in subsequent stages in the planning process.

The criteria are divided into four elements - location, siting and design, vehicular access and water. Each element has an intent outlining the overall aim. The acceptable solutions provide examples of how that intent may be met. The performance principle allows for 'alternative solutions' to be developed where the acceptable solutions cannot be achieved.

### ELEMENT 1: LOCATION

**Intent:** To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure.

#### PERFORMANCE PRINCIPLE

*The intent may be achieved where:*

##### P1

The strategic planning proposal, subdivision and development application is located in an area where the bushfire hazard assessment is or will, on completion, be moderate or low, or a BAL-29 or below, and the risk can be managed. For unavoidable development in areas where BAL-40 or BAL-FZ applies, demonstrating that the risk can be managed to the satisfaction of the Department of Fire and Emergency Services and the decision-maker.

#### ACCEPTABLE SOLUTIONS

*To achieve compliance with this Element using an acceptable solution, the following acceptable solution (A1.1) must be met*

##### A1.1 Development location

The strategic planning proposal, subdivision and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL-29 or below.

#### EXPLANATORY NOTES

Land is most suitable for land use intensification where hazard levels are low. Where there is an extreme bushfire hazard or requirement for use of BAL-40 or BAL-FZ construction standards, the land is not considered suitable for development unless it meets the definition of minor or unavoidable development.

## ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

**Intent:** To ensure that the siting and design of development minimises the level of bushfire impact.

### PERFORMANCE PRINCIPLE

*The intent may be achieved where:*

#### P2

The siting and design of the strategic planning proposal, subdivision or development application, including roads, paths and landscaping, is appropriate to the level of bushfire threat that applies to the site. That it incorporates a defendable space and significantly reduces the heat intensities at the building surface thereby minimising the bushfire risk to people, property and infrastructure, including compliance with AS 3959 if appropriate.

### ACCEPTABLE SOLUTIONS

*To achieve compliance with this Element the following acceptable solution must be met.*

#### A2.1 Asset Protection Zone (APZ)

Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:

- **Width:** Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m<sup>2</sup> (BAL-29) in all circumstances.
- **Location:** the APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity (see explanatory notes).
- **Management:** the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones'. (see Schedule 1).

## ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

### EXPLANATORY NOTES

#### E2 Subdivision and development design

Identification and consideration of bushfire risks in decision-making should occur at all stages of the planning and development process and should influence siting and design of subdivision and development. Once a subdivision and related development has been designed or established, experience has shown that incorporating bushfire protection measures is generally harder to achieve.

Land is most suitable for new subdivisions and related development where hazard levels are low. Where residents and buildings cannot be protected from a bushfire hazard the land may not be suitable for development.

The design and layout of subdivision and development can reduce the vulnerability of dwellings and residents from the impact of a bushfire. Appropriate design will greatly assist with bushfire prevention and suppression operations. Hazard separation should be considered and integrated during initial planning stages. Public roads, including footpaths and verges, can be combined to increase separation between buildings and bushfire prone vegetation.

Separation may also be needed where a bushfire hazard exists within a subdivision area. The hazard may be a wetland and the wetland buffer, gullies, waterways and their foreshore areas, public open space with remnant vegetation or where revegetation is proposed.

Undeveloped future stages of the subdivision, containing bushfire prone vegetation, will also need to be taken into consideration. Even if the hazard will be cleared at a subsequent stage, until this occurs, subdivision of adjoining lots must address this risk in its current state.

**Figure 14:**  
Subdivision and  
development design



Design components and areas of minimal fuel within a subdivision can be used to help reduce the intensity of a bushfire

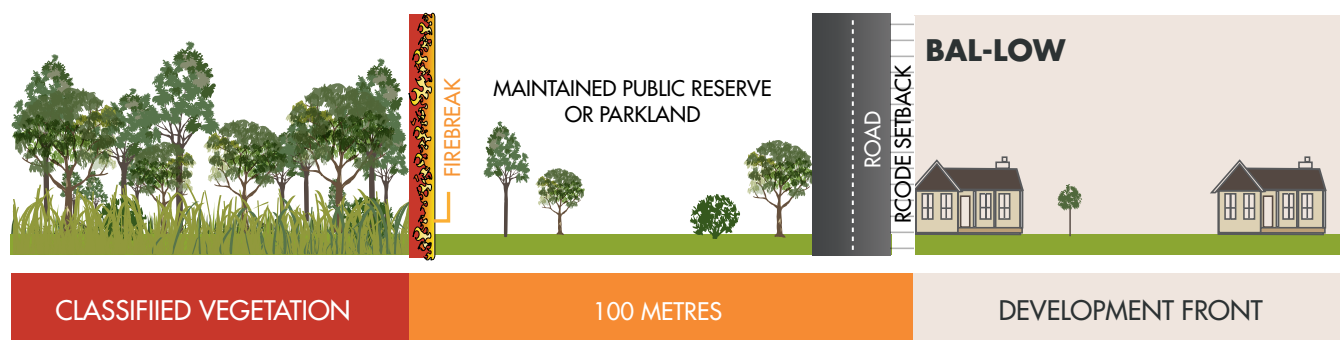


## ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

### EXPLANATORY NOTES

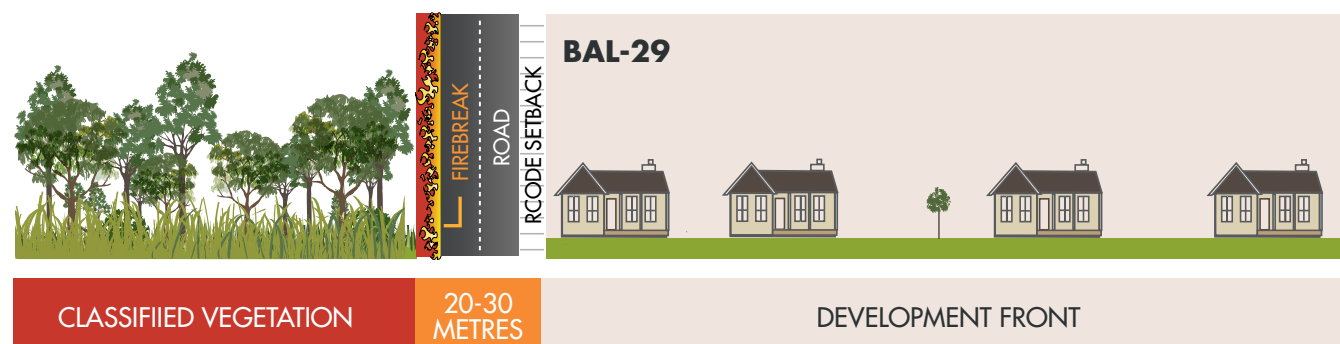
**Figure 15:** Separation distance required where no additional construction standards are proposed

In the absence of additional construction standards a minimum separation distance of 100 metres between buildings and the hazard must be provided in order to protect them from burning debris, radiant heat and direct flame contact



**Figure 16:** A reduced separation distance may necessitate increased construction standards

It may be possible to reduce the minimum distances, for example by increasing the construction standard of the building – in this example the building would need to be constructed to BAL-29



## ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

### EXPLANATORY NOTES

#### E2.1 Asset Protection Zones (APZ)

An APZ is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level. The width of the required APZ varies with slope and vegetation. The APZ should at a minimum be of sufficient size to ensure the potential radiant heat impact of a fire does not exceed  $29\text{kW}/\text{m}^2$  (BAL-29). It should be lot specific. Hazard separation in the form of using subdivision design elements (refer to E2) or excluded and low threat vegetation adjacent to the lot may be used to reduce the dimensions of the APZ within the lot.

The APZ includes a defensible space which is an area adjoining the asset within which firefighting operations can be undertaken to defend the structure. Vegetation within the defensible space should be kept at an absolute minimum and the area should be free from combustible items and obstructions. The width of the defensible space is dependent on the space which is available on the property, but as a minimum should be 3 metres.

The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity. The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

APZs can adversely affect the retention of native vegetation. Where the loss of vegetation is not acceptable or causes conflict with landscape or environmental objectives, such as waterway foreshore areas and wetland buffers, reducing lot yield may be necessary in order to minimise the removal and modification of remnant vegetation.

It is the responsibility of the landowner/proponent to maintain their APZ in accordance with Schedule 1 'Standards for Asset Protection Zones'. It is further recommended that maintenance of APZs is addressed through the local government firebreak notice, issued under s33 of the *Bushfires Act 1954*, and preferably included in a Bushfire Management Plan specifically as a how-to guide for the landowner.

Regardless of whether an Asset Protection Zone exists in accordance with the acceptable solutions and is appropriately maintained, it should be noted that fire fighters are not obliged to protect an asset if they think the separation distance between the dwelling and vegetation is unsafe.

## ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

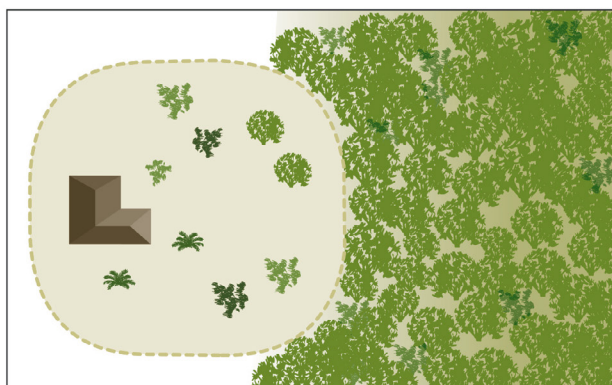
### EXPLANATORY NOTES

**Figure 17:** Design of Asset Protection Zone

The proportion of the APZ reflect the distance from the hazard to ensure adequate separation is achieved.

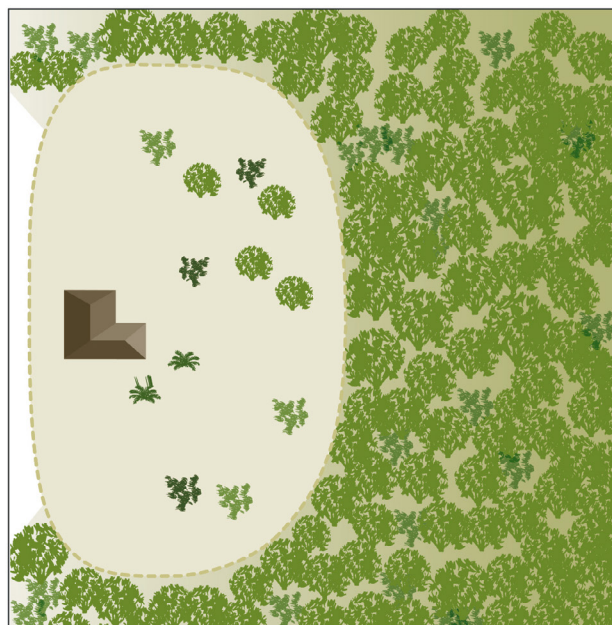
Hazard on one side

 APZ



Hazard on three sides

 APZ



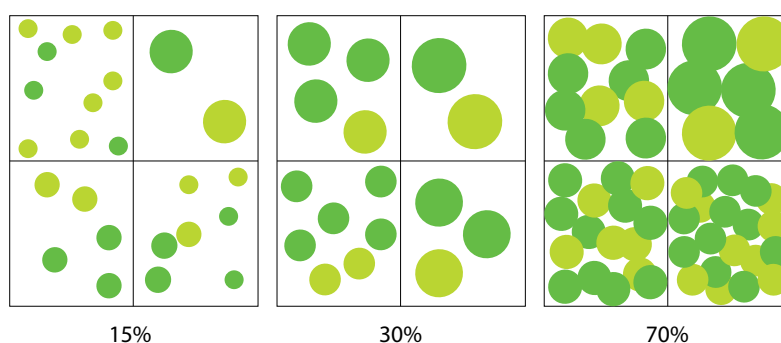
Refer to Schedule 1: Standards for Asset Protection Zones.

## ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

### SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

- **Fences:** within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.
- **Objects:** within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.
- **Fine Fuel load:** combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare.
- **Trees (> 5 metres in height):** trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy.

**Figure 18:** Tree canopy cover – ranging from 15 to 70 per cent at maturity



- **Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m<sup>2</sup> in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.
- **Ground covers (<0.5 metres in height):** can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.
- **Grass:** should be managed to maintain a height of 100 millimetres or less.



## ELEMENT 3: VEHICULAR ACCESS

**Intent:** To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.

### PERFORMANCE PRINCIPLE

*The intent may be achieved where:*

#### P3

The internal layout, design and construction of public and private vehicular access and egress in the subdivision/development allow emergency and other vehicles to move through it easily and safely at all times.

### ACCEPTABLE SOLUTIONS

*To achieve the intent, all applicable 'acceptable solutions' must be addressed.*

#### A3.1 Two access routes

Two different vehicular access routes are provided, both of which connect to the public road network, provide safe access and egress to two different destinations and are available to all residents/the public at all times and under all weather conditions.

#### A3.2 Public road

A public road is to meet the requirements in Table 6, Column 1.

#### A3.3 Cul-de-sac (including a dead-end road)

A cul-de-sac and/or a dead end road should be avoided in bushfire prone areas. Where no alternative exists (i.e. the lot layout already exists and/or will need to be demonstrated by the proponent), the following requirements are to be achieved:

- Requirements in Table 6, Column 2;
- Maximum length: 200 metres (if public emergency access is provided between cul-de-sac heads maximum length can be increased to 600 metres provided no more than eight lots are serviced and the emergency access way is no more than 600 metres); and
- Turn-around area requirements, including a minimum 17.5 metre diameter head.

#### A3.4 Battle-axe

Battle-axe access leg should be avoided in bushfire prone areas. Where no alternative exists, (this will need to be demonstrated by the proponent) all of the following requirements are to be achieved:

- Requirements in Table 6, Column 3;
- Maximum length: 600 metres; and
- Minimum width: six metres.

## ELEMENT 3: VEHICULAR ACCESS

### PERFORMANCE PRINCIPLE

### ACCEPTABLE SOLUTIONS

#### A3.5 Private driveway longer than 50 metres

A private driveway is to meet all of the following requirements:

- Requirements in Table 6, Column 3;
- Required where a house site is more than 50 metres from a public road;
- Passing bays: every 200 metres with a minimum length of 20 metres and a minimum width of two metres (i.e. the combined width of the passing bay and constructed private driveway to be a minimum six metres);
- Turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres (i.e. kerb to kerb 17.5 metres) and within 50 metres of a house; and
- Any bridges or culverts are able to support a minimum weight capacity of 15 tonnes.
- All-weather surface (i.e. compacted gravel, limestone or sealed).

#### A3.6 Emergency access way

An access way that does not provide through access to a public road is to be avoided in bushfire prone areas. Where no alternative exists (this will need to be demonstrated by the proponent), an emergency access way is to be provided as an alternative link to a public road during emergencies. An emergency access way is to meet all of the following requirements:

- Requirements in Table 6, Column 4;
- No further than 600 metres from a public road;
- Provided as right of way or public access easement in gross to ensure accessibility to the public and fire services during an emergency; and
- Must be signposted.

#### A3.7 Fire service access routes (perimeter roads)

Fire service access routes are to be established to provide access within and around the edge of the subdivision and related development to provide direct access to bushfire prone areas for fire fighters and link between public road networks for fire-fighting purposes. Fire service access routes are to meet the following requirements:

- Requirements Table 6, Column 5;
- Provided as right of ways or public access easements in gross to ensure accessibility to the public and fire services during an emergency;
- Surface: all-weather (i.e. compacted gravel, limestone or sealed)
- Dead end roads are not permitted;
- Turn-around areas designed to accommodate type 3.4 appliances and to enable them to turn around safely every 500 metres (i.e. kerb to kerb 17.5 metres);
- No further than 600 metres from a public road;
- Allow for two-way traffic and;
- Must be signposted.

## ELEMENT 3: VEHICULAR ACCESS

### PERFORMANCE PRINCIPLE

### ACCEPTABLE SOLUTIONS

#### A3.8 Firebreak width

Lots greater than 0.5 hectares must have an internal perimeter firebreak of a minimum width of three metres or to the level as prescribed in the local firebreak notice issued by the local government.

**Table 6:** Vehicular access technical requirements

TECHNICAL REQUIREMENTS	1 Public road	2 Cul-de-sac	3 Private driveway	4 Emergency access way	5 Fire service access routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5
Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5
*Refer to E3.2 Public roads: Trafficable surface					

## EXPLANATORY NOTES

### E3.1 Two access routes

It is essential that residents and the community, as well as emergency services, have safe access and egress from both the subdivision and individual houses/development. It is the developer's responsibility, as part of the Bushfire Hazard Level assessment, to ensure that subdivision and development design allow for bushfire protection criteria to be met regarding driveways and turnaround areas at house sites.

It is also necessary that the public have two safe access options leading to two different destinations that can withstand all weather conditions. This applies to access routes leading into a subdivision, as well as those within a subdivision. This acceptable solution allows for the situation if a vehicular access/egress route to a subdivision or lot becomes blocked during a fire then there is an alternative vehicular access/egress route which provides access to a different destination. Accordingly, road widening in lieu of providing two different access routes should not be supported. All access should be suitable to accommodate type 3.4 fire appliances (i.e. fire trucks with a four-wheel-drive 7-tonne chassis).

Two-way access should be provided as a public road; however, where a public road cannot be provided, (this will need to be demonstrated by the proponent providing justification for why this cannot be achieved) an emergency access way may be considered.

## ELEMENT 3: VEHICULAR ACCESS

### EXPLANATORY NOTES

#### E3.2 Public road

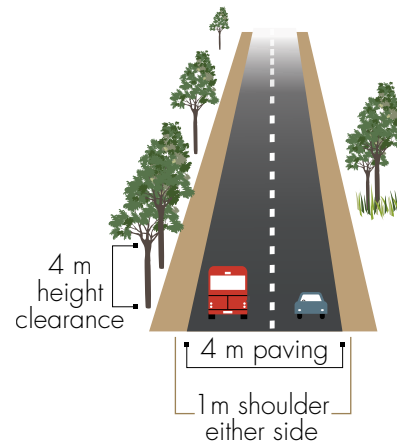
##### Trafficable surface

Widths quoted for access routes refer to the width of the trafficable surface. A six metre trafficable surface does not necessarily mean paving width. It could, for example, include four metre wide paving one metre wide constructed road shoulders.

In special circumstances, where eight lots or less are being serviced, a public road with a minimum trafficable surface of four metres for a maximum distance of 90 metres may be provided subject to the approval of both the local government and Department of Fire and Emergency Services.

##### Public road design

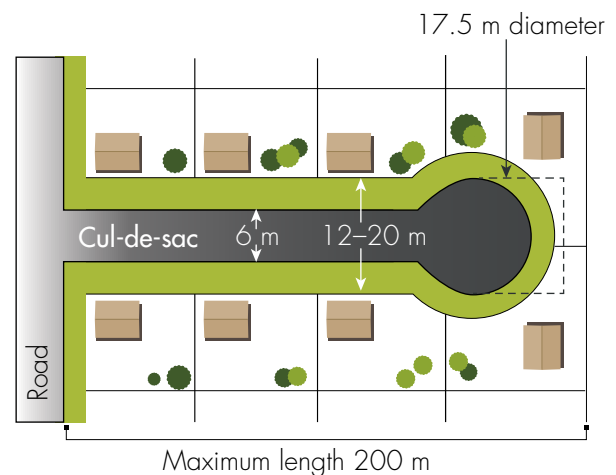
All roads should allow for two-way traffic to allow conventional two-wheel drive vehicles and fire appliances to travel safely on them.



**Figure 19:** Minimum design requirements for a public road

#### E3.3 Cul-de-sac

In bushfire prone areas, a cul-de-sac subdivision layout is not favoured because they do not provide access in different directions for residents. In some instances it may be possible to provide an emergency access way between cul-de-sac heads to a maximum distance of 600 metres, so as to achieve two-way access. Such links must be provided as right of ways or public access easements in gross to ensure accessibility to the public and fire services during an emergency. A cul-de-sac in a bushfire prone area is to connect to a public road that allows for travel in two directions in order to address Acceptable Solution A3.1.



**Figure 20:** Minimum design requirements for a cul-de-sac



## ELEMENT 3: VEHICULAR ACCESS

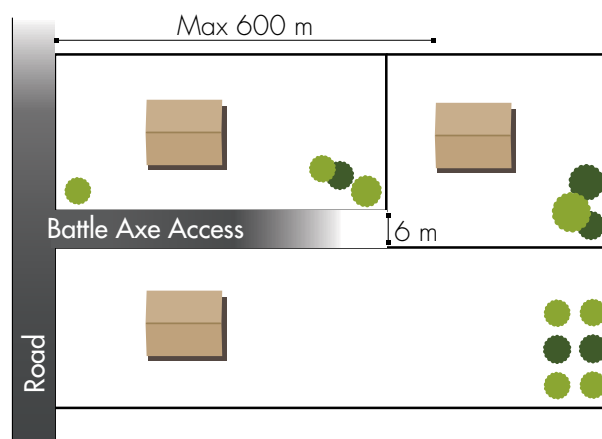
### EXPLANATORY NOTES

#### E3.4 Battle-axe

In bushfire prone areas, lots with battle-axe access legs should be avoided because they often do not provide two-way access and egress for residents and may be easily blocked by falling trees or debris. In some instances, however; it may be appropriate for battle-axe access to be used to overcome specific site constraints. Where used, they should comply with the minimum standards for private driveways.

Passing bays should be provided at 200 metre intervals along battle-axe access legs to allow two-way traffic. The passing bays should be a minimum length of 20 metres, with the combined width of the passing bay and the access being a minimum of six metres.

Turn-around areas should allow type 3.4 fire appliances to turn around safely (i.e. kerb to kerb 17.5 metres) and should be available at house sites and at 500 metre intervals along the access leg.



**Figure 21:** Minimum design requirements for a battle-axe

Unless no alternative exists, battle-axe access legs should be avoided in bushfire prone areas. Where deemed appropriate, the minimum design standards are shown.

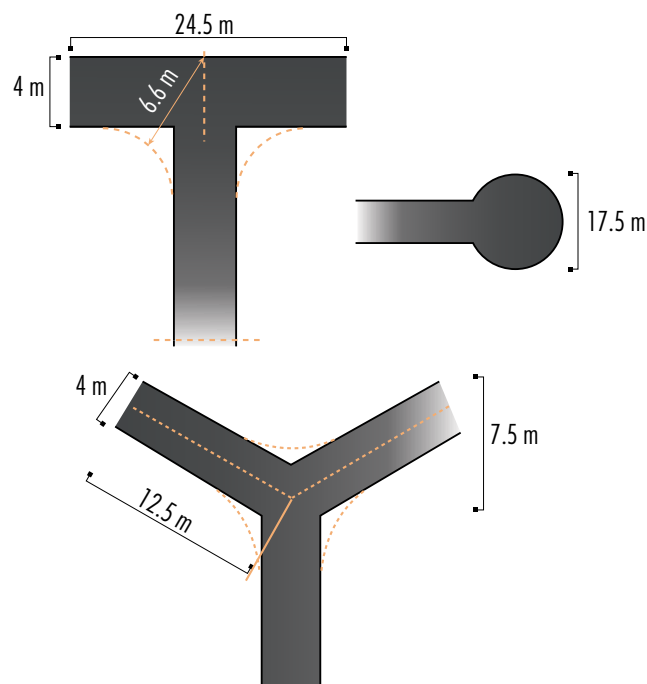
#### E3.5 Private driveway longer than 50 metres

For a driveway shorter than 50 metres, fire appliances typically operate from the street frontage however where the distance exceeds 50 metres, then fire appliances will need to gain access along the driveway in order to defend the property during a bushfire. Where house sites are more than 50 metres from a public road, access to individual houses and turn-around areas should be available for both conventional two-wheel drive vehicles of residents and type 3.4 fire appliances.

Turn-around areas should be located within 50 metres of a house. Passing bays should be available where driveways are longer than 200 metres and turn-around areas in driveways that are longer than 500 metres. Circular and loop driveway designs may also be considered. These criteria should be addressed through subdivision design.

Passing bays should be provided at 200 metre intervals along private driveways to allow two-way traffic. The passing bays should be a minimum length of 20 metres, with the combined width of the passing bay and the access being a minimum of six metres.

Turn-around areas should allow type 3.4 fire appliances to turn around safely (i.e. kerb to kerb 17.5 metres) and should be available at the house sites and at 500 metre intervals along the driveway.



**Figure 22:** Design requirements for a private driveway longer than 50 metres

Turning areas should allow type 3.4 fire appliances to turn safely

## ELEMENT 3: VEHICULAR ACCESS

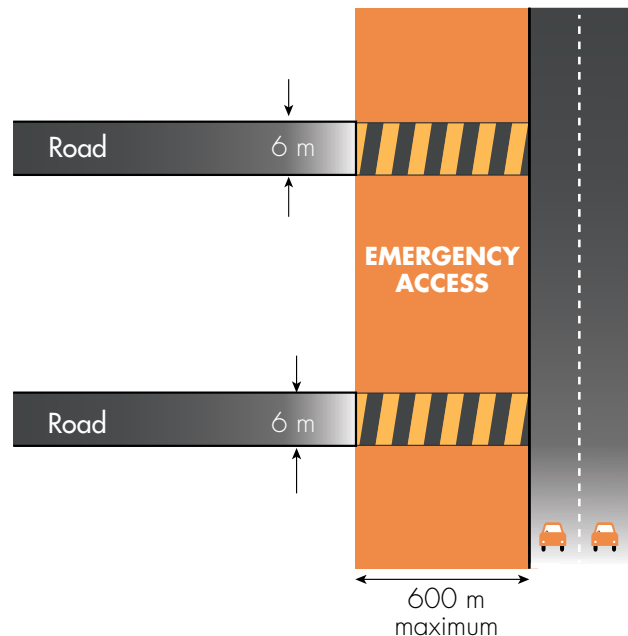
### EXPLANATORY NOTES

#### E3.6 Emergency access way

An emergency access way is not a preferred option however may be used to link up with roads to allow alternative access and egress during emergencies where traffic flow designs do not allow for two-way access. Such access should be provided as a right-of-way or easement in gross to ensure accessibility to the public and fire emergency services during an emergency.

The access should comply with minimum standards for a public road and should be signposted. Where gates are used to control traffic flow during non-emergency periods, these must not be locked. Emergency access ways are to be no longer than 600 metres and must be adequately signposted where they adjoin public roads.

Where an emergency access way is constructed on private land, a right of way or easement in gross is to be established.



**Figure 23:** Minimum design requirements for an emergency access way

Two different vehicular access routes, both of which connect to the public road network, should be available to all residents at all times



**Figure 24:** Emergency access ways may be used to link up with roads to allow alternative access during emergencies

## ELEMENT 3: VEHICULAR ACCESS

### EXPLANATORY NOTES

#### E3.7 Fire service access routes (perimeter roads)

Fire service access routes should be established to separate bushfire prone areas from developed areas, and to provide access within and around the edge of subdivisions and related development. Fire service access is used during bushfire suppression operations but can also be used for fire prevention work.

Fire service access routes should:

- Link up with the road network at regular intervals – the development and road network forms part of the fire service access system;
- Be adequately signposted;
- Allow for two-way traffic – that is, two fire appliances must be able to safely pass each other;
- Have an all-weather surface (i.e. compacted gravel, limestone or sealed); and
- Have erosion control measures in place.

Driveways may be used as part of the designated fire service access system, provided they meet the minimum standard for fire service access routes. It is beneficial to link the fire service access routes with individual driveways to allow quick access to properties and houses during fire emergencies.

Where gates are used, these should be wide enough to accommodate type 3.4 fire appliances (minimum width of 3.6m) with the design and construction to be approved by the relevant local government. Gates on fire service access routes may be locked to restrict access provided that a common key system is used and such keys are made available for fire appliances and designated fire officers within the local government area and/or surrounding district. Gates should be installed where fences cross fire service access routes.

Management and access arrangements should be in place to ensure that the maintenance of fire service access routes will occur in the long term after an area has been subdivided. A number of options can be used to achieve this, including but not limited to:

- Individual property owners being responsible for maintaining fire service access routes where these fall on their property;
- Providing such access as a right-of-way or easement in gross to ensure accessibility to fire services during an emergency; and/or
- A levy system administered by local government to cover the cost of maintaining fire service access routes.

Such arrangements should be documented in the relevant planning application (such as a structure plan, subdivision plan or development plan) and should be agreed to by local government.

## ELEMENT 4: WATER

**Intent:** To ensure that water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire.

### PERFORMANCE PRINCIPLE

*The intent may be achieved where:*

#### P4

The subdivision, development or land use is provided with a permanent and secure water supply that is sufficient for fire fighting purposes.

### ACCEPTABLE SOLUTIONS

*To achieve the intent, all applicable 'acceptable solutions' must be addressed.*

#### A4.1 Reticulated areas

The subdivision, development or land use is provided with a reticulated water supply in accordance with the specifications of the relevant water supply authority and Department of Fire and Emergency Services.

#### A4.2 Non-reticulated areas

Water tanks for fire fighting purposes with a hydrant or standpipe are provided and meet the following requirements:

- Volume: minimum 50,000 litres per tank;
- Ratio of tanks to lots: minimum one tank per 25 lots (or part thereof);
- Tank location: no more than two kilometres to the further most house site within the residential development to allow a 2.4 fire appliance to achieve a 20 minute turn-around time at legal road speeds;
- Hardstand and turn-around areas suitable for a type 3.4 fire appliance (i.e. kerb to kerb 17.5 metres) are provided within three metres of each water tank; and
- Water tanks and associated facilities are vested in the relevant local government.

#### A4.3 Individual lots within non-reticulated areas (Only for use if creating 1 additional lot and cannot be applied cumulatively)

- Single lots above 500 square metres need a dedicated static water supply on the lot that has the effective capacity of 10,000 litres.

### EXPLANATORY NOTES

#### E4.1 Reticulated areas

Water supply authorities in Western Australia include the Water Corporation, Aqwest and the Busselton Water Board.

The Water Corporation's 'No. 63 Water Reticulation Standard' is deemed to be the baseline criterion for developments and should be applied unless local water supply authorities' conditions apply.

#### E4.2 Non-reticulated areas

A procedure must be in place to ensure that water tanks are maintained at or above the designated capacity, including home tanks on single lots, at all times. This could be in the form of an agreement with the local government and the fire service.



## APPENDIX FIVE BUSHFIRE MANAGEMENT PLANS

### Purpose

A Bushfire Management Plan (BMP) is required to accompany strategic planning proposals, subdivision and development applications<sup>9</sup> in areas above BAL – Low or areas with a bushfire hazard level above low. In accordance with SPP 3.7: Planning in bushfire prone areas, a BMP should include the bushfire assessment; identification of the bushfire hazard issues arising from the relevant assessment; and demonstration that compliance with the bushfire protection criteria contained within Appendix 4 of these Guidelines can be achieved. Further guidance is included in section 4.6 of these Guidelines.

### Level of detail

The level of detail provided within a BMP should be commensurate with the applicable planning stage and scale of the proposal or application.

The primary sections 1-6 included in the BMP templates should always retain the stated section numbering. If a primary section is not relevant to an application then state N/A (and a reason, if applicable) but leave the section in the plan. The sub-sections can be modified as required, with best practice being to adhere to them as closely as possible, and add further detail if required.

Table 7 provides a checklist to outline the requirements for land use planning proposals and development applications in bushfire prone areas.

**Table 7:** Bushfire Management Plan Section Checklist

SECTIONS		Local planning strategies	Schemes and amendments	Structure plans	Subdivision	Development approval
Coversheet		✓	✓	✓	✓	✓
Executive summary		optional	optional	optional	optional	optional
1.	Proposal details	✓	✓	✓	✓	✓
2.	Environmental considerations	✓	✓	✓	✓	✓
3.	Bushfire assessment results					
3.1	Assessment inputs	✓	✓	✓	✓	✓
3.2	Assessment outputs					
	BHL assessment	✓	✓	✓		
			or	or		
	BAL contour map		✓	✓	✓	
					or	
	BAL assessment				✓	✓
4.	Bushfire hazard issues	✓	✓	✓	✓	✓
5.	Assessment against the bushfire protection criteria	✓	✓	✓	✓	✓
6.	Implementation	✓	✓	✓	✓	✓

# If future lot layout has been determined, a BAL contour map showing the BAL ratings for each lot should be prepared instead of a BHL assessment.

<sup>9</sup> Excluding development applications for single houses and ancillary dwellings on a lot or lots less than 1,100m<sup>2</sup>

## Bushfire Management Plan sections

### Section 1: Proposal details

Include a brief explanation of the planning proposal and resulting intensification of land use.

### Section 2: Environmental considerations

SPP 3.7 policy objective 5.4 recognises the need to consider bushfire risk management measures alongside environmental, biodiversity and conservation values.

The BMP should identify whether onsite clearing or modification of native vegetation will be required; and whether areas are proposed to be revegetated as part of the planning proposal.

The BMP should provide evidence (from relevant agencies, the environmental or planning consultant and/or the local government) that the vegetation clearing and/or modification can be achieved. If evidence is unavailable, it may be satisfactory to identify the need to seek these approvals at a subsequent stage of the planning process and to acknowledge that if approval is not forthcoming there may be a need to revise the BMP.

Where revegetation is proposed, written evidence and / or an approved landscape plan should be provided to demonstrate that the agency responsible for the ongoing management (i.e. local government and / or Department of Biodiversity, Conservation and Attractions), understands and supports the vegetation classification assigned to the subject area.

### Section 3: Bushfire assessment results

The assessment inputs and outputs will be dependent on the type of planning proposal. Assessments should be undertaken in accordance with the relevant methodology contained within these Guidelines.

### Section 4: Identification of bushfire hazard issues

Identify any bushfire hazard issues identified through examination of the environmental considerations and the bushfire risk assessment. This may include access constraints both within and outside of the site, the location of significant and remaining bushfire hazards (e.g. Regional reserves, National Parks, etc.) and other relevant bushfire hazards. This will assist in the understanding of whether the proposal is likely to be able to comply with the bushfire protection criteria.

This is particularly relevant to support strategic planning proposals where consideration of issues may assist in determining the suitability of areas for development; and issues that need to be considered at subsequent stages of the planning process.

### Section 5: Assessment against the bushfire protection criteria

For each of the elements listed in Appendix 4 of these Guidelines, the 'intent' must be demonstrated by either addressing the relevant acceptable solutions; or where these acceptable solutions cannot be fully met, performance-based solutions can be developed to achieve the 'intent'.

Acceptable solutions should be provided within a table and not duplicated in the body of the BMP.

### Section 6: Responsibilities for implementation and management of the bushfire measures

This section should be set out in a table and list separately the responsibilities of the developer/s, landowner/s and local government for the initial implementation and ongoing maintenance of the required bushfire risk mitigation measures.

## Best practice examples

Best practice examples have been prepared for:

1. Local planning strategies – using a BHL assessment
2. Strategic planning proposals – using a BHL assessment
3. Structure plan / subdivision where lot layout is known – using a BAL contour map
4. Development application (complex) – using a BAL assessment
5. Development application (simple) – using a BAL assessment

The BMP templates can be found at [www.dplh.wa.gov.au](http://www.dplh.wa.gov.au) under bushfire planning publications. The standardisation of BMPs improves efficiencies in decision-making at both local and State government level. The BMP templates promote the clear and succinct presentation of information required under SPP 3.7 and within these Guidelines. It is strongly recommended that these BMP templates are used.

## APPENDIX SIX RELATED PUBLICATIONS AND FURTHER READING

The following list of publications may be helpful to read in conjunction with SPP 3.7 and these Guidelines. The designation of bushfire prone areas, compliance with the objectives and policy measures of SPP 3.7, and the application of bushfire construction requirements are complemented by bushfire risk management measures that fall outside the planning process. This includes, but is not limited to, maintaining reduced fuel loads, public education and consultation, provision and maintenance of firefighting services and infrastructure, and up-to-date evacuation plans.

### Planning policies and publications

*State Planning Policy 2: Environment and Natural Resources Policy* (WAPC, 2003)

*State Planning Policy 2.5: Agricultural and Rural Land Use Planning* (WAPC, 2014)

*State Planning Policy 2.6: State Coastal Planning Policy* (WAPC, 2013)

*State Planning Policy 2.8: Bushland Policy for the Perth Metropolitan Region* (WAPC, 2010)

*State Planning Policy 2.9: Water Resources* (WAPC, 2006)

*State Planning Policy 3: Urban Growth and Settlement* (WAPC, 2006)

*State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) (WAPC, 2015)

*Introduction to the Western Australian Planning System* (WAPC, 2014)

*Liveable Neighbourhoods* (WAPC 2009, as amended)

*Local Planning Manual* (WAPC, 2010)

*Structure Plan Preparation Guidelines* (WAPC, 2012)

*Visual Landscape Planning in Western Australia* (WAPC, 2007)

### Legislation

*Building Act 2011*

*Building Regulations 2012*

*Environmental Protection Act 1986*

*Environmental Protection and Biodiversity Conservation Act 1999* (Cwth)

*Environmental Protection (Clearing of Native Vegetation) Regulations 2004*

*Planning and Development Act 2005*

*Planning and Development (Local Planning Schemes) Regulations 2015*

### Building approval publications

Building Code of Australia (Australian Building Codes Board, as amended)

*Australian Standard 3959 Construction of Buildings in Bushfire-Prone Areas* (Standards Australia 2009, as referenced by the Building Code of Australia) (Published by SAI Global)

Performance Standards for Private Bushfire Shelters (Australian Building Codes Board, 2010)

### Fire protection publications

*Standards for building protection zones for buildings and critical infrastructure in bushfire prone areas* (DFES, 2013)

*Prepare. Act. Survive* (DFES, 2012)

*Guidelines for Plantation Fire Protection* (Fire and Emergency Services Authority, 2011)

*The Homeowner's Bushfire Survival Manual* – 6th edition (Department of Fire and Emergency Services, 2015)

*Mapping Standard for Bush Fire Prone Areas* (OBRM, 2015)

### Other related publications

*Adapting to our Changing Climate* (Department of Environment and Conservation, 2012)

*Building for Better Protection in Bushfire Areas: A Homeowner's Guide* (Department of Commerce, 2014)

*Design Standard 63* (Water Corporation, 2012)

*Evacuation Planning' Handbook 4, 3rd Edition* (2013), produced by the Australian Emergency Management Institute of the Commonwealth Attorney Generals Department.

*Guidelines for Organisations Seeking to Become Accrediting Bodies in Western Australia: Level 1 Bushfire Attack Level Assessor, Level 2 Bushfire Planning Practitioner – Prescriptive and Level 3 Bushfire Planning Practitioner – Performance* (Department of Planning, 2015)

Regional and Local Fire Prevention and Response Plans and Fire Equipment Strategies, Where They Exist (refer relevant local government)