

# WA Bushfire Planning Policies and Guidelines – What does it Mean for Compliance?



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# Introduction

- Background and introduction
- Legislative Requirements
  - SPP 3.7
  - Bushfire prone mapping
  - Planning for Bushfire Protection Guidelines
  - AS 3959 – 2009
- Bushfire practitioners and accreditation
- Relevance to revegetation/restoration
- Acknowledgements
- Questions

# Background

- Environmental scientist
- Worked in TAFE and consulting sectors
- Bushfire planning practitioner 5+ years
- Accredited Level 2 bushfire planning and design(BPAD) accreditation through Fire Protection Association of Australia

# Legislation and Policies

- State Planning Policy 3.7 Planning in Bushfire Prone Areas (WA)
- Guidelines for Planning in Bushfire Prone Areas (WA)
- *Planning and Development Act 2005* (WA)
- Planning and Development Regulations 2009 (WA)
- Planning and Development (Local Planning Scheme) Regulations 2015 (WA)
- *Fire and Emergency Services Act 1998* (WA)
- *Building Act 2011* (WA)
- Building Regulations 2012 (WA)
- Building Code of Australia (National Construction Code)

# Bushfire Prone Mapping

- Bushfire prone area means land designated by an order made under Section 18P of the *Fire and Emergency Services Act 1998*
- Designation undertake by Office of Bushfire Risk Management (OBRM)
- Online December 2015, updated May 2016



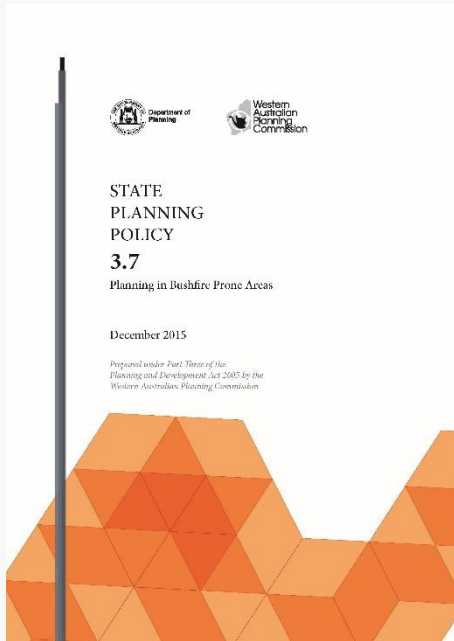


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# SPP 3.7

- Councils must have due regard to the policy, or they must give respect and consideration to it
- Requires consideration of bushfire hazard at various stages of the planning process
- Common outputs of the process:
  - Bushfire Hazard Assessment
  - BAL-contour map and BAL-assessment
  - Bushfire Management Plan



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Type of proposal	BHL	BAL Contour Map	BAL Assessment		Other Requirements
			Professional	Self-assessment	
Strategic Planning Proposals (e.g. MRS, LPS, Structure Plan)	✓	✓	x	x	<ul style="list-style-type: none"> <li>Consideration of bushfire protection criteria</li> </ul>
Subdivision applications	x	✓	✓	x	<ul style="list-style-type: none"> <li>Demonstrate compliance with specific bushfire protection criteria</li> </ul>
Development - single house on a lot $\geq 1,100\text{m}^2$ within 50km of a gazetted townsite boundary	x	✓	✓	x	<ul style="list-style-type: none"> <li>Planning approval only required if BAL-40 or BAL-FZ</li> <li>Demonstrate compliance with specific bushfire protection criteria</li> </ul>
Development - single house a lot $\geq 1,100\text{m}^2$ further than 50km from a gazetted townsite boundary	x	✓	✓	✓	<ul style="list-style-type: none"> <li>Planning approval only required if BAL-40 or BAL-FZ</li> <li>Demonstrate compliance with specific bushfire protection criteria</li> </ul>
All other development applications	x	✓	✓	x	<ul style="list-style-type: none"> <li>Demonstrate compliance with specific bushfire protection criteria</li> </ul>



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## THE MAP OF BUSH FIRE PRONE AREAS

Binary assessment: mapping of land considered bushfire prone designated by the Fire and Emergency Services Commissioner.

### BUSHFIRE HAZARD LEVEL ASSESSMENT

A broad three tier categorisation of vegetation into hazard levels based on fuel characteristics.

### BAL CONTOUR MAP

A scale map of the subdivision illustrating the potential radiant heat impacts and associated indicative BAL ratings in reference to classified vegetation for each of the subject lot/s.

### BAL ASSESSMENT

A measurement of the severity of a buildings potential exposure to ember attack, radiant heat and direct flame contact using increments of radiant heat expressed in  $\text{kW}/\text{m}^2$ .

### BUSHFIRE MANAGEMENT PLAN

A living document that sets out short, medium and long-term bushfire risk management measures for the life of the development. It should include consideration of the bushfire protection criteria.



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Example pre-development bushfire hazard



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# BAL-Contour, BAL-assessment

- BAL = bushfire attack level
- Considers the presence of bushland areas (classified vegetation) and its proximity to urban development, along with vegetation type and slope
- Majority of house fires in proximity to bushland are within 100 m of the vegetated areas
- Bushfire hazard considers the separation distance to building walls and associated risks of smoke, ember attack and flames
- Scale map of a development site including proposed lot layout and indicative BAL-ratings; indicates potential bushfire attack levels and radiant heat impacts, thus identifies land suitable and unsuitable for development



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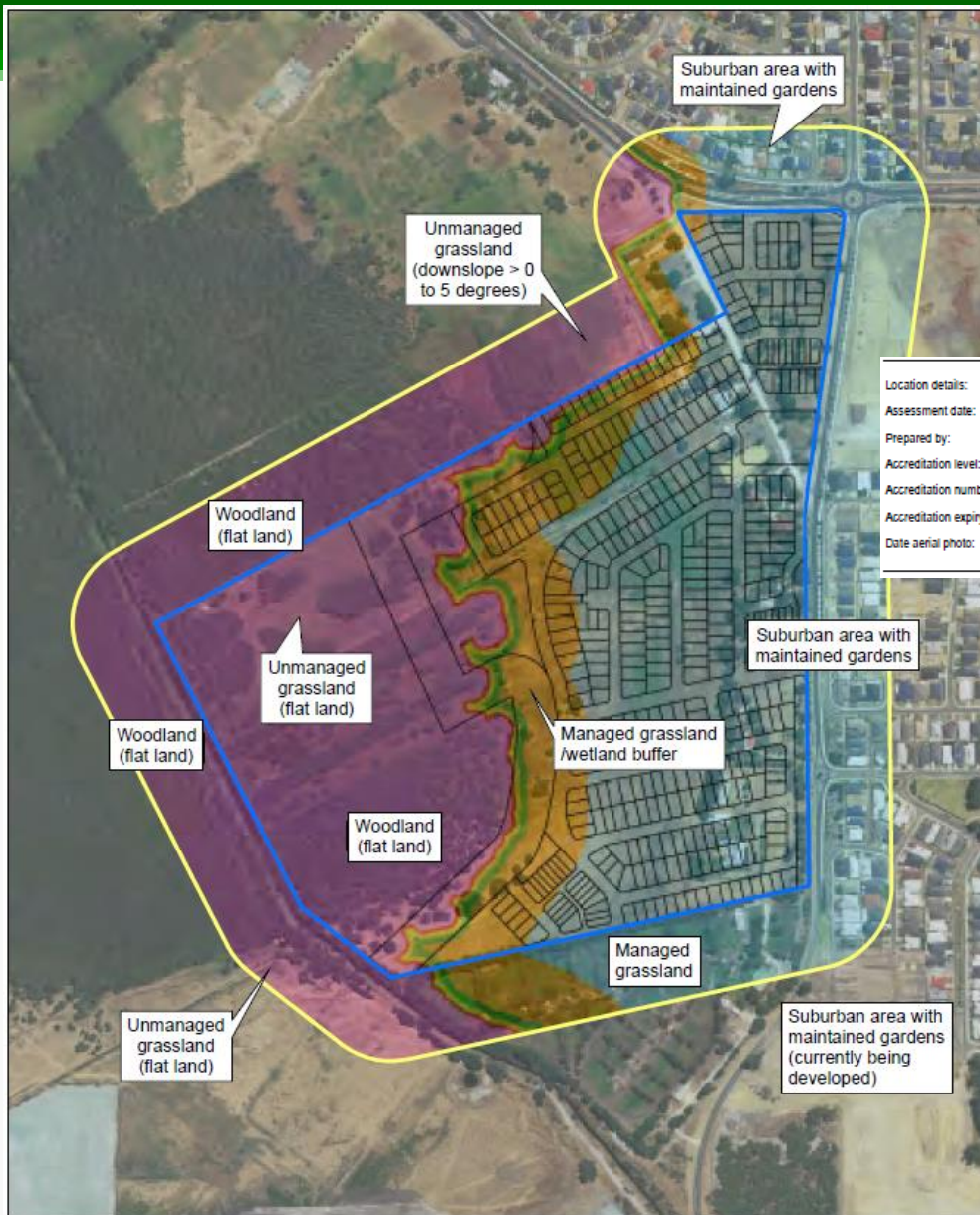


# BAL Construction Levels



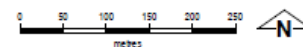
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Location details:  
 Assessment date:  
 Prepared by:  
 Accreditation level:  
 Accreditation number:  
 Accreditation expiry date:  
 Date aerial photo:

## Sample BAL Contour Map showing indicative BAL ratings



Legend		Indicative bushfire attack levels:
	Assessment area (100m from the external boundary of the subject site)	BAL-LOW
	Subject land	BAL-12.5
	Proposed cadastre	BAL-19
		BAL-29
		BAL-40
		BAL-FZ

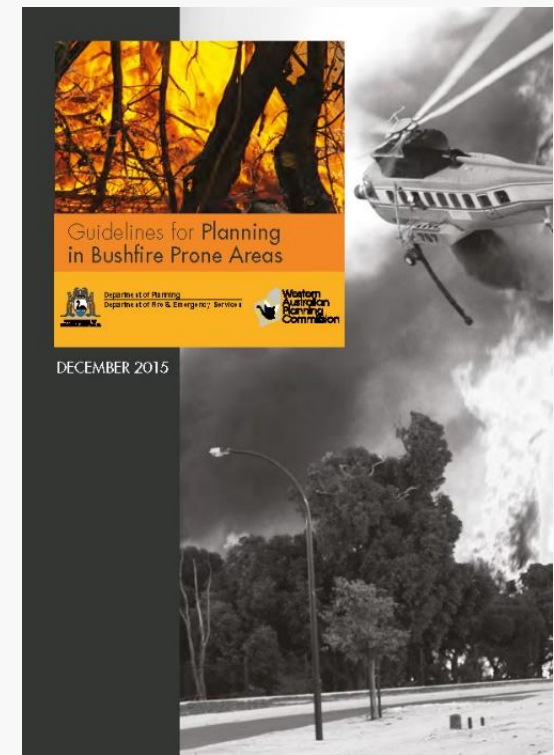


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# Bushfire Protection Criteria

- Performance-based system of assessing bushfire risk management measures
- Consists of four elements
  - 1 – Location
  - 2 – Siting and design of development
  - 3 – Vehicular access
  - 4 – Water
- Each has an intent that outlines the desired outcomes for the element (performance principle and acceptable solutions)
- Assessment typically documented in a Bushfire Management Plan



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# Bushfire Protection Criteria

## Element 1 – Location

Development 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.

## Element 2 – Siting And Design

- Asset Protection Zone – minimum 20 m. Where 20 m not possible, APZ sufficient enough to ensure potential radiant heat impact of a fire does not exceed 29 kW/m<sup>2</sup>.

## Element 3 – Vehicular Access

- Two access routes
- Technical requirements for:
  - Public road
  - Cul-de-sac
  - Battle Axe
  - Private driveway >50 m
  - Emergency access way
  - Fire service access routes.

## Element 4 – Water

- Reticulated water supply, or
- Provision of water tanks for fire fighting purposes.



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# Implications for Revegetation

- Development will result in clearing of vegetation and also the landscaping and/or revegetation
- Revegetation can create areas of classified vegetation that can impact on the various bushfire assessments and the need for a building to have a BAL-rating
- Important to consider revegetation in early stages of the planning process



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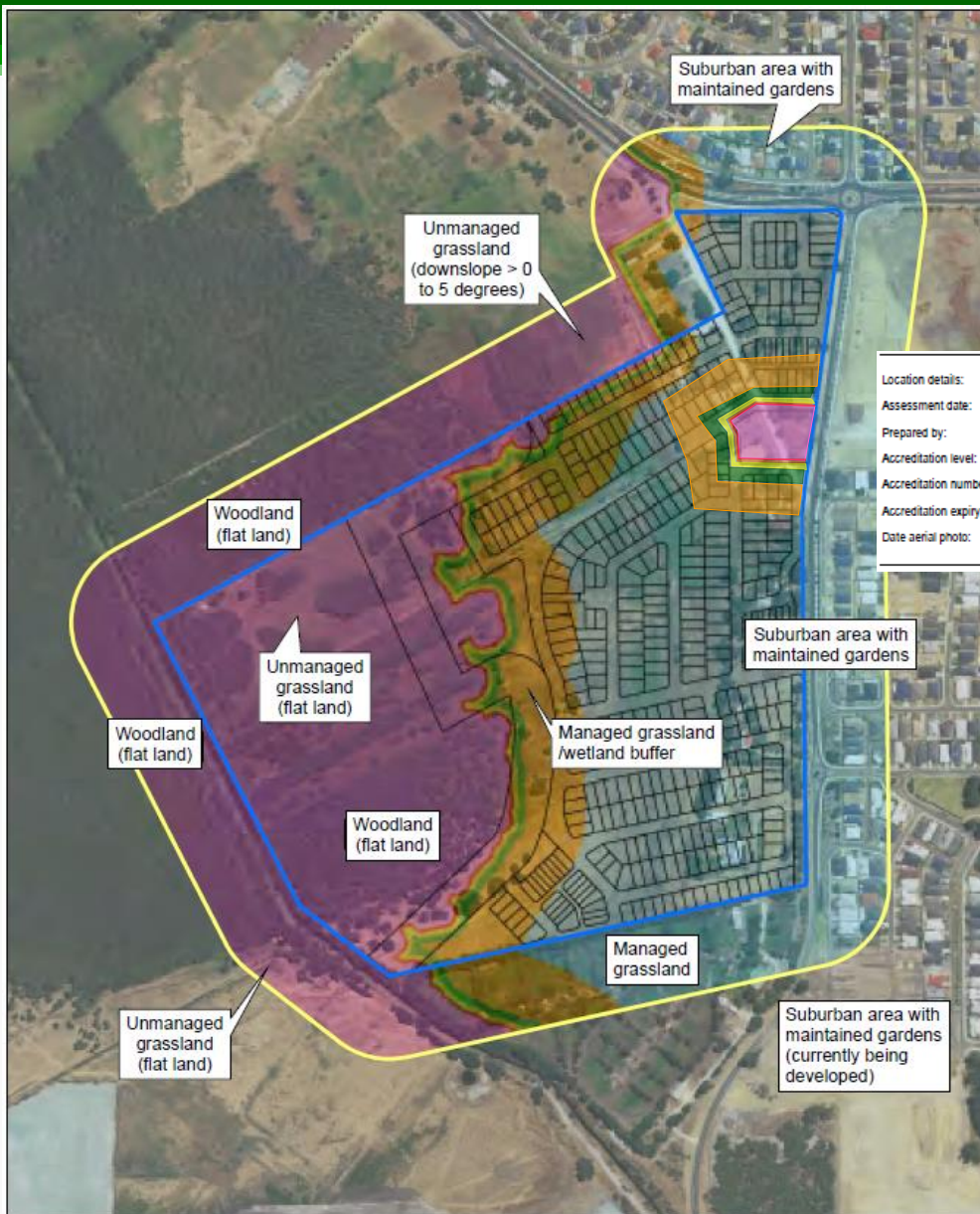
# Implications for Revegetation

- Revegetation considerations could include:
  - Species selection
  - Planting density and locations
  - Weed control
  - Spatial area to be planted
  - Proximity to other classified vegetation
  - Future maintenance requirements (e.g.: fire fuel loads)



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 Date aerial photo:

## Sample BAL Contour Map showing indicative BAL ratings Revegetated POS



### Legend

- Assessment area (100m from the external boundary of the subject site)
- Subject land
- Proposed cadastre

- Indicative bushfire attack levels:
- BAL-LOW
  - BAL-12.5
  - BAL-19
  - BAL-29
  - BAL-40
  - BAL-FZ



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# Key Messages

- Bushfire implications need to be considered early in the planning process
- Landscaping and revegetation activities also need to be considered early due to their potential impacts on BAL-ratings within a subdivision

# Acknowledgements

- Chris Wyborn, Engagement and Education Manager, Fire Protection Association of Australia



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# Questions?

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