



**NSW RURAL FIRE SERVICE**



# **What the heck is a BAL?**

**Bushfire Building Conference and Expo  
19 September 2015**

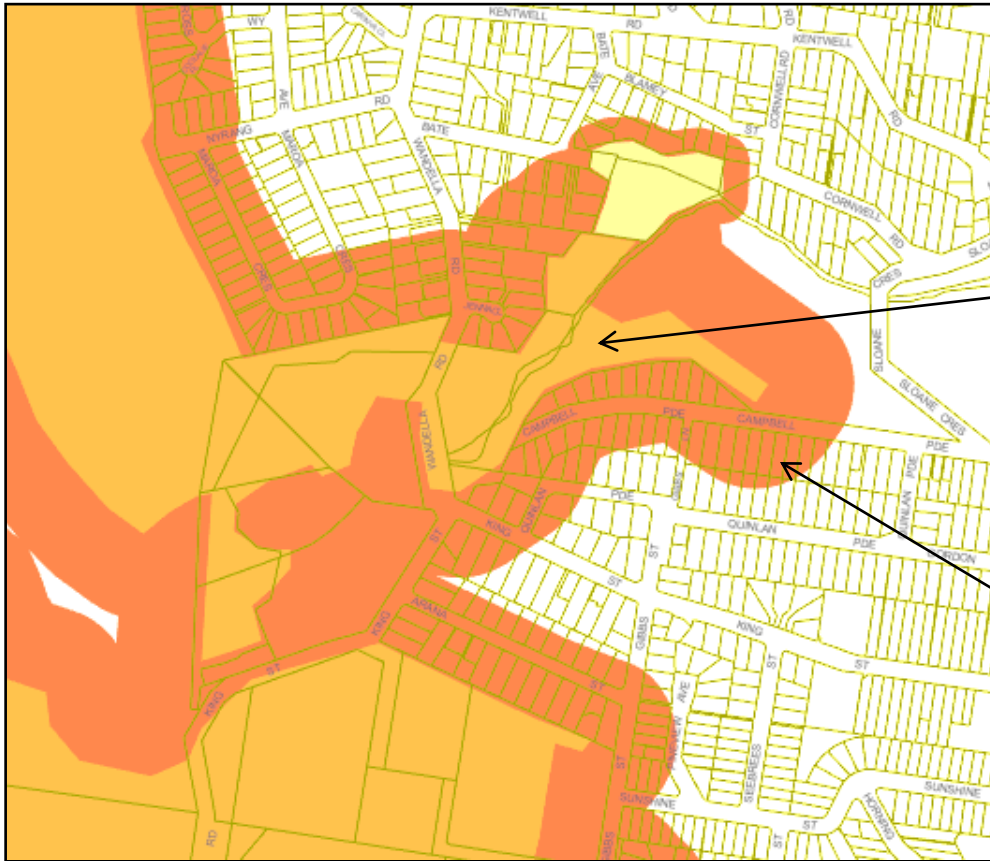
**Jason Maslen  
Development Assessment and Planning  
Customer Service Centre East**

# Overview

- › What is bush fire prone land?
- › What is a BAL?
- › How to determine your BAL
- › What are the construction requirements?
- › Other requirements
- › More information

# What is Bush Fire Prone Land?

- Area likely to be subject to bush fire attack as identified on bush fire prone land map



Prepared by local Council & certified by NSW RFS

Identifies bush fire hazard (unmanaged vegetation which has the potential to carry a bush fire)

Identifies buffer (100m / 30m) from the vegetation

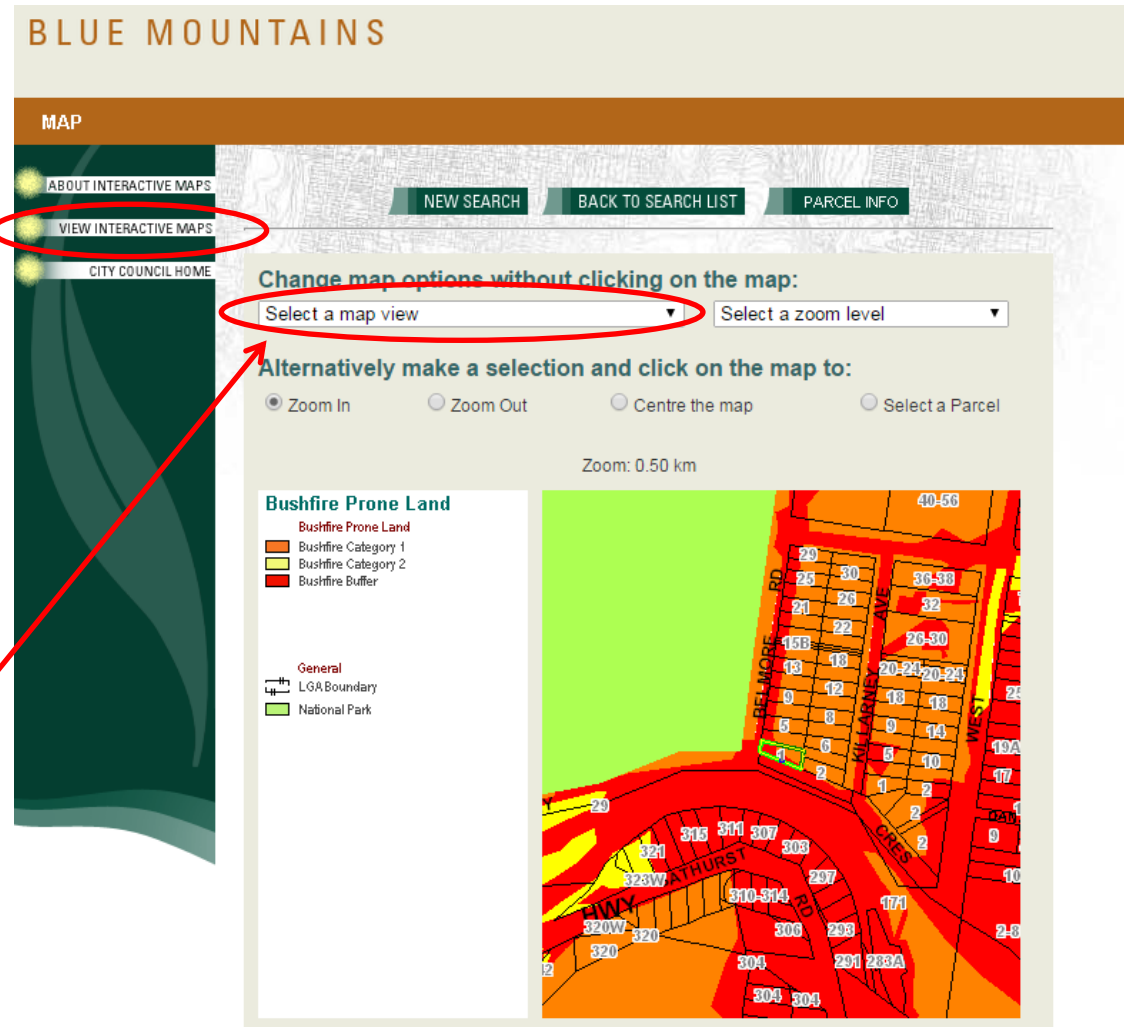
Is a trigger, not a measure of risk

# Bush Fire Prone Land Map - BMCC

[www.bmcc.nsw.gov.au](http://www.bmcc.nsw.gov.au)



'Map – Bush Fire Prone Land'



# What is a BAL?

- BAL = Bushfire Attack Level
- Level of construction required under *AS3959-2009 Construction of buildings in Bushfire-prone areas*
  - Materials, windows, roof etc
- Relates to the level of expected bush fire attack
  - Embers, radiant heat & flame contact
- Determined on a site-specific basis
  - Type of vegetation
  - Slope under the vegetation
  - Setback from house to vegetation

# How to determine your BAL

- Self-assessment using RFS booklet
- Bush fire consultant



[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)



[www.fpaa.com.au](http://www.fpaa.com.au)



# BAL Step 1 – Classify Vegetation



## Forests

Open tree canopy dominated by eucalypt species (typically >10m in height) with crowns that touch or overlap. Canopy allows most sunlight to penetrate supporting growth of a prominent understorey layer varying between hard-leaved shrubs to luxuriant soft leaved shrubs, ferns and herbs.



## Tall Heaths (Scrub)

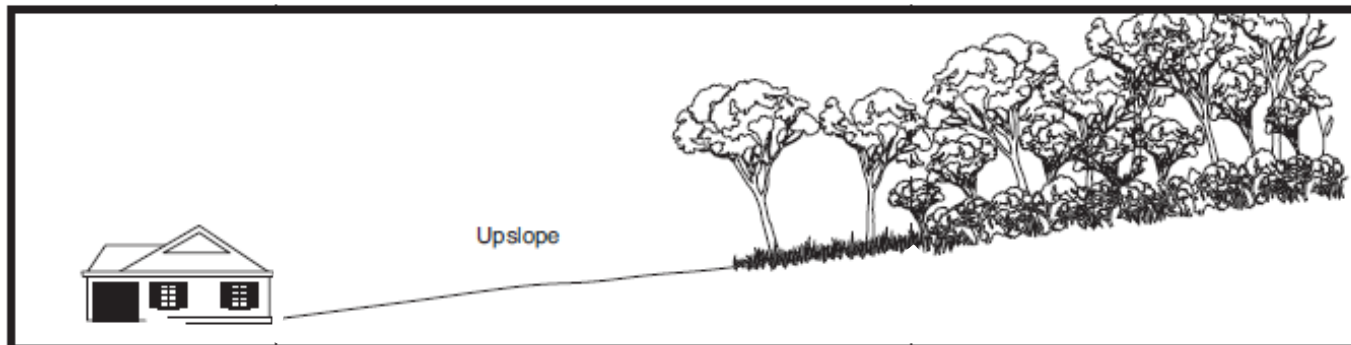
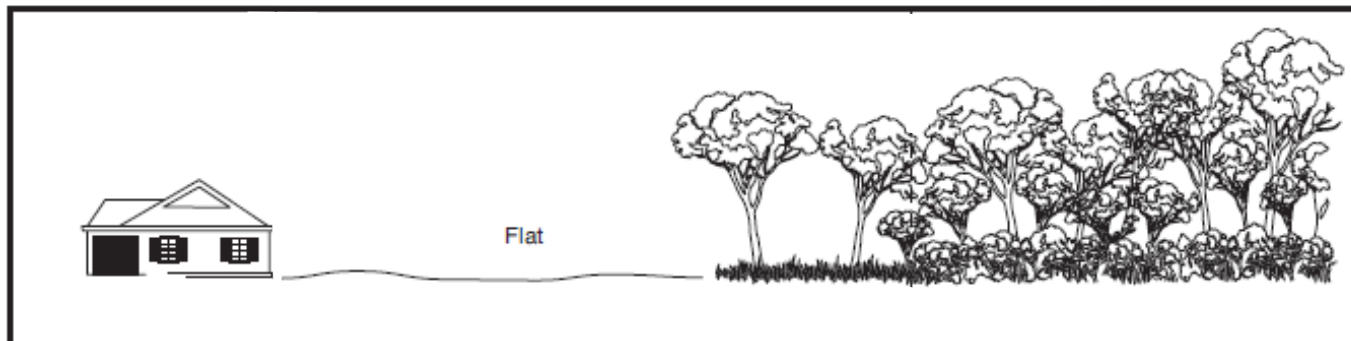
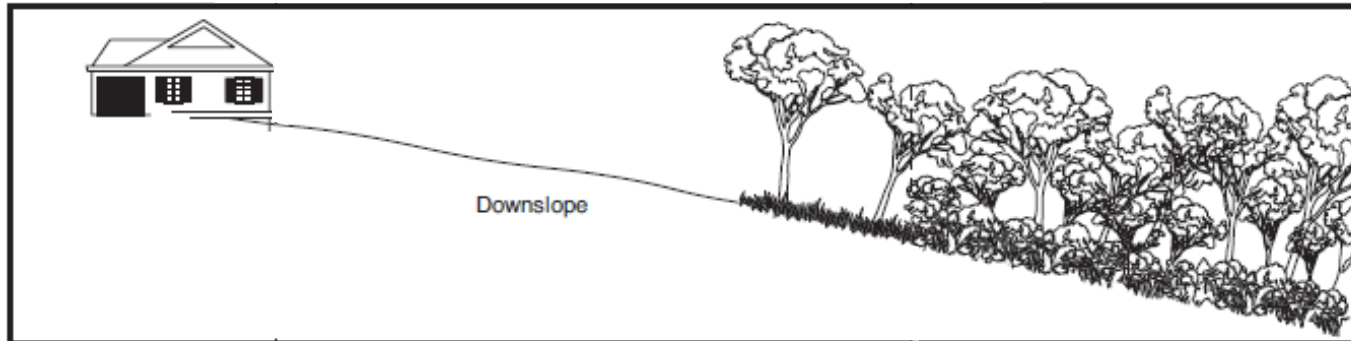
Shrubby vegetation greater than 2 metres tall. Principal plant species include banksias, spider flowers, wattles, legumes, eucalypts, tea-trees, paper barks, she oaks, grass trees, cord rushes and sedges. Grasses are scarce. Not found in arid and semi arid locations. Includes Hawkesbury Sandstone vegetation with scattered overstorey trees and predominantly healthy understorey and coastal heath. May include some mallee eucalypts in coastal locations.



## Woodlands

Dominated by an open to sparse layer of eucalypts with the crowns rarely touching. Typically 15-35m high (may be shorter at sub-alpine altitudes). Diverse ground cover of grasses and herbs. Shrubs are sparsely distributed. Usually found on flat to undulating ground.

# BAL Step 2 – Determine Slope



› Slope under the vegetation

› Measured in degrees

0-5, 5-10, 10-15, 15-20>

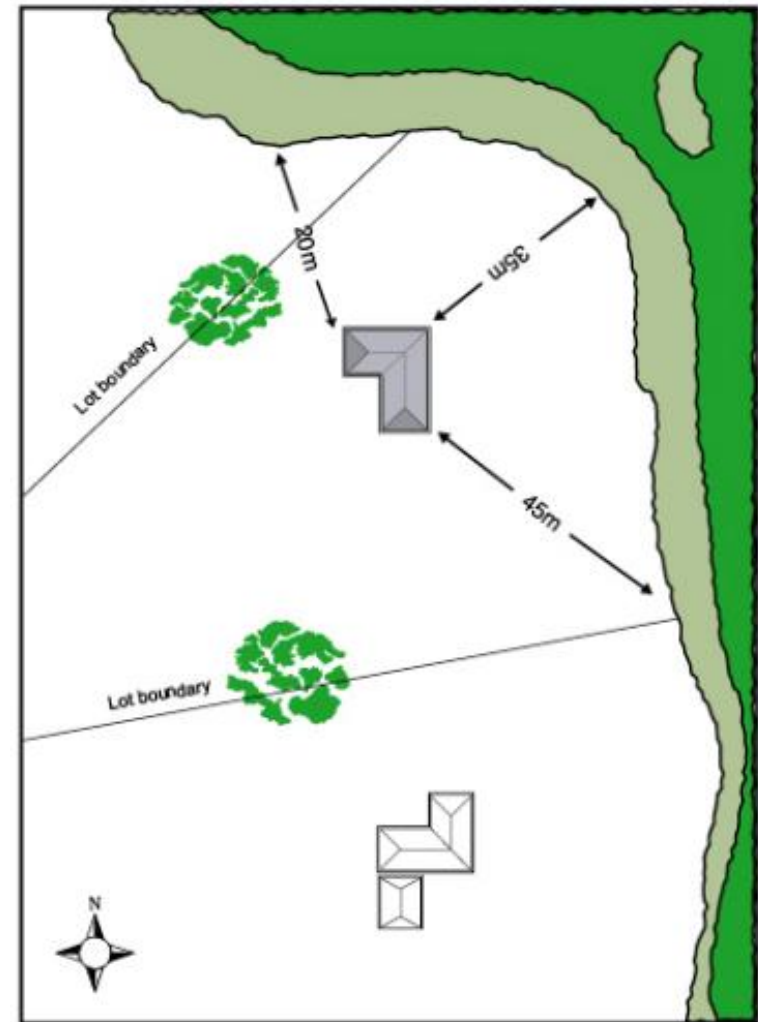


› If having trouble – engage a bush fire consultant



# BAL Step 3 – Determine the Setback

- Setback from house to unmanaged vegetation
  - Within property boundaries
  - Off-site in exceptional circumstances
    - Managed land (in perpetuity)
    - APZ easement







# BAL Step 4 – Determine BAL

1 Table 4. - FDI 100 Blue Mountains - 100

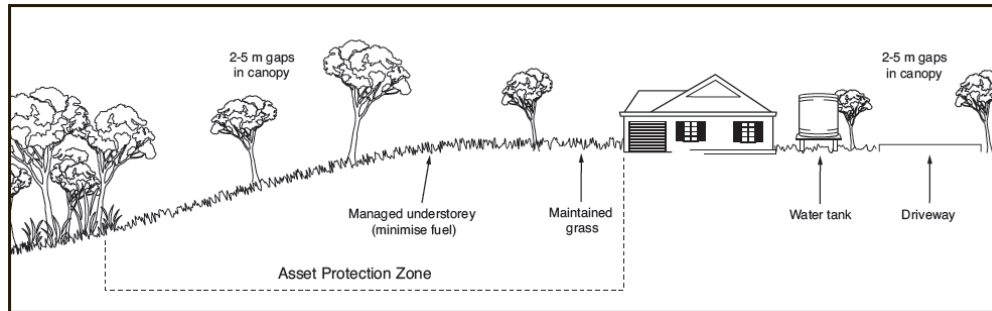
Vegetation Formation (class)	Categories of Bush Fire Attack (AS 3959-2009)				
	BAL- FZ	BAL- 40	BAL- 29	BAL- 19	BAL-12.5
	Distance (m) of the site from the predominant vegetation class				
All upslopes and flat land (0 degrees)					
Forests	<19	19-<25	25-<35	35-<48	48 - 100
Woodlands	<12	12-<16	16-<24	24-<33	33 - 100
Shrubland	<7	7-<9	9-<13	13-<19	19 - 100
Scrub	<10	10-<13	13-<19	19-<27	27 - 100
Mallee/Mulga	<6	6-<8	8-<12	12-<17	17 - 100
Rainforest	<8	8-<11	11-<16	16-<23	23 - 100
Downslope > 0 to 5 degrees					
Forests	<24	24-<32	32-<43	43-<57	57 - 100
Woodlands	<12	15-<21	21-<29	29-<41	41 - 100
Shrubland	<7	7-<10	10-<15	15-<22	22 - 100
Scrub	<11	11-<15	15-<19	19-<27	27 - 100
Mallee/Mulga	<7	7-<9	9-<13	13-<20	20 - 100
Rainforest	<10	10-<14	14-<20	20-<29	29 - 100
Downslope > 5 to 10 degrees					
Forests	<31	31-<39	39-<53	53-<69	69 - 100
Woodlands	<20	20-<26	26-<37	37-<50	50 - 100

# Construction requirements

		BAL-12.5	BAL-19	BAL-29	BAL-40	BAL-FZ
Decks		- Lower sections non-combustible or bush fire resistant timbers			- No timber	
Walls		- Lower sections non-combustible or certain timbers		- Bush fire resistant timbers	- No timber	
Windows		- Lower sections 4mm thick or annealed glass - Openable portion screened	- Lower sections 5mm thick toughened - Openable portion screened	- Entire window 5mm toughened glass - Openable & <400mm screened	- Entire window 6mm toughened glass - Entire window screened	- Entire window 6mm toughened glass - Entire window screened & shuttered
Roof		- Sealed at eaves or wall - Ember protected - Fully sarked				- Sealed system involving multiple layers of protection - Sarking - Glasswool insulation - Plywood - Plasterboard to eaves

# Other requirements

- BAL is one of a number of 'bush fire protection measures' to better prepare a dwelling to withstand bush fire attack
- Asset Protection Zones - Managed area around house



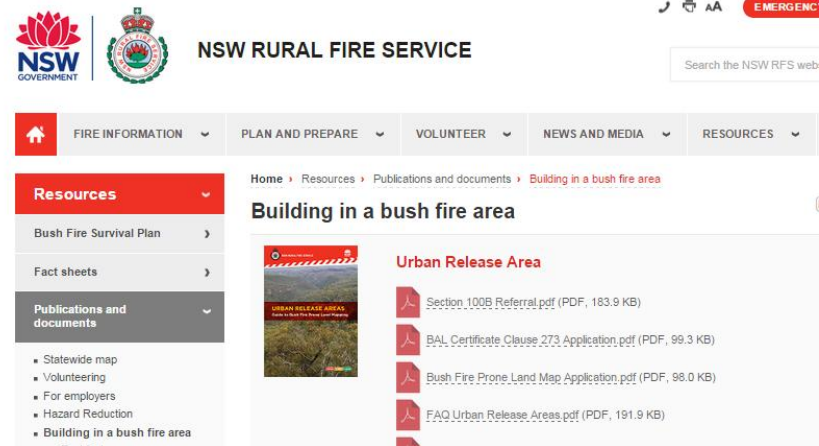
- Access - Driveways / turning areas
- Water & services - Water / electricity / gas
- Landscaping – Reduced fuel loads



# Further information

- RFS Website
  - Policy documents
  - Single dwelling application kit
  - Prepare a survival plan
  - Prepare your home
- NSW RFS Customer Service Centre
  - 1300 NSW RFS (1300 679 737)
- Bush fire consultant - FPAA website

[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)



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