



Firebird Ecosultants Pty Ltd

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Date: 23 June 2011

Attn: James Goode
Development Manager
North Lakes Pty Ltd
PO Box 2214
Dangar NSW 2309

Dear James,

RE: BUSHFIRE ATTACK LEVELS FOR STAGE 54 NORTHLAKES, CAMERON PARK

The following has been prepared to provide the key information relating to the construction requirements for future dwellings within Stage 54 North Lakes Estate, Cameron Park.

The site assessment methodology used for determining the construction requirements for dwellings has been undertaken in accordance with the Building Code of Australia (BCA) and Addendum: Appendix 3 of PBP. BCA formally adopted AS3959-2009 as the national standard on 1 May 2010.

The determinations of the appropriate Bushfire Attack Levels (BAL) in accordance with AS3959-2009 are based upon parameters such as weather modelling, fire-line intensity, flame length calculations, as well as vegetation and fuel load analysis. The determination of the construction level is derived by using the following information:

- Relevant Fire Danger Index (FDI) of 100
- Flame temperature
- Slope
- Vegetation Classification; and
- Building location.

Assessment of the site and the surrounding land for a distance of 140m has shown that after development of the site, the following vegetation and slope this vegetation occurs on is as follows:



- To the north an APZ of greater than 28m occurs followed by Open Forest.
- To the east Stage 6 and the community centre occurs.
- To the south a managed crown road reserve occurs followed by residential development.
- To the west an APZ of greater than 28m occurs followed by Open Forest.

Using a FDI of 100, the information relating to vegetation, slope and according to Table 2.4.2 of AS3959-2009, Table 1 and Figure 1 illustrates the required BAL in accordance with Addendum: Appendix 3 of PBP for future dwellings within the site. Any lessening of the BAL would require a Performance Based Assessment to be undertaken.

Table 1: Deemed to Satisfy Bushfire Attack Levels (BALs) for Future Dwellings within Stage 54 of North Lakes Estate

Direction	Vegetation Type	Average Slope of Land under Vegetation Type	Separation Distance from Vegetation Type	Bushfire Attack Level (BAL)	Construction Section
North and East	Open Forest	Upslope	28-<35m	BAL-29	Sect 3 & 7 of AS3959 and Sect A3.7 of PBP Addendum Appendix 3
			35-<48m	BAL-19	Sect 3 & 6 of AS3959 and Sect A3.7 of PBP Addendum Appendix 3
			48-<100m	BAL-12.5	Sect 3 & 5 of AS3959 and Sect A3.7 of PBP Addendum Appendix 3
			>100	BAL-LOW	No Requirements

To Note: The construction requirements for the next lower BAL than that determined for the lot may be applied to an elevation of the building where the elevation is not exposed to the source of bushfire attack. An elevation is deemed to be not exposed to the source of bushfire attack if all straight lines between that elevation and the source of bushfire attack are obstructed by another part of the building.



We trust this information is sufficient for your purposes, however, if you require further details or clarification please do not hesitate to contact the writer.

Yours faithfully
Firebird EcoSultants Pty Ltd

Sarah Jones
B.Env.Sc., G.DIP.DBPA (Design for Bushfire Prone Areas)
Ecologist / Bushfire Planner



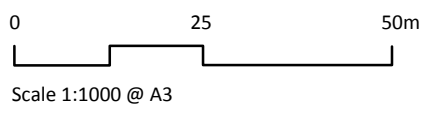
Disclaimer

The BALS as depicted on this map have been determined by vegetation within 140m of Stage 54 at the time of the assessment on June 2011. It should be noted that conditions may change over time, that may result in different BALS for the site. Although every care has been taken in the preparation of this map, North Lakes Estate and the author accept no responsibility for any misprints, errors, omissions, inaccuracies in these maps or damages resulting from the use of this information.

TITLE: BUSHFIRE ATTACK LEVELS

CLIENT Northlakes
SITE DETAILS Stage 54 Northlakes Estate
DATE 28 June 2011

- Legend**
- BAL - 29
 - BAL - 19
 - BAL - 12.5
 - BAL - Low
 - Stage Boundary
 - APZ



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