

6th July 2020

Andrea Smith,
Development Manager, Villawood Properties
PO Box 1104, Bendigo VIC 3552
Email: andrea@villawoodproperties.com
Phone: (03) 5444 0002

Dear Andrea,

Bushfire Attack Level Assessment 132–144 Ash Road, Leopold

Practical Ecology has been commissioned to provide a Bushfire Attack Level Assessment for the residential subdivision of 132–144 Ash Road, Leopold. It is understood a planning permit has been granted for the subdivision plan attached to the end of this report. An overview of the site is presented in Map 1.

The land is located within a Bushfire Prone Area under the Victorian *Building Regulations 2006* as such that the provisions within the Building Code of Australia (BCA) require residential development to be protected from the effects of bushfire. The deemed-to-satisfy solutions require an assessment of the Bushfire Attack Level (BAL) in accordance with *Australian Standards 3959–2018: Construction of buildings in bushfire-prone areas* (AS3959–2018). Dwellings must then be built to the relevant BAL as per the BCA.

Currently there are two deemed-to-satisfy methods of building construction to satisfy the BAL:

- AS3959–2018
- NASH Standard ‘Steel Framed Construction in Bushfire Areas’

The land is zoned General Residential and is not covered by a Bushfire Management Overlay. Planning Authorities may seek assurance that bushfire protection measures have been considered at the subdivision application stage.

There are three potential methods of BAL assessment under the building and planning regulations:

- Method 1 of AS3959–2018
- Method 2 of AS3959–2018
- An Alternative Solution in accordance with the BCA for building permits or as approved by the Relevant Authority for planning permits.

Considering the nature of the development and the condition of the surrounding vegetation. Method 1 as per AS3959–2018 is considered suitable.

SUMMARY OF RESULTS

Document date & version	06/07/2020 – Version 1.0
Assessors	Emma Wilkin
Assessors Contact	Email: emmaw@practicalecology.com.au Phone: (03) 9484 1555
Plan of Subdivisions	Concept Plan– Ash Road, Leopold (Drawing No. A4041 PROSUB 01)

Lot No	BAL (AS3959–2018)
1	12.5
2	12.5
3	12.5
4	12.5
5	12.5
6	12.5
7	12.5
8	12.5
9	12.5
10	12.5
11	12.5
12	12.5
13	12.5
14	12.5
15	12.5
16	12.5
17	12.5
18	12.5
19	12.5
20	12.5

Lot No	BAL (AS3959–2018)
21	12.5
22	12.5
23	12.5
24	12.5
25	12.5
26	12.5
27	12.5
28	19
29	12.5
30	12.5
31	12.5
32	12.5
33	12.5
34	12.5
35	12.5
36	12.5
37	12.5
38	12.5
39	12.5

Bushfire Attack Level Assessment

Document date & version	06/07/2020 - Version 1.0
Assessor	Emma Wilkin
Assessors Contact	Email: emmaw@practicalecology.com.au Phone: (03) 9484 1555
Reviewer	Julian Drummond (BPAD Level 2 VIC - BPAD44709)
Reviewers Contact	Email: juliand@practicalecology.com.au Phone: (03) 9484 1555

SITE DETAILS

Municipality	City of Greater Geelong
Address	132-154 Ash Road, Leopold
Applicant	c/o Andrea Smith Development Manager, Villawood Properties PO Box 1104, Bendigo VIC 3552 andrea@villawoodproperties.com
Zoning	General Residential
Overlays	Development Plan Overlay - Schedule 33
Bushfire Prone Area	Yes
Proposal	Residential subdivision

AS3959 METHOD 1

Direction	North	East, South & West	South-East	West North-West
Fire Danger Index	100	100	100	100
Vegetation type	Grassland	Low Threat	Forest	Grassland
Exclusions (from section 2.2.3.2b, c, d, e and/or f)	N/A	e, f	N/A	N/A
Slope (up/down)	Flat	Flat	Flat	Downslope
Slope (degrees)	0-1°	0-1°	0-1°	0-5°
Defendable space for BAL 12.5 (m)	19	N/A	48	22
Defendable space for BAL 19 (m)	13	N/A	35	15
Defendable space for BAL 29 (m)	9	N/A	25	10
Distance from classified vegetation (m)*	21	0	34	55
BAL (based on the distance to the classified vegetation)	BAL-12.5	BAL-12.5	BAL-19	BAL-12.5

* Distances have been measured from the edge of the proposed residential lots as opposed to the property boundary

SUMMARY AND RECOMMENDATIONS

The results of the BAL assessment are displayed on Map 2.

A large proportion of the vegetation on the site and within the residential properties surrounding the site has been cleared and managed and is therefore considered to be Low Threat (see Figures 1– 3).

A residential property to the south–east of the site contains stands of large Pine Trees adjacent to Ash road (see Figure 4) This vegetation has been assessed as Forest, and is considered Flat relative to the subdivision. Outside of 100m buffer from the site, there is a downslope of 5–10° as Ash Road approaches Lake Connewarre. The south–east corner of the proposed subdivision is approximately 34m from this patch of Forest, impacting specifically Lot 28 only, where a set–back for BAL–12.5 cannot be achieved and as such requires a BAL–19 rating as per AS3959–2018 (see Map 2) for the setbacks.

There is Grassland vegetation present north and west of the site which at the time of assessment indicated management and maintenance conducted periodically through mowing/slashing (see Figures 5 and 6). This vegetation occurs downslope relative to the site, with the slope approximately 0–5°. There is adequate distance from both grassland patches for BAL–12.5 and as such, no further setbacks are required.

It is therefore recommended that all of the proposed lots within the sub–division can be built to BAL 12.5, with the exception of Lot 28 which shall be BAL–19 as discussed. Shielding as per Section 3.5 of AS3959–2018 can be employed on Lot 28 to reduce the northern and western aspects to BAL–12.5.

CONCLUSION

We have taken all reasonable steps to ensure that the information provided in this assessment is accurate and reflects the conditions on and around the site on the date of this assessment. This assessment cannot guarantee safety during a bushfire event. There are additional measures that should be considered and implemented to improve the bushfire performance of buildings and the safety of occupants such as:

- a Personal Bushfire Plan for each household to detail how occupants will respond to an emergency event
- building design: e.g. minimise re-entrant corners, elevated floors, vulnerable elements
- access and egress for emergency services
- static water supply in case mains water is not available
- defensible space around building by managing vegetation and removing other fuel sources.

Please don't hesitate to contact me if you have any issues or queries,

Yours sincerely,



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and



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We acknowledge the Traditional Custodians of the land, the Wurundjeri Woi Wurrung people of the Kulin Nation, on which our office is located. We pay our respects to their Elders, past and present. We also acknowledge the Traditional Custodians of the Lands on which we conduct our business throughout Australia. We pay our respects to their Elders, past and present, and the Aboriginal Elders of other communities who may be present on those lands.

PHOTOGRAPHS



Figure 1. Main access via Ash Road, looking south from property



Figure 2. Low Threat development to the south of the site



Figure 3. Low Threat vegetation and developed land to the East, Ash Road in Foreground



Figure 4. Woodland vegetation along property front on Ash Road, South West of the site



Figure 5. Grassland as undeveloped land to the west of the site






Figure 6. Grassland as undeveloped land to the north of the site

Map 1. Subject site
132-144 Ash Rd, Leopold



Legend

-  Subject site
-  Parcels
-  Contours (10m)

Details

Date: 22/05/2020
Version: 1
Aerial photography from Nearmap (March 2020).
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Disclaimer






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Map 2. BAL Assessment

132-144 Ash Rd, Leopold




Legend

-  Subject site
-  Assessment area (100m)
-  Parcels
-  Contours (10m)
-  Slope measurements

Classified vegetation


-  Forest, upslope/flat
-  Grassland, downslope (0-5°)
-  Grassland, upslope/flat
-  Low Threat

Proposed development

-  Residential lots

Defendable space setbacks




Forest, Upslope/Flat

-  Forest, BAL-12.5 (48m)
-  Forest, BAL-19 (35m)
-  Forest, BAL-29 (25m)

Forest, Down slope (0-5°)

-  Grassland Down, BAL-12.5 (22m)
-  Grassland Down, BAL-19 (15m)
-  Grassland Down, BAL-29 (10m)

Grassland, Upslope/Flat

-  Grassland Flat, BAL-12.5 (19m)
-  Grassland Flat, BAL-19 (13m)
-  Grassland Flat, BAL-29 (9m)

Details

Date: 10/06/2020

Version: 1

Aerial photography from Nearmap (March 2020).

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