

Andrea Smith,
Development Manager
Villawood Properties
PO Box 1104, Bendigo
Victoria, 3552
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Email: andrea@villawoodproperties.com

15th September 2021

Dear Andrea,

Practical Ecology has been commissioned to provide a Bushfire Attack Level (BAL) assessment for the residential subdivision of Drews Paddock, Invermay Park. While the assessment was performed across the entire site, this development is being performed in stages so Stages 2, 3 and 4 will be focused on by this report.

The land is located within a Bushfire Prone Area under the Victorian Building Regulation 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.

The land is zoned General Residential Zone – Schedule 1 (GRZ1) 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.

Based on our field assessment, Method 1 of AS3959-2018 is all that is required for this site; the results of this assessment are detailed below. See Map 1 for an overview of the site.

Bushfire Attack Level Assessment

Document date & version	Version 1.0 – 12/06/2019
Assessor	Julian Drummond
FPA Accreditation	BPAD Level 2 VIC – BPAD44709
Assessors Contact	Email: juliand@practicalecology.com.au Phone: (03) 9484 1555

SITE DETAILS

Municipality	City of Ballarat
Address	Drews Paddock, Heinz Lane, Invermay Park – Stage 2
Applicant/Owner	Andrea Smith, Development Manager Villawood Properties PO Box 1104, Bendigo Victoria, 3552 Phone: (03) 5444 0002 Email: andrea@villawoodproperties.com
Zoning	General Residential
Overlays	None
Bushfire Prone Area	Yes
Proposed buildings	Class 1A – Dwelling
Description of building work	Residential subdivision
Date site visited	04/04/2019

AS3959 METHOD 1

Vegetation patch	1	2	3	4
Direction in relation to site	North	West	North	South
Fire Danger Index	100	100	100	100
Vegetation type	Woodland	Shrubland	Grassland	Low Threat
Exclusions (from section 2.2.3.2 b, c, d, e or f)	N/A	N/A	N/A	e, f
Effective Slope (up/down)	Flat	Flat	Flat	Flat
Slope (degrees)	0°	0°	0°	0°
Distance to vegetation from site boundary (m)	10m	0m	0m	0m
BAL at site boundary	Flame Zone	Flame Zone	Flame Zone	BAL-12.5

The extent of the vegetation within 100m of the site is presented on Map 2. The majority of the 100m assessment area is Low Threat with managed vegetation on residences and the golf course east of the site, Heinz Lane to the south, the industrial areas further west and the Western Freeway to the north. The southern third of the site is also managed as Low threat.

The centre of the site and the land between the site and the rail line to the west is considered Shrubland Vegetation as per AS3959–2018 while the northern third of the site is unmanaged Grassland and there is Woodland present between the northern boundary and the western Freeway. The vegetation immediately around the proposed development is displayed on Map 3.

As all onsite vegetation will be cleared as part of this development and onsite reserves will be managed to minimal fuel conditions, the classified vegetation along the boundaries is the only vegetation which requires a response. This includes the Woodland north of the site and the Shrubland adjacent to the western boundary. With this vegetation present, most of the proposed lots can provide BAL-12.5 while some require a setback to achieve it. Lots 406–13 require northern setbacks to achieve BAL-19 and Lot 414 requires setback from the northern and western boundaries to achieve BAL-29 (see Figure 1).



Figure 1. Setbacks required for Lots 406–14

The following setbacks are required from the northern boundary to achieve particular BAL ratings:

- BAL-12.5: 23m (33m accounting for the 10m fuel break on the opposite side of the northern boundary)
- BAL-19: 14m (24m accounting for the 10m fuel break on the opposite side of the northern boundary)
- BAL-29: 6m (16m accounting for the 10m fuel break on the opposite side of the northern boundary)

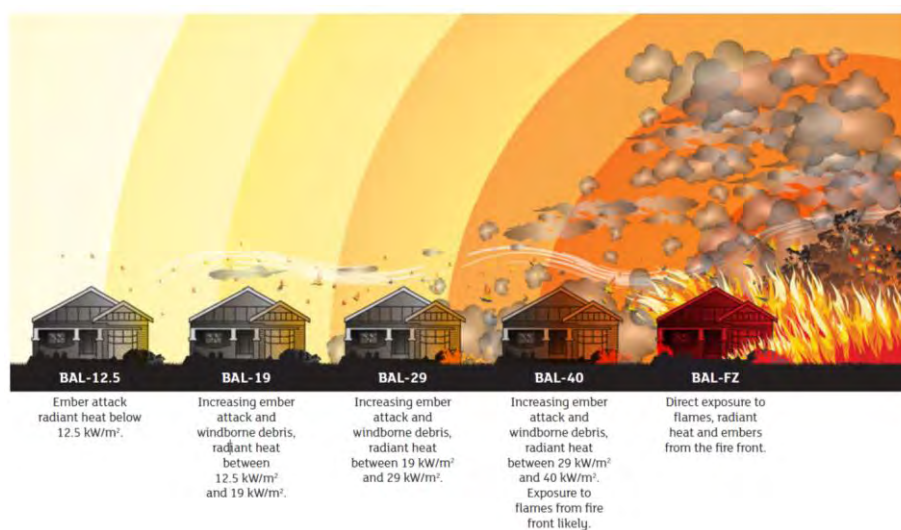
The following setbacks are required from the western boundary to achieve particular BAL ratings:

- BAL-12.5: 19m
- BAL-19: 13m
- BAL-29: 9m

The majority of this is separated from the site by proposed reserves, roads and an existing 10–15m setback along the northern boundary. The required setbacks from the vegetation are presented on Map 3 and the prescribed BAL for each lot, whether a setback is required (setbacks can be adjusted if landowners building to a higher BAL rating) to achieve it and whether shielding as per Section 3.5 of AS3959–2018 is required.

Drews Paddock, Invermay Park – Stages 2, 3 and 4							
Lot	BAL	Setback required	Shielding provision (Section 3.5 to AS3959–2018)	Lot	BAL	Setback required	Shielding provision (Section 3.5 to AS3959–2018)
Stage 2							
201	12.5	None	N/A	202	12.5	None	N/A
203	12.5	None	N/A	204	12.5	None	N/A
205	12.5	None	N/A	206	12.5	None	N/A
207	12.5	None	N/A	208	12.5	None	N/A
209	12.5	None	N/A	210	12.5	None	N/A
211	12.5	None	N/A	212	12.5	None	N/A
213	12.5	None	N/A	214	12.5	None	N/A
215	12.5	None	N/A	216	12.5	None	N/A
217	12.5	None	N/A	218	12.5	None	N/A
219	12.5	None	N/A	220	12.5	None	N/A
221	12.5	None	N/A	222	12.5	None	N/A
223	12.5	None	N/A	224	12.5	None	N/A
225	12.5	None	N/A	226	12.5	None	N/A
227	12.5	None	N/A	228	12.5	None	N/A
Stage 3							
301	12.5	None	N/A	302	12.5	None	N/A
303	12.5	None	N/A	304	12.5	None	N/A
305	12.5	None	N/A	306	12.5	None	N/A
307	12.5	None	N/A	308	12.5	None	N/A
309	12.5	None	N/A	310	12.5	None	N/A
311	12.5	Yes – western boundary	N/A	312	12.5	None	N/A
313	12.5	None	N/A	314	12.5	None	N/A
315	12.5	None	N/A	316	12.5	None	N/A

Drews Paddock, Invermay Park – Stages 2, 3 and 4							
Lot	BAL	Setback required	Shielding provision (Section 3.5 to AS3959-2018)	Lot	BAL	Setback required	Shielding provision (Section 3.5 to AS3959-2018)
317	12.5	None	N/A	318	12.5	None	N/A
319	12.5	None	N/A	320	12.5	None	N/A
321	12.5	None	N/A	322	12.5	None	N/A
323	12.5	None	N/A	324	12.5	None	N/A
Stage 4							
401	12.5	None	N/A	402	12.5	None	N/A
403	12.5	None	N/A	404	12.5	None	N/A
405	12.5	None	N/A	406	12.5	Yes – northern boundary	N/A
407	19	Yes – northern boundary	Yes – southern aspect	408	19	Yes – northern boundary	Yes – southern aspect
409	19	Yes – northern boundary	Yes – southern aspect	410	19	Yes – northern boundary	Yes – southern aspect
411	19	Yes – northern boundary	Yes – southern aspect	412	19	Yes – northern boundary	Yes – southern aspect
413	19	Yes – northern boundary	Yes – southern aspect	414	29	Yes – northern and western aspects	Yes – southern aspect
415	12.5	Yes – western boundary	N/A	416	12.5	Yes – western boundary	N/A
417	12.5	Yes – western boundary	N/A	418	12.5	Yes – western boundary	N/A
419	12.5	None	N/A	420	12.5	None	N/A
421	12.5	None	N/A	422	12.5	None	N/A



Source: CFA 2012 *Planning for Bushfire Victoria*

STATEMENT

I have taken all reasonable steps to ensure that the information provided in this assessment is in accordance with *AS3959-2018 Construction of buildings in bushfire-prone areas*, 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 to improve the bushfire performance of buildings and the safety of occupants such as:

- a Personal Bushfire Plan to detail how you 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
- 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,

Regards,



Julian Drummond

Bushfire / Ecological Consultant

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Figure 2. Low Threat areas east of the site within residential area



Figure 3. Low Threat areas along Heinz Lane south of the site



Figure 4. Low Threat industrial areas west of the site



Figure 5. Low Threat managed areas in the southern third of the site



Figure 6. Shrubland vegetation in the centre of the site



Figure 7. Shrubland vegetation west of the site



Figure 8. Unmanaged Grassland in the northern third of the site




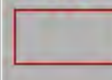



Figure 9. Woodland vegetation north of the site (with 10–15m setback)



Disclaimer

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Legend

-  Subject site
-  Parcels
-  Contours (10m)
-  Natural watercourse
-  Railways

Details

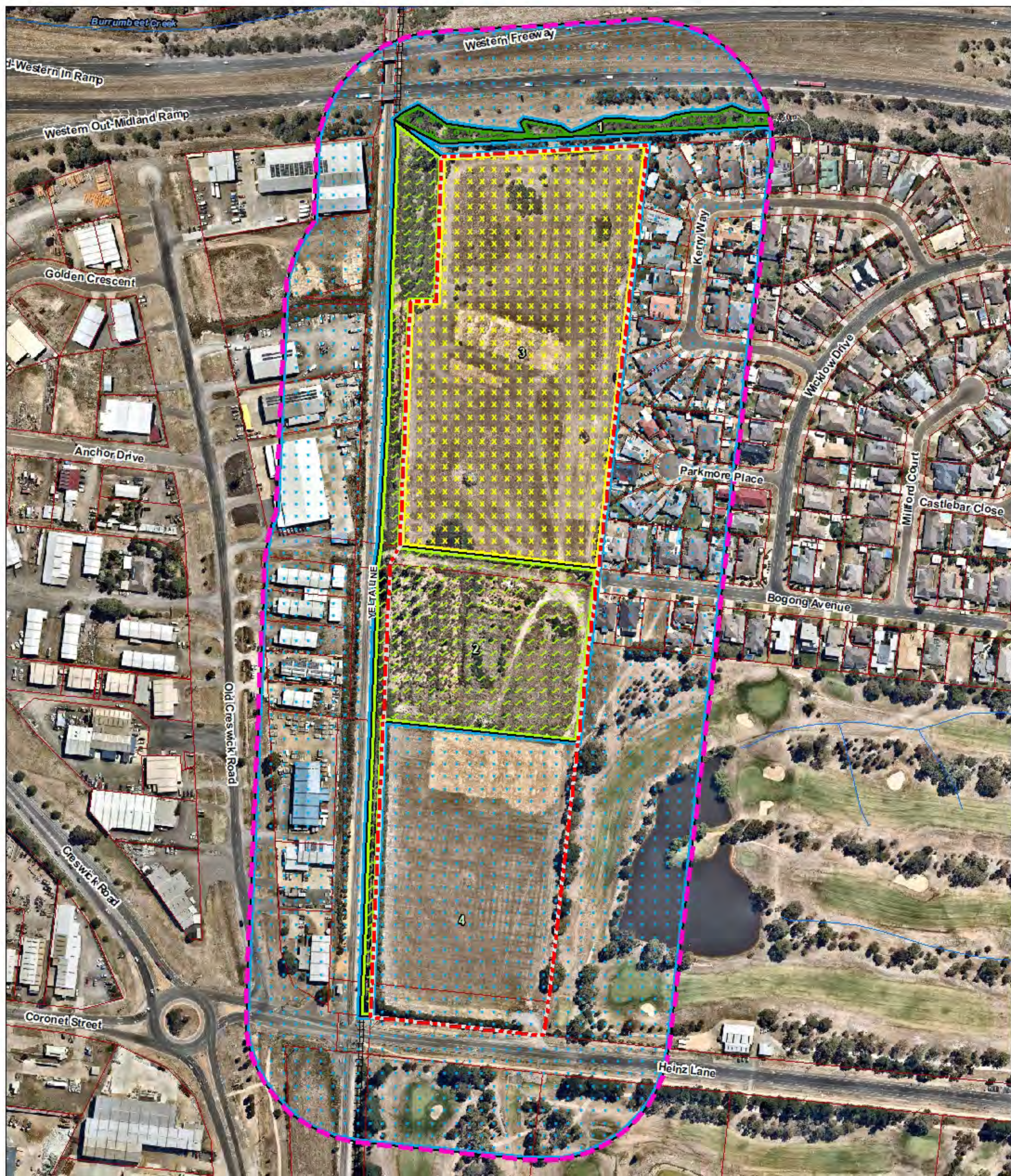
Date: 31/07/2020
Version: 1

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Aerial photography from Nearmap (Feb 2019).

Map 1. Subject Site Drows Paddock Invermay Park







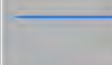

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Legend

-  Subject site
-  Assessment area (100m)
-  Parcels
-  Contours (10m)
-  Natural watercourse
-  Railways

Vegetation type

-  Woodland
-  Shrubland
-  Grassland
-  Low Threat

Details

Date: 31/07/2020
Version: 1

Data Source: Base layers courtesy of VicMap,
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Aerial photography from Nearmap (Feb 2019).

Map 2. BAL Assessment Vegetation Dreads Paddock Invermay Park










0 50 100 m




Scale 1:2,800 (Page size A3)






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-
-  Subject site
 Assessment area (100m)
 Parcels
 Contours (10m)
 Natural watercourse

-  Lots
-  Road

- Vegetation type**
- | | |
|---|------------|
|  | Woodland |
|  | Shrubland |
|  | Low Threat |

-  BAL-12.5
-  BAL-19
-  BAL-29

Date: 30/08/2021
Version: 1

Map 3. BAL Assessment
Defendable Space
Drews Paddock
Invermay Park

