

Bushfire Attack Level (BAL) Assessment Report for Brightwood Estate: Stage 11B (Lots 739–780), Baldivis

Site Details

Address:	Stage 11B (Lots 739–780), Brightwood Estate, Baldivis		
Suburb:	Baldivis, 6171	State	Western Australia
Local Government Area:	City of Rockingham		
Description of building works:	Residential Subdivision		

Report details

Report/Job number:	24PER8726	Report version:	v1
Assessment date:	24/06/2024	Report date:	26/06/2024
Author:	Kristy Oliver	Review:	Eva Cronin (BPAD Level 2- 45482)



SITE ASSESSMENT AND SITE PLAN

The assessment of 42 lots for Stage 11B (Lots 739–780) was undertaken on 24 June 2024 for the purpose of determining the Bushfire Attack Level (BAL) in accordance with *Australian Standard AS 3959: 2018 Construction of Buildings in Bushfire Prone Areas* (Standards Australia 2018) Simplified Procedure (Method 1). An overview of the site is presented in Figure 1.

VEGETATION CLASSIFICATION

All vegetation within 150 m of Stage 1 was classified in accordance with Clause 2.2.3 of AS 3959: 2018. Each distinguishable vegetation class with the potential to determine the BAL is identified below and presented in Figure 1.

Plot 1	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (a)
	Effective slope:	-

Photo Point 1

Vegetation within Plot 1 contains Class B Woodland vegetation; however, is excluded under Clause 2.2.3.2 (a) of AS 3959:2018 as it is located >100 m from the subject site.

NB: access to this plot for more detailed photographs was restricted owing to the presence of construction machinery north of the subject site.

Photo points 2, 7, 9 and 10 also depict Plot 1 from a distance.



Plot 2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (e) & (f)
	Effective slope:	-

Photo Point 2

This photo point depicts the area previously classified as Class G Grassland in the endorsed BMP (ELA 2023). This vegetation has now been cleared for development and is excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.

Plot 1 is shown in the background on the right-hand side. The retained vegetation that will comprise part of the Public Open Space [POS] of the adjacent development is shown on the left-hand side (refer to Photo Point 4).



Plot 2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (e) & (f)
	Effective slope:	-

Photo Point 3

This photo point depicts the area previously classified as Class G Grassland in the endorsed BMP (ELA 2023). This vegetation has now been cleared for development and is excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.

The retained vegetation that will comprise part of the Public Open Space [POS] of the adjacent development is shown in the background, on the right-hand side (refer to Photo Point 4).



Plot	2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (f)
		Effective slope:	-

Photo Point 4

Photo Point 4 comprises retained trees that will comprise a managed and maintained POS. This area is currently managed to a low threat state and as such, has been excluded under Clause 2.2.3.2 (f) of AS 3959:2018.



Plot	2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (f)
		Effective slope:	-

Photo Point 5

Photo Point 5 comprises a POS area to the south of the subject site, on the developer's landholdings. The POS will have irrigated turf and be managed in a low threat state. As such, it is excludable under Clause 2.2.3.2 (f) of AS 3959:2018.



Plot	2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (e) & (f)
		Effective slope:	-

Photo Point 6

This photo point comprises Solis Boulevard and Ridge View Secondary College, located to the south of the subject site. Roads, buildings and managed vegetation are excludable under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.



Plot 2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (e) & (f)
	Effective slope:	-

Photo Point 7

This photo point comprises Stage 11A under development and as such, is excluded under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.

Plot 1 is shown in the background.



Plot 2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (e) & (f)
	Effective slope:	-

Photo Point 8

This photo point depicts cleared land and roadway to the east of the subject site as part of a future development. This area is excludable under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.



Plot 2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (e) & (f)
	Effective slope:	-

Photo Point 9

Road and battered wall to the north of the subject site that is devoid of vegetation and thus, excludable under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.

Plot 1 is shown in the background.



Plot 2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (e) & (f)
	Effective slope:	-

Photo Point 10

Photo Point 10 depicts the subject site. The site has been cleared of vegetation and in future, will contain houses and low threat vegetation. This area is excludable under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.

Plot 1 is shown in the background.



Plot 2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (e) & (f)
	Effective slope:	-

Photo Point 11

Photo Point 11 depicts the southern lots of the subject site. The site has been cleared of vegetation and will contain houses and low threat vegetation in future. This area is excludable under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.

Ridge View Secondary College is depicted in the background and is also excludable under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.



Plot 2	Classification or exclusion clause:	Excluded AS 3959-2018 2.2.3.2 (e) & (f)
	Effective slope:	-

Photo Point 12

Photo Point 12 depicts the northern lots of the subject site. The site has been cleared of vegetation and will contain houses and low threat vegetation in future. This area is excludable under Clause 2.2.3.2 (e) and (f) of AS 3959:2018.



RELEVANT FIRE DANGER INDEX

The fire danger index for this site has been determined in accordance with Table 2.1 of AS 3959: 2018.

Relevant Fire Danger Index			
FDI 40 <input type="checkbox"/>	FDI 50 <input type="checkbox"/>	FDI 80 <input checked="" type="checkbox"/>	FDI 100 <input type="checkbox"/>
Table 2.4.5	Table 2.4.4	Table 2.4.3	Table 2.4.2

POTENTIAL BUSHFIRE IMPACTS

The potential bushfire impact to the proposed development from each of the identified vegetation plots are identified below (Table 1 and Figure 1).

Table 1: BAL Analysis as per AS 3959: 2018

Plot	Vegetation Classification	Effective Slope	Separation Distance (m)				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Excluded AS 3959-2018 2.2.3.2 (a)	-	No separation distances required – BAL-LOW				
2	Excluded AS 3959-2018 2.2.3.2 (e) & (f)	-	No separation distances required – BAL-LOW				

DETERMINED BUSHFIRE ATTACK LEVEL (BAL)

The determined Bushfire Attack Level (highest BAL) for the proposed works has been determined in accordance with Clause 2.2.6 of AS 3959: 2018. Relevant data from the site assessment shown in Table 2.

Table 2: BAL Assessment summary

Lots	BAL	Construction sections to be consulted in AS 3959: 2018
Lots 739–780	BAL-LOW	4

This BAL rating is based on the information current at the date of this document and is valid for 12 months.

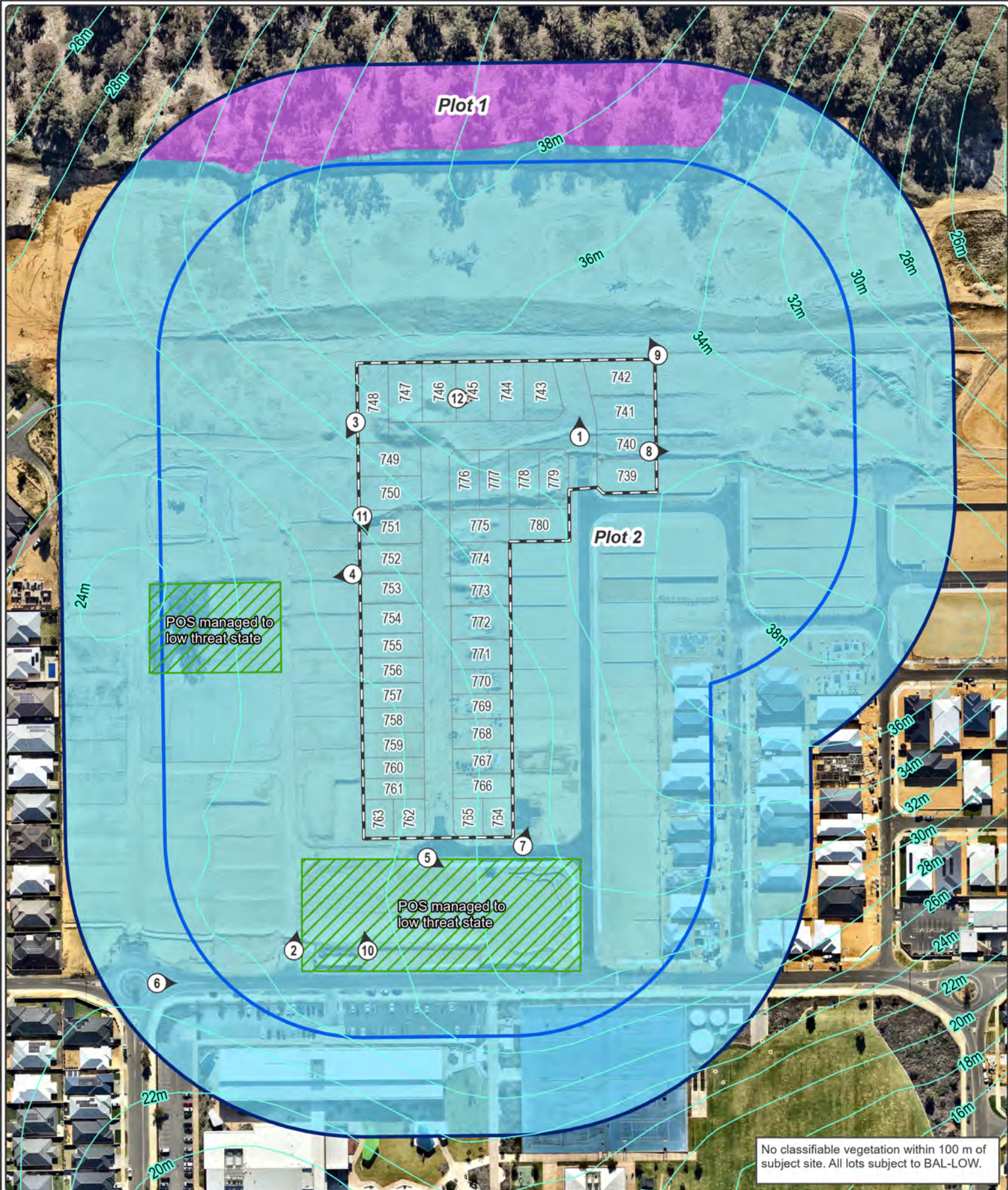


Figure 1: Vegetation Classification

- | | |
|----------------------|--|
| Subject site | Lot boundary |
| 100m site assessment | Public open space |
| 150m site assessment | Vegetation classification |
| Photo location | Excluded as per clause 2.2.3.2 (a) |
| Contour (2m) | Excluded as per clause 2.2.3.2 (e) and (f) |

0 20 40 80
Metres

Datum/Projection:
GDA 1994 MGA Zone 50

24PER8726-EH Date: 26/06/2024



eco
logical
AUSTRALIA
A TETRA TECH COMPANY

Appendix A – Additional Information / Advisory Notes

This assessment was undertaken as per AS 3959: 2018. It is important that the current version of AS 3959, is consulted for construction purposes.

This BAL rating is based on the information current at the date of this letter and is valid for 12 months from the date of this letter.

Bushfire Attack Level (BAL) as set out in the *Australian Standard 3959 Construction of Buildings in Bushfire-Prone Areas* (AS 3959), as referenced in the *Building Code of Australia*.

Bushfire Attack Level (BAL)	Classified vegetation within 100 m of the site and radiant heat flux exposure thresholds	Description of predicted bush fire attack and levels of exposure	Construction Section as per AS 3959
BAL-LOW	-	There is insufficient risk to warrant specific construction requirements.	4
BAL-12.5	$\leq 12.5 \text{ kW/m}^2$	Ember attack.	3 and 5
BAL-19	$> 12.5 \text{ kW/m}^2 \leq 19 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing radiant heat flux.	3 and 6
BAL-29	$> 19 \text{ kW/m}^2 \leq 29 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing radiant heat flux.	3 and 7
BAL-40	$> 29 \text{ kW/m}^2 \leq 40 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing radiant heat flux with the increased likelihood of exposure to flames.	3 and 8
BAL-FZ	$> 40 \text{ kW/m}^2$	Direct exposure to flames from fire front in addition to radiant heat flux and ember attack.	3 and 9

Source: “AS 3959: 2018 Construction of Buildings in Bushfire-prone Areas” published by Standards Australia, Sydney.