

Bushfire Attack Level (BAL) Assessment Report for Stage 10 and 11 Beenyup Grove, Byford

Site Details

Address: Beenyup Grove Estate (Stage 10 and 11), Byford

Suburb: Byford, 6122 **State:** Western Australia

Local Government Area: Shire of Serpentine Jarrahdale

Description of building works: Residential development (26 lots)

Report details

Report/Job number:	22PER2700	Report version:	v1
Assessment date:	22/01/2024	Report date:	1/02/2024
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SITE ASSESSMENT AND SITE PLAN

The assessment of the 26 subject lots within Stages 10 and 11 of Beenyup Grove Estate, Byford was undertaken on 22 January 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 (SA 2018) Simplified Procedure (Method 1)*. An overview of the site is presented in Figure 1.

VEGETATION CLASSIFICATION

All vegetation within 100 m of the 26 subject lots 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 (c)

Photo Point 1

This plot is comprised of vegetation that has trees between 10 m and 30m tall with 30%-70% foliage cover. Understorey is multi-tiered containing shrubs, juvenile trees and grasses.

Due to this single area of vegetation being less than 0.25 ha in area and not within 20 m of other areas of classifiable vegetation or the subject site it has been excluded.



Plot 1 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (c)

Photo Point 2 (background)

This plot is comprised of grasses and isolated trees.

The entirety of this patch of vegetation includes portions that extend beyond the 150 m buffer around the subject site.

Due to this single area of vegetation being less than 0.25 ha in area and not within 20 m of other areas of classifiable vegetation or the subject site it has been excluded.



Plot 2 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (e)

Photo Point 3

Non-vegetated area that is permanently cleared of classifiable vegetation (i.e., footpaths, roads and residential housing).



Plot 2 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (e) & (f)

Photo Point 4
 Non-vegetated area that is permanently cleared of classifiable vegetation (i.e., cleared areas for future development).
 Vegetation within this plot is regarded as low threat due to factors such as flammability, moisture content and fuel load as it is managed weeds.



Plot 2 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (e) & (f)

Photo Point 5
 Non-vegetated area that is permanently cleared of classifiable vegetation (i.e., cleared areas for future development).
 Vegetation within this plot is regarded as low threat due to factors such as flammability, moisture content and fuel load as it is managed yard containing remanent trees over a cleared understorey.



Plot 2 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (f)

Photo Point 6
 Vegetation within this plot is regarded as low threat due to factors such as flammability, moisture content and fuel load as it is managed yard.



Plot 2 Classification or Exclusion Clause Excluded AS 3959-2018 2.2.3.2 (f)

Photo Point 7

Vegetation within this plot is regarded as low threat due to factors such as flammability, moisture content and fuel load as it is managed grass.

This exclusion reflects the Bushfire Management Plan addendum prepared for Beenyup Grove Estate by ELA (11 July 2022) which details vegetation management over this property through a signed letter from the landowner (LWP Property) committing to their vegetation management requirements under the Shire of Serpentine-Jarrahdale Firebreak notice for properties >1 ha.



Plot 2 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (f)

Photo Point 8

Vegetation within this plot is regarded as low threat due to factors such as flammability, moisture content and fuel load as it is managed grass.

This exclusion reflects the Bushfire Management Plan addendum prepared for Beenyup Grove Estate by ELA (11 July 2022) which details vegetation management over this property through a signed letter from the landowner (LWP Property) committing to their vegetation management requirements under the Shire of Serpentine-Jarrahdale Firebreak notice for properties >1 ha.



Plot 2 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (e) & (f)

Photo Point 9

Non-vegetated area that is permanently cleared of vegetation (i.e., footpaths, roads and residential development).

Vegetation within this plot is regarded as low threat due to factors such as flammability, moisture content and fuel load as it is managed landscaping and yards.



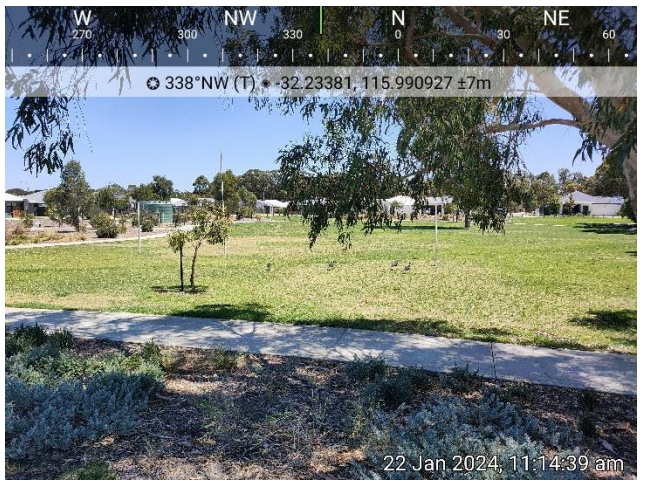
Plot 2 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (e)

Photo Point 10
 Non-vegetated area that is permanently cleared of vegetation (i.e., footpaths, roads and residential housing).



Plot 2 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (e) & (f)

Photo Point 11
 Non-vegetated area that is permanently cleared of vegetation (i.e., footpaths, roads and playground).
 Vegetation within this plot is regarded as low threat due to factors such as flammability, moisture content and fuel load as it is managed landscaping, parkland and sporting ovals.



Plot 2 Classification or Exclusion Clause Excluded AS 3959: 2018 2.2.3.2 (e) & (f)

Photo Point 12
 Non-vegetated area that is permanently cleared of vegetation (i.e., roads, carpark and a school).
 Vegetation within this plot is regarded as low threat due to factors such as flammability, moisture content and fuel load as it is managed landscaping.



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"/>
<i>Table 2.4.5</i>	<i>Table 2.4.4</i>	<i>Table 2.4.3</i>	<i>Table 2.4.2</i>

POTENTIAL BUSHFIRE IMPACTS

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

Table 1: BAL Analysis AS 3959: 2018

Plot	Vegetation Classification	Effective Slope	Separation distances required				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Excluded AS 3959-2018 2.2.3.2 (c)	-	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 Figure 1 and Table 2.

Table 2: BAL Assessment summary

BAL	Affected lots	Construction sections to be consulted in AS 3959-2018
BAL-LOW	All subject lots	4

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

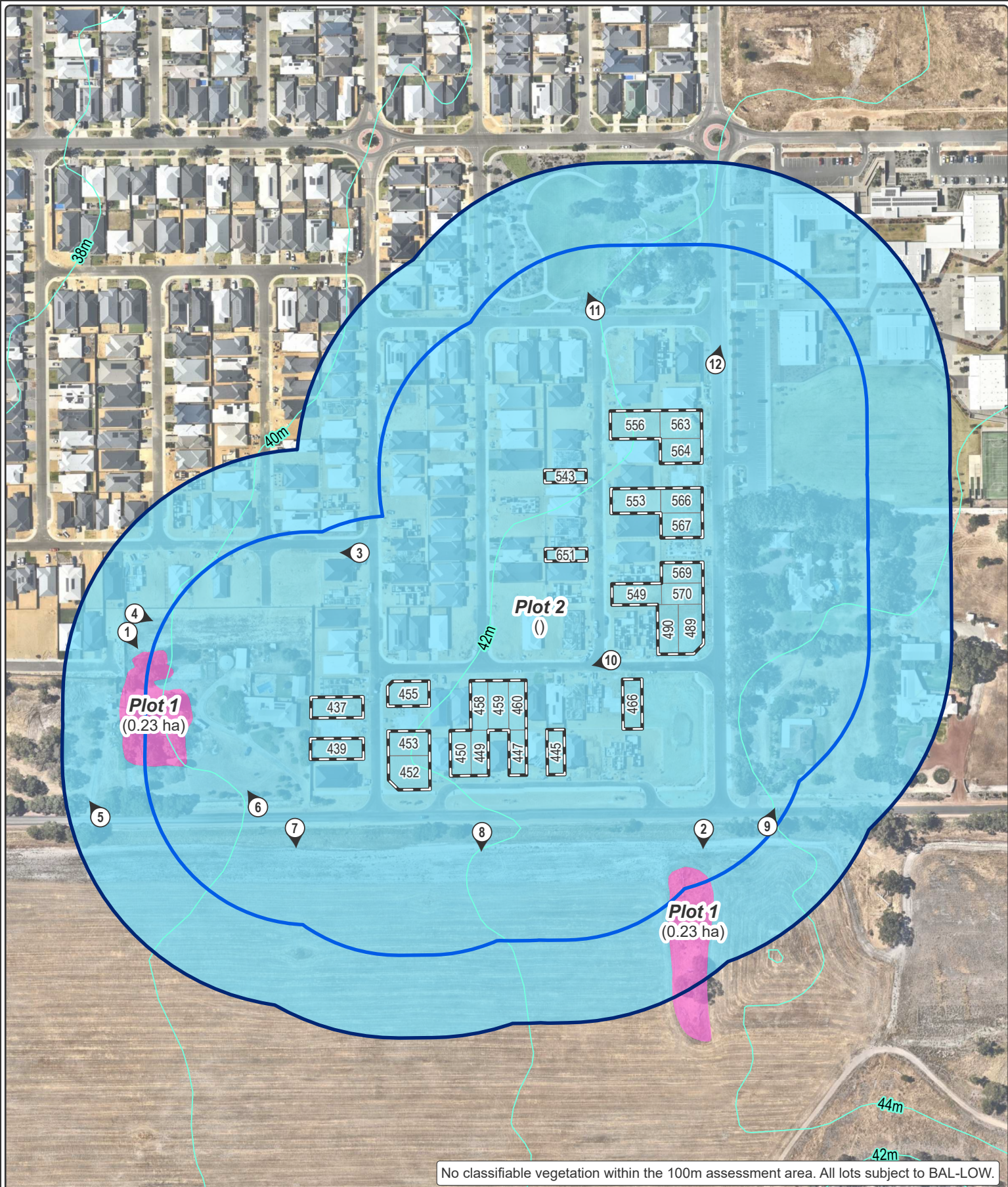


Figure 1: Vegetation Classification

Subject site	Photo location	<p>Vegetation classification</p> <p> Excluded as per clause 2.2.3.2 (c)</p> <p> Excluded as per clause 2.2.3.2 (e) and (f)</p>	<p>0 25 50 100</p> <p>Metres</p>
100m site assessment	150m site assessment		
Lot boundary			<p>Datum/Projection: GDA 1994 MGA Zone 50</p> <p>22PER2700-SM Date: 1/02/2024</p>
Contour (2m)			<p> N</p> <p>eco logical AUSTRALIA A TETRA TECH COMPANY</p>

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	≤12.5 kW/m ²	Ember attack	3 and 5
BAL-19	>12.5 kW/m ² ≤19 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 kW/m ² ≤29 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 kW/m ² ≤40 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 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