

Bushfire Attack Level (BAL) Assessment Report for Stage 13 (Lots 152-161, 163-195 & 9033) Beenyup Grove Estate, Byford

Site Details

Address: Stage 13 (Lots 152-161, 163-195 & 9033) Beenyup Grove Estate, Byford

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

Local Government Area: Shire of Serpentine Jarrahdale

Description of building works: Residential Development

Report details

| | | | |
|---------------------------|--------------|------------------------|---------------------------------|
| Report/Job number: | 22PER2700 | Report version: | v2 |
| Assessment date: | 26/04/2023 | Report date: | 7/12/2023 |
| Author: | Maitland Ely | Review: | Eva Cronin (BPAD Level 2-45482) |



SITE ASSESSMENT AND SITE PLAN

The assessment of the 44 proposed lots within Stage 13 of Beenyup Grove Estate, Byford (parent lot 31 Doley Road, Byford) was undertaken on 26 April 2023 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). This updated report (Version 2) has been prepared to account for minor changes in lot layout within the stage and no additional site inspection has been completed as the BAL report still remains valid. An overview of the site is presented in Figure 1.

VEGETATION CLASSIFICATION

All vegetation within 100 m of the subject site 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 (b) |
|---|--|------------------------------------|
| <p>Photo Point 1</p> <p>This plot has been excluded as it is less than 1 ha in area and not within 100 m of other areas of classifiable vegetation.</p> <p>At the time of the assessment, classified vegetation was present within this plot and comprised of trees up to 30 m high with 10% to 30% foliage cover. Understory is comprised of grasses and isolated shrubs.</p> |  | |
| <p>Photo Point 2</p> <p>This plot has been excluded as it is less than 1 ha in area and not within 100 m of other areas of classifiable vegetation.</p> <p>At the time of the assessment, classified vegetation was present within this plot and comprised of shrubs greater than 2 m high with >30% foliage cover.</p> |  | |
| <p>Photo Point 3</p> <p>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. Grass within this property is currently <50 mm height and is required to be maintained as such in accordance with the Shire of Serpentine Jarrahdale Firebreak Notice.</p> |  | |

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 vegetation (i.e. roads and residential development).



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

Photo Point 5

Non-vegetated area that is permanently cleared of classifiable vegetation (i.e. cleared areas for future roads and residential development).



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

Photo Point 6

Non-vegetated area that is permanently cleared of classifiable vegetation (i.e. cleared areas for future roads and residential development).



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.

Grass within this property is currently <50 mm height and is required to be maintained as such in accordance with the Shire of Serpentine Jarrahdale Firebreak Notice.



Plot 2 Classification or Exclusion Clause

Excluded AS 3959: 2018 2.2.3.2 (e) & (f)

Photo Point 8

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

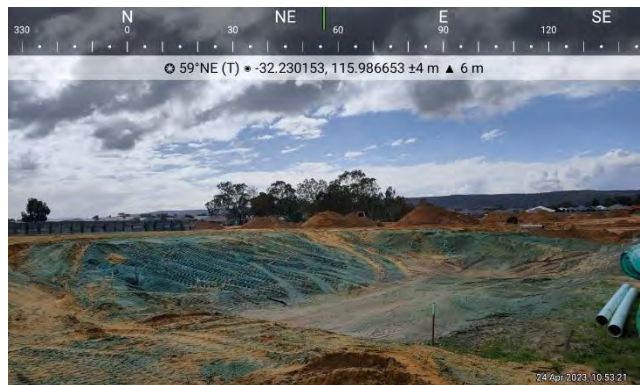


Plot 2 Classification or Exclusion Clause

Excluded AS 3959: 2018 2.2.3.2 (e)

Photo Point 9

Non-vegetated area that is permanently cleared of classifiable vegetation (i.e. cleared areas for future roads and residential development).



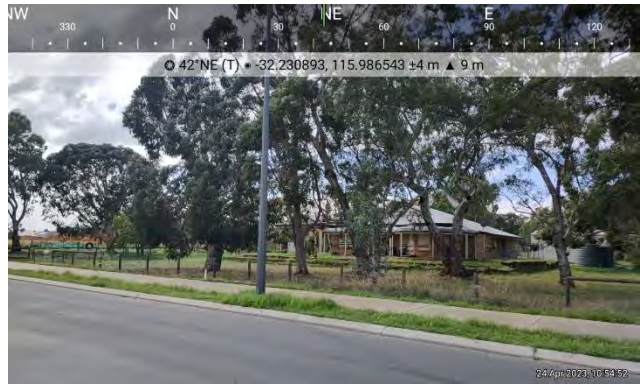
Plot 2 Classification or Exclusion Clause

Excluded AS 3959: 2018 2.2.3.2 (e) & (f)

Photo Point 10

Non-vegetated area that is permanently cleared of vegetation (i.e. 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 grass (managed yards and landscaping). Grass within this property is currently <50 mm height and is required to be maintained as such in accordance with the Shire of Serpentine Jarrahdale Firebreak Notice.



Plot 2 Classification or Exclusion Clause

Excluded AS 3959: 2018 2.2.3.2 (e)

Photo Point 11

Non-vegetated area that is permanently cleared of vegetation (i.e. future development).



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 (b) | - | 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 2 and Table 2.

Table 2: BAL Assessment summary

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

Note: This BAL Report has been updated due to minor changes in lot layout, with the BAL Report remaining valid within a 12 month period of the site assessment date of 26th April 2023.

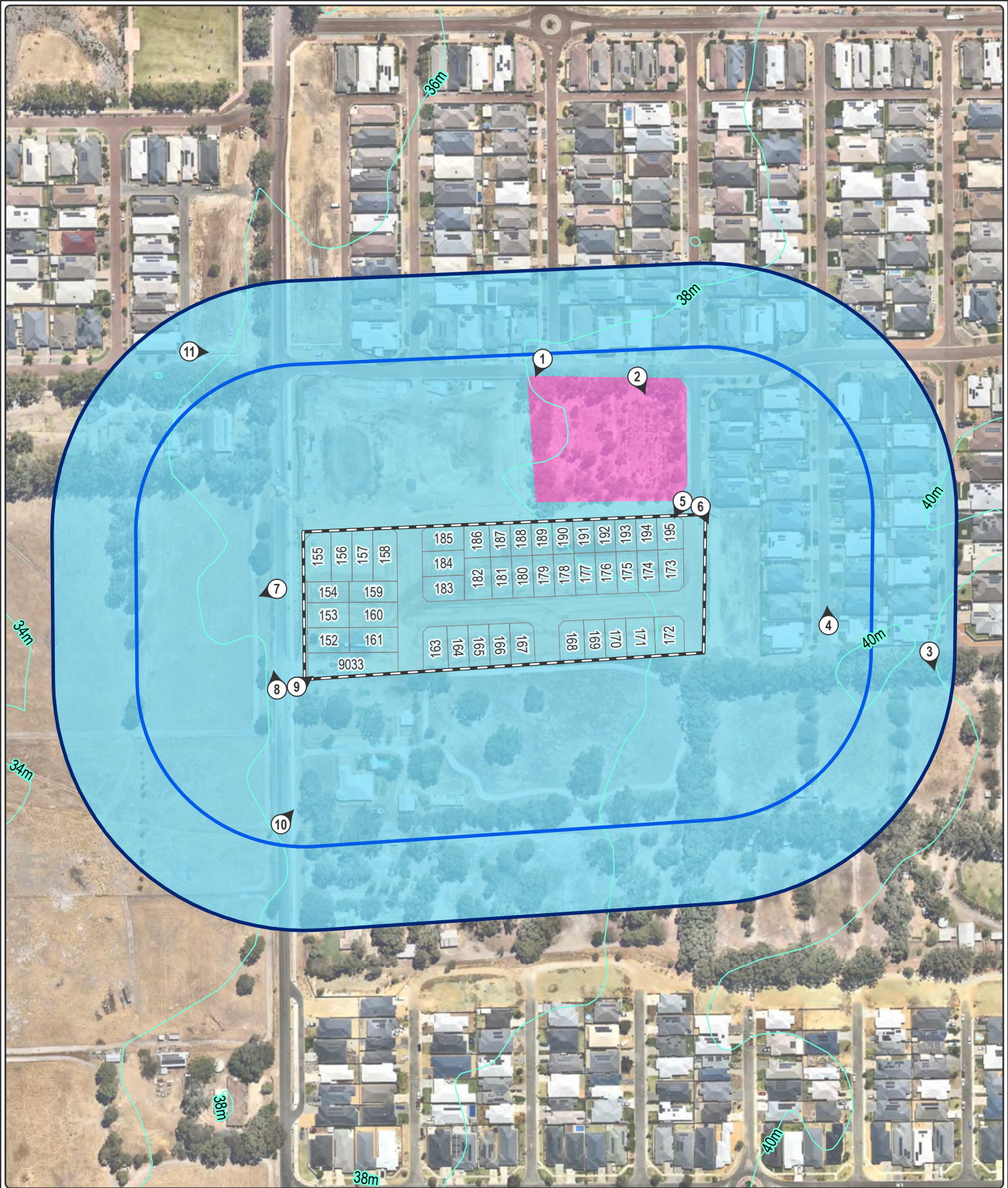


Figure 1: Vegetation Classification



















| | | |
|--|--|--|
| <ul style="list-style-type: none">  Subject site  100m site assessment  150m site assessment  Lot Boundary  Photo location  Contour (2m) | <p>Vegetation Classification</p> <ul style="list-style-type: none">  Excluded as per clause 2.2.3.2 (b)  Excluded as per clause 2.2.3.2 (e) and (f) | <p>0 25 50 100 Metres</p> <p>Datum/Projection: GDA 1994 MGA Zone 50</p> <p>22PER2700-ED Date: 14/12/2023</p> |
|--|--|--|

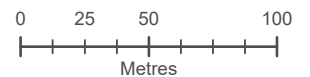


Figure 2: Bushfire Attack Level (BAL) Contours

-  Subject site
-  100m site assessment
-  150m site assessment
-  Lot boundary

Bushfire Attack Level (BAL)

-  BAL - FZ
-  BAL - 40
-  BAL - 29
-  BAL - 19
-  BAL - 12.5
-  BAL - LOW



Datum/Projection:
GDA 1994 MGA Zone 50
22PER2700-ED Date: 14/12/2023



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