



Bushfire Attack Level (BAL) Assessment Report

Site details

Address: Lot 32 - 128 Doley Road

Suburb: Byford

State: Western Australia

Local Government Area: Shire of Serpentine-Jarrahdale

Description of Building Works: Residential Subdivision

Report details

Project number	A25.046	Report version	Draft A
Assessment date	2/05/2025	Report date	16/05/2025
Author	Hannah Cunningham	Review	Daniel Panickar BPAD L3 - 37802



Site Assessment and Site Plan

The assessment of the 58 subject lots was undertaken on 2/05/2025 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* (AS 3959: 2018; 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 58 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 in Table 1 and presented in Figure 2.

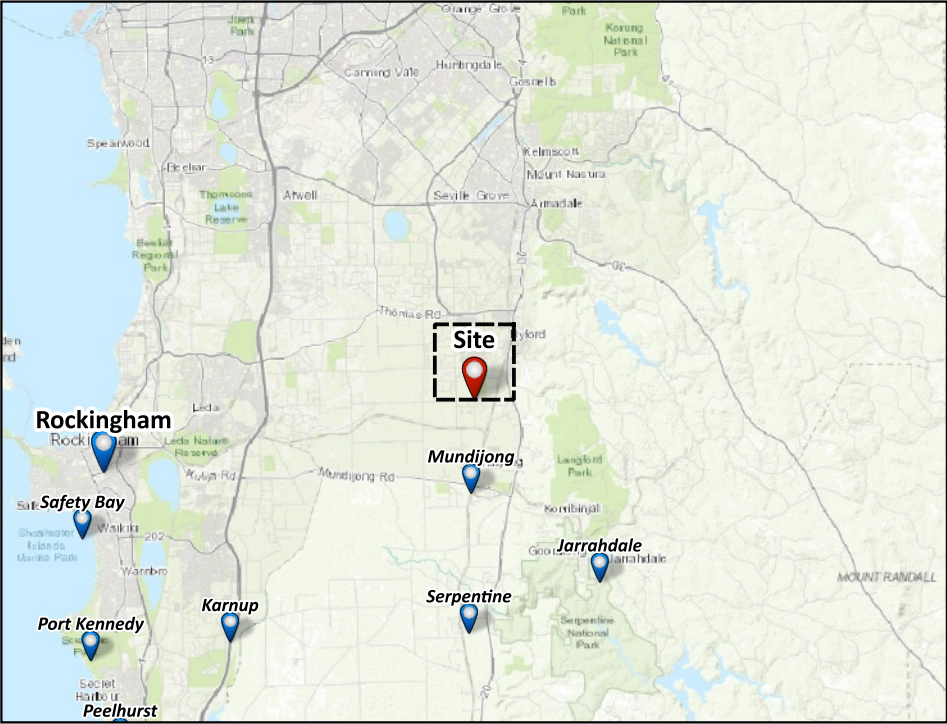
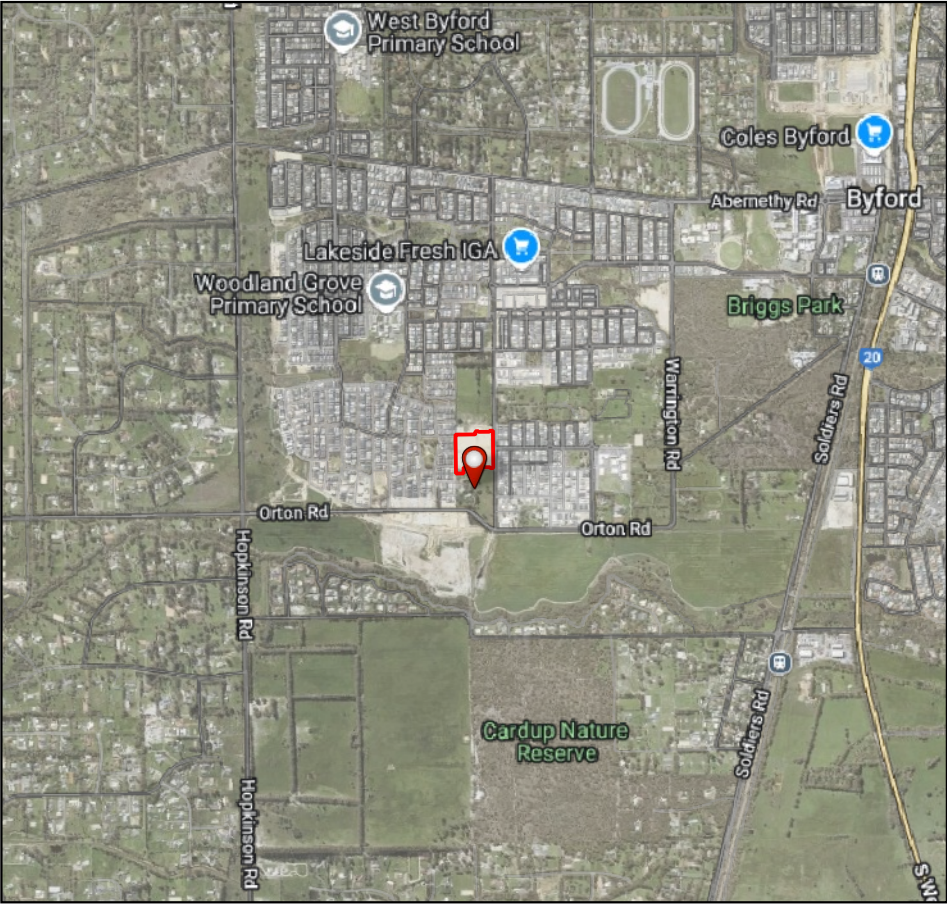
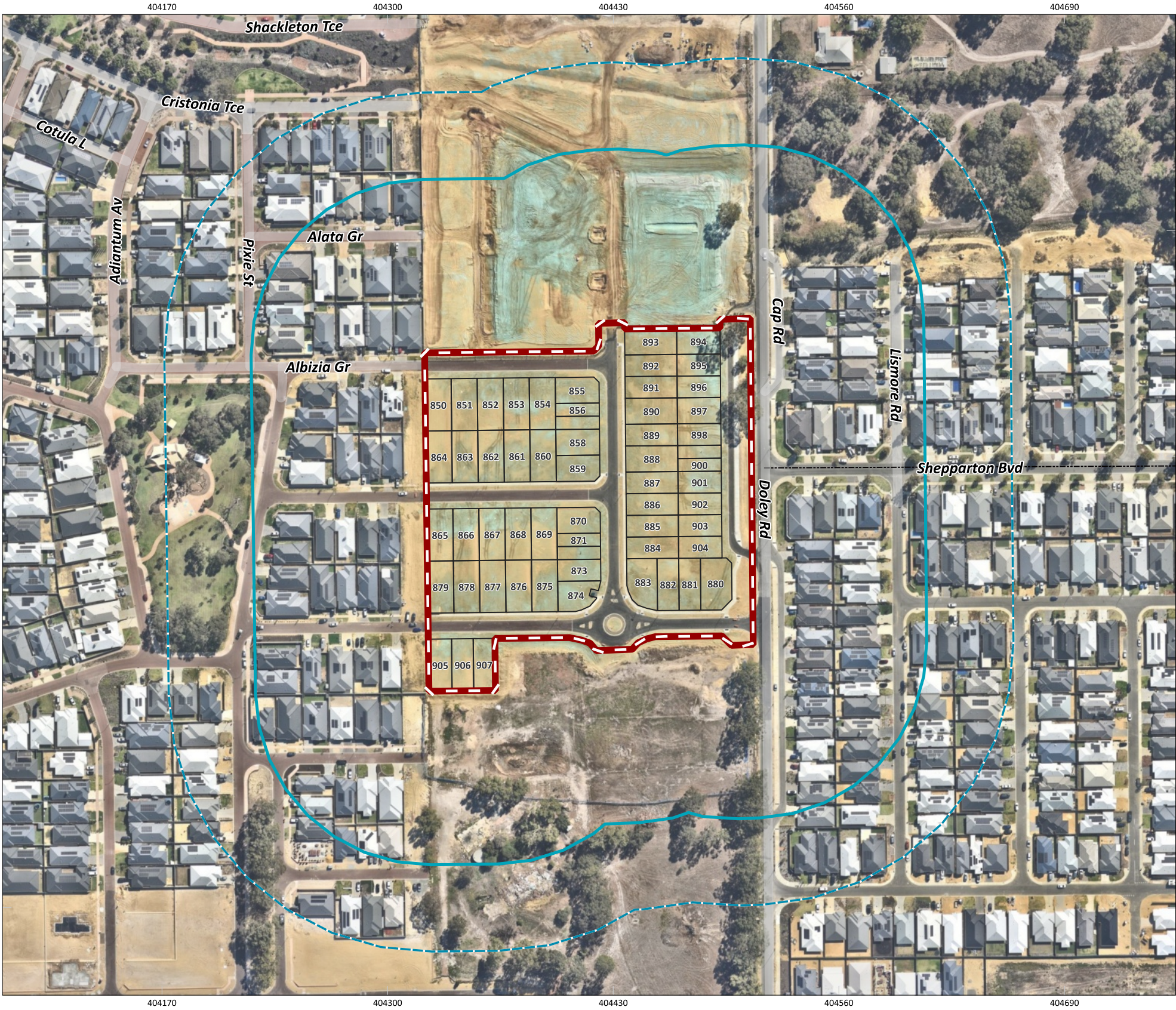


Figure 1: Site Overview

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PROJECT/REPORT NAME

Bushfire Attack Level (BAL) Assessment Report

Lots 33 and Lot 34 Doley Road Byford

CLIENT

Delfina Properties Pty Ltd

PROJECT NUMBER

A25.046

VERSION

0

DRAWN BY / REVIEWED BY

SM/HC

DATE

16/5/2025

Legend

Subject Site

Buffer 100m

Buffer 150m

Lots

SCALE

1:2,600

SHEET SIZE

A3 COLOUR

COORDINATE REFERENCE SYSTEM

GDA2020 / MGA zone 50

DATA SOURCE

Nearmap (19th April 2025)

NOTES:

Cadastral boundary (LGATE-002). Base map ESRI Topo. Townsites (LGATE-248).

WESTERN ENVIRONMENTAL

Western Environmental Pty Ltd

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Table 1: Vegetation Classification

<p>Plot 1</p>	<p>Class G Grassland</p> <p>Photo 1</p> <p>This plot consist of demolition works in progress and the vegetation comprises of grass cover including sparse trees.</p> <p>The slope under this vegetation was assessed to be upslope/flat land.</p>
<p>Plot 1</p>	<p>Class G Grassland</p> <p>Photo 2</p> <p>This plot consists of grasses, including sparse trees.</p> <p>The slope under this vegetation was assessed to be upslope/flat land.</p>
<p>Plot 1</p>	<p>Class G Grassland</p> <p>Photo 3</p> <p>This plot consists of grasses, including sparse trees.</p> <p>The slope under this vegetation was assessed to be upslope/flat land.</p>



Plot 3	Excluded - clause 2.2.3.2 (e)
<p>Photo 4</p> <p>Semirural residential properties with managed landscapes.</p>	
<p>Photo 5</p> <p>Roads, residential properties and managed verges</p>	
<p>Photo 6</p> <p>Cleared areas devoid of vegetation within site.</p>	






Plot 3	Excluded - clause 2.2.3.2 (e)
<p>Photo 7</p> <p>Roads, residential properties and managed verges</p>	 <p>12 Feb 2025 9:35:03 am 32.2336S 115.9840E ±48.00m 116° SE</p>
Plot 3	Excluded - clause 2.2.3.2 (e)
<p>Photo 8</p> <p>This plot comprises areas which have been cleared for development.</p>	 <p>S 180 SW 210 240 W 270 233°SW (T) • -32.230909, 115.98659 ±3m ▲ 8m 02 May 2025, 8:18:01 am</p>
Plot 3	Excluded - clause 2.2.3.2 (e)
<p>Photo 9</p> <p>This plot comprises areas which have been cleared for development.</p>	 <p>12 Feb 2025 8:58:43 am 32.2323S 115.9856E ±3.00m 321° NW</p>



Plot 3	Excluded - clause 2.2.3.2 (e)
<p>Photo 10</p> <p>Cleared areas devoid of vegetation within site.</p>	<p>12 Feb 2025 8:55:25 am 32.2330S 115.9855E ±6.00m 141° SE</p> 
Plot 3	Excluded - clause 2.2.3.2 (e)
<p>Photo 11</p> <p>Cleared parking area and firebreak.</p>	<p>12 Feb 2025 9:39:06 am 32.2345S 115.9845E ±3.00m 146° SE</p> 
Plot 3	Excluded - clause 2.2.3.2 (e)
<p>Photo 12</p> <p>Roads, residential properties and managed verges.</p>	<p>12 Feb 2025 9:49:00 am 32.2316S 115.9841E ±6.00m 270° W</p> 



Plot 3	Excluded - clause 2.2.3.2 (e)
<p>Photo 13</p> <p>This plot comprises areas which have been cleared for development.</p>	<div>12 Feb 2025 8:45:52 am 32.2320S 115.9860E ±4.00m 185° S</div> 
Plot 3	Excluded - clause 2.2.3.2 (e)
<p>Photo 14</p> <p>This plot comprises areas which have been cleared for development.</p>	<div>12 Feb 2025 8:58:00 am 32.2323S 115.9846E ±16.00m 20° N</div> 
Plot 4	Excluded - clause 2.2.3.2 (f)
<p>Photo 15</p> <p>Vegetation within this plot comprises a single row of trees low threat windbreak adjacent to road.</p>	<div>E 90 120 SE 150 S 180 © 136°SE (T) • -32.234723, 115.986029 ±3m ▲ 11m</div> 



Plot 4	Excluded - clause 2.2.3.2 (f)
<p>Photo 16</p> <p>Managed grass adjacent to subdivision.</p>	
Plot 4	Excluded - clause 2.2.3.2 (f)
<p>Photo 17</p> <p>Managed low threat vegetation within a residential subdivision drain system.</p>	
Plot 4	Excluded - clause 2.2.3.2 (f)
<p>Photo 18</p> <p>Suburban park with low threat managed grass and trees.</p>	



Figure 2: Vegetation Classification

<div><div><div></div><div>0</div><div>20</div><div>40</div><div>60</div><div>80 m</div></div><div><div>N</div></div></div>		PROJECT/REPORT NAME Bushfire Attack Level (BAL) Assessment Lots 33 and Lot 34 Doley Road Byford		<div>Legend</div> <div><div><div></div></div> Subject Site</div> <div><div><div></div></div> Buffer 100m</div> <div><div><div></div></div> Buffer 150m</div> <div><div><div></div></div> Photos</div> <div>2 metre contours (DPIRD-072)</div> <div><div></div> 2m</div> <div><div></div> 10m</div>		<div>Vegetation Classification</div> <div><div></div> Class G - Grassland</div> <div><div></div> Excluded AS 3959: 2018 2.2.3.2 (e)</div> <div><div></div> Excluded AS 3959: 2018 2.2.3.2 (f)</div>		<table><tr><th>No</th><th>Description</th><th>Drawn</th><th>Approved</th><th>Date</th></tr><tr><td>A</td><td>Original Issue</td><td>SM</td><td>HC</td><td>16/5/2025</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td colspan="5">NOTES:</td></tr><tr><td colspan="5">Cadastral boundary (LGATE-002). Label corresponds to the vegetation association number.</td></tr></table>		No	Description	Drawn	Approved	Date	A	Original Issue	SM	HC	16/5/2025																										NOTES:					Cadastral boundary (LGATE-002). Label corresponds to the vegetation association number.					<div><div><div></div></div></div> <div>WESTERN ENVIRONMENTAL</div> <div>Western Environmental Pty Ltd 08 6244 2310 enquiries@westernenv.com.au Level 3/25 Proowie St, West Perth WA 6005 westernenv.com.au</div>	
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DATA SOURCE Nearmap (19th April 2025)		DRAWN BY / REVIEWED BY SM/HC		DATE 16/5/2025																																																				

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Relevant Fire Danger Index

The Fire Danger Index for this site has been determined in accordance with Table 2.1 of AS 3959: 2018 and is presented in Table 2.

Table 2: Fire Danger Index (FDI)

Relevant Fire Danger Index			
FDI 40 <input type="checkbox"/> <i>Table 2.4.5</i>	FDI 50 <input type="checkbox"/> <i>Table 2.4.4</i>	FDI 80 <input checked="" type="checkbox"/> <i>Table 2.4.3</i>	FDI 100 <input type="checkbox"/> <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 in Table 3.

Table 3: Method 1 BAL Calculation (BAL Contours)

Plot	Vegetation classification	Effective slope	Separation distances required (m)				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Class G Grassland	All upslopes and flat land (0 degrees)	<6	6-<8	8-<12	12-<17	17-<50
2	Excluded - clause 2.2.3.2 (e)	-	No separation distances required - BAL-LOW				
3	Excluded - clause 2.2.3.2 (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 3 and Table 4.



Table 4: BAL Assessment Summary

Proposed Building/Asset	BAL Rating	Construction sections to be consulted in AS 3959: 2018
850	BAL - LOW	4
851	BAL - LOW	4
852	BAL - LOW	4
853	BAL - LOW	4
854	BAL - LOW	4
855	BAL - LOW	4
856	BAL - LOW	4
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865	BAL - LOW	4
866	BAL - LOW	4
867	BAL - LOW	4
868	BAL - LOW	4
869	BAL - LOW	4
870	BAL - LOW	4
871	BAL - LOW	4
872	BAL - LOW	4
873	BAL - LOW	4
874	BAL - LOW	4
875	BAL - LOW	4
876	BAL - LOW	4
877	BAL - LOW	4
878	BAL - LOW	4
879	BAL - LOW	4
880	BAL - LOW	4



Proposed Building/Asset	BAL Rating	Construction sections to be consulted in AS 3959: 2018
881	BAL - LOW	4
882	BAL - LOW	4
883	BAL - LOW	4
884	BAL - LOW	4
885	BAL - LOW	4
886	BAL - LOW	4
887	BAL - LOW	4
888	BAL - LOW	4
889	BAL - LOW	4
890	BAL - LOW	4
891	BAL - LOW	4
892	BAL - LOW	4
893	BAL - LOW	4
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895	BAL - LOW	4
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897	BAL - LOW	4
898	BAL - LOW	4
899	BAL - LOW	4
900	BAL - LOW	4
901	BAL - LOW	4
902	BAL - LOW	4
903	BAL - LOW	4
904	BAL - LOW	4
905	BAL - LOW	4
906	BAL - LOW	4
907	BAL - LOW	4

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



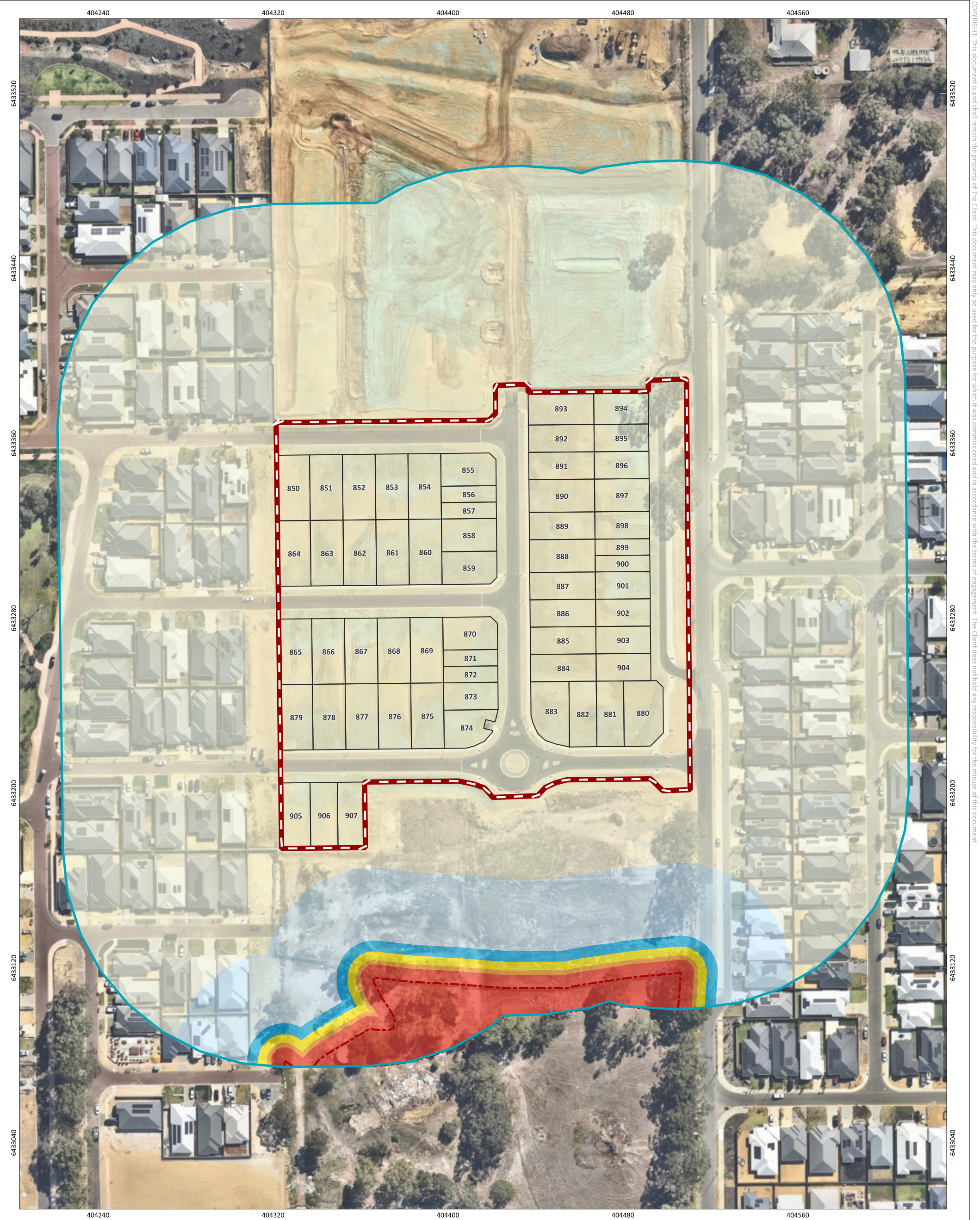


Figure 3: Bushfire Attack Level (BAL) Contours

0

15

30

45

60 m

N

SCALE

1:1,600

SHEET SIZE

A3 COLOUR

COORDINATE REFERENCE SYSTEM

GDA2020 / MGA zone 50

DATA SOURCE

Nearmap (19th April 2025)

PROJECT/REPORT NAME

Bushfire Attack Level (BAL) Assessment
Lots 33 and Lot 34 Doley Road Byford

CLIENT

Delfina Properties Pty Ltd

PROJECT NUMBER

A25.046

VERSION

0

DRAWN BY / REVIEWED BY

SM/HC

DATE

16/5/2025

Legend

Subject Site

Buffer 100m

Lots

Bushfire Hazard Interface

Bushfire Attack Level (BAL)

BAL-FZ

BAL-40

BAL-29

BAL-19

BAL-12.5

BAL-LOW

No	Description	Drawn	Approved	Date
A	Original issue	SM	HC	16/5/2025

NOTES:
Cadastral boundary (LGATE-002). Label corresponds to the vegetation association number.

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ENVIRONMENTAL

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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.

