WESTERN ENVIRONMENTAL

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Bushfire Attack Level (BAL) Assessment Report

Site details	
Address: Lot 9000 (142) Taylor Road	
Suburb: Mundijong	**State:** Western Australia
Local Government Area: Shire of Serpentine-Jarrahdale	
Description of Building Works: Construction of Class 1a dwellings - Stage 1 Mundi Estate	

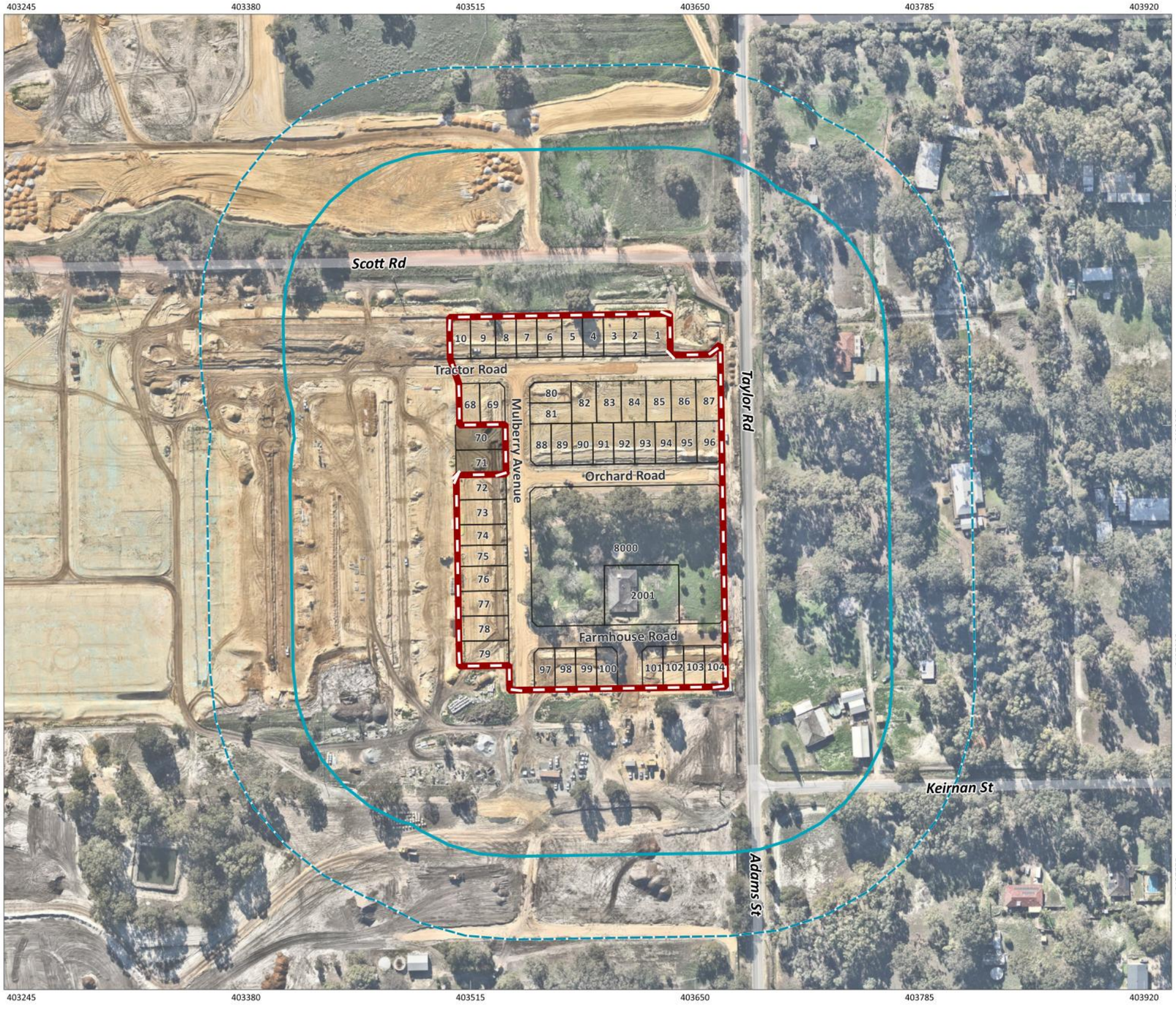
Report details			
Project number	24.076	**Report version**	0
Assessment date	10/07/2025	**Report date**	22/08/2025
Author	Beau Eaton Senior Bushfire and Environmental Consultant	**Review**	Dylan Wray Associate Bushfire Consultant (BPAD L2-44656) BPAD Bushfire Planning & Design Accredited Practitioner Level 2

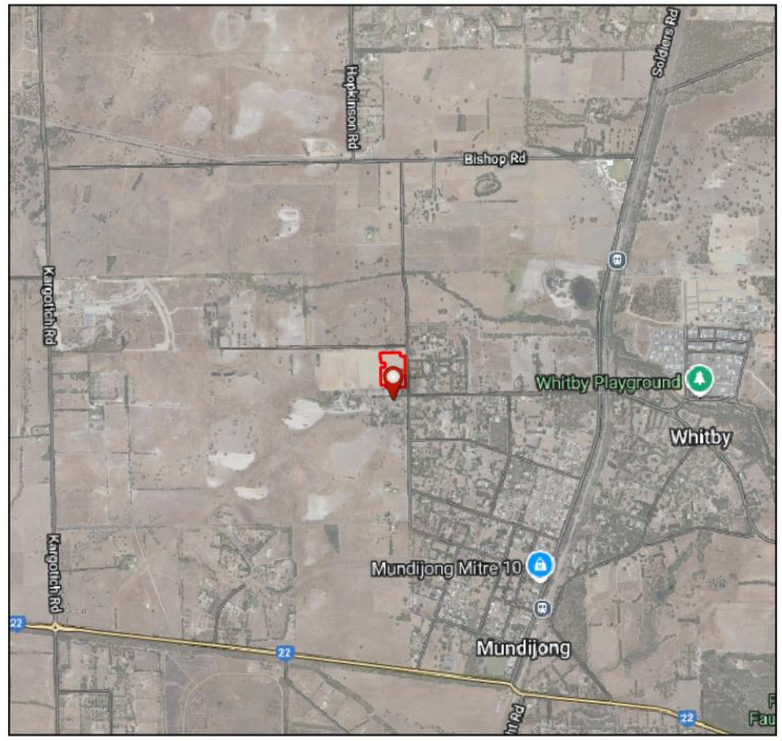
Site Assessment and Site Plan

Assessment of 46 lots in Stage 1 Mundi Estate (subject lots), was undertaken on 10/07/2025 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). While there is a total of 48 lots within Stage 1, Lot 70 and Lot 71 have been excluded from this BAL Assessment Report on the basis that they will be constructed as car parks and are therefore not subject to an assessment against AS 3959: 2018. An overview of the site is presented in Figure 1.

Vegetation Classification

All vegetation within 100 m of the subject lots was classified in accordance with Clause 2.2.3 of AS 3959: 2018. Each vegetation class is identified in Table 1 and presented in Figure 2.





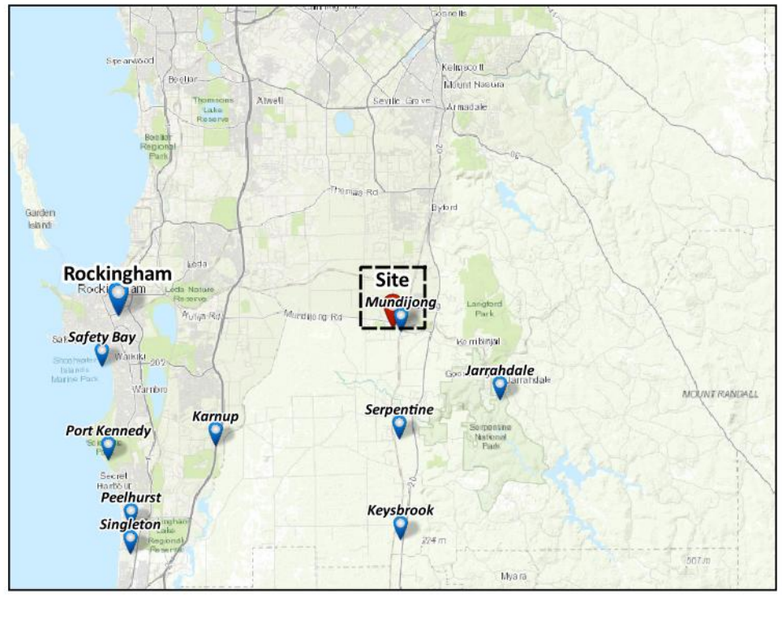


Figure 1: Site Overview

N

0 40 80 120 160 m

SCALE: 1:2,700	SHEET SIZE: A3 COLOUR
COORDINATE REFERENCE SYSTEM: GDA2020 / MGA zone 50	PROJECT NUMBER: A24.079 / VERSION: 0
DATA SOURCE: Nearmap (25th June 2025)	DRAWN BY / REVIEWED BY: SM/BE / DATE: 14/8/2025

PROJECT/REPORT NAME: Bushfire Attack Level Report: Stage 1, Mundi Estate
Lot 9000 Mundi Estate

CLIENT: Parcel Property

Legend
- Subject Lots
- Buffer 100m
- Buffer 150m
- Lots
- Proposed car park lot

No	Description	Drawn	Approved	Date
A	Original issue	SM	BE	14/8/2025

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

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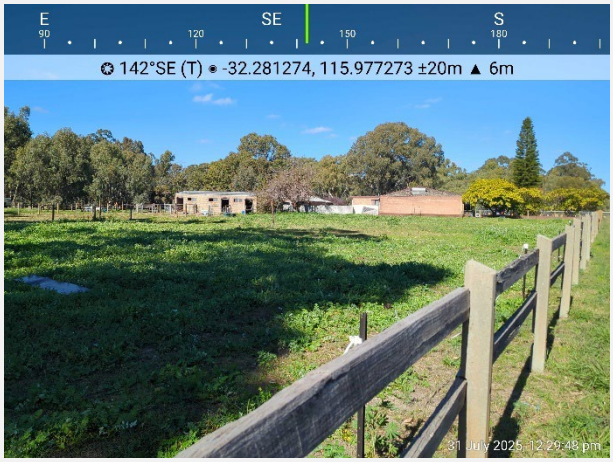
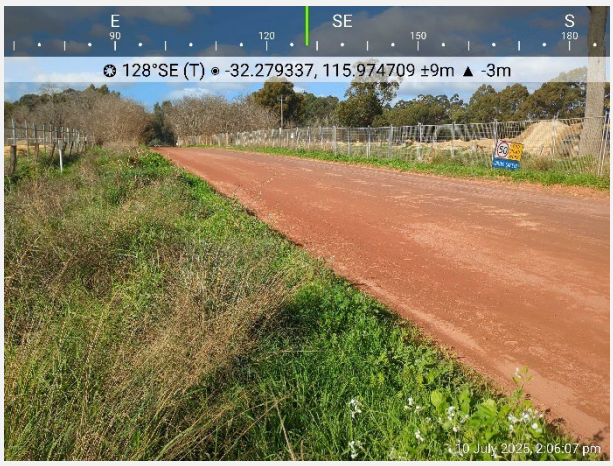
Table 1: Vegetation Classification

Plot 1	Class B Woodland
Photo 1 Eucalyptus trees up to 20 m in height with a grassy understorey. The vegetation structure is considered open. The plot contains more than a single row of trees, however, due to frequent traffic along the site access road, a photo couldn't be captured of the denser portion. The slope under this vegetation was assessed to be upslope/flat land.	
Plot 1	**Class B Woodland**
Photo 2 Eucalyptus trees up to 20 m in height with an overstorey canopy cover up to 30% and a grass-dominated understorey. This vegetation was generally observed in paddocks of adjacent rural residential properties. The plot contained occasional patches of denser canopy cover however fire behaviour is considered most likely to represent Class B Woodland. The slope under this vegetation was assessed to be flat/upslope.	
Plot 1	**Class B Woodland**
Photo 3 (Background) Eucalyptus trees up to 20 m in height with an overstorey canopy cover up to 30% and a grass-dominated understorey. This vegetation was generally observed in paddocks of adjacent rural residential properties. The plot contained occasional patches of denser canopy cover however fire behaviour is considered most likely to represent Class B Woodland. The slope under this vegetation was assessed to be flat/upslope.	

Plot 2	Class G Grassland
Photo 4 Grass in paddocks with an average height greater than 100 mm. The overstorey contains occasional trees which comprise less than 10% of the overall canopy cover. The slope under this vegetation was assessed to be flat/upslope.	

Plot 2	Class G Grassland
Photo 5 Grass in paddocks with an average height greater than 100 mm. The overstorey contains occasional trees which comprise less than 10% of the overall canopy cover. The slope under this vegetation was assessed to be flat/upslope.	

Plot 2	Class G Grassland
Photo 6 Grass in adjacent land to the north with an average height greater than 100 mm. The overstorey contains occasional trees which comprise less than 10% of the overall canopy cover. The slope under this vegetation was assessed to be flat/upslope.	

Plot 3	Excluded - clause 2.2.3.2 (e)
Photo 7 Non-vegetated area in the form of vacant cleared land. These non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018.	
Plot 3	**Excluded - clause 2.2.3.2 (e)**
Photo 8 Non-vegetated gravel access road to the subject site. These non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018.	
Plot 4	**Excluded - clause 2.2.3.2 (f)**
Photo 9 Grass in proposed Public Open Space (POS) cropped to less than 100 mm in height and maintained in a low-threat state. The area contains the occasional tree which comprise less than 10% of the overall canopy cover. This vegetation is regarded as low-threat and has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959: 2018. This photo was captured by the landowner due to slashing taking place after the site visit.	

Plot 4	Excluded - clause 2.2.3.2 (f)
Photo 10 Grass in proposed POS cropped to less than 100 mm in height and maintained in a low-threat state. The area contains the occasional tree which comprise less than 10% of the overall canopy cover. This vegetation is regarded as low-threat and has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959: 2018. This photo was captured by the landowner due to slashing taking place after the site visit.	

Plot 4	Excluded - clause 2.2.3.2 (f)
Photo 11 (Background) Eucalyptus trees with an understorey of bare sand and slashed grass maintained in a low-threat state. Vegetation structure is considered open. This vegetation is regarded as low-threat and has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959: 2018.	

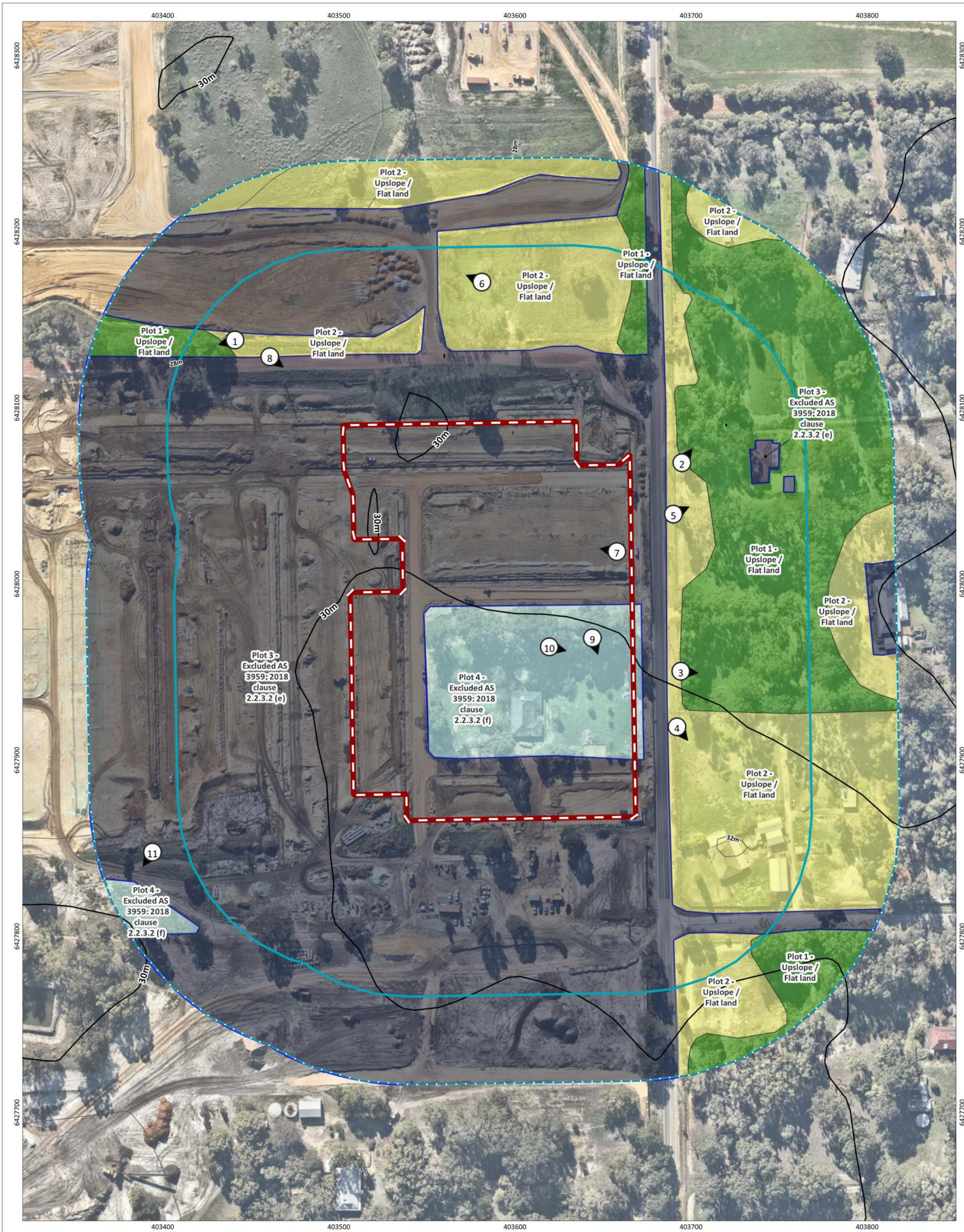


Figure 2: Vegetation Classification

N 0 15 30 45 60 m		PROJECT/REPORT NAME: Bushfire Attack Level Report: Stage 1, Mundi Estate Lot 9000 Mundi Estate	
SCALE: 1:2,000	SHEET SIZE: A3 COLOUR	CLIENT: Parcel Property	
COORDINATE REFERENCE SYSTEM: GDA2020 / MGA zone 50		PROJECT NUMBER: A24.079	VERSION: 0
DATA SOURCE: Nearmap (25th June 2025)		DRAWN BY / REVIEWED BY: SM/BE	DATE: 14/8/2025

Legend

- Subject Lots
- Buffer 100m
- Buffer 150m
- Photos
- 2 metre contours (DPIRD-072)
  - 2m
  - 10m

Vegetation Classification

- Class B - Woodland
- Class G - Grassland
- Excluded AS 3959: 2018 2.2.3.2 (e)
- Excluded AS 3959: 2018 2.2.3.2 (f)

No	Description	Drawn	Approved	Date
A	Original issue	SM	BE	14/8/2025

NOTES:

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

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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 ☐ *Table 2.4.5*	FDI 50 ☐ *Table 2.4.4*	FDI 80 ✓ *Table 2.4.3*	FDI 100 ☐ *Table 2.4.2*

Potential Bushfire Impacts

The potential bushfire impact (presented as BAL contours) to the subject lots from each of the identified vegetation plots are outlined below in Table 3.

Table 3: Method 1 BAL Calculation (BAL Contours)

Plot	Vegetation classification	Effective slope	Separation distances (m)				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Class B Woodland	All upslopes and flat land (0 degrees)	<10	10-<14	14-<20	20-<29	29-<100
2	Class G Grassland	All upslopes and flat land (0 degrees)	<6	6-<8	8-<12	12-<17	17-<50
3	Excluded - clause 2.2.3.2 (e)	-	No separation distances required - BAL-LOW				
4	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 subject lots has been determined in accordance with Clause 2.2.6 of AS 3959: 2018. Relevant data from the site assessment is shown in Figure 3 and Table 4.

Table 4: BAL Assessment Summary

Affected Lot	BAL Rating	Construction sections to be consulted in AS 3959: 2018
1	BAL-12.5	3 and 5
2	BAL-12.5	3 and 5
3	BAL-12.5	3 and 5
4	BAL-12.5	3 and 5
5	BAL-12.5	3 and 5
6	BAL-12.5	3 and 5
7	BAL-12.5	3 and 5
8	BAL-12.5	3 and 5
9	BAL-12.5	3 and 5
10	BAL-12.5	3 and 5
68	BAL-LOW	4
69	BAL-LOW	4
72	BAL-LOW	4
73	BAL-LOW	4
74	BAL-LOW	4
75	BAL-LOW	4
76	BAL-LOW	4
77	BAL-LOW	4
78	BAL-LOW	4
79	BAL-LOW	4
80	BAL-LOW	4
81	BAL-LOW	4
82	BAL-LOW	4
83	BAL-12.5	3 and 5
84	BAL-12.5	3 and 5
85	BAL-12.5	3 and 5
86	BAL-12.5	3 and 5
87	BAL-12.5	3 and 5
88	BAL-LOW	4
89	BAL-LOW	4
90	BAL-LOW	4

Affected Lot	BAL Rating	Construction sections to be consulted in AS 3959: 2018
91	BAL-12.5	3 and 5
92	BAL-12.5	3 and 5
93	BAL-12.5	3 and 5
94	BAL-12.5	3 and 5
95	BAL-12.5	3 and 5
96	BAL-12.5	3 and 5
97	BAL-LOW	4
98	BAL-LOW	4
99	BAL-LOW	4
100	BAL-LOW	4
101	BAL-12.5	3 and 5
102	BAL-12.5	3 and 5
103	BAL-12.5	3 and 5
104	BAL-12.5	3 and 5

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

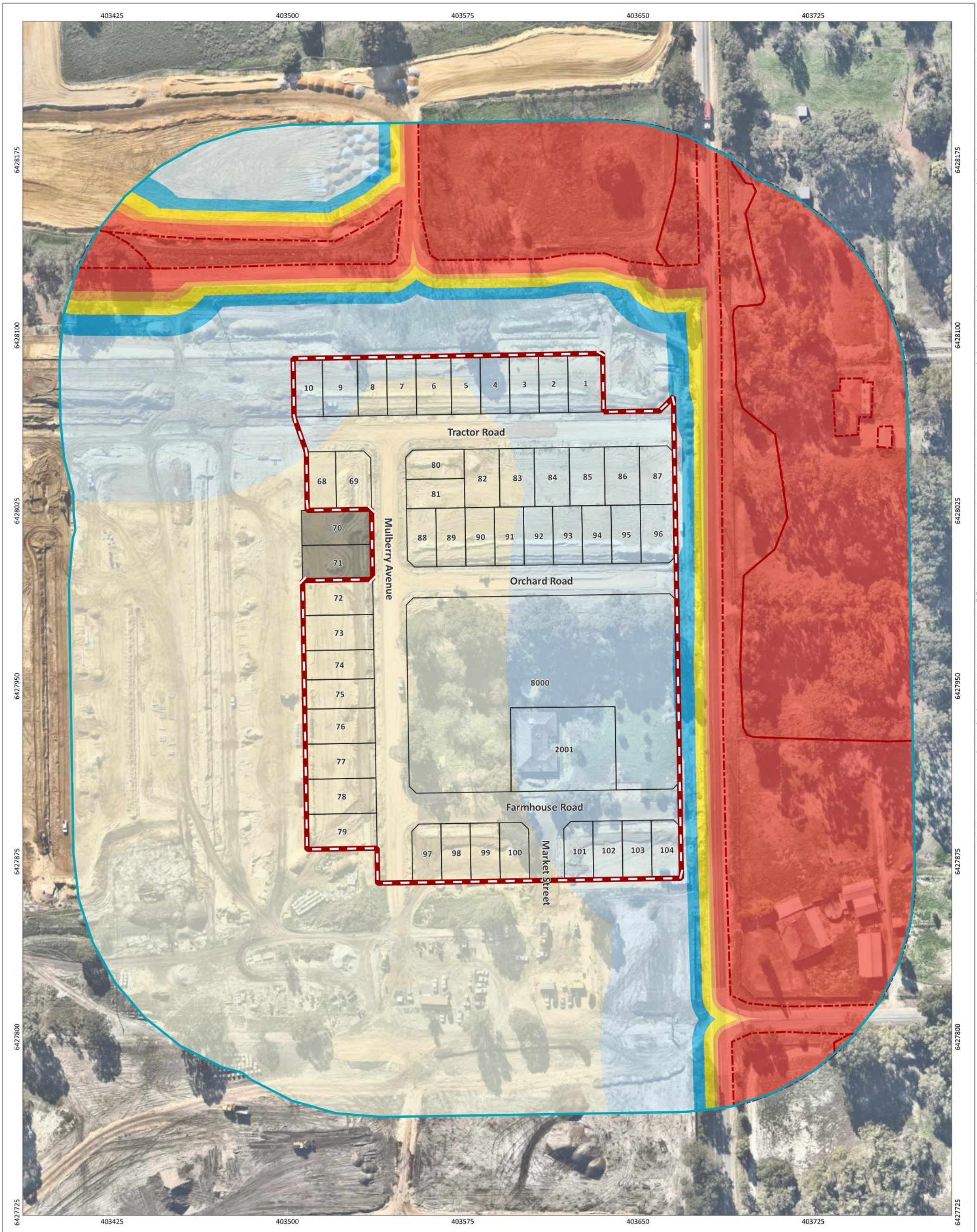

Figure 3: Bushfire Attack Level (BAL) Contours

0 10 20 30 40 50 m

N

PROJECT/REPORT NAME	Bushfire Attack Level Report: Stage 1, Mundi Estate Lot 9000 Mundi Estate
SCALE	1:1,500
SHEET SIZE	A3 COLOUR
CLIENT	Parcel Property
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A24.079
VERSION	0
DATA SOURCE	Nearmap (25th June 2025)
DRAWN BY / REVIEWED BY	SM/BE
DATE	14/8/2025

Legend

- Subject Lots
- Buffer 100m
- Buffer 150m
- Lots
- Proposed car park lot
- 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	BE	14/8/2025

NOTES:

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

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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	≤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.