



AS3959 Bushfire Attack Level Assessment Report

This report has been prepared using the Simplified Procedure (Method 1) as detailed in Section 2 of AS3959-2018.

Site Details	
Address:	Subdivision Stage 2 – Treeby North, Lot 5131 Jandakot Road
Suburb:	Treeby WA 6164
Local Government Area	City of Cockburn
State:	Western Australia
Description of Building Works	Residential lots for Class 1 Dwellings – 68 lots

Report Details			
2402-104	2607-93	Report Version	1.0
Assessment Date:	17/12/2025	Report Date	27/07/2026
Assessor Details			
Name:	Rohan Carboon		
Accredited Practitioner	Rohan Carboon Level 3 - BPAD 23160		

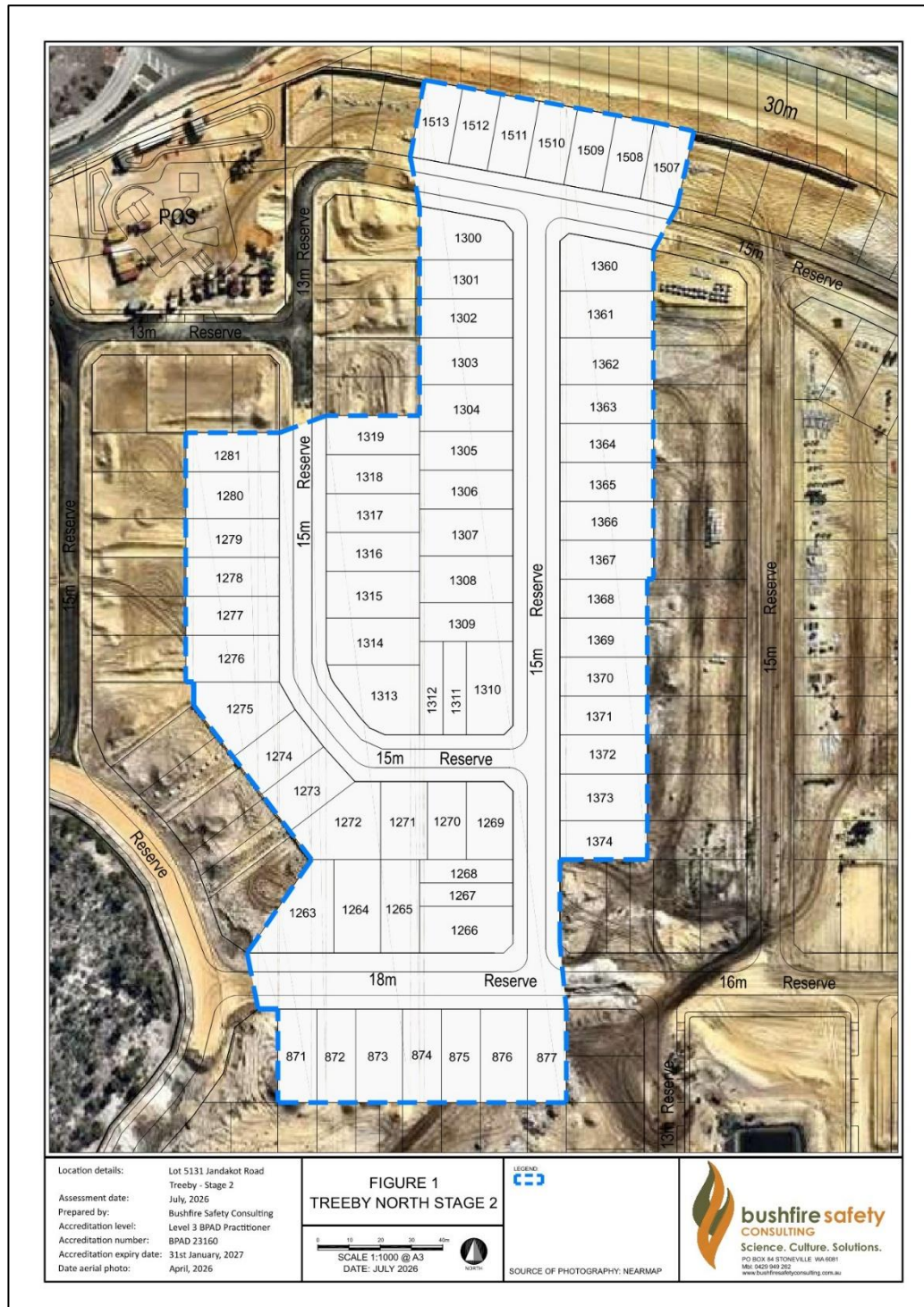
Disclaimer:

This report has been prepared in good faith and is derived from sources believed to be reliable and accurate at the time of publication. Nevertheless, this publication is distributed on the terms and understanding that the author is not responsible for results of any actions taken based on information in this publication or for any error in or omission from this publication.

Notwithstanding the precautions adopted in this report, it should always be remembered that bushfires burn under a wide range of conditions. An element of risk, no matter how small always remains. The objective of the standard (AS 3959:2018) is 'to prescribe particular construction details for buildings to reduce the risk of ignition from a bushfire while the front passes' (Standards Australia, 2018). Building to the standard (AS 3959:2018) does not guarantee a building will survive a bushfire.

Site Assessment and Site Plans

The assessment of this development was undertaken on 17/12/2025 by Bushfire Safety Consulting Pty Ltd for the purposes of determining the Bushfire Attack Level for each lot and dwelling in accordance with AS 3959 – 2018 Simplified Procedure (Method 1). The Stage 2 subdivision development creates 68 urban residential lots and internal roads adjacent to an existing developed area. This assessment has been undertaken to provide BAL ratings for each lot in Subdivision Stage 2 at Treeby North (Figure 1) as outlined in the Vegetation Classification Map (Figure 2).



Vegetation Classification

All vegetation within 150m of the subdivision was classified in accordance with Clause 2.2.3 of AS 3959-2018. Clearing of this and other subdivision stages has commenced and is progressing. Classified vegetation within 150 metres only occurs to the north, east, west and south of the stage where remnant vegetation will be permanently protected in Bush Forever reserves.

The dominant vegetation classes are Class B Woodland, Class D Scrub.

Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below and outlined in the Vegetation Classification Plan.

Photo ID: 1 Plot Number: 4 Vegetation classification or exclusion clause: Class D Scrub Description/justification of classification: Mixed species of shrubs averaging 1-3 metres in height, with mine ral earth corridors and isolated banksia trees that total less than 10% foliage cover.	
Photo ID: 2 Plot Number: 4 Vegetation classification or exclusion clause: Class D Scrub Description/justification of classification: Mixed species of shrubs averaging 1-3 metres in height, with mineral earth corridors and isolated banksia trees that total less than 10% foliage cover.	
Photo ID: 3 Plot Number: 5 Vegetation classification or exclusion clause: Class B Woodland Description/justification of classification: Degraded area near existing dwelling with grass house paddock and Isolated trees or clumps of trees and less than 30% foliage cover.	
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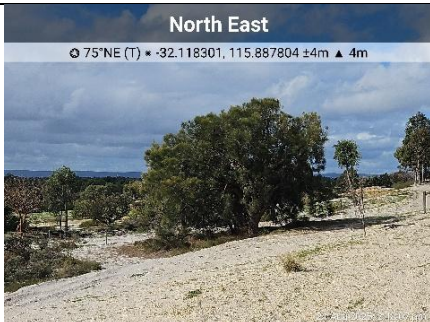
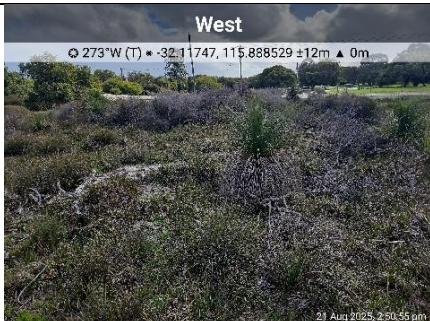
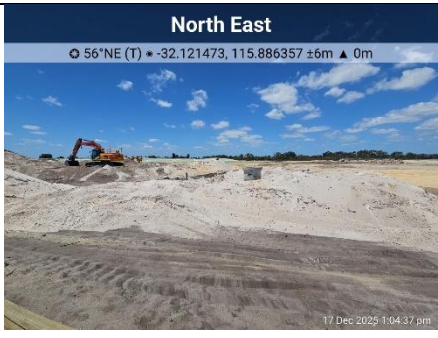
Photo ID: 5 Plot Number: 5 Vegetation classification or exclusion clause: Class B Woodland Description/justification of classification: Roadside vegetation with Isolated trees and shrubs and less than 30% foliage cover.	 North 24°N (T) • -32.118297, 115.887535 ±8m ▲ 4m
Photo ID: 6 Plot Number: 5 Vegetation classification or exclusion clause: Class B Woodland Description/justification of classification: Roadside vegetation with Isolated trees and shrubs and less than 30% foliage cover.	 North East 75°NE (T) • -32.118301, 115.887804 ±4m ▲ 4m
Photo ID: 7 Plot Number: 6 Vegetation classification or exclusion clause: Class B Woodland Description/justification of classification: Banksia trees > 6m tall with 10-30% canopy and low shrubland.	 South East 156°SE (T) • -32.120064, 115.884594 ±12m ▲ 1m
Photo ID: 8 Plot Number: 6 Vegetation classification or exclusion clause: Class B Woodland Description/justification of classification: Mixture of eucalypts and banksia woodland to 12m with 10 -30% foliage cover and low shrubs on the ground.	 West Elevation 81°E (T) • -32.122222, 115.88549 ±4m ▲ 1m
Photo ID: 9 Plot Number: 7 Vegetation classification or exclusion clause: Class C Shrubland Description/justification of classification: Low shrubs not exceeding 1 metre in height.	 West 273°W (T) • -32.11747, 115.888529 ±12m ▲ 0m

Photo ID: 10 Plot Number: 8 Vegetation classification or exclusion clause: Class G Grassland Description/justification of classification: Grass vegetation in degraded paddock with some pigface.	 East 96°E (T) • -32.11775, 115.888445 ±6m ▲ -1m 21 Aug 2025, 2:49:47 pm
Photo ID: 11 Plot Number: 8 Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (f) Description/justification of classification: Future landscape Public Open Space.	 East 108°E (T) • -32.11993, 115.88473 ±9m ▲ 2m 21 Aug 2025, 2:55:02 pm
Photo ID: 12 Plot Number: 11 Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2(e) Description/justification of classification: Cleared for future Public Roads and Development lots.	 North East 56°NE (T) • -32.121473, 115.886357 ±6m ▲ 0m 17 Dec 2025 1:04:37 pm
Photo ID: 13 Plot Number: 11 Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2(e) Description/justification of classification: Cleared for future Public Roads and Development lots.	 West 270°W (T) • -32.120742, 115.885237 ±7m ▲ 2m 17 Dec 2025 1:08:30 pm

Relevant Fire Danger Index

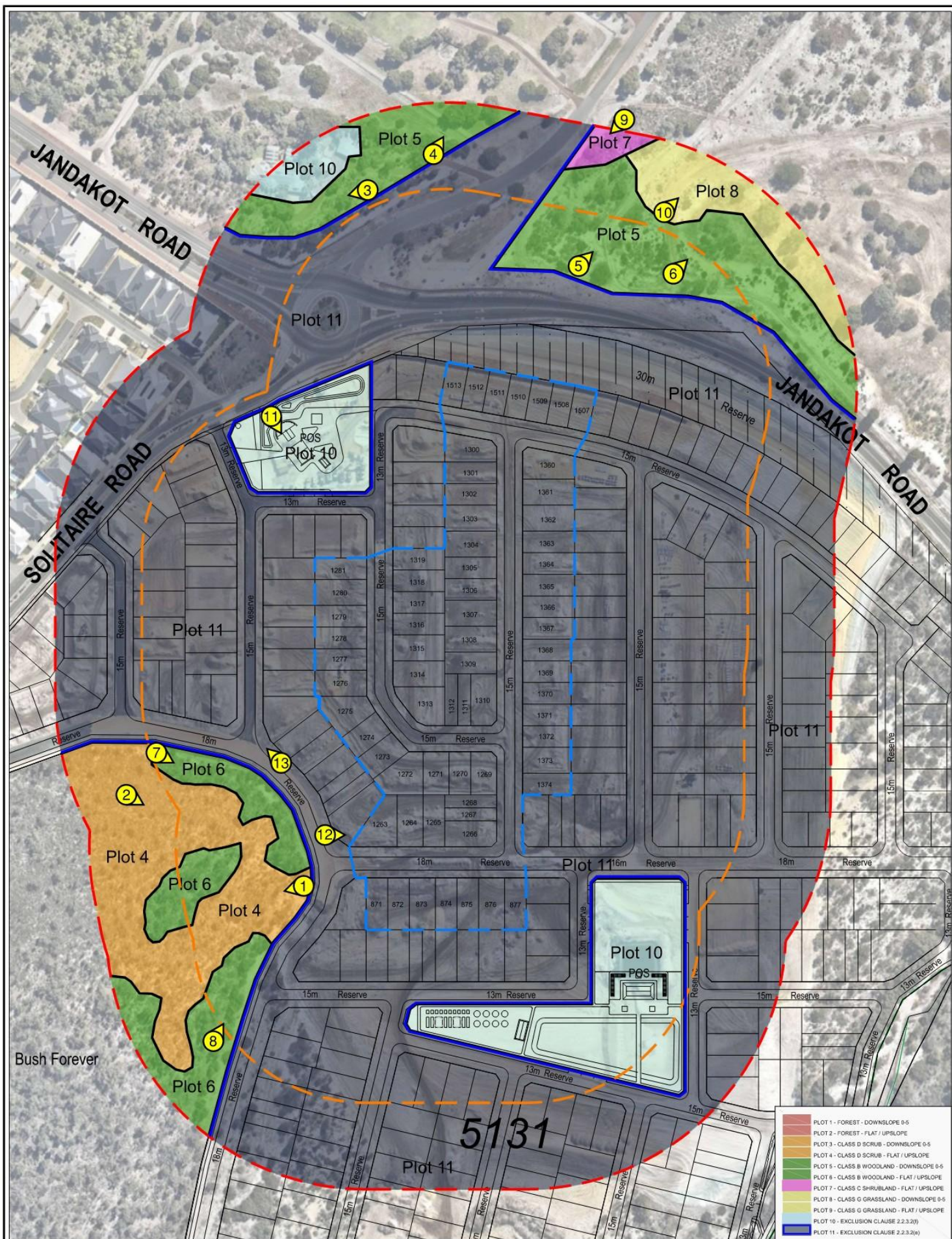
The fire danger index for this site has been determined in accordance with Table 2.1 in AS3959–2018.

Fire Danger Index:	Table
FDI : 80	2.5

Effective Slope

The effective slope under the classified vegetation is outlined in the following table.

Plot No.	Classified Vegetation	Effective slope
1	Class A Forest	Downslope 0-5°
2	Class A Forest	Flat/upslope
3	Class D Scrub	Downslope 0-5°
4	Class D Scrub	Flat/Upslope
5	Class B Woodand	Downslope 0-5°
6	Class B Woodland	Flat/upslope
7	Class C Shrubland	Flat/upslope
8	Class C Shrubland	Downslope 0-5°
9	Class G Grassland	Flat/upslope
10	Exclusion Clause 2.2.3.2 (f)	N/A
11	Exclusion Clause 2.2.3.2(e)	N/A



Determined Bushfire Attack Level

The Bushfire Attack Level (highest BAL) for the lots has been determined in accordance with clause 2.2.6 of AS3959-2018 using the above analysis.

Potential Bushfire Impacts

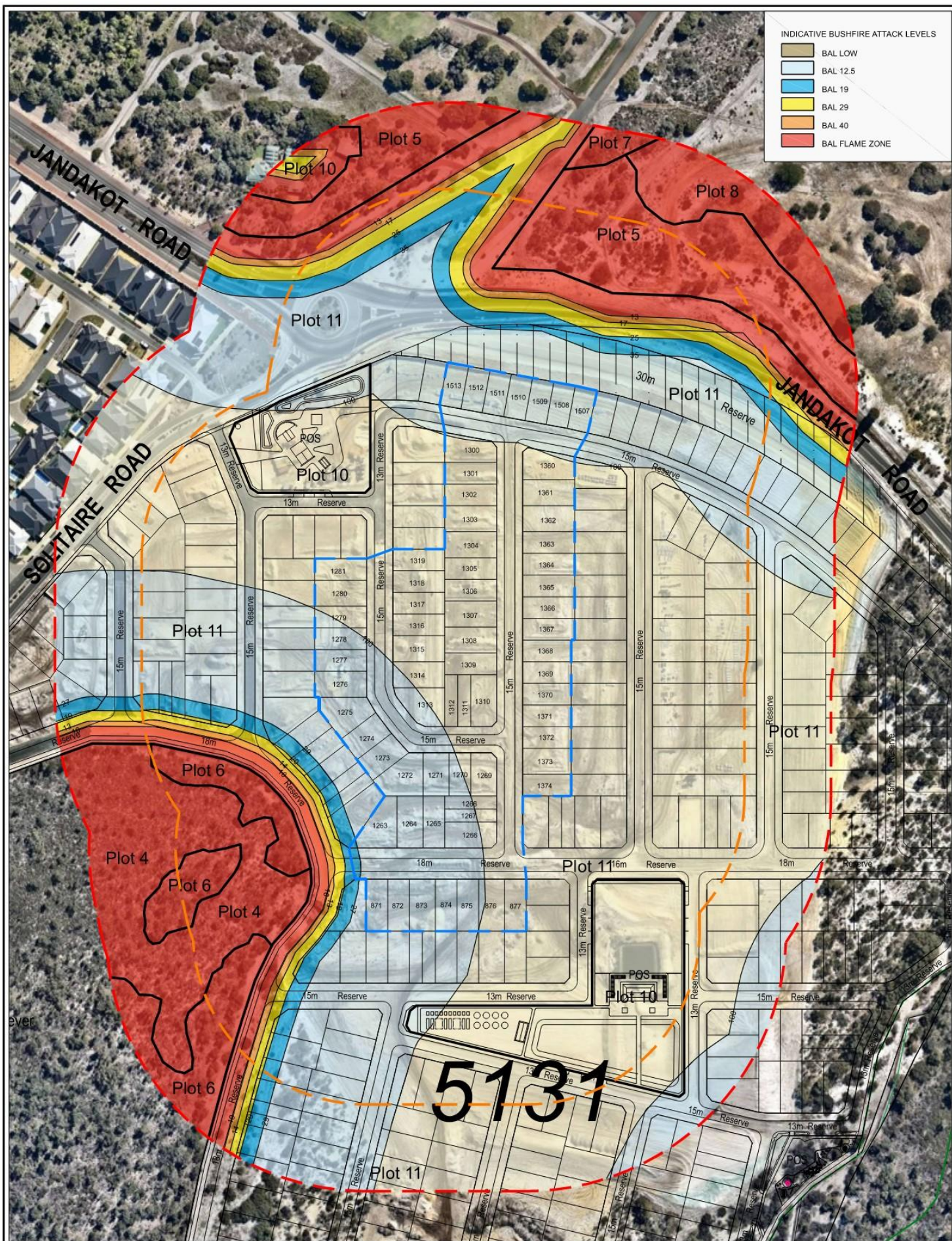
The predicted radiant heat flux levels into the site from the assessment are outlined below in Table 1 and the BAL Contour Plan.

Table 1: BAL Inputs and BAL Ratings

Lots	Vegetation Class	Plot No.	Effective Slope	Setback Distance		BAL Rating
				external	internal	
871	Class D Scrub	4	Flat/Upslope	31 m	0m	BAL-12.5
872	Class D Scrub	4	Flat/Upslope	44 m	0m	BAL-12.5
873	Class D Scrub	4	Flat/Upslope	57m	0m	BAL-12.5
874	Class D Scrub	4	Flat/Upslope	71m	0m	BAL-12.5
875	Class D Scrub	4	Flat/Upslope	84m	0m	BAL-12.5
876	Class D Scrub	4	Flat/Upslope	96m	0m	BAL-12.5
877	Class D Scrub	4	Flat/Upslope	>100 m	0m	BAL-LOW
1263	Class B Woodland	6	Flat/Upslope	24m	5m	BAL-12.5
1264	Class B Woodland	6	Flat/Upslope	53m	0 m	BAL-12.5
1265	Class B Woodland	6	Flat/Upslope	68m	0 m	BAL-12.5
1266	Class B Woodland	6	Flat/Upslope	80.5	0 m	BAL-12.5
1267	Class B Woodland	6	Flat/Upslope	83m	0 m	BAL-12.5
1268	Class B Woodland	6	Flat/Upslope	84m	0	BAL-12.5
1269	Class B Woodland	6	Flat/Upslope	>100 m	N/A	BAL-LOW
1270	Class B Woodland	6	Flat/Upslope	89m	0m	BAL-12.5
1271	Class B Woodland	6	Flat/Upslope	74m	0m	BAL-12.5
1272	Class B Woodland	6	Flat/Upslope	52m	0m	BAL-12.5
1273, 1274	Class B Woodland	6	Flat/Upslope	49m	0m	BAL-12.5
1275	Class B Woodland	6	Flat/Upslope	53m	0m	BAL-12.5
1276	Class B Woodland	6	Flat/Upslope	57m	0m	BAL-12.5
1277	Class B Woodland	6	Flat/Upslope	68m	0m	BAL-12.5
1278	Class B Woodland	6	Flat/Upslope	79m	0m	BAL-12.5
1279	Class B Woodland	6	Flat/Upslope	90m	0m	BAL-12.5
1280	Class B Woodland	6	Flat/Upslope	>100 m	0m	BAL-LOW
1281	Class B Woodland	6	Flat/Upslope	>100 m	0m	BAL-LOW
1300	Class B Woodland	5	Down 0-5°	98m	2m	BAL-LOW
1301 - 1312	Class B Woodland	5	Down 0-5°	>100 m	N/A	BAL-LOW
1313	Class B Woodland	6	Flat/Upslope	88m	0m	BAL-12.5
1314	Class B Woodland	6	Flat/Upslope	90 m	0m	BAL-12.5
1315 - 1319	Class B Woodland	5	Down 0-5°	>100 m	N/A	BAL-LOW
1360	Class B Woodland	5	Down 0-5°	96 m	0m	BAL-12.5
1361 - 1374	Class B Woodland	5	Down 0-5°	>100 m	N/A	BAL-LOW

Table 1: BAL Inputs and BAL Ratings

1507	Class B Woodland	5	Down 0-5°	59m	0m	BAL-12.5
1508, 1510	Class B Woodland	5	Down 0-5°	61m	0m	BAL-12.5
1509	Class B Woodland	5	Down 0-5°	63m	0m	BAL-12.5
1511, 1512	Class B Woodland	5	Down 0-5°	60m	0m	BAL-12.5
1513	Class B Woodland	5	Down 0-5°	59m	0m	BAL-12.5



Appendix 1: Additional Information / Advisory Notes

A Bushfire Attack Level (BAL) Assessment is a means of measuring the severity of a buildings potential exposure to ember attack, radiant heat and direct flame contact from a bushfire event, and thereby determining the construction measures required for the dwelling.

The method used to determination of the BAL rating, and subsequent building construction standards, are directly referenced from Australian Standard *AS3959-2018 Construction of buildings in bushfire prone areas*.

The BAL rating is determined through the identification and assessment of the following parameters:

- Fire danger Index (FDI) rating; assumed to be FDI-80 for Western Australia
- All classified vegetation **within 100m** of the subject building
- Separation distance between the building and the classified vegetation
- Slope of the land under the classified vegetation

AS3959-2018 has six (6) levels of BAL, based on the radiant heat flux exposure to the building, and also identifies the relevant sections for building construction as detailed below;

Bushfire Attack Level (BAL)	Classified Vegetation within 100m of the site and heat flux exposure thresholds	Description of predicted bushfire attack and levels of exposure	Construction Sections (within AS3959)
BAL-LOW	See Clause 2.2.3.2	There is insufficient risk to warrant specific construction requirements	4
BAL-12.5	$\leq 12.5 \text{ kW/m}^2$	Ember attack	3 & 5
BAL-19	$> 12.5 \text{ kW/m}^2$ to $\leq 19 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windbourne embers together with increasing heat flux	3 & 6
BAL-29	$> 19 \text{ kW/m}^2$ to $\leq 29 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windbourne embers together with increasing heat flux	3 & 7
BAL-40	$> 29 \text{ kW/m}^2$ to $\leq 40 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windbourne embers together with increasing heat flux with the increased likelihood of exposure to flames	3 & 8
BAL-FZ	$> 40 \text{ kW/m}^2$	Direct exposure to flames from fire front in addition to heat flux and ember attack	3 & 9