WESTERN ENVIRONMENTAL

(08) 6162 8980
PO Box 437, Leederville, WA 6903
enquiries@westenv.com.au

Bushfire Attack Level (BAL) Assessment Report

Site details	
Address: Stage 21 Baldivis Parks Estate	
Suburb: Baldivis	**State:** Western Australia
Local Government Area: City of Rockingham	
Description of Building Works: Construction of Class 1a dwellings	

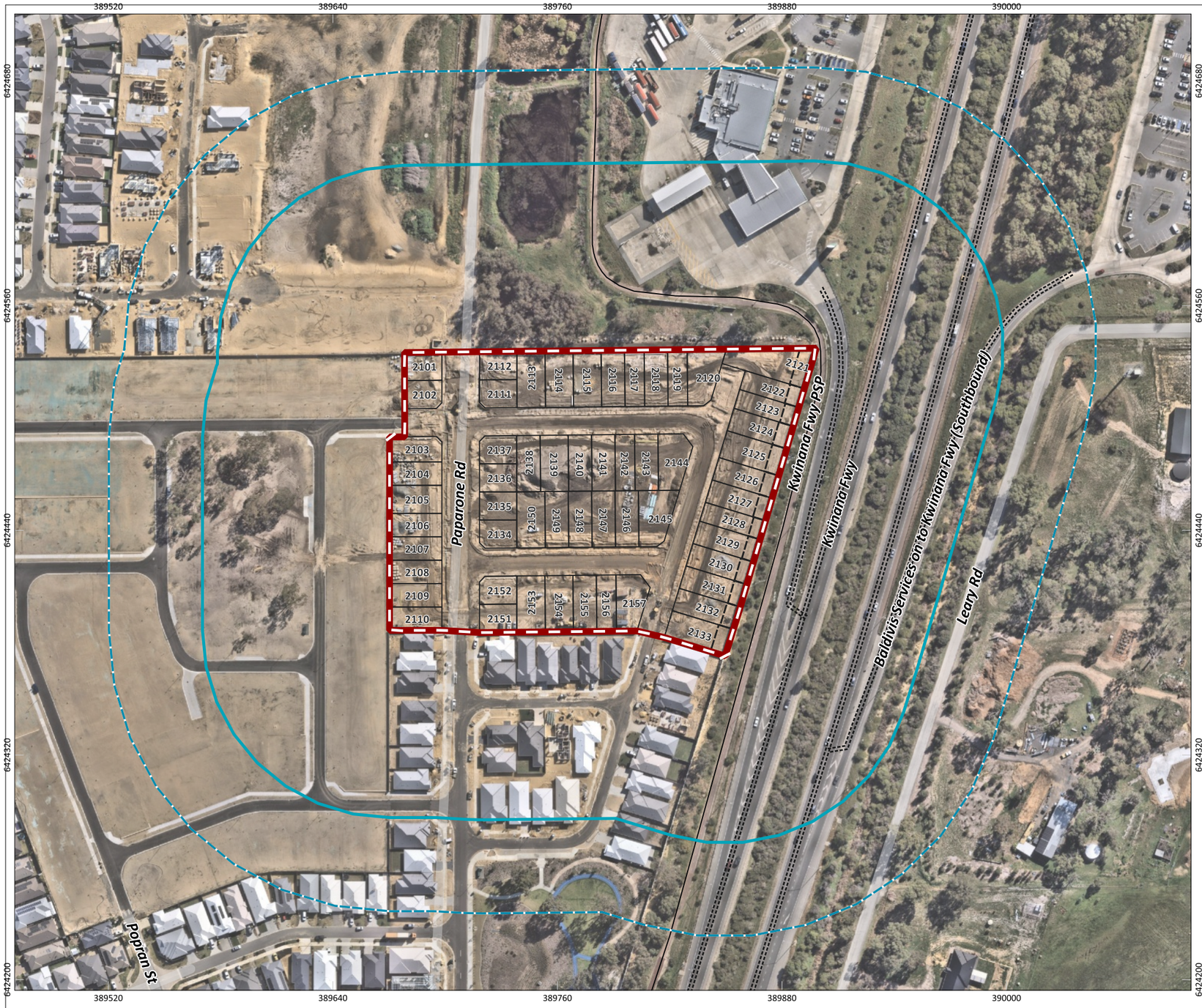
Report details			
Project number	**A24.009**	**Report version**	B
Assessment date	16/09/2025	**Report date**	5/01/2026
Author	Hannah Cunningham (L1 BPAD 68474)	**Review**	Daniel Panickar (L3 BPAD 37802)

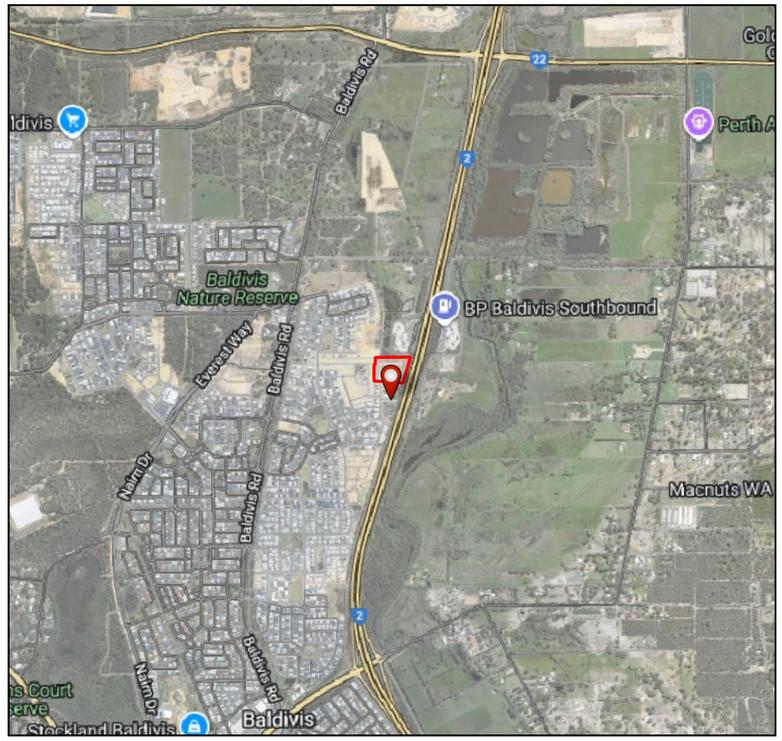
Site Assessment and Site Plan

Assessment of the 57 lots (subject lots) with Stage 21 of Baldivis Parks Estate (the subject lots) was undertaken on 16/09/2025 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 Stage 21 and the subject lots 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 distinguishable vegetation class with the potential to determine the BAL is identified in Table 1 and presented in Figure 2.





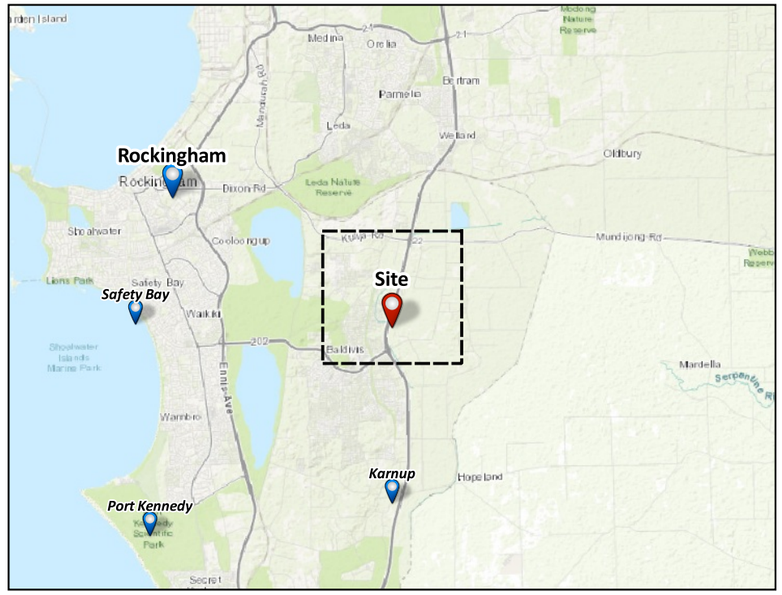


Figure 1: Site Overview

N 0 30 60 90 120 m		PROJECT/REPORT NAME: Compliance Report Stage 21 Baldivis Parks	
SCALE: 1:2,400	SHEET SIZE: A3 COLOUR	CLIENT: Frasers Property Group	
COORDINATE REFERENCE SYSTEM: GDA2020 / MGA zone 50		PROJECT NUMBER: A24.009	VERSION: 0
DATA SOURCE: Nearmap Imagery (16th August 2025)		DRAWN BY / REVIEWED BY: SM/HC	DATE: 19/12/2025

Legend
- Subject Site
- Buffer 100m
- Buffer 150m
- Lots
- Lot Setbacks

No	Description	Drawn	Approved	Date
A	Original issue	SM	HC	19/12/2025

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

WESTERN ENVIRONMENTAL
Western Environmental Pty Ltd
08 6244 2310 | enquiries@westenv.com.au
Level 3/25 Prowse St, West Perth WA 6005
westenv.com.au

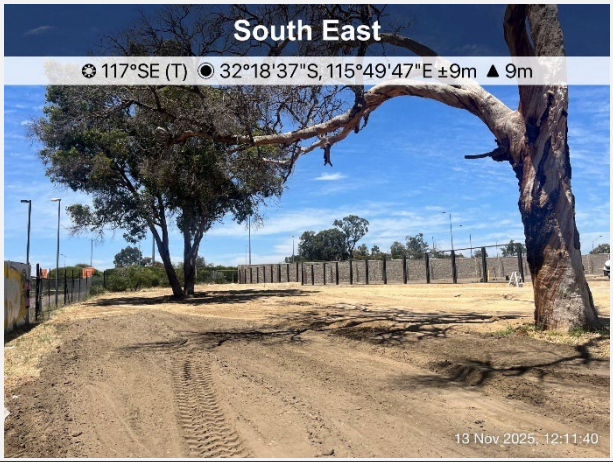
G:\GIS\Project Data\2024\A24.009\A24.009_Stage21Comp\A24.009_Stage21Comp.qgz

Table 1: Vegetation Classification

Plot 1	Class A Forest
Photo 1 Due to site access constraints, no photos of this plot are available. This plot contains trees reaching up to 30 m in height. Overstorey canopy cover exceeds 30 % and the understorey vegetation structure is multi-tiered. The lack of a photo is not considered to be an issue for the BAL assessment, as the highest possible vegetation classification (Class A Forest) has been assigned. The slope under this vegetation was assessed to be upslope/flat land.	
Plot 2	**Class D Scrub**
Photo 2 This plot consists of shrubs over 2 m in height with a grassy understory. The slope under this vegetation was assessed to be downslope >0 - 5 degrees.	
Plot 3	**Class D Scrub**
Photo 3 This plot consists of shrubs over 2 m in height with a grassy understory a grassy understory within the median strip on the Kwinana Freeway. The slope under this vegetation was assessed to be upslope/flat land.	

Plot 4	Class C Shrubland
Photo 4 This plot comprises shrubs with an average height up to 2 m with an understorey cover consisting of grasses. The slope under this vegetation was assessed to be downslope >0 - 5 degrees.	
Plot 5	**Class G Grassland**
Photo 5 This plot comprises grasses along the Kwinana Freeway bike path, including sparse shrubs and tree coverage under 10 %. The slope under this vegetation was assessed to be upslope/flat land.	
Plot 5	**Class G Grassland**
Photo 6 This plot comprises grasses along the Kwinana Freeway bike path, including sparse shrubs and tree coverage under 10 %. The slope under this vegetation was assessed to be upslope/flat land.	

Plot 6	Excluded - clause 2.2.3.2 (b)
Photo 7 Public open space within the neighbouring stage of Baldivis Parks Estate. This plot is a single area of vegetation less than 1 ha in area and not within 100 m of other areas of classified vegetation. Excluded in accordance with Clause 2.2.3.2 (b) of AS 3959: 2018.	
Plot 7	**Excluded - clause 2.2.3.2 (e)**
Photo 8 A non-vegetated area cleared for residential development within the subject site. Excluded in accordance with Clause 2.2.3.2 (f) of AS 3959: 2018.	
Plot 7	**Excluded - clause 2.2.3.2 (e)**
Photo 9 Residential development and footpaths along Paparone Boulevard. Non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018.	

Plot 7	Excluded - clause 2.2.3.2 (e)
Photo 10 Non-vegetated area cleared for development adjacent to site. Non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018.	
Plot 7	**Excluded - clause 2.2.3.2 (e)**
Photo 11 Cleared, non-vegetated surface finished with a limestone base and gravel. Non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018.	
Plot 8	**Excluded - clause 2.2.3.2 (f)**
Photo 12 Managed vegetation within a residential parkland. Low threat vegetation has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959: 2018	

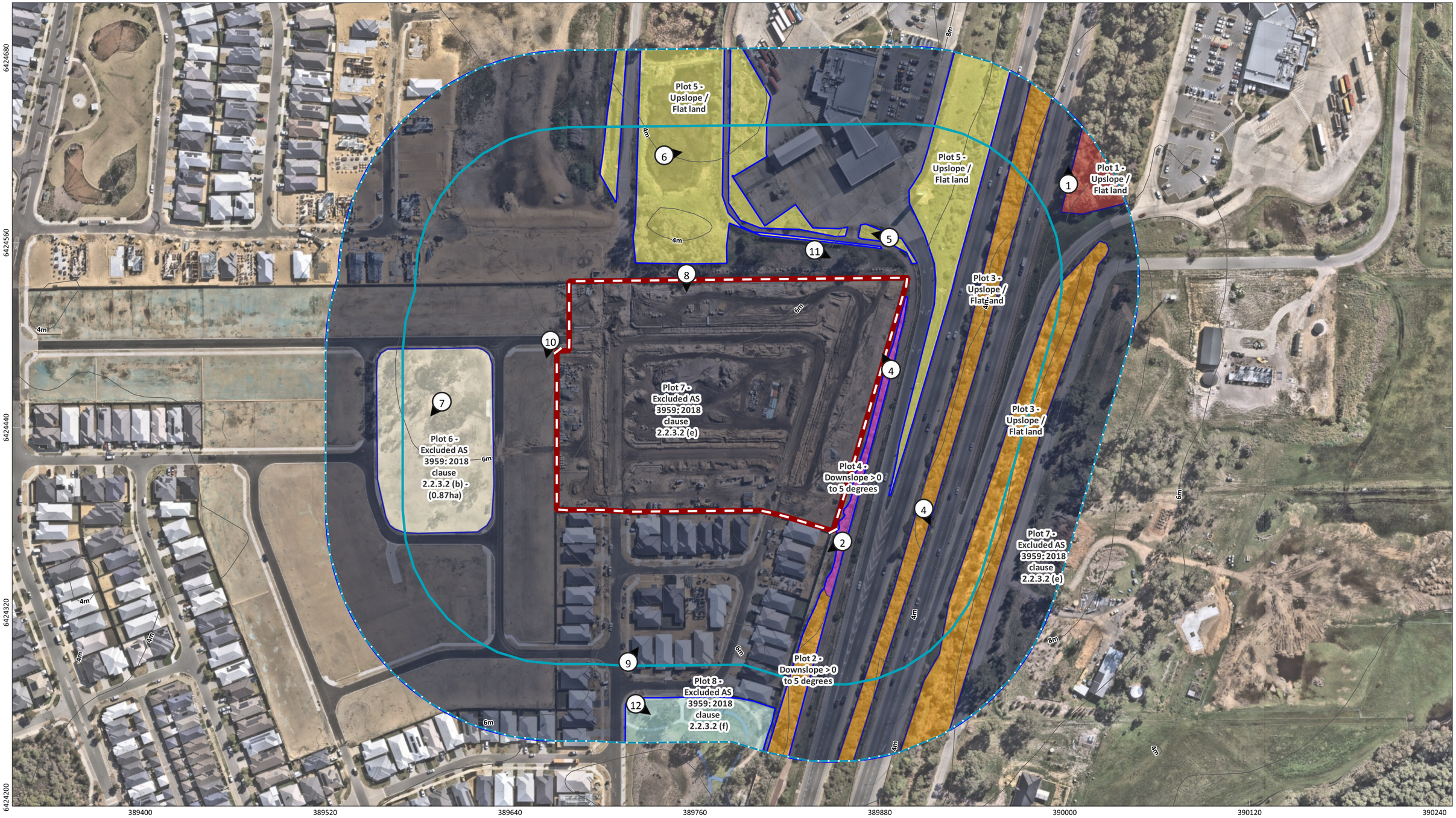


Figure 2: Vegetation Classification

N

0 30 60 90 120 m

SCALE	1:2,400
SHEET SIZE	A3 COLOUR
PROJECT/REPORT NAME	Compliance Report Stage 21 Baldivis Parks
CLIENT	Frasers Property Group
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A24.009
VERSION	0
DATA SOURCE	Nearmap Imagery (16th August 2025)
DRAWN BY / REVIEWED BY	SM/HC
DATE	19/12/2025

Legend

- Subject Site
- Buffer 100m
- Buffer 150m
- Photos

2m Contours (DPIRD-072)
- 2m

Vegetation Classification
- Class A - Forest
- Class C - Shrubland
- Class D - Scrub
- Class G - Grassland
- Excluded AS 3959: 2018 2.2.3.2 (b)
- 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	HC	19/12/2025

NOTES:

Cadastral boundary from LANDGATE 2022. Label corresponds to the vegetation association number.

WESTERN ENVIRONMENTAL

Western Environmental Pty Ltd
08 6244 2310 | enquiries@westenv.com.au
Level 3/25 Prowse St, West Perth WA 6005
westenv.com.au

G:\GIS\Project Data\2024\A24.009\A24.009_Stage21Comp\A24.009_Stage21Comp.qgz

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 to the subject lots 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 A Forest	All upslopes and flat land (0 degrees)	<16	16-<21	21-<31	31-<42	42-<100
2	Class D Scrub	Downslope >0 to 5 degrees	<11	11-<15	15-<22	22-<31	31-<100
3	Class D Scrub	All upslopes and flat land (0 degrees)	<10	10-<13	13-<19	19-<27	27-<100
4	Class C Shrubland	Downslope >0 to 5 degrees	<7	7-<10	10-<15	15-<22	22-<100
5	Class G Grassland	All upslopes and flat land (0 degrees)	<6	6-<8	8-<12	12-<17	17-<50
6	Excluded - clause 2.2.3.2 (b)	-	No separation distances required - BAL-LOW				
7	Excluded - clause 2.2.3.2 (e)	-	No separation distances required - BAL-LOW				
8	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 as depicted in Figure 3 and Table 4.

The BAL ratings incorporate a restrictive covenant which has been placed at the rear of Lots 2121-2133 to ensure that dwellings are constructed within areas subject to BAL ratings ≤BAL-29.

Table 4: BAL Assessment Summary

Proposed Building/Lot	BAL Rating	Construction sections to be consulted in AS 3959: 2018
2101	BAL-12.5	3 and 5
2102	BAL-12.5	3 and 5
2103	BAL-LOW	4
2104	BAL-LOW	4
2105	BAL-LOW	4
2106	BAL-LOW	4
2107	BAL-LOW	4
2108	BAL-LOW	4
2109	BAL-LOW	4
2110	BAL-LOW	4
2111	BAL-12.5	3 and 5
2112	BAL-19[1]	3 and 6
2113	BAL-19[2]	3 and 6
2114	BAL-19[3]	3 and 6
2115	BAL-19[4]	3 and 6
2116	BAL-19[5]	3 and 6
2117	BAL-12.5	3 and 5
2118	BAL-12.5	3 and 5
2119	BAL-12.5	3 and 5
2120	BAL-12.5	3 and 5
2121	BAL-29[6]	3 and 7
2122	BAL-29[7]	3 and 7
2123	BAL-29[8]	3 and 7
2124	BAL-29[9]	3 and 7
2125	BAL-29[10]	3 and 7

Proposed Building/Lot	BAL Rating	Construction sections to be consulted in AS 3959: 2018
2126	BAL-29[11]	3 and 7
2127	BAL-29[12]	3 and 7
2128	BAL-29[13]	3 and 7
2129	BAL-29[14]	3 and 7
2130	BAL-29[15]	3 and 7
2131	BAL-29[16]	3 and 7
2132	BAL-29[17]	3 and 7
2133	BAL-29[18]	3 and 7
2134	BAL-LOW	4
2135	BAL-LOW	4
2136	BAL-LOW	4
2137	BAL-LOW	4
2138	BAL-LOW	4
2139	BAL-LOW	4
2140	BAL-12.5	3 and 5
2141	BAL-12.5	3 and 5
2142	BAL-12.5	3 and 5
2143	BAL-12.5	3 and 5
2144	BAL-12.5	3 and 5
2145	BAL-12.5	3 and 5
2146	BAL-12.5	3 and 5
2147	BAL-12.5	3 and 5
2148	BAL-12.5	3 and 5
2149	BAL-LOW	4
2150	BAL-LOW	4
2151	BAL-LOW	4
2152	BAL-LOW	4
2153	BAL-LOW[19]	4
2154	BAL-12.5	3 and 5
2155	BAL-12.5	3 and 5
2156	BAL-12.5	3 and 5
2157	BAL-12.5	3 and 5

Notes to Table 4

1) Lot 2112 BAL rating can be reduced to BAL-19 if a setback of 1.1 m is applied between the future dwelling and the northern lot boundary.
2) Lot 2113 BAL rating can be reduced to BAL-19 if a setback of 1.4 m is applied between the future dwelling and the northern lot boundary.
3) Lot 2114 BAL rating can be reduced to BAL-19 if a setback of 1.5 m is applied between the future dwelling and the northern lot boundary.
4) Lot 2115 BAL rating can be reduced to BAL-19 if a setback of 1.5 m is applied is applied between the future dwelling and the northern lot boundary.
5) Lot 2116 BAL rating can be reduced to BAL-19 if a setback of 1.2 m is applied is applied between the future dwelling and the northern lot boundary.
6)Lot 2121 BAL rating can be reduced to BAL-29 if a setback of 8.2 m is applied is applied between the future dwelling and the eastern lot boundary.
7) Lot 2122 BAL rating can be reduced to BAL-29 if a setback of 7.9 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
8) Lot 2123 BAL rating can be reduced to BAL-29 if a setback of 7.5 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
9) Lot 2124 BAL rating can be reduced to BAL-29 if a setback of 8 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
10) Lot 2125 BAL rating can be reduced to BAL-29 if a setback of 8 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
11) Lot 2126 BAL rating can be reduced to BAL-29 if a setback of 7.5 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
12) Lot 2127 BAL rating can be reduced to BAL-29 if a setback of 7.1 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
13) Lot 2128 BAL rating can be reduced to BAL-29 if a setback of 6.6 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
14) Lot 2129 BAL rating can be reduced to BAL-29 if a setback of 6.5 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
15) Lot 2130 BAL rating can be reduced to BAL-29 if a setback of 7 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
16) Lot 2131 BAL rating can be reduced to BAL-29 if a setback of 7 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
17) Lot 2132 BAL rating can be reduced to BAL-29 if a setback of 7.4 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
18) Lot 2133 BAL rating can be reduced to BAL-29 if a setback of 8.2 m is applied is applied is applied between the future dwelling and the eastern lot boundary.
19) Lot 2153 BAL rating can be reduced to BAL-LOW if a setback of 1 m is applied is applied between the future dwelling and the eastern lot boundary.
Note: This BAL rating is based on the information current at the date of this document and is valid for 12 months.

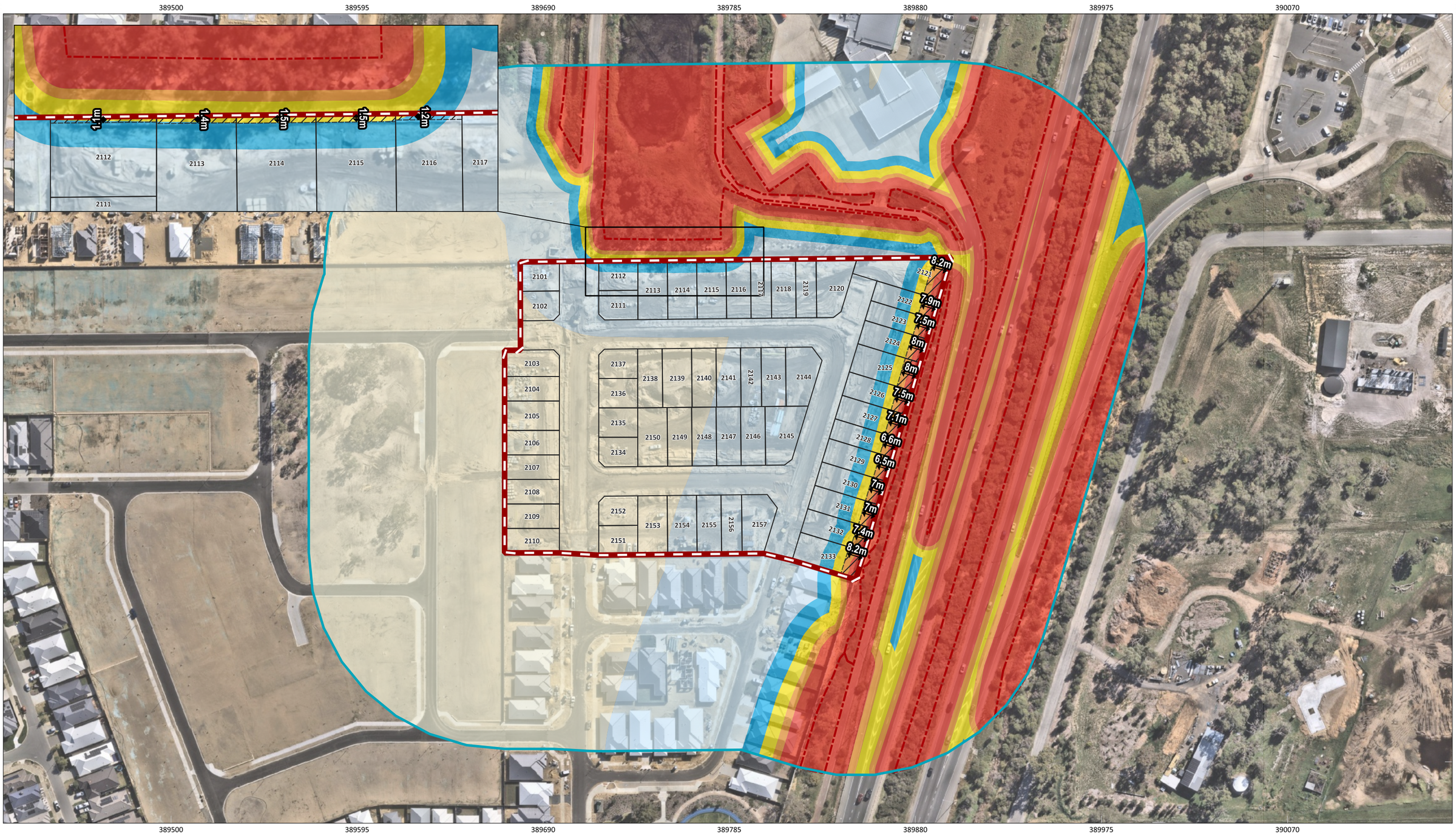


Figure 3: Bushfire Attack Level (BAL) contours

N

0 30 60 90 120 m

PROJECT/REPORT NAME	Compliance Report Stage 21 Baldivis Parks
SCALE	1:1,900
SHEET SIZE	A3 COLOUR
CLIENT	Frasers Property Group
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A24.009
VERSION	0
DATA SOURCE	Nearmap Imagery (16th August 2025)
DRAWN BY / REVIEWED BY	SM/HC
DATE	19/12/2025

Legend

- Subject Site
- Buffer 100m
- Lots
- Bushfire Hazard Interface
- Lot Setbacks

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	19/12/2025

NOTES:

Cadastral boundary from LANDGATE 2022. Label corresponds to the vegetation association number.

WESTERN ENVIRONMENTAL

Western Environmental Pty Ltd
08 6244 2310 | enquiries@westenv.com.au
Level 3/25 Prowse St, West Perth WA 6005
westenv.com.au

G:\GIS\Project Data\2024\A24.009\A24.009_Stage21Comp\A24.009_Stage21Comp.qgz

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.