Smith Bushfire Consultants Pty Ltd

BUSHFIRE ATTACK LEVEL REPORT

Lot 144 Pastel Road, Anketell
(City of Kwinana)

BPAD
Bushfire
Planning & Design
Accredited Practitioner
Level 2

Report completed by Ralph Smith
Smith Bushfire Consultants Pty Ltd
BPAD Accredited Practitioner 27541
10 July 2023
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Bushfire Attack Level (BAL) Certificate
Determined in accordance with AS 3959-2018

This Certificate has been issued by a person accredited by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme. The certificate details the conclusions of the full Bushfire Attack Level Assessment Report (full report) prepared by the Accredited Practitioner.
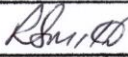
Property Details and Description of Works

Address Details	Unit no	Street no	Lot no	Street name / Plan Reference		
			144	Pastel Road		
	Suburb				State	Postcode
	Anketell				WA	6167
Local government area	City of Kwinana					
Main BCA class of the building	Class 1a	Use(s) of the building		Dwelling		
Description of the building or works	Construction of a dwelling					

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class G Grassland	>0-5	22	BAL – 12.5

BPAD Accredited Practitioner Details

Name Ralph Smith	
Company Details Smith Bushfire Consultants Pty Ltd	I hereby declare that I am a BPAD accredited bushfire practitioner.
I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level stated above in accordance with the requirements of AS 3959-2018.	Accreditation No. 27541 Signature RSmith Date 10 July 2023

Authorised Practitioner Stamp

Reliance on the assessment and determination of the Bushfire Attack Level contained in this certificate should not extend beyond a period of 12 months from the date of issue of the certificate. If this certificate was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated certificate issued.

Introduction

This is a Bushfire Attack Level (BAL) assessment and report. It has been developed by Smith Bushfire Consultants Pty Ltd for the exclusive use of the client, Terranovis Pty Ltd and their agents.

This BAL assessment and report has been compiled using the standard methodologies required by Western Australian government departments and agencies. The report is based on the following:

- *State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP 3.7)*, December 2015
- *Guidelines for Planning in Bushfire Prone Areas*, December 2021
- *Australian Standard 3959 – Construction of buildings in bushfire-prone areas (Incorporating Amendments Nos 1 and 2)*, November 2018
- City of Kwinana requirements

The techniques described in the above publications have been applied in the appropriate areas and circumstances for the development of this document.

Where there was no public access, the interpretation is based on photographic and satellite imagery, and a laser distance meter was used to measure distances and effective slope.

DISCLAIMER

This Bushfire Attack Level (BAL) assessment and report has been prepared in good faith. It is derived from sources believed to be reliable and accurate at the time of publication. Nevertheless, this report 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 or omission from this publication.

Smith Bushfire Consultants Pty Ltd has exercised due and customary care in the preparation of this BAL report and has not, unless specifically stated, independently verified information provided by others.

Any recommendations, opinions or findings stated in this report are based on circumstances and facts as they existed at the time Smith Bushfire Consultants Pty Ltd performed the work. Any changes in such circumstances and facts upon which this document is based may adversely affect any recommendations, opinions or findings contained in this report.

Property Details

Location of property: Lot 144 Pastel Road, Anketell, WA

Property owner or representative: Warren Spencer

Property owner or representative contact details: warren@terranovis.com.au

Date of field assessment: 5 July 2023

Purpose of Assessment

This assessment has been undertaken to determine the potential Bushfire Attack Level (BAL) on Lot 144 Pastel Road, Anketell. The BAL assessment and subsequent report are based on the physical evidence that was present at the time of assessment. The BAL assessment is based on the requirements contained within the Western Australian government policies and guidelines.

BALs are used to determine which, if any, construction requirements contained within Sections 3–9 of the *Australian Standard 3959 – Construction standard of buildings in bushfire-prone areas* (AS 3959) are appropriate for a particular site.

Procedure

The BAL assessment involved the following process in accordance with AS 3959 (Method 1):

- Determine the area to be assessed
- Determine the relevant Fire Danger Index (FDI)
- Determine the vegetation type/s and class
- Determine the distance of the site from the classified vegetation type/s
- Determine the effective slope/s under the classified vegetation type/s
- Determine the BAL
- Determine the appropriate construction requirements.

Fire Danger Index

The methodology rates bushfire attack using a combination of vegetation type, slope and distance from the building or building envelope to the predominant vegetation. In Western Australia it assumes a Fire Danger Index (FDI) of 80.

Site Assessment

The assessment of Lot 144 Pastel Road, Anketell, was undertaken on 5 July 2023 for the purpose of determining the Bushfire Attack Level in accordance with AS 3959 (Method 1).

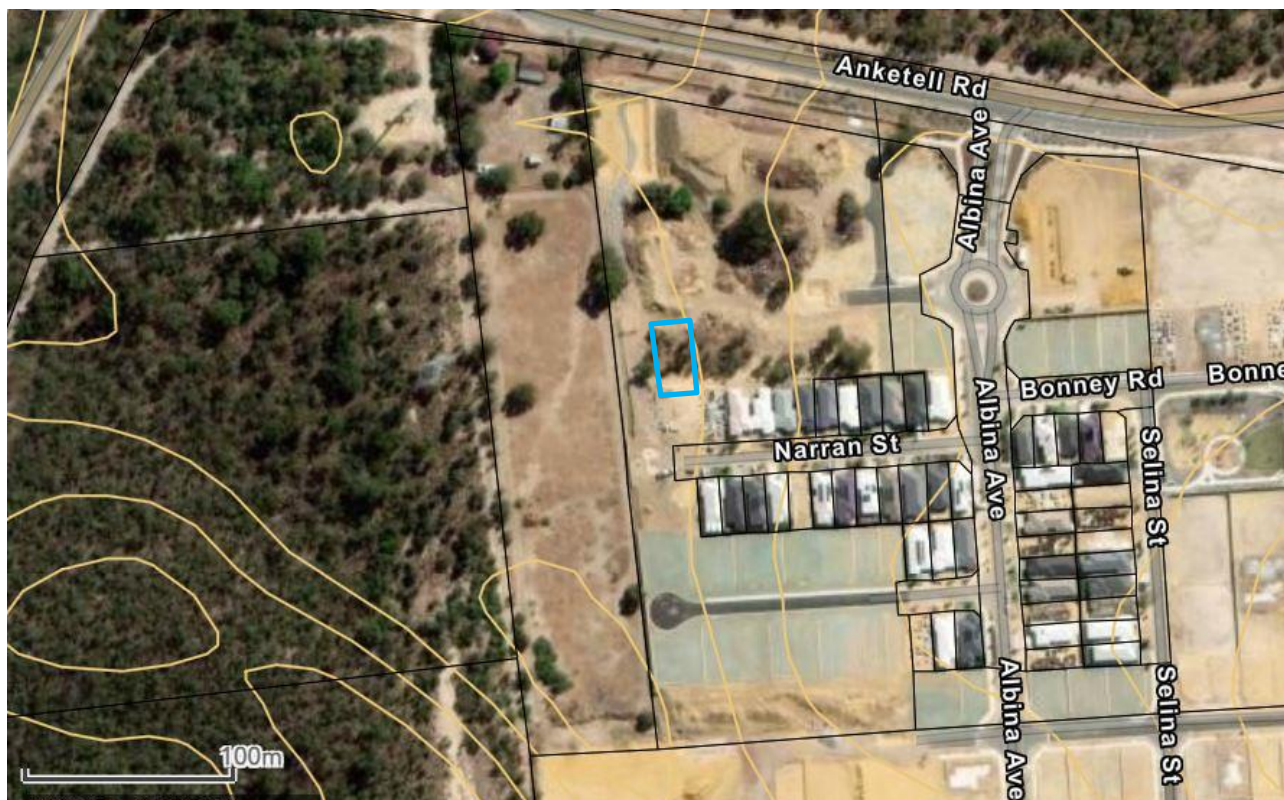**Figure 1:** Vegetation Classification Map.

Slope

Figure 2: Two-metre Contour Map.
Source: Department of Primary Industries and Regional Development

The pale orange lines on the contour map are two-metre contour lines. The slope is assessed as being south-west to the north-east, as confirmed by the contour map. The slope is associated with the vegetation and therefore there would be minimal impact on the bushfire rate of spread because of the slight slope.

Vegetation Classification

All vegetation within 150 metres of the lot boundary as indicated on the vegetation classification map was classified in accordance with the Western Australian Government criteria and Clause 2.2.3 of AS 3959 was applied. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below. AS 3959 only requires consideration of 50 metres between vegetation and the building for grassland.

Plot 1
Exclusion – Low threat vegetation and non-vegetated areas
Clause 2.2.3.2 (e) and (f).

5/07/2023 2:12:10 PM (+8.0 hrs) Dir=SW Lat=-32.21165 Lon=115.85369 Alt=3ft MSL WGS84

Photo ID: Photo 1 Looking at the lot ready for a dwelling to be constructed.

5/07/2023 1:43:54 PM (+8.0 hrs) Dir=SE Lat=-32.2129 Lon=115.85378 Alt=3ft MSL WGS84

Photo ID: Photo 2 Looking across the subdivision site with lots where construction on new builds has commenced.

5/07/2023 2:18:05 PM (+8.0 hrs) Dir=WSW Lat=-32.21281 Lon=115.85532 Alt=3ft MSL WGS84

Photo ID: Photo 3 Looking at the established dwellings, footpath and road.

5/07/2023 2:15:21 PM (+8.0 hrs) Dir=W Lat=-32.21156 Lon=115.85465 Alt=3ft MSL WGS84

Photo ID: Photo 4 Looking across the land north-east of the lot which is cleared and ready for new dwellings.

Photo ID: Photo 5 Looking across the land north-east of the lot which is cleared and ready for new dwellings.

Photo ID: Photo 6 Looking at the drainage sump.

Photo ID: Photo 7 Looking at the cleared and managed land west of the subdivision site.

Plot 2
Class G – Grassland under an open woodland (G – 06)

Photo ID: Photo 8 Looking at the grassland and tree on the land to the west of the subdivision.

Photo ID: Photo 9 The grassland west of the subdivision site.

Photo ID: Photo 10 The grassland vegetation west of the subdivision site.

Photo ID: Photo 11 The grassland vegetation within the derelict neighbouring house yard.

Plot 3
Class D – Scrub (D – 13)

Photo ID: Photo 12 The scrub vegetation west of the grassland neighbouring the subdivision site.

Photo ID: Photo 13 The scrub vegetation west of the grassland neighbouring the subdivision site.
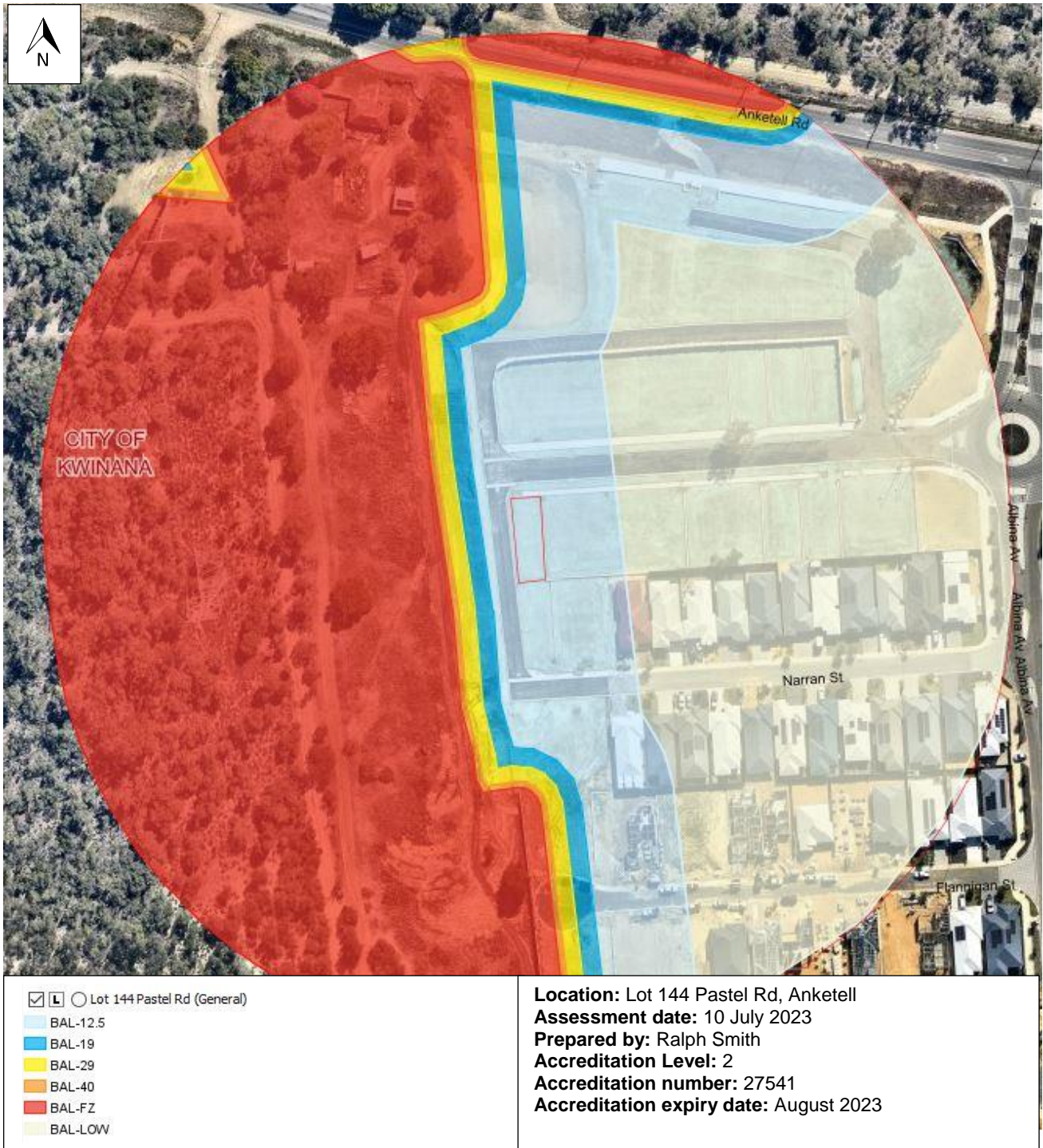
Legend:

- ☑ Ⓛ ◯ Lot 144 Pastel Rd (General)
- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ
- BAL-LOW

Location: Lot 144 Pastel Rd, Anketell
Assessment date: 10 July 2023
Prepared by: Ralph Smith
Accreditation Level: 2
Accreditation number: 27541
Accreditation expiry date: August 2023

Figure 3: BAL Contour Map.

Notes to Accompany Vegetation Classification

1. Plot 1
Exclusion – Low threat vegetation and non-vegetated areas
Clause 2.2.3.2 (e) and (f).

Lot 144 Pastel Road, Anketell is a residential lot located within a newly established residential estate. The lot is cleared and ready for construction to commence. The lots immediate surrounding the lot and within the new estate are all cleared and developed, ready for sale and construction of dwellings to commence. The land to the west has been cleared and is managed to low threat vegetation standard.

Plot 1 includes the road network and suburban infrastructure that services the area.

2. Plot 2
Class G – Grassland under an open woodland (G – 06)

This plot comprises the land to the west, but separated by a 22 metre wide cleared and managed area, of the lot. There is an absence of a multi-tiered scrub layer beneath the sparse tree overstorey cover. The overstorey cover is less than 10% and contains a grassland surface vegetation.

3. Plot 3
Class D – Scrub (D – 13)

This plot comprises the scrub that is west of the development site and is classified as Regional Park. The principle overstorey vegetation is *Banskia spp*. This portion of the plot is separated from the development site by grassland under an open woodland.

Potential Bushfire Impacts

The potential bushfire impacts to the lot from each of the identified vegetation plots are identified below.

Plot	Vegetation Classification	Effective Slope	Separation distance (m)	BAL rating
1	Exclusion – Low threat vegetation and non-vegetated areas Clause 2.2.3.2 (e) & (f)	N/A	N/A	BAL–LOW
2	Class G – Grassland under an open woodland (G – 06)	>0-5	22	BAL–12.5
3	Class D – Scrub (D – 13)	Level / Upslope	62	BAL–12.5

Determination of Bushfire Attack Level (BAL)

The determined Bushfire Attack Level (highest BAL) for Lot 144 Pastel Road, Anketell, has been determined in accordance with Clause 2.2.6 of AS 3959 using the above analysis.

The determined Bushfire Attack Level (BAL) for the lot is assessed as a BAL–12.5.

Appendix 1

Aerial photo showing the indicative subject site, Lot 144 Pastel Road, Anketell, as being designated a bushfire prone area. Source: Landgate.

References

Landgate. (2023). *Map of Bushfire Prone Areas.* Retrieved 7 July 2023 from
https://maps.slip.wa.gov.au/landgate/bushfireprone/

Department of Planning, Lands and Heritage maps from
https://espatial.dplh.wa.gov.au/PlanWA/Index.html?viewer=PlanWA

Department of Primary Industries and Regional Development (DPIRD). *Natural Resource Information (WA) – Contour Map.* Retrieved 7 July 2023 from
https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f

Near Maps online mapping from http://www.near maps.

Standards Australia. (2018). *Australian Standard 3959 – Construction of buildings in bushfire-prone areas (Incorporating amendments No 1 and 2)*. Standards Australia, Sydney, NSW.

Western Australian Planning Commission, (2015). *State Planning Policy 3.7 – Planning in Bushfire Prone Areas*. Western Australian Planning Commission, Perth, WA.

Western Australian Planning Commission, (2021). *Guidelines for Planning in Bushfire Prone Areas*. Western Australian Planning Commission, Perth, WA.