

AS 3959-2018 Bushfire Attack Level (BAL) Report

Client Reference Number

B20124-25

Date (Final)

6/05/2025

Site Inspection Date

28/04/2025

Report Version

1

Report Validity

12 months from report date

Client Name

Developed Pty Ltd

PROPERTY DETAILS

Site Address	Lot 1926 #17 Ridley Street
Suburb	Bulgarra
Local Government Area	Karratha
Description of Works	New residential build
Main Use of Building/Lot	Residential
BCA Class	1a


Disclaimer: The information contained in this Bushfire Attack Level Assessment is considered to meet the minimum standards of AS 3959-2018 Construction of buildings in bushfire-prone areas. The assessment does not guarantee that a building will not be damaged in a bush fire. Any general advice or recommendations given in this assessment is made in good faith and based on the information available at the time of the on-site inspection by Bushfire Protection Australia. The determined Bushfire Attack Level's (BAL) continuity as assessed at the time of the report will depend among other things on the actions of the landowners or occupiers over which Bushfire Protection Australia has no control. Notwithstanding anything contained therein, Bushfire Protection Australia will not, except as may be required by law, be liable for any loss or other consequences (whether or not due to the negligence of their consultants, their servants or agents) arising out of the services provided.


Site Plans




Vegetation Classification

All vegetation within 100m of the site/proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.

Plot ID	Excluded Area
Vegetation Classification or Exclusion Clause Description / Justification for Classification	Exclusion (e) Non vegetated areas
Photo ID	 1

Plot ID	Excluded Area
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>Exclusion (e)</p> <p>Non vegetated areas</p>
Photo ID	 <p>2</p>

Plot ID	2
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	 <p>3</p>

Plot ID	2
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	4



Plot ID	3
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	5



Plot ID	1
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	6



Plot ID	1
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	7





Plot ID	3
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	8





Plot ID	3
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	9



Plot ID	1
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	 <p>10</p>

Plot ID	3
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	 <p>11</p>

Plot ID	3
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	 <p>12</p>

Plot ID	1
Vegetation Classification or Exclusion Clause Description / Justification for Classification	<p>G Grassland</p> <p>Grass type vegetation, can include trees with <10% foliage cover.</p>
Photo ID	 <p>13</p>

Relevant Fire Danger Index

The fire danger index for this site has been determined in accordance with AS3959-2018 Table 2.4.3 or otherwise determined with a jurisdictional variation applicable to the site.

A Fire Danger Index Rating of 80 is applied throughout Western Australia.

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
X			

Potential Bushfire Impacts

The potential bushfire impact to the site/proposed development from each of the identified vegetation plots are identified below.

Table 1: BAL Analysis

Plot	Vegetation Classification	Effective Slope	Separation	BAL
1	Grassland	0.0°	58.3	12.5
2	Grassland	0.0°	15.5	19
3	Grassland	0.0°	30.7	12.5

The Determined Bushfire Attack Level (Highest BAL) for the site/proposed development has been determined in accordance with clause 2.2.6 of AS 3959-2018 using the above analysis.

Bushfire Attack Level	BAL-19
------------------------------	---------------

Appendix 2 Additional Information /Advisory Notes

Additional Information / General Advisory Notes / Justifications Related to Assessment / Exemptions as per AS 3959-2018

- All bushfire prone vegetation within 100m of the site was assessed as per AS3959-2018.
- Excluded areas are made up of a. residential lots with no bushfire prone vegetation present, b. roadways and footpaths.

Bushfire Attack Level Assessment Explained

A BAL Assessment is a means of measuring the potential risk from ember attack, radiant heat and direct flame exposure during a bushfire event and determine the relevant construction standards.

The methodology used in determining the BAL rating is sourced from *Australian Standard 3959-2018 Construction of Buildings in Bushfire Prone Areas (AS3959-2018)* – (see below).

Bushfire Attack Level (BAL)	Heat flux exposure thresholds	Description of predicted bushfire attack and levels of exposure	Section of AS 3959
BAL-LOW	See clause 2.2.3.2	There is insufficient risk to warrant specific construction requirements	4
BAL-12.5	$\leq 12.5\text{W/m}^2$	Ember Attack	3 & 5
BAL-19	$>12.5\text{W/m}^2$ to $\leq 19\text{kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne 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 windborne 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 windborne 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



ADDENDUM - MAPS

Figure 1: BAL Assessment Map

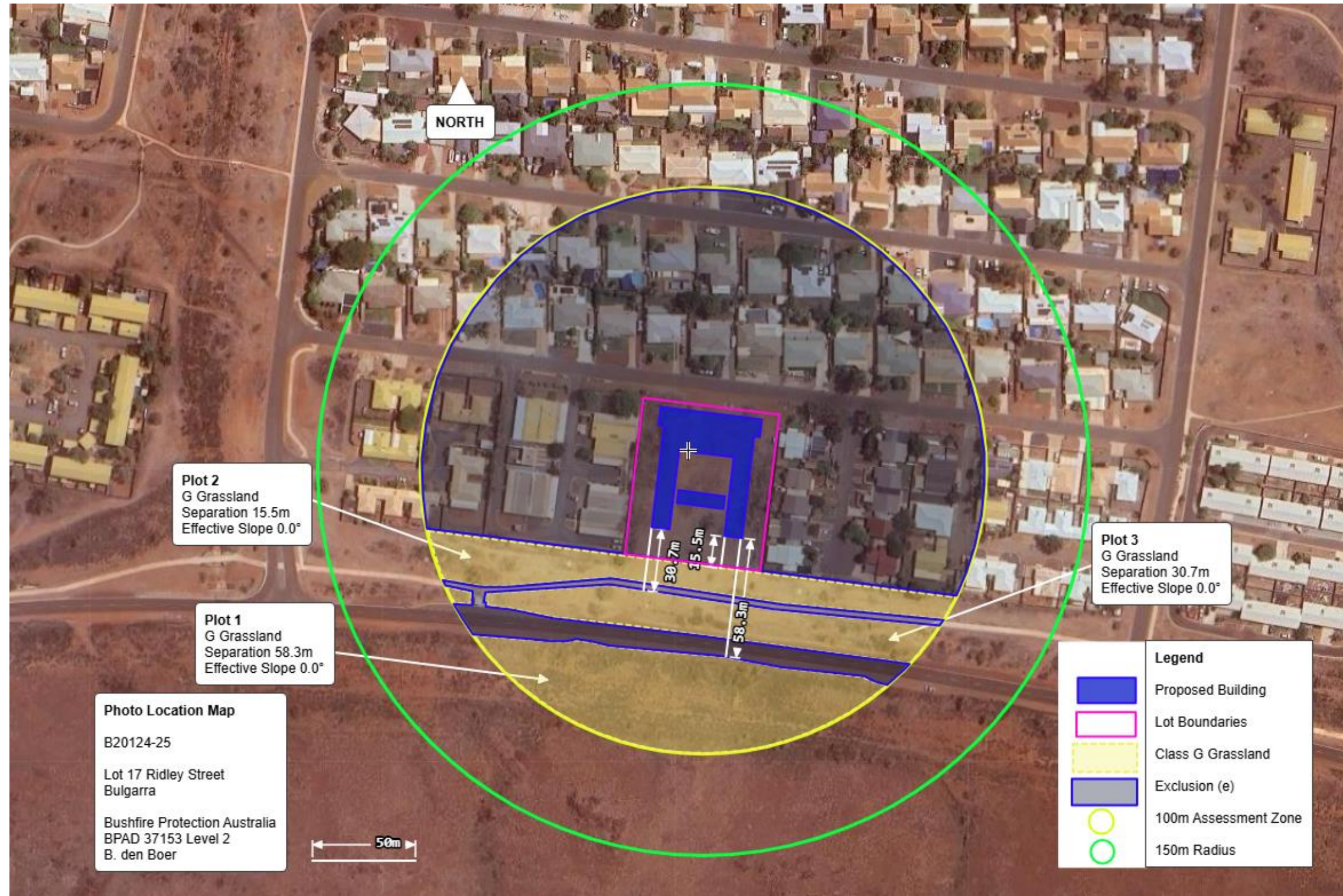
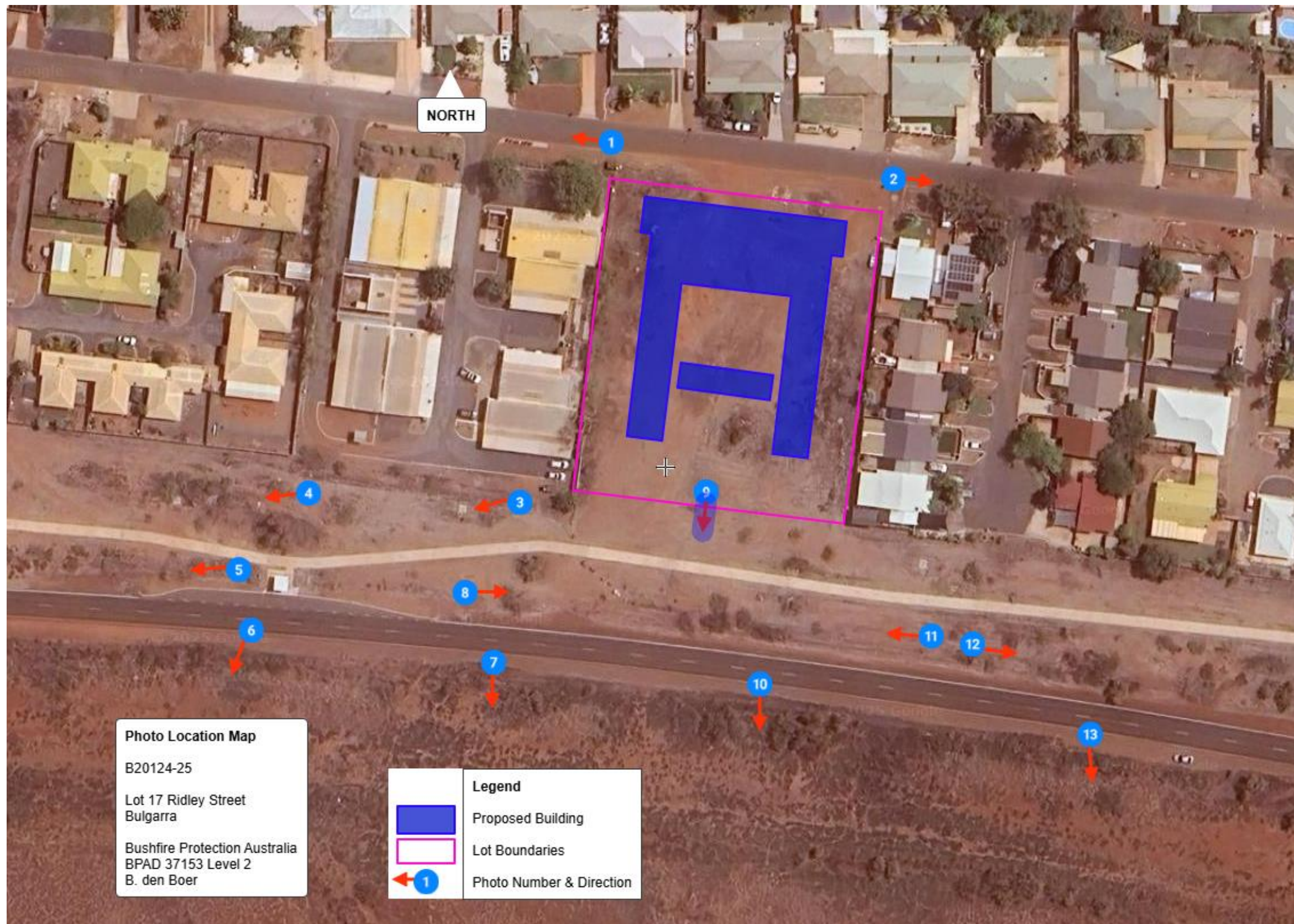


Figure 2: Photo Location Map



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		
		17	1926	Ridley Street		
Local government area	Suburb			State	Postcode	
	Bulgarra			WA	6714	
Main BCA class of the building	Karratha					
Description of the building or works	Class 1a	Use(s) of the building	Residential Building			
	New Build					

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class G Grassland	0.0°	15.5	BAL – 19

BPAD Accredited Practitioner Details

Name Ben den Boer	<div style="border: 1px solid black; padding: 5px;"> <p>I hereby declare that I am a BPAD accredited bushfire practitioner.</p> <p>Accreditation No. <u>37153</u></p> <p>Signature <u>[Signature]</u></p> <p>Date <u>6/03/2025</u></p> </div>
Company Details Bushfire Protection Australia	
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.	

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.