AS 3959-2018 Bushfire Attack Level (BAL) Report

Client Reference Number	**B20224-25**
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 751 Gregory Way**
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


LOT DA 51
DA 51 - Gregory Wy, BULGARRA
Location Map
The Site (DA 51 - Gregory Way)
Site Plan
Karratha Apartments (LOT DA 51)
DA 51 - Gregory Wy, BULGARRA
CONCEPT DEVELOPMENT
1 : 400
18/02/25
A001
Preliminary Scheme Only
Gregory Way
Millstream Road
Carpark
Visitor
GATE
OUTLOOK
1 Bed x 1 Bath
2 Bed x 2 Bath
3 Bed x 2 Bath
3 LEVELS
BBQ
POOL
PLANT
ALFRESCO
GYM

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	2
Vegetation Classification or Exclusion Clause Description / Justification for Classification	G Grassland Grass type vegetation, can include trees with <10% foliage cover. 
Photo ID	1

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

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

Plot ID	1
Vegetation Classification or Exclusion Clause Description / Justification for Classification	G Grassland Grass type vegetation, can include trees with <10% foliage cover. 
Photo ID	4

Plot ID	1
Vegetation Classification or Exclusion Clause Description / Justification for Classification	G Grassland Grass type vegetation, can include trees with <10% foliage cover. 
Photo ID	5

Plot ID	3
Vegetation Classification or Exclusion Clause Description / Justification for Classification	G Grassland Grass type vegetation, can include trees with <10% foliage cover. 
Photo ID	6

Plot ID	3
Vegetation Classification or Exclusion Clause Description / Justification for Classification	G Grassland Grass type vegetation, can include trees with <10% foliage cover. 
Photo ID	7

Plot ID	1
Vegetation Classification or Exclusion Clause Description / Justification for Classification	G Grassland Grass type vegetation, can include trees with <10% foliage cover. 
Photo ID	8

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

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

Plot ID	1
Vegetation Classification or Exclusion Clause Description / Justification for Classification	G Grassland Grass type vegetation, can include trees with <10% foliage cover. 
Photo ID	11

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 Building 1

Plot	Vegetation Classification	Effective Slope	Separation	BAL
1	Grassland	0.0°	32.5	12.5
2	Grassland	0.0°	142.9	LOW
3	Grassland	0.0°	97.7	LOW
4	Grassland	0.0°	50.0	LOW

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-12.5

Table 2: BAL Analysis Building 2

Plot	Vegetation Classification	Effective Slope	Separation	BAL
1	Grassland	0.0°	109.4	LOW
2	Grassland	0.0°	72.2	LOW
3	Grassland	0.0°	28.1	12.5
4	Grassland	0.0°	29.0	12.5

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

Bushfire Attack Level	BAL-12.5

Appendix 2 Additional Information /Advisory Notes

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

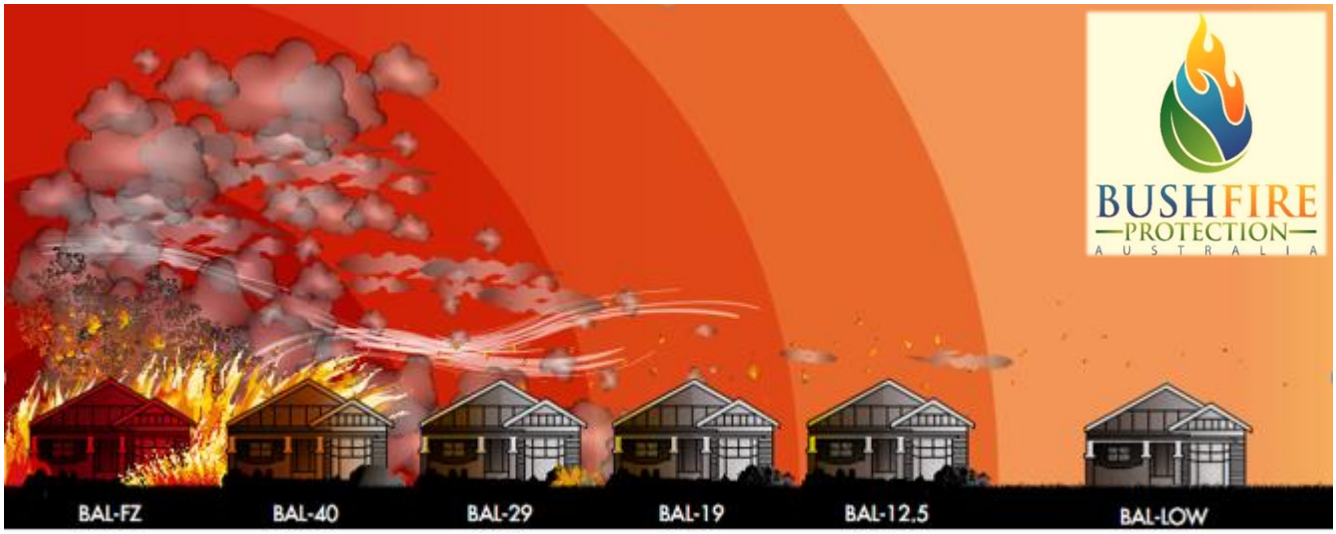
- All bushfire prone vegetation within 100m of the site was assessed as per AS3959-2018.
- Excluded areas are made up of a. residential lots with no bushfire prone vegetation present, b. roadways and footpaths.

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	≤ 12.5W/m^2	Ember Attack	3 & 5
BAL-19	>12.5W/m^2 to ≤19kW/m^2	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	3 & 6
BAL-29	>19kw/m^2 to ≤29kWm^2	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	3 & 7
BAL-40	>29kW/m^2 to ≤40kW/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	>40kW/m^2	Direct exposure to flames from fire front in addition to heat flux and ember attack	3 & 9



BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5	BAL-LOW
Direct Exposure to flames, radiant heat and embers from the fire front	Increasing ember attack and windborne debris, radiant heat between 29kW/m^2 and 40kW/ m^2. Exposure to flames from fire front likely	Increasing ember attack and windborne debris, radiant heat between 19kw/ m^2 and 29kW/ m^2	Increasing ember attack and windborne debris, radiant heat between 12.5W/m^2 and 19kW/ m^2	Ember attack radiant heat below 12.5W/m^2	There is insufficient risk to warrant any specific construction requirements, but there is still some risk

ADDENDUM - MAPS

Figure 1: BAL Assessment Map

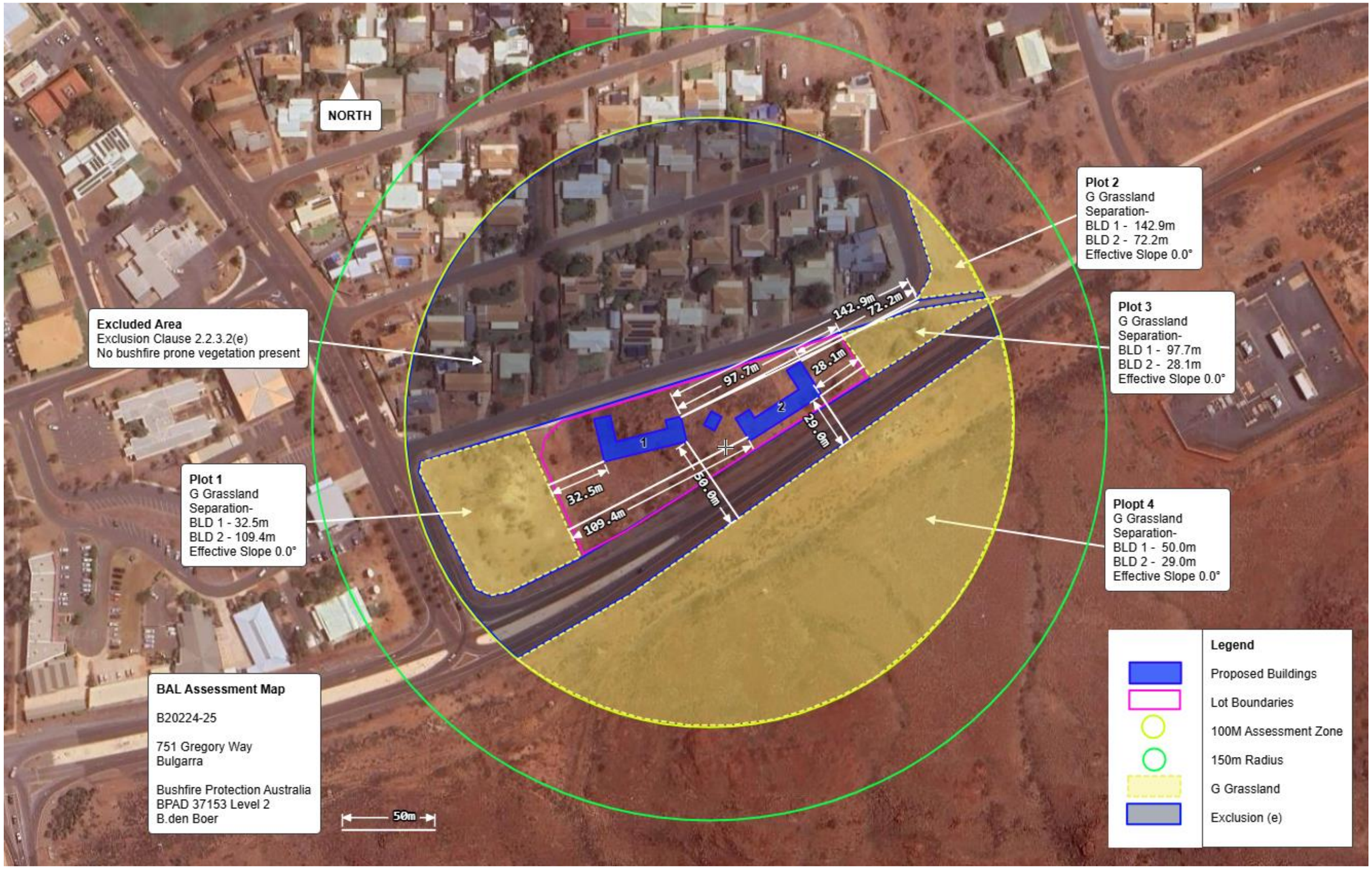
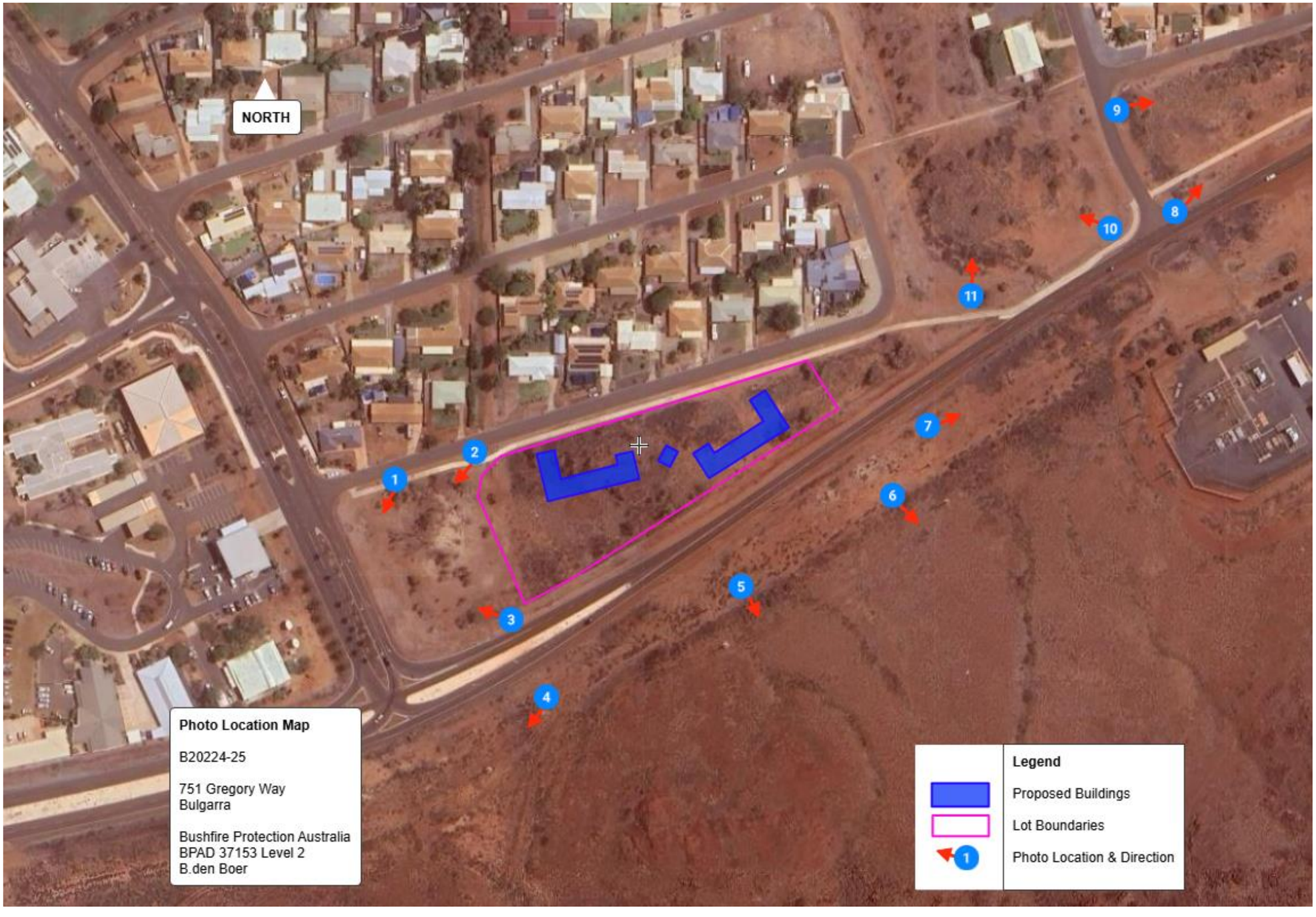


Figure 2 : Photo Location Map



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** 751	**Street name / Plan Reference** Gregory Way	
	Suburb Bulgarra			**State** WA	**Postcode** 6714
Local government area	Karratha				
Main BCA class of the building	Class 1a	**Use(s) of the building**	Residential Building		
Description of the building or works	New Build -Building 1				

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class G Grassland	0.0°	32.5	BAL – 19

BPAD Accredited Practitioner Details

Name
Ben den Boer

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.

I hereby declare that I am a BPAD accredited bushfire practitioner.
Accreditation No. 37153
Signature
Date 6/03/2025

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.

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Local government area	Karratha				
Main BCA class of the building	Class 1a	**Use(s) of the building**	Residential Building		
Description of the building or works	New Build -Building 2				

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class G Grassland	0.0°	28.1	BAL – 19

BPAD Accredited Practitioner Details

Name
Ben den Boer

Company Details
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I hereby declare that I am a BPAD accredited bushfire practitioner.
Accreditation No. 37153
Signature
Date 6/05/2025

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