

## Bushfire Attack Level (BAL) Assessment Report for Stage 2 Natures Edge Estate, Southern River

### Site Details

**Address:** Natures Edge Estate, Southern River: Lots 104-112, 170-175 and 185-191

**Suburb:** Southern River, 6110 **State:** Western Australia

**Local Government Area:** City of Gosnells

**Description of building works:** Residential Development

### Report details

**Report/Job number:** 17493

**Report version:** v2

**Assessment date:** 21/07/2021

**Report date:** 25/08/2021

**Author:** Daniel Panickar (BPAD Level 3-27802)  
Stephen Moore

**Review:** Daniel Panickar (BPAD Level 3-37802)



### SITE ASSESSMENT AND SITE PLAN

The assessment of the subject lots was undertaken on 21 July 2021 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* (SA 2018) Simplified Procedure (Method 1). An overview of the site is presented in Figure 1.

### VEGETATION CLASSIFICATION

All vegetation within 150 m of the 22 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 below and presented in Figure 1.

It is currently assumed that areas of landscaped vegetation within the site and assessment area will be managed and maintained by Parcel Property (the developer) until replaced by residential dwellings and associated infrastructure or handed over to the City of Gosnells in the future.

Plot 1	Classification or Exclusion Clause	Class B Woodland
	Effective Slope	All upslopes and flat land (0 degrees)

#### Photo Point 1

This plot comprises wetland vegetation in a Resource Enhancement Wetland and associated buffer within Natures Edge Estate.

This area will be revegetated to resemble a woodland structure. Classified vegetation within this plot will be comprised of trees between 10 to 30 m tall with approximately 20 to 30% foliage cover. Some sedges/reeds and shrubs will be present at the base of the trees.



Plot 1	Classification or Exclusion Clause	Class B Woodland
	Effective Slope	All upslopes and flat land (0 degrees)

#### Photo Point 2

This plot comprises wetland vegetation in a Resource Enhancement Wetland and associated buffer within Natures Edge Estate.

This area will be revegetated to resemble a woodland structure. Classified vegetation within this plot will be comprised of trees between 10 to 30 m tall with approximately 20 to 30% foliage cover. Some sedges/reeds and shrubs will be present at the base of the trees.



Plot 1	Classification or Exclusion Clause	Class B Woodland
	Effective Slope	All upslopes and flat land (0 degrees)

#### Photo Point 3

This plot comprises wetland vegetation in a Resource Enhancement Wetland and associated buffer outside of Natures Edge Estate.

This area will be revegetated to resemble a woodland structure. Classified vegetation within this plot will be comprised of trees between 10 to 30 m tall with approximately 20 to 30% foliage cover. Some sedges/reeds and shrubs will be present at the base of the trees.



Plot	2	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)
		Effective Slope	-

**Photo Point 4**

This plot comprises land that has been cleared for development.



Plot	2	Classification or Exclusion Clause	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)
		Effective Slope	-

**Photo Point 5**

This plot comprises land that has been cleared for development.



RELEVANT FIRE DANGER INDEX

The fire danger index for this site has been determined in accordance with Table 2.1 of AS 3959: 2018.

Relevant Fire Danger Index			
FDI 40 <input type="checkbox"/>	FDI 50 <input type="checkbox"/>	FDI 80 <input checked="" type="checkbox"/>	FDI 100 <input type="checkbox"/>
Table 2.4.5	Table 2.4.4	Table 2.4.3	Table 2.4.2

POTENTIAL BUSHFIRE IMPACTS

The potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below, Table 1 and Figure 2.

Table 1: BAL Analysis AS 3959: 2018

Plot	Vegetation Classification	Effective Slope	Separation distances required				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Class B Woodland	All upslopes and flat land (0 degrees)	<10	10-<14	14-<20	20-<29	29-<100
2	Excluded AS 3959: 2018 2.2.3.2 (e) & (f)	-	No separation distances required – BAL-LOW				



### DETERMINED BUSHFIRE ATTACK LEVEL (BAL)

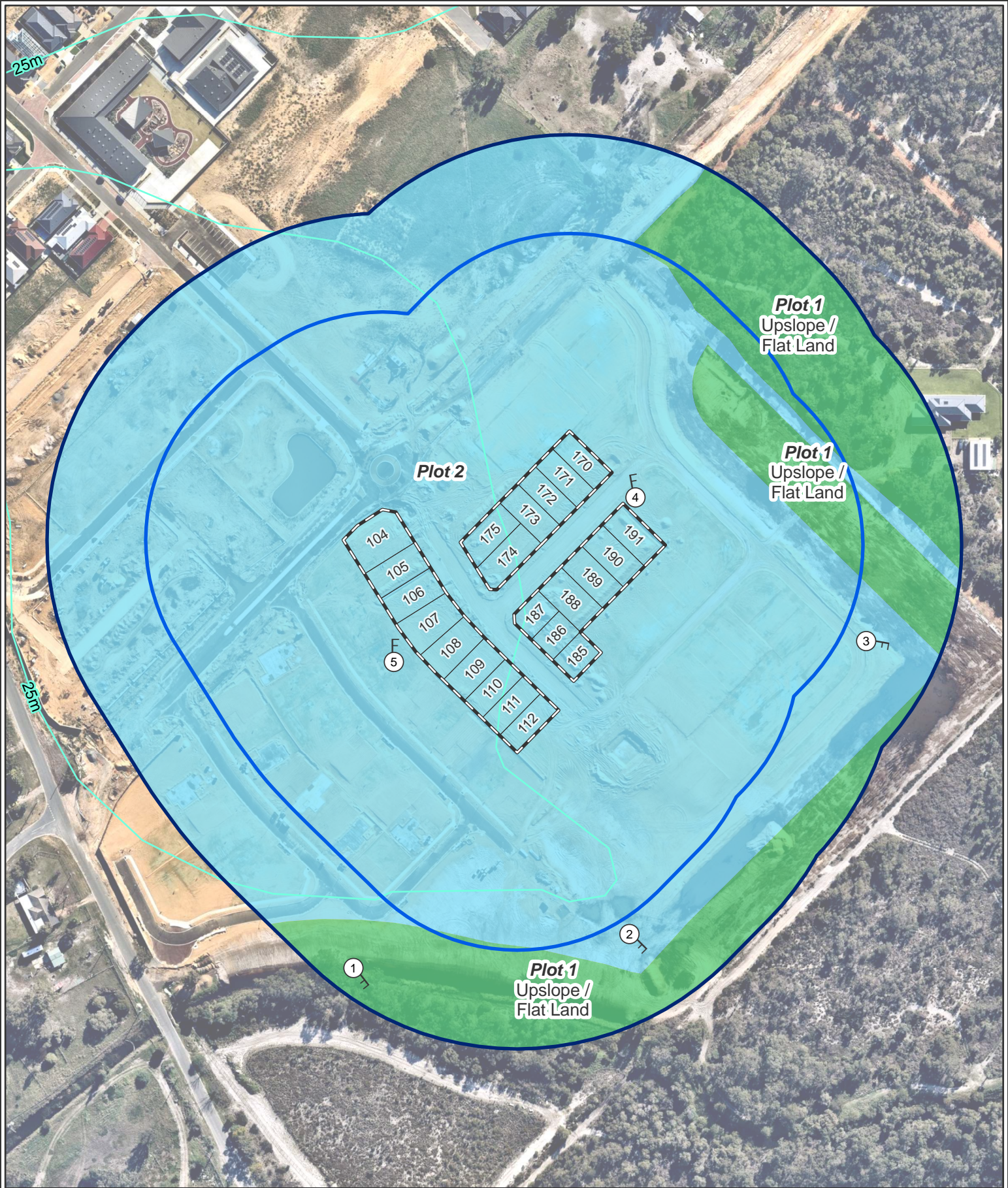
The determined Bushfire Attack Level (highest BAL) for the proposed works has been determined in accordance with Clause 2.2.6 of AS 3959: 2018 relevant data from the site assessment shown in Table 2 and Figure 2.

**Table 2: BAL Assessment summary**









BAL	Affected lots	Construction sections to be consulted in AS 3959-2018
BAL-FZ	Nil	N/A
BAL-40	Nil	N/A
BAL-29	Nil	N/A
BAL-19	Nil	N/A
BAL-12.5	Determined Bushfire Attack Level for: Lots 170, 171, 172, 173*, 189*, 190 and 191.	3 and 5
BAL-LOW	Determined Bushfire Attack Level for: Lots 104, 105, 106, 107, 108, 109, 110, 111, 112, 174, 175, 185, 186, 187 and 188.	3 and 4

\*INDICATES THAT A SETBACK MAY BE ABLE TO REDUCE THE BAL RATING FOR A FUTURE DWELLING





**Figure 1: Vegetation Classification**

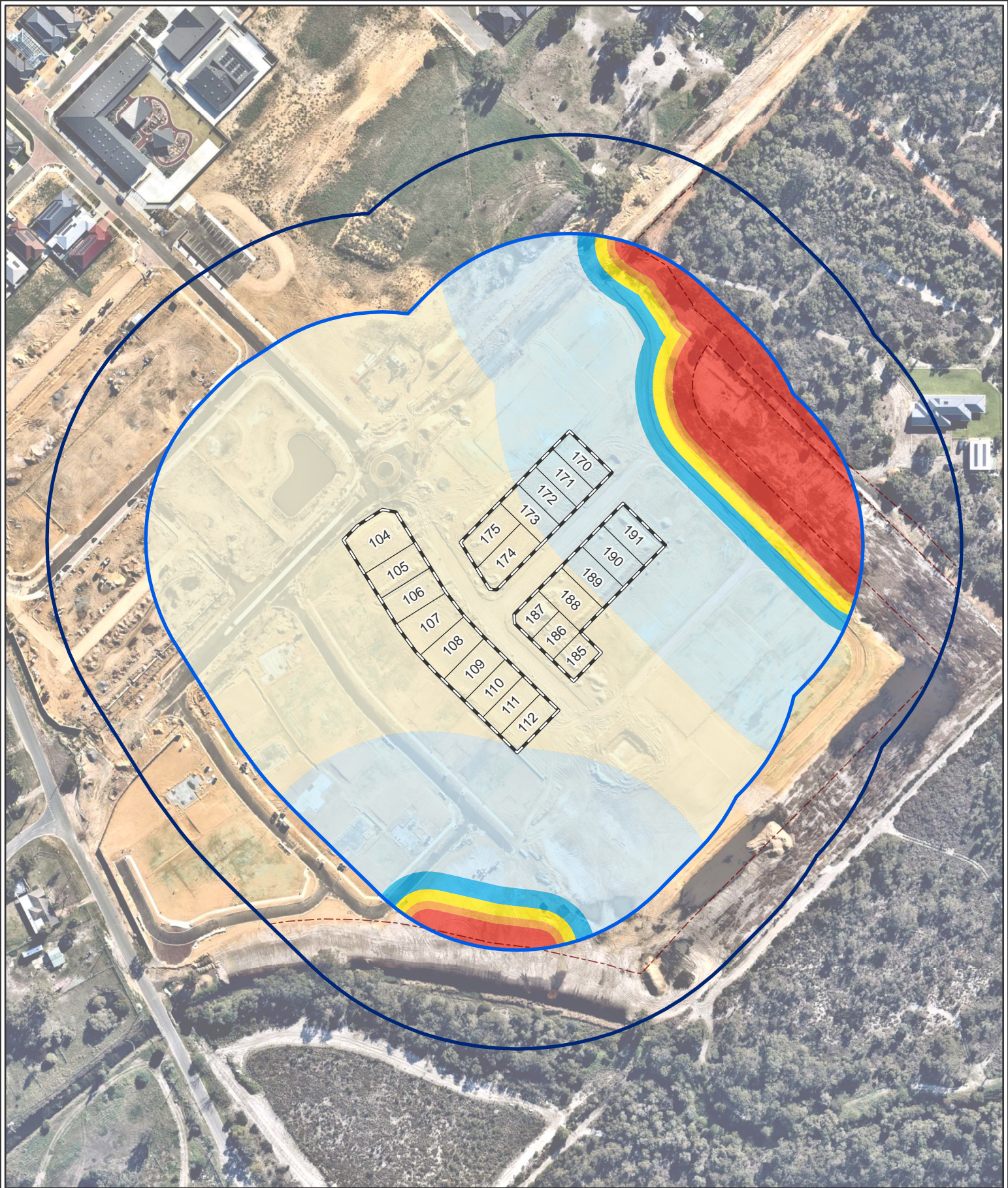
- |   |  |
|---|--|
|  Subject site         | <b>Vegetation classification</b>   |
|  Lot boundary         |  Class B woodland                           |
|  100m site assessment |  Excluded as per clause 2.2.3.2 (e) and (f) |
|  150m site assessment |  |
|  Contour (5m)         |  |
|  Photo location       |  |

0 20 40 80  
Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021





**Figure 2: Bushfire Attack Level (BAL) Contours**

Subject site  
 Lot boundary  
 100m site assessment  
 150m site assessment  
 Bushfire hazard interface

**Bushfire Attack Level (BAL)**

BAL - FZ  
 BAL - 40  
 BAL - 29  
 BAL - 19  
 BAL - 12.5  
 BAL - LOW

0 20 40 80  
Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021

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## 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	$\leq 12.5 \text{ kW/m}^2$	Ember attack	3 and 5
BAL-19	$>12.5 \text{ kW/m}^2 \leq 19 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing radiant heat flux.	3 and 6
BAL-29	$>19 \text{ kW/m}^2 \leq 29 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing radiant heat flux	3 and 7
BAL-40	$>29 \text{ kW/m}^2 \leq 40 \text{ kW/m}^2$	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	$>40 \text{ kW/m}^2$	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



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 104, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	158 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 


Certificate Date: 25/08/2021









Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021

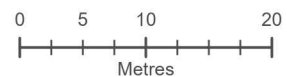


## Bushfire Attack Level (BAL) Certificate - Lot 104 (BAL - LOW)

-  Lot boundary
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

### Bushfire Attack Level (BAL)

-  BAL - FZ
-  BAL - 40
-  BAL - 29
-  BAL - 19
-  BAL - 12.5
-  BAL - LOW



Datum/Projection:  
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Project: 17493-SM Date: 25/08/2021



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# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 105, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	157 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021










Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021

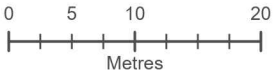




**Bushfire Attack Level (BAL) Certificate - Lot 105 (BAL - LOW)**

-  Lot boundary
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



Datum/Projection:  
GDA 1994 MGA Zone 50  
Project: 17493-SM Date: 25/08/2021





# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 106, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	155 m	BAL - LOW

## Practitioner Details

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.

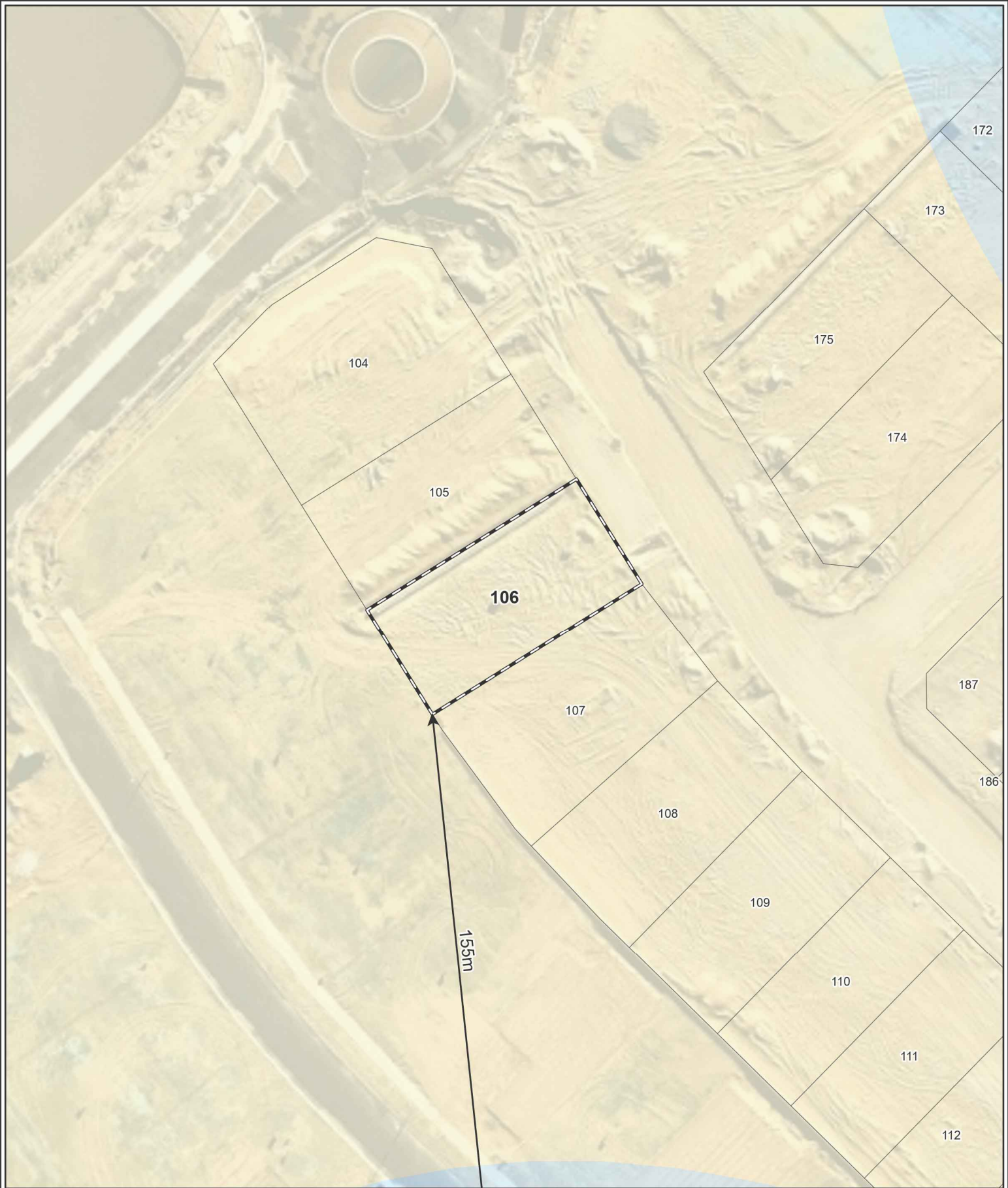
Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021



**Bushfire Attack Level (BAL) Certificate - Lot 106 (BAL - LOW)**

- Lot boundary
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



051020

Metres

Datum/Projection:  
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Project: 17493-SM Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 107, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	138 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021









Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021

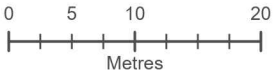




**Bushfire Attack Level (BAL) Certificate - Lot 107 (BAL - LOW)**

-  Lot boundary
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



Datum/Projection:  
GDA 1994 MGA Zone 50  
Project: 17493-SM Date: 25/08/2021





# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 108, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	126 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 


Certificate Date: 25/08/2021









Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021

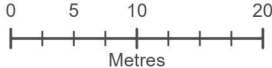


**Bushfire Attack Level (BAL) Certificate - Lot 108 (BAL - LOW)**

-  Lot boundary
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW





Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM    Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 109, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	117 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

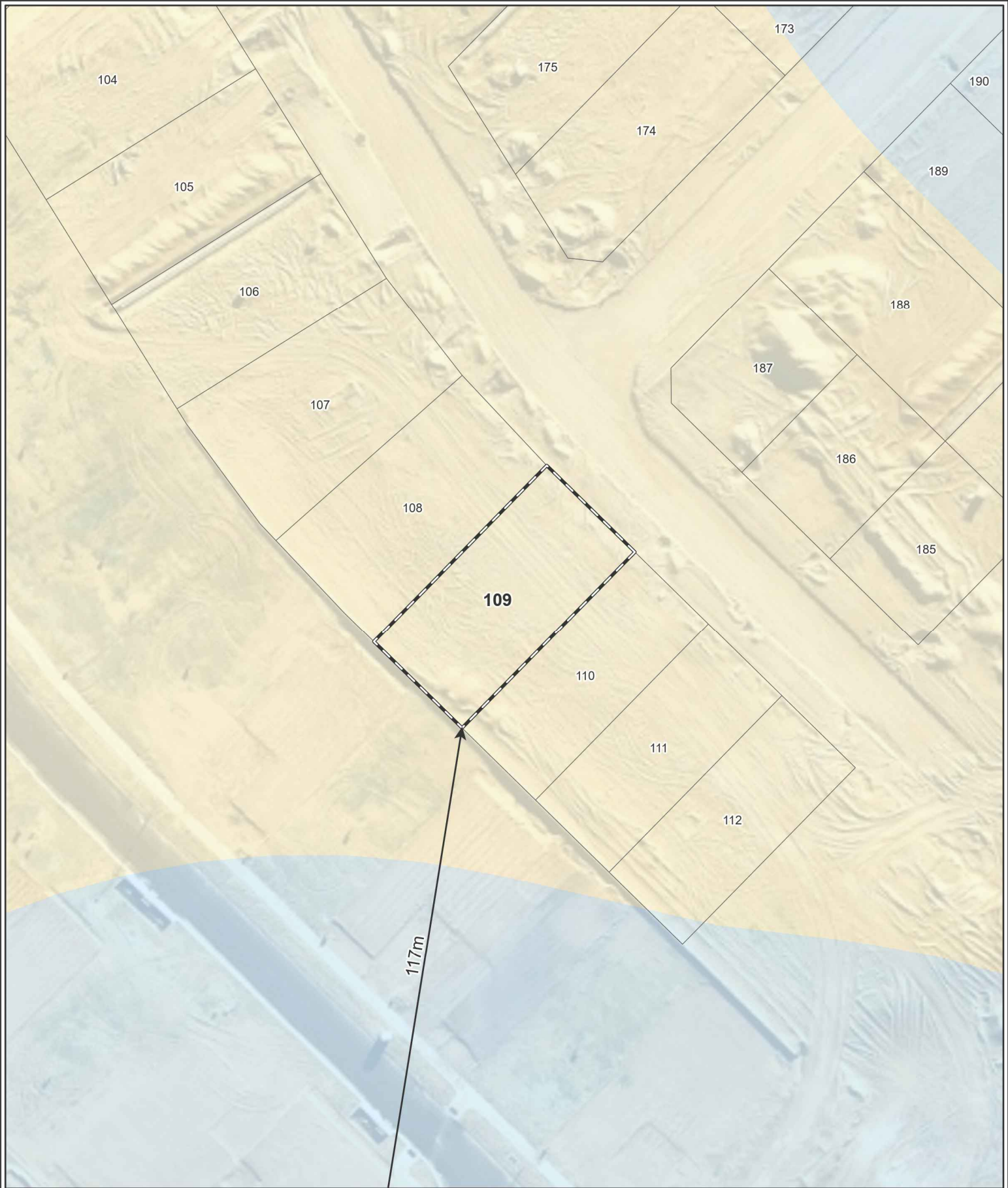
Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021





**Bushfire Attack Level (BAL) Certificate - Lot 109 (BAL - LOW)**

- Lot boundary
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



051020

Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021





# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 110, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	110 m	BAL - LOW

## Practitioner Details

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.

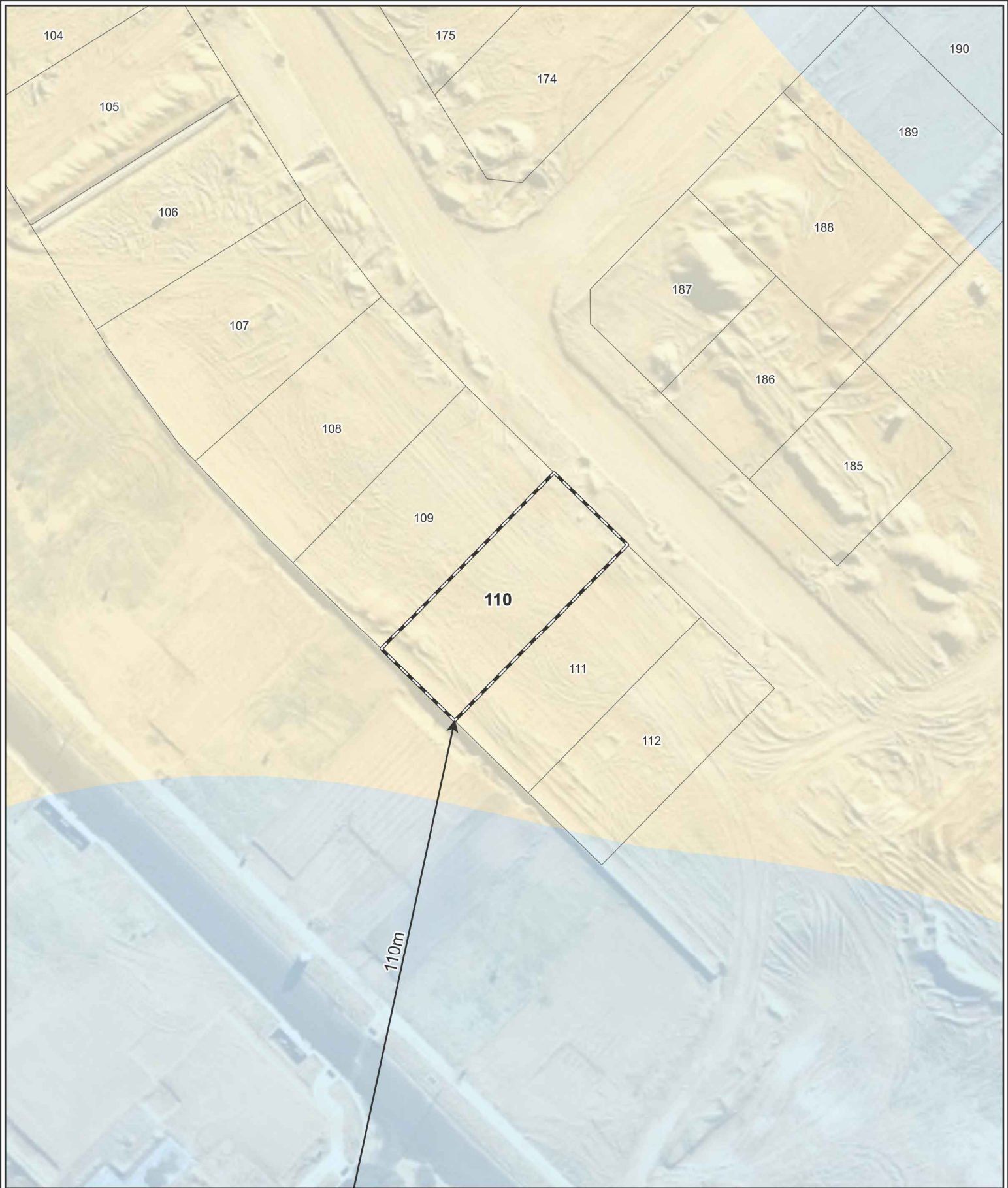
Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021



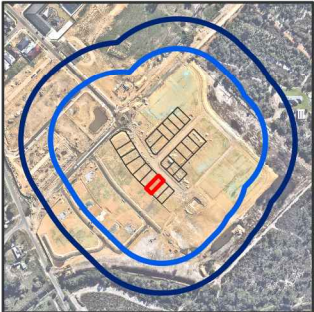
Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021



**Bushfire Attack Level (BAL) Certificate - Lot 110 (BAL - LOW)**

- Lot boundary
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



051020

Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 111, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021


## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	103 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

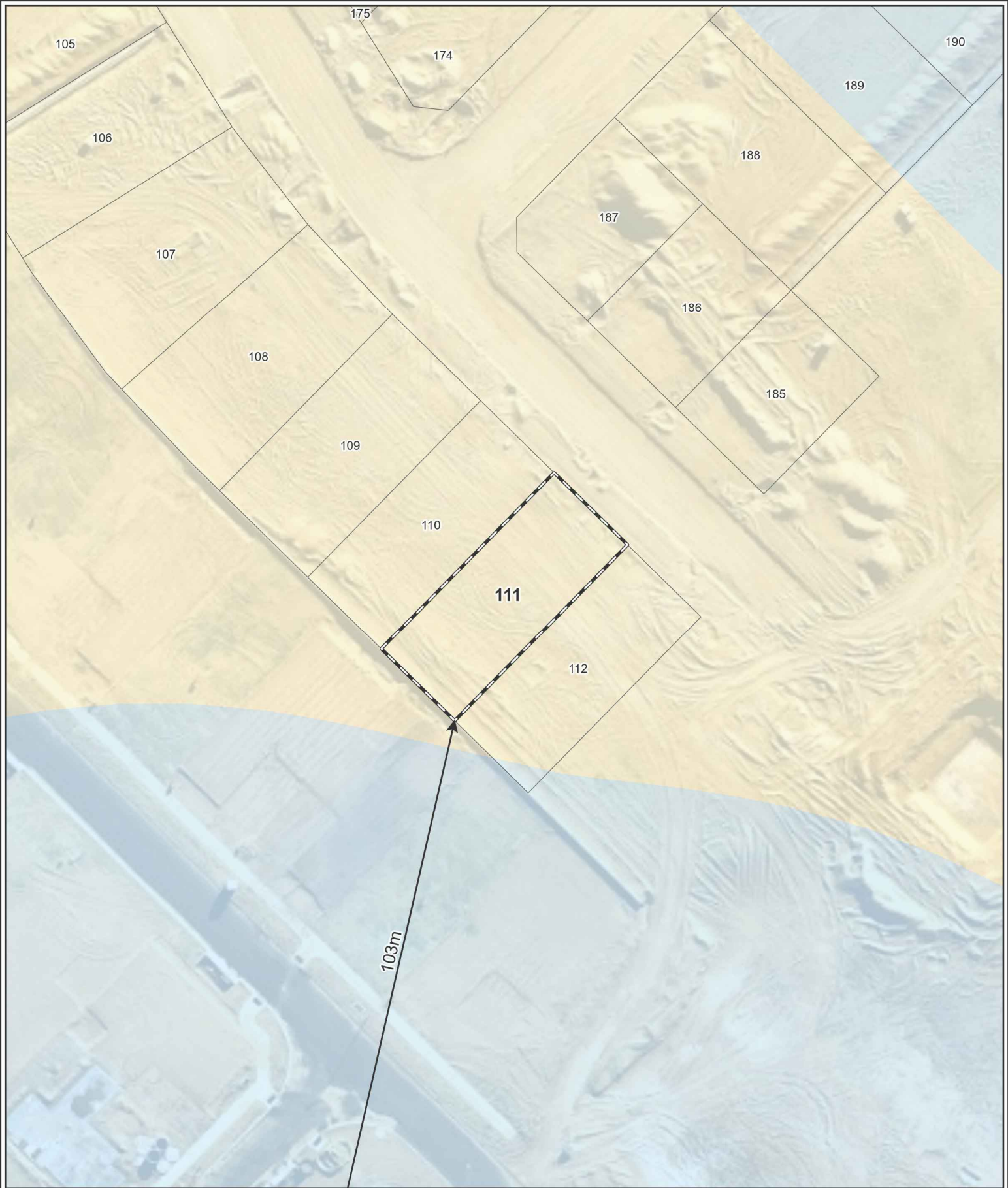
Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021





**Bushfire Attack Level (BAL) Certificate - Lot 111 (BAL - LOW)**

- Lot boundary
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM    Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 112, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	100 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

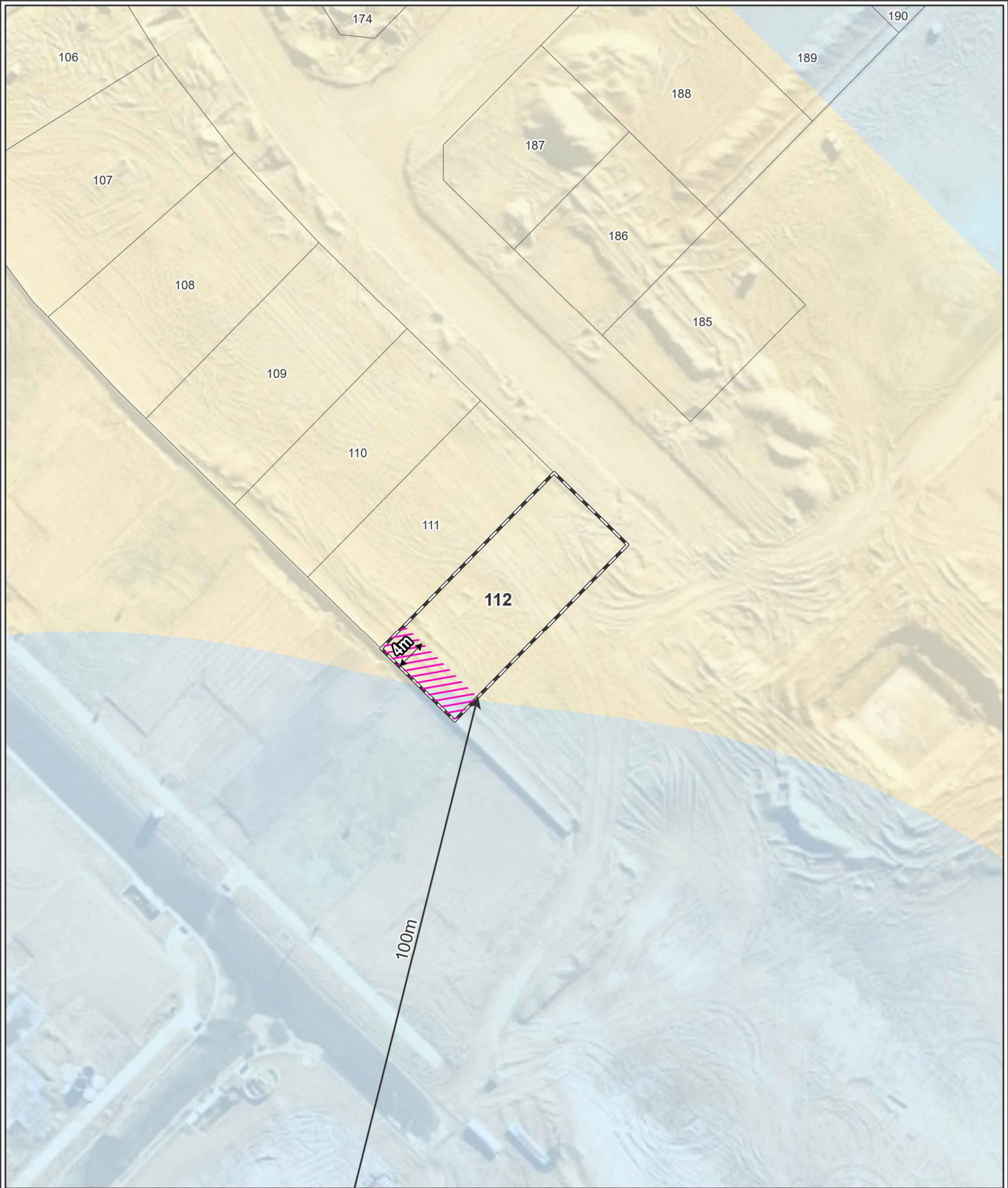
Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021





**Bushfire Attack Level (BAL) Certificate - Lot 112 (BAL - LOW)**

- Lot boundary
- Lot setback
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



051020

Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021





# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 170, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	53 m	BAL - 12.5

## Practitioner Details

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.

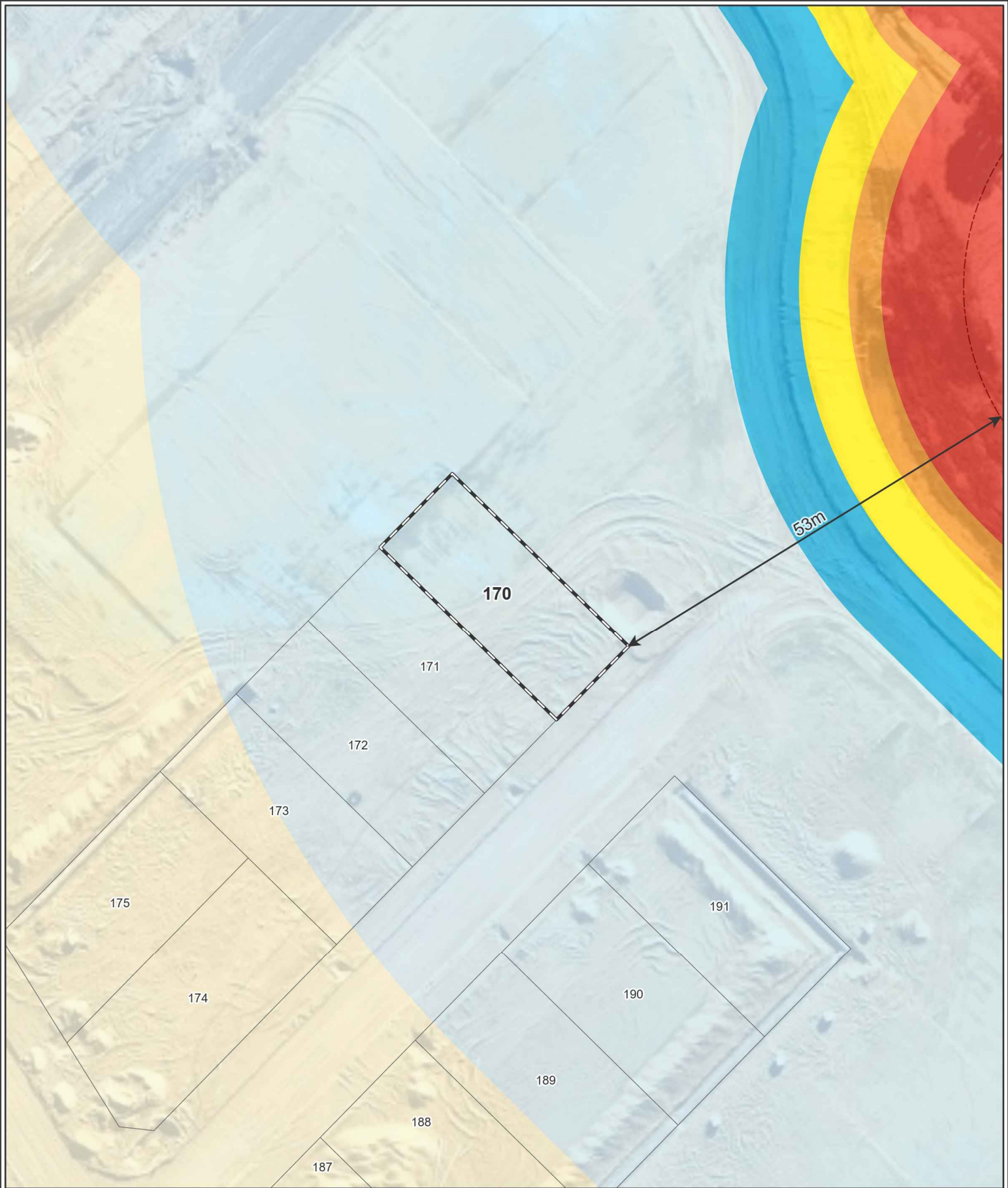
Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021



**Bushfire Attack Level (BAL) Certificate - Lot 170 (BAL - 12.5)**

- Lot boundary
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



051020

Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 171, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	65 m	BAL - 12.5

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

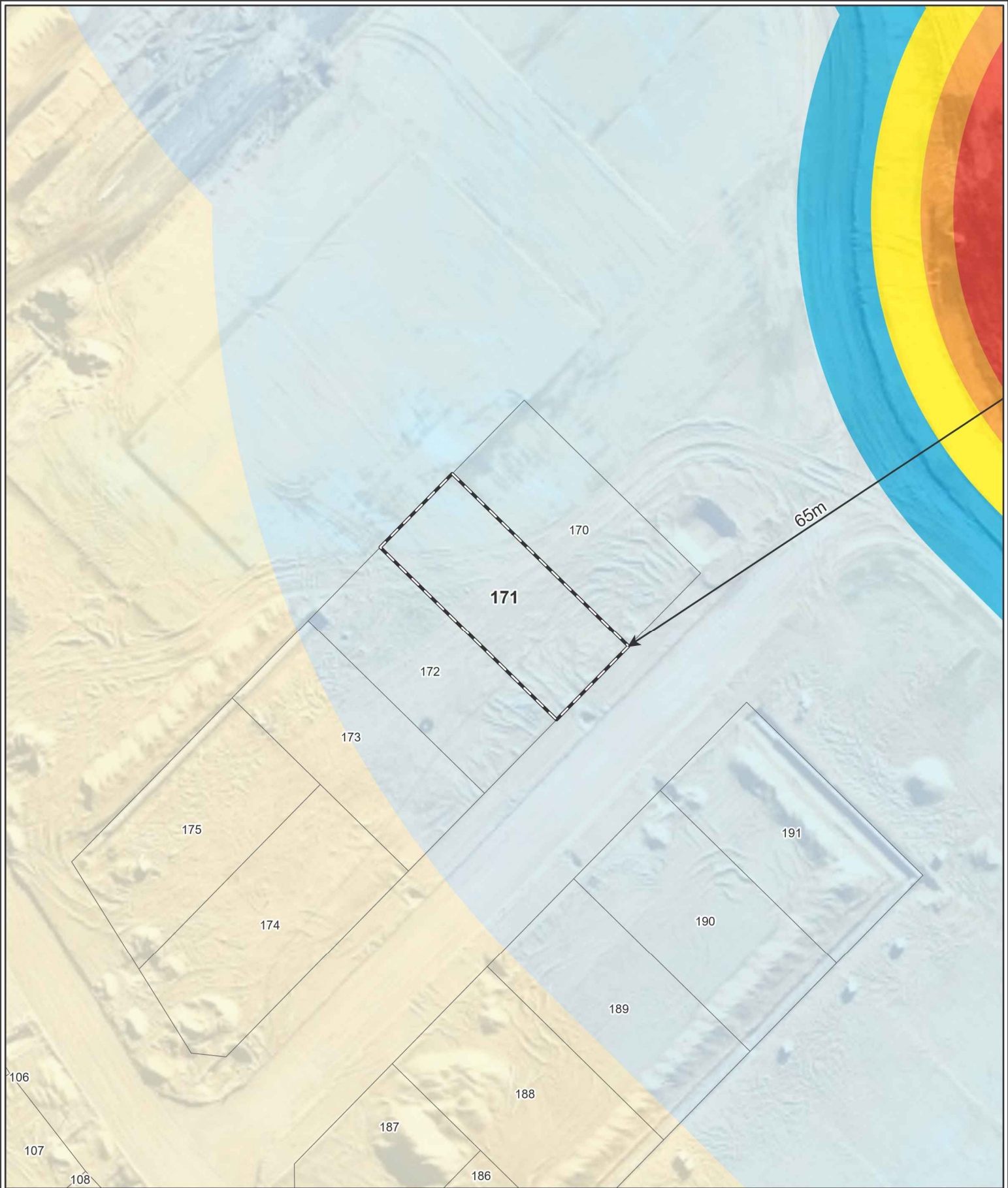
Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021

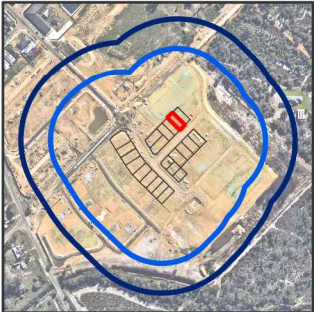




**Bushfire Attack Level (BAL) Certificate - Lot 171 (BAL - 12.5)**

- Lot boundary
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

- Bushfire Attack Level (BAL)**
- BAL - FZ
  - BAL - 40
  - BAL - 29
  - BAL - 19
  - BAL - 12.5
  - BAL - LOW



0 5 10 20  
Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 172, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	78 m	BAL - 12.5

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021









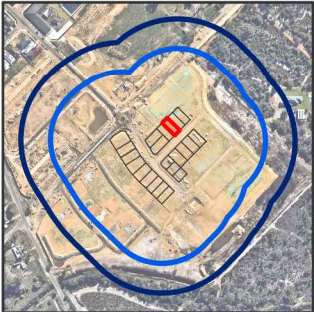
Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021

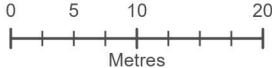


**Bushfire Attack Level (BAL) Certificate - Lot 172 (BAL - 12.5)**

-  Lot boundary
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

- Bushfire Attack Level (BAL)**
-  BAL - FZ
  -  BAL - 40
  -  BAL - 29
  -  BAL - 19
  -  BAL - 12.5
  -  BAL - LOW





Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM    Date: 25/08/2021





# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 173, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	90 m	BAL - 12.5

## Practitioner Details

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.

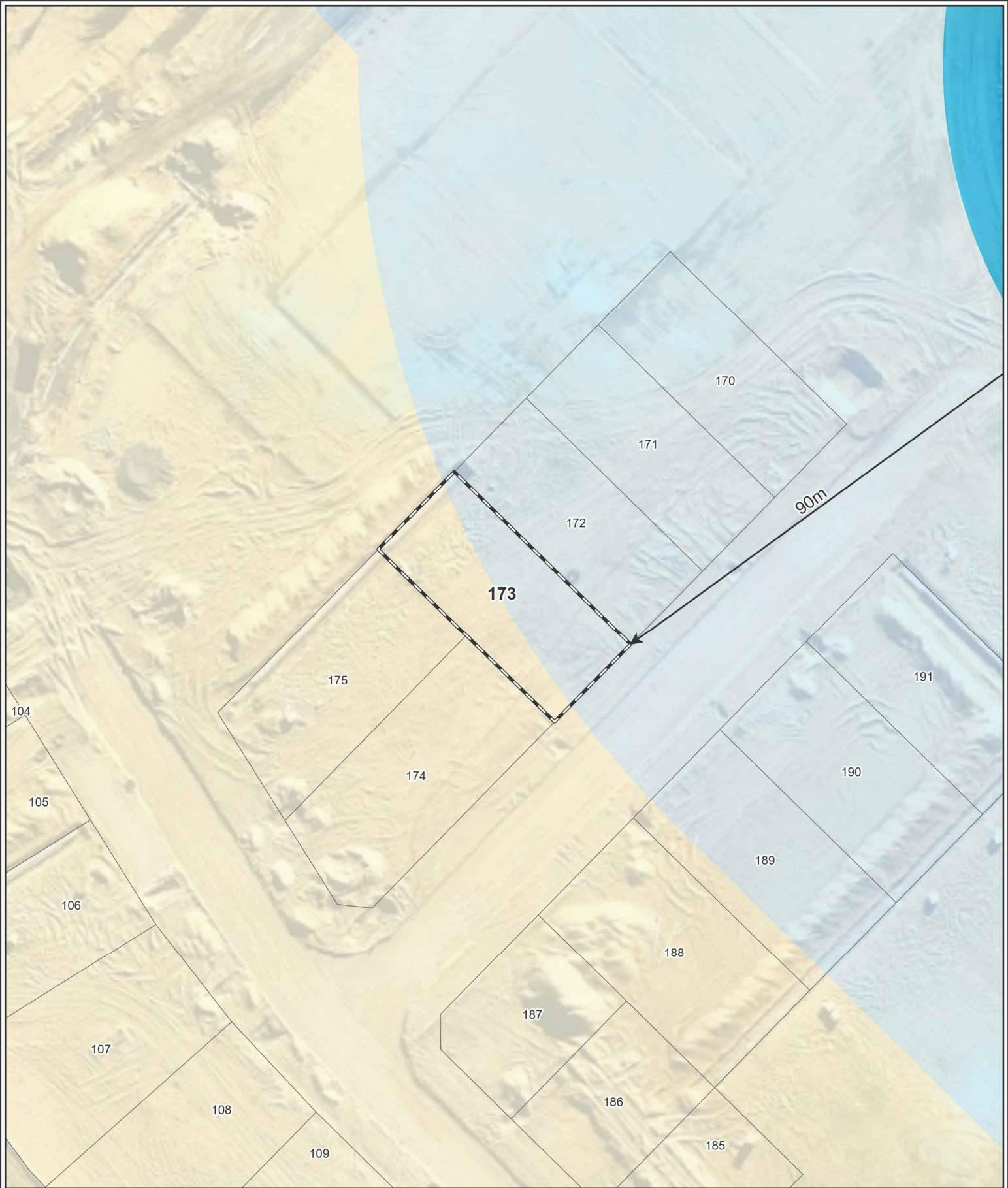
Name Daniel Panickar  
*Eco Logical Australia*

Signature: 



Certificate Date: 25/08/2021









Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021



**Bushfire Attack Level (BAL) Certificate - Lot 173 (\*BAL - 12.5)**

-  Lot boundary \*Intersects multiple BAL contours
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

**Bushfire Attack Level (BAL)**

	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



0 5 10 20  
Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 174, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021


## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	103 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021





**Bushfire Attack Level (BAL) Certificate - Lot 174 (BAL - LOW)**

- Lot boundary
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



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Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 175, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	106 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021





**Bushfire Attack Level (BAL) Certificate - Lot 175 (BAL - LOW)**

- Lot boundary
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



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Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM
Date: 25/08/2021





# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 185, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	119 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 


Certificate Date: 25/08/2021









Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021



**Bushfire Attack Level (BAL) Certificate - Lot 185 (BAL - LOW)**

-  Lot boundary
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW



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Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM
Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 186, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	119 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021





**Bushfire Attack Level (BAL) Certificate - Lot 186 (BAL - LOW)**

- Lot boundary
 100m site assessment
 150m site assessment
 Bushfire hazard interface
 Distance to bushfire hazard interface

**Bushfire Attack Level (BAL)**
 BAL - FZ
 BAL - 40
 BAL - 29
 BAL - 19
 BAL - 12.5
 BAL - LOW



0 5 10 20  
Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM Date: 25/08/2021

A TETRA TECH COMPANY

# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 187, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	119 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021





Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021








**Bushfire Attack Level (BAL) Certificate - Lot 187 (BAL - LOW)**


-  Lot boundary


 100m site assessment


 150m site assessment


 Bushfire hazard interface


 Distance to bushfire hazard interface
- Bushfire Attack Level (BAL)**


 BAL - FZ

 BAL - 40

 BAL - 29

 BAL - 19

 BAL - 12.5

 BAL - LOW



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Metres


Datum/Projection:

GDA 1994 MGA Zone 50

Project: 17493-SM

Date: 25/08/2021

N

A TETRA TECH COMPANY



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 188, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	103 m	BAL - LOW

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021



Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021



**Bushfire Attack Level (BAL) Certificate - Lot 188 (BAL - LOW)**

- Lot boundary
- 100m site assessment
- 150m site assessment
- Bushfire hazard interface
- Distance to bushfire hazard interface

- Bushfire Attack Level (BAL)**
- BAL - FZ
  - BAL - 40
  - BAL - 29
  - BAL - 19
  - BAL - 12.5
  - BAL - LOW



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Metres

Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM
Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 189, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021


## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	88 m	BAL - 12.5

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021








Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021









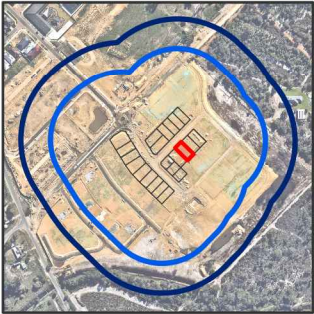


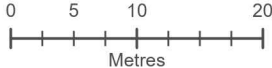
**Bushfire Attack Level (BAL) Certificate - Lot 189 (\*BAL - 12.5)**

-  Lot boundary \*Intersects multiple BAL contours
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

**Bushfire Attack Level (BAL)**

	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW





Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM    Date: 25/08/2021



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 190, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	73 m	BAL - 12.5

## Practitioner Details

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.

Name Daniel Panickar  
*Eco Logical Australia*

Signature: 

Certificate Date: 25/08/2021










Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021



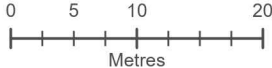


**Bushfire Attack Level (BAL) Certificate - Lot 190 (BAL - 12.5)**

-  Lot boundary
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

Bushfire Attack Level (BAL)	
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5
	BAL - LOW





Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM    Date: 25/08/2021





# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959: 2018

## Site Details

Address:	Lot 191, Natures Edge Estate, Stage 2		
Suburb:	Southern River, 6110	State:	WA
Local Government Area:	City of Gosnells		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17493	Report Date:	25/08/2021

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B woodland	Upslope / Flat Land	58 m	BAL - 12.5

## Practitioner Details

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.

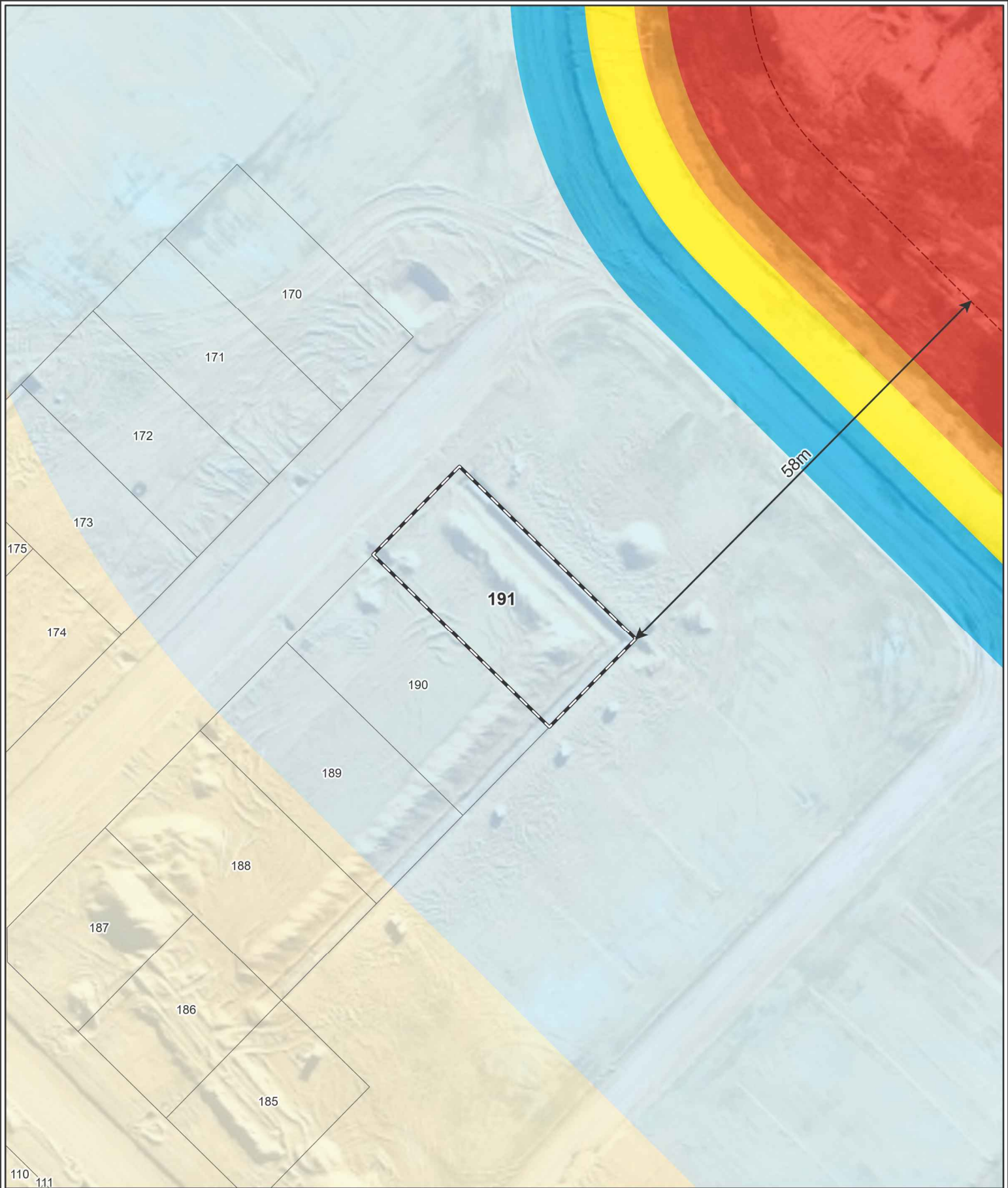
Name Daniel Panickar  
*Eco Logical Australia*

Signature: 


Certificate Date: 25/08/2021









Accreditation No: BPAD 37802  
Accreditation Expiry: December 2021

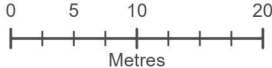


**Bushfire Attack Level (BAL) Certificate - Lot 191 (BAL - 12.5)**

-  Lot boundary
-  100m site assessment
-  150m site assessment
-  Bushfire hazard interface
-  Distance to bushfire hazard interface

- Bushfire Attack Level (BAL)**
-  BAL - FZ
  -  BAL - 40
  -  BAL - 29
  -  BAL - 19
  -  BAL - 12.5
  -  BAL - LOW





Datum/Projection:  
GDA 1994 MGA Zone 50

Project: 17493-SM    Date: 25/08/2021

