

AS 3959-2009 Bushfire Attack Level (BAL) Assessment Report for Stage 6 Beenyup Grove Estate, Byford

Site Details					
Address: Beenyup Grove Estate (Lots 317,318, 341-348, 372-381, 386-399, 471, 656, 657 and 699					
Suburb:	Byford, 6122	State	Western Australia		
Local Government Area:	Shire of Serpentine Jarrahdale				
Description of building works:	Residential development, future buildings				

Report details			
Report/Job number:	21PER-18603	Report version:	v1
Assessment date:	19/03/2021	Report date:	30/03/2021
Author:	Maitland Ely	Review:	Daniel Panickar (BPAD Level 3- 37802)
			BPAD Bushfire Planning & Design Accredited Practitioner Level 3

SITE ASSESSMENT AND SITE PLAN

The assessment of the subject lots was undertaken on 19 March 2021 for the purpose of determining the Bushfire Attack Level (BAL) in accordance with *Australian Standard AS 3959-2009 Construction of Buildings in Bushfire Prone Areas* (SA 2009) Simplified Procedure (Method 1). An overview of the site is presented in **Figure 1**.

VEGETATION CLASSIFICATION AND EFFECTIVE SLOPE

All vegetation and effective slope within 100 m of the 38 subject lots was classified in accordance with Clause 2.2.3 of AS 3959-2009. 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 Shire of Serpentine-Jarrahdale in the future.



Plot 1 Classification or Exclusion Clause

Photo Point 4

This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959-2009. This is an area that has been cleared for construction and will contain residential lots, roads, and low threat, maintained vegetation.

Excluded – clause 2.2.3.2 (e) & (f)

Excluded - clause 2.2.3.2 (e) & (f)-



Plot 1 Classification or Exclusion Clause

Photo Point 5

This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959-2009. This is an area of low threat, maintained vegetation and footpaths.



Plot 1 Classification or Exclusion Clause

Photo Point 6

This plot has been excluded under Clause 2.2.3.2 (f) of AS 3959-2009. This is an area of low threat, managed vegetation as windbreaks.



Plot 1 Classification or Exclusion Clause

Photo Point 7

This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959-2009. This is an area of low threat, maintained grass, managed vegetation and non-vegetated areas (i.e. firebreaks and roads).

Excluded – clause 2.2.3.2 (e) & (f)



Plot 1 Classification or Exclusion Clause

Excluded – clause 2.2.3.2 (e) & (f)

Photo Point 8

This plot has been excluded under Clause 2.2.3.2 (e) and (f) of AS 3959-2009. This is an area of low threat, maintained vegetation and buildings.



RELEVANT FIRE DANGER INDEX

The fire danger index (FDI) for this site has been determined in accordance with Table 2.1 of AS 3959-2009. The FDI for WA is FDI 80.

Relevant Fire Danger Index			
FDI 40 🛛	FDI 50 🛛	FDI 80 🗹	FDI 100
Table 2.4.5	Table 2.4.4	Table 2.4.3	Table 2.4.2

POTENTIAL BUSHFIRE IMPACTS

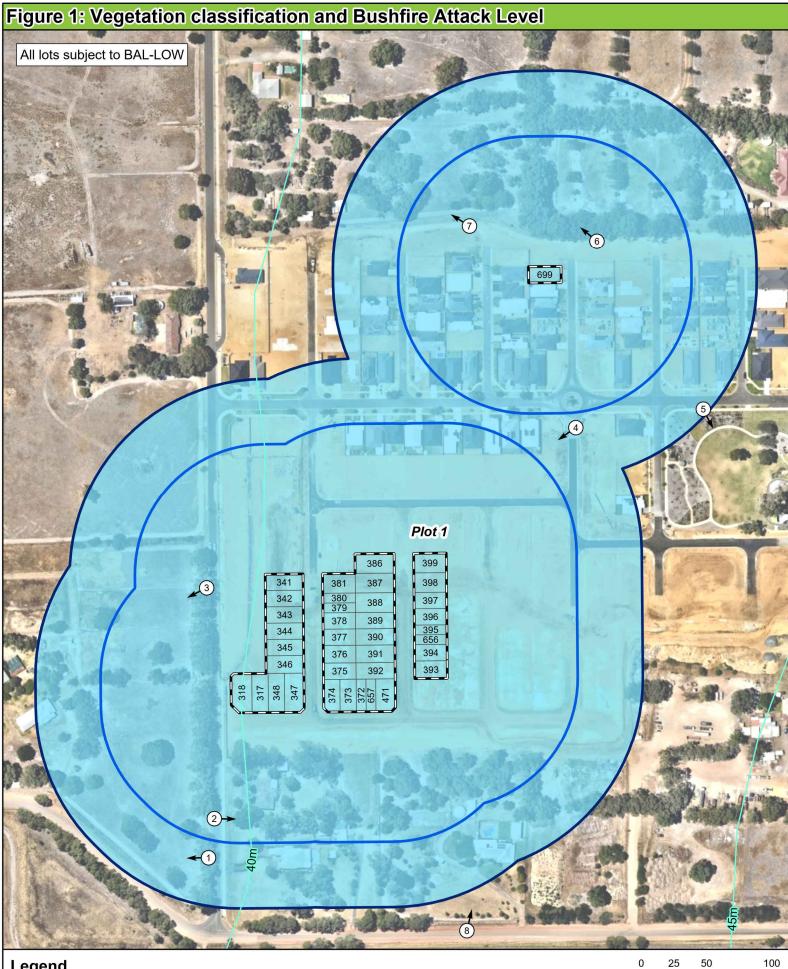
The potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below, **Table 1** and Figure 1.

Table 1:	BAL	Analys	sis AS	3959-	2009
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Plot Vegetation Classification		Effective	Separation distances required				
Plot Vegetation Classification	vegetation classification	Slope	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Excluded under Clause 2.2.3.2 (e) & (f)	N/A	No separa	tion distances	required –	BAL-LOW	

DETERMINED BUSHFIRE ATTACK LEVEL (BAL)

The determined Bushfire Attack Level (highest BAL) for the 38 subject lots has been determined in accordance with Clause 2.2.6 of AS 3959-2009 relevant data from the site assessment shown in Figure 1 and Table 1. All lots within the site are subject to BAL ratings of **BAL -LOW**.



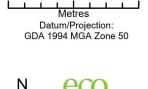
Legend

Subject site Lot boundary 100m site assessment 150m site assessment

Contour (5m)



Vegetation classification Excluded as per clause 2.2.3.2 (e) and (f)



1



Appendix A – Additional Information / Advisory Notes

This assessment was undertaken as per AS 3959-2009. 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/m²	Ember attack	3 and 5
BAL-19	>12.5 kW/m2 ≤19 kW/m²	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/m2≤29 kW/m²	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/m2≤40 kW/m²	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/m²	Direct exposure to flames from fire front in addition to radiant heat flux and ember attack	3 and 9

Source: "AS 3959-2009 Construction of buildings in bushfire-prone areas" published by Standards Australia, Sydney

Determined in accordance with AS 3959-2009

Site Details					
Address:	Address: Lot 317, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021





100m site assessment
 150m site assessment
 Lot boundary
 Bushfire Hazard Interface

 Bushfire Attack Level (BAL)

 BAL - FZ

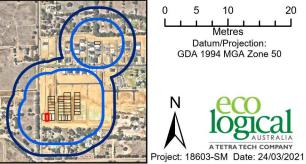
 BAL - 40

 BAL - 29

 BAL - 19

 BAL - 12.5

 BAL - LOW



Determined in accordance with AS 3959-2009

Site Details					
Address: Lot 318, Beenyup Grove Estate					
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarra	hdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	BAL - LOW	

Practitioner Details

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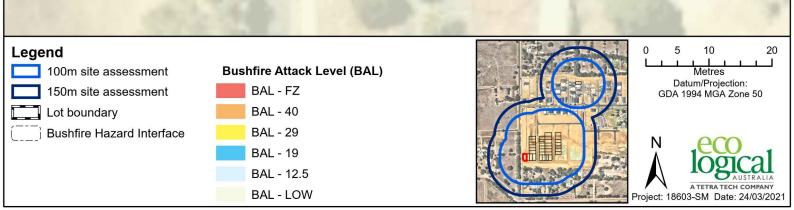
Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 318 (BAL - LOW)





Determined in accordance with AS 3959-2009

Site Details					
Address: Lot 341, Beenyup Grove Estate					
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	BAL - LOW	

Practitioner Details

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Name

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Signature:

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Certificate Date:

30/03/2021







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100m site assessment	Bushfire Attack	Level (BAL)				
150m site assessment	BAL - FZ		3.		Datum/Projection GDA 1994 MGA Zor	n: ne 50
Lot boundary	BAL - 40			C min		
[] Bushfire Hazard Interface	BAL - 29		1		N .eco	
	BAL - 19					cal
	BAL - 12.5			The second second		ISTRALIA
	BAL - LOW				Project: 18603-SM Date: 2	24/03/2021

Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 342, Beenyup Grove I	Lot 342, Beenyup Grove Estate			
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highe	st Bushfire Attack Level			
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	N/A	N/A	N/A	BAL - LOW

Practitioner Details

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Signature:

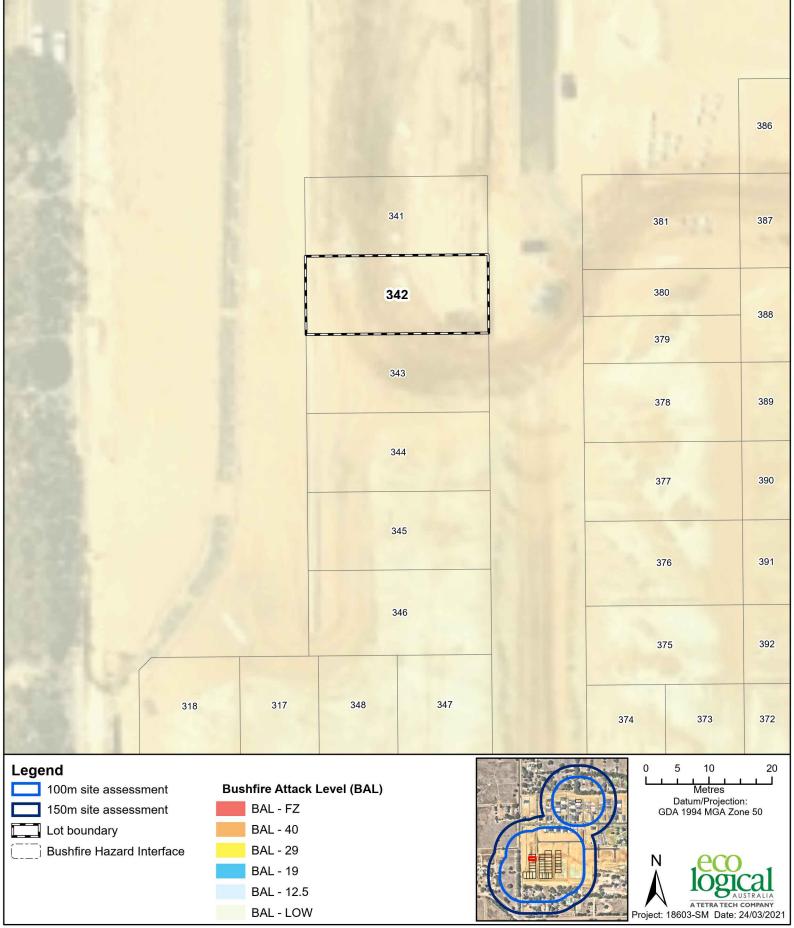
TR

Certificate Date:

30/03/2021







Determined in accordance with AS 3959-2009

Site Details				
Address:	Lot 343, Beenyup Grove Estate			
Suburb:	Byford, 6122 State: WA			
Local Government Area:	Shire of Serpentine-Jarrahdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a	
Report / Job Number:	21PER-18603	Report Date:	30/03/2021	

Determination of Highe	st Bushfire Attack Level			
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	N/A	N/A	N/A	BAL - LOW

Practitioner Details

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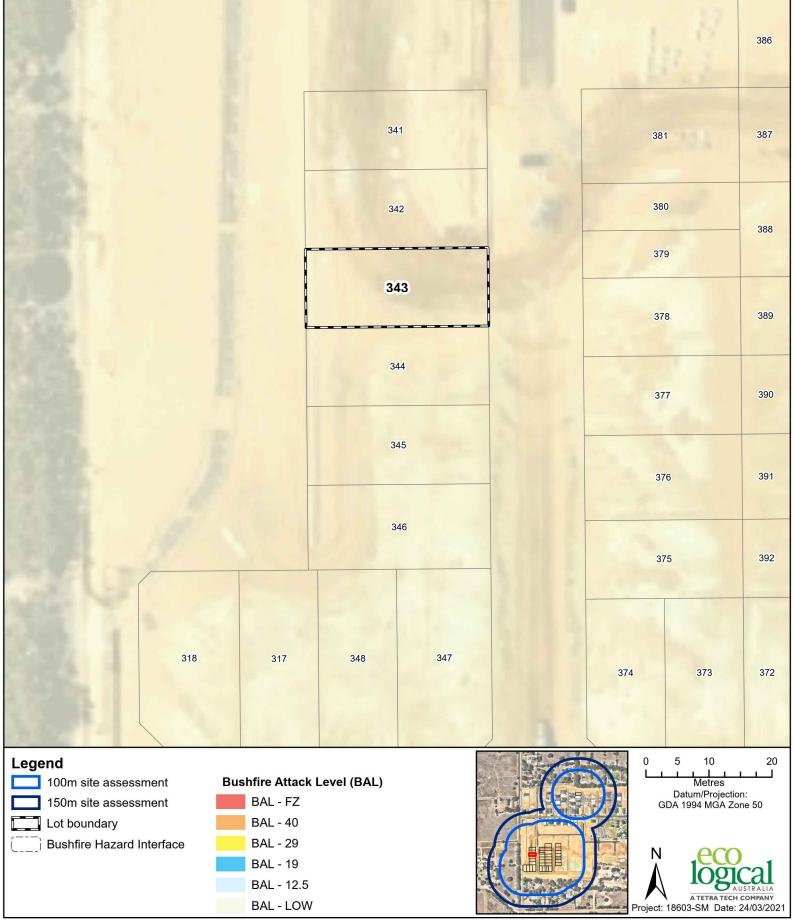
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Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 343 (BAL - LOW)



Determined in accordance with AS 3959-2009

Site Details				
Address:	Lot 344, Beenyup Grove Estate			
Suburb:	Byford, 6122 State: WA			
Local Government Area:	Shire of Serpentine-Jarrahdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a	
Report / Job Number:	21PER-18603	Report Date:	30/03/2021	

Determination of Highe	st Bushfire Attack Level			
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	N/A	N/A	N/A	BAL - LOW

Practitioner Details

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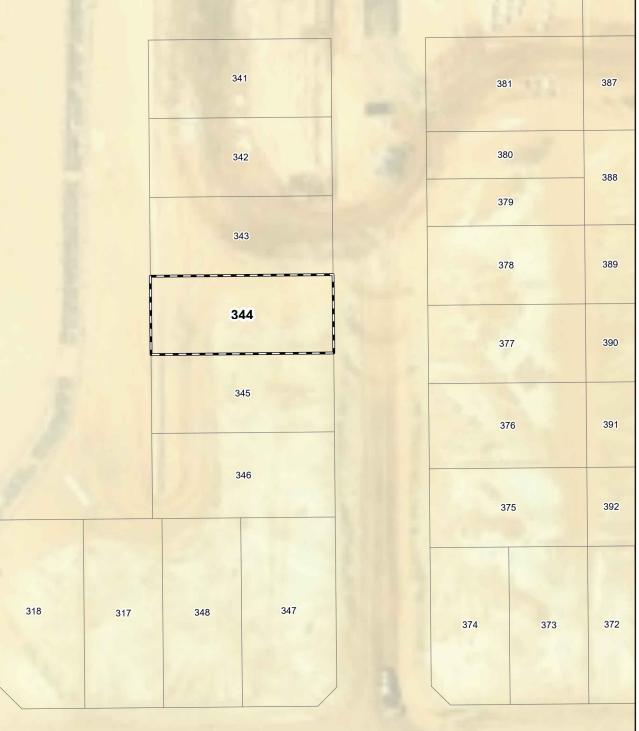
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Certificate Date:

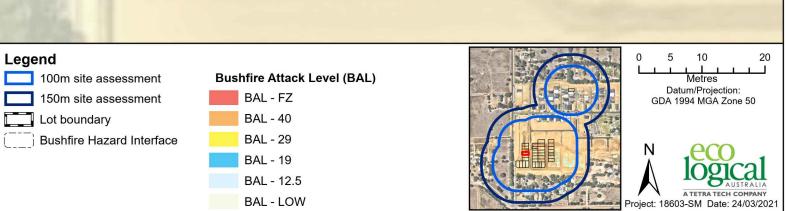
30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 344 (BAL - LOW)



386



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 345, Beenyup Grove I	Lot 345, Beenyup Grove Estate			
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highe	st Bushfire Attack Level			
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	N/A	N/A	N/A	BAL - LOW

Practitioner Details

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Signature:

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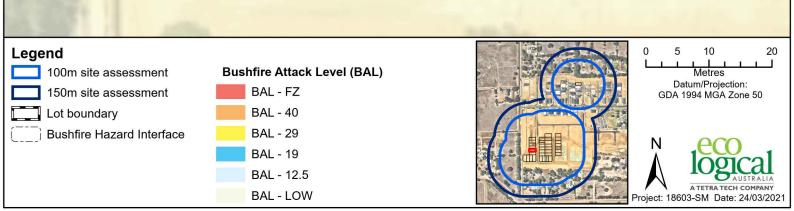
Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 345 (BAL - LOW)





Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 346, Beenyup Grove I	Lot 346, Beenyup Grove Estate			
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highe	st Bushfire Attack Level			
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	N/A	N/A	N/A	BAL - LOW

Practitioner Details

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Signature:

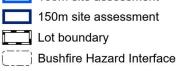
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Certificate Date:

30/03/2021

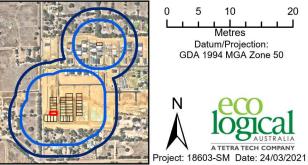






Bus	hfire Attack Level (BAL)
	BAL - FZ
	BAL - 40
	BAL - 29
	BAL - 19
	BAL - 12.5

BAL - LOW



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 347, Beenyup Grove Estate					
Suburb:	Byford, 6122 State: WA					
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	BAL - LOW	

Practitioner Details

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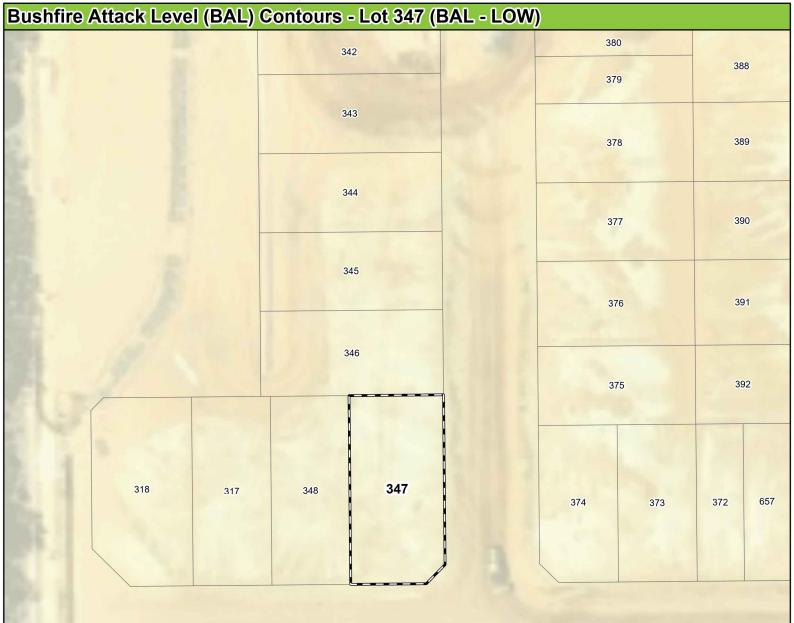
Signature:

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Certificate Date:

30/03/2021





Legend

100m site assessment
 150m site assessment
 Lot boundary
 Bushfire Hazard Interface

 Bushfire Attack Level (BAL)

 BAL - FZ

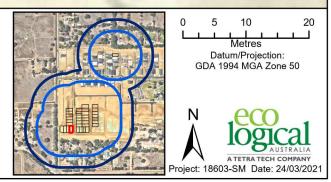
 BAL - 40

 BAL - 29

 BAL - 19

 BAL - 12.5

 BAL - LOW



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 348, Beenyup Grove Estate					
Suburb:	Byford, 6122 State: WA					
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	BAL - LOW	

Practitioner Details

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Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021





Legend

100m site assessment
 150m site assessment
 Lot boundary
 Bushfire Hazard Interface

 Bushfire Attack Level (BAL)

 BAL - FZ

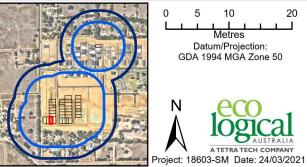
 BAL - 40

 BAL - 29

 BAL - 19

 BAL - 12.5

 BAL - LOW



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 372, Beenyup Grove Estate					
Suburb:	Byford, 6122 State: WA					
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	BAL - LOW	

Practitioner Details

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Name

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Signature:

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Certificate Date:

30/03/2021

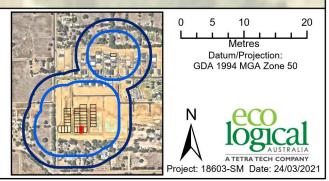


Bushfire Attack Level (BAL) Contours - L	ot 372 (BAL - LOW)	
342	380 379	388	397
343	378	389	396
344		12227 6 3111	395
	377	390	656
345	376	391	394
346	375	392	393
348 347	374 373	372 657 471	

Legend

100m site assessment
 150m site assessment
 Lot boundary
 Bushfire Hazard Interface

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



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 373, Beenyup Grove Estate					
Suburb:	Byford, 6122 State: WA					
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021







100m site assessment
 150m site assessment
 Lot boundary
 Bushfire Hazard Interface

 Bushfire Attack Level (BAL)

 BAL - FZ

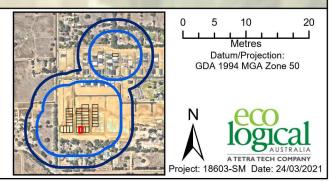
 BAL - 40

 BAL - 29

 BAL - 19

 BAL - 12.5

 BAL - LOW



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 374, Beenyup Grove Estate					
Suburb:	Byford, 6122 State: WA					
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	BAL - LOW	

Practitioner Details

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Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021



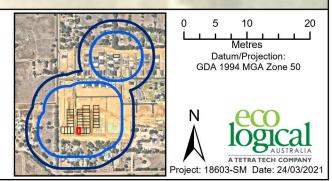
Bushfire Attack Level (BAL) Contours - Lot 374 (BAL - LOW) 380



Legend

100m site assessment
 150m site assessment
 Lot boundary
 Bushfire Hazard Interface

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



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 375, Beenyup Grove Estate					
Suburb:	Byford, 6122 State: WA					
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level						
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL		
Method 1	N/A	N/A	N/A	BAL - LOW		

Practitioner Details

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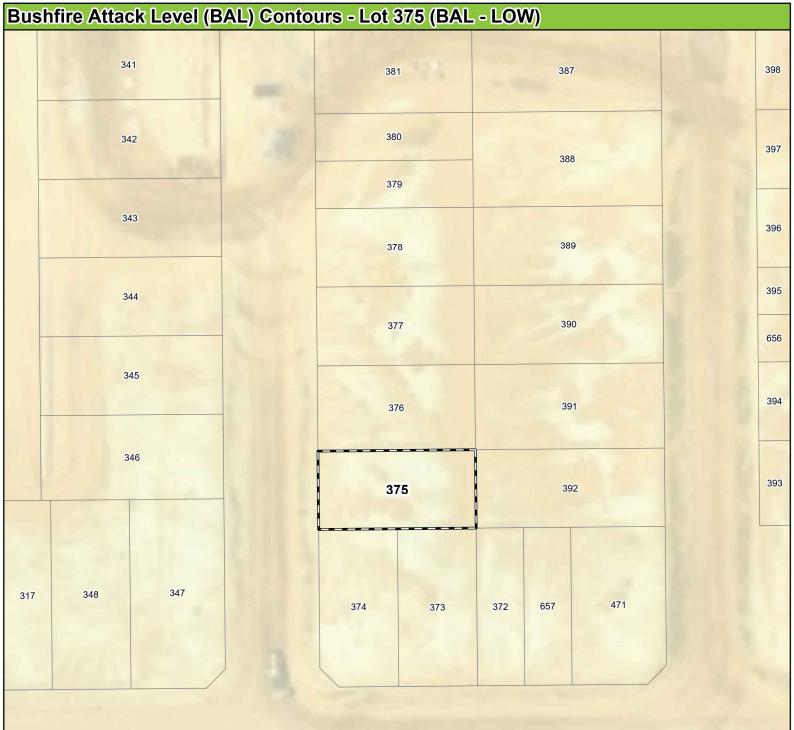
Signature:

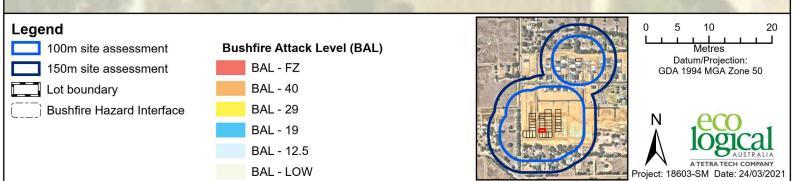
TR

Certificate Date:

30/03/2021







Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 376, Beenyup Grove Estate					
Suburb:	Byford, 6122	State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level						
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL		
Method 1	N/A	N/A	N/A	BAL - LOW		

Practitioner Details

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Signature:

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Certificate Date:

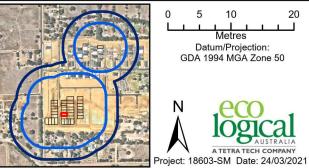
30/03/2021







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



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 377, Beenyup Grove Estate					
Suburb:	Byford, 6122	State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	BAL - LOW	

Practitioner Details

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Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 377 (BAL - LOW)





- 100m site assessment
 150m site assessment
 Lot boundary
 Bushfire Hazard Interface
- Bushfire Attack Level (BAL)

 BAL FZ

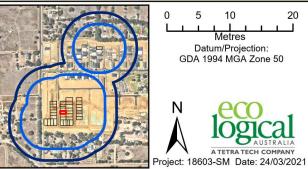
 BAL 40

 BAL 29

 BAL 19

 BAL 12.5

 BAL LOW



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 378, Beenyup Grove Estate					
Suburb:	Byford, 6122	State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

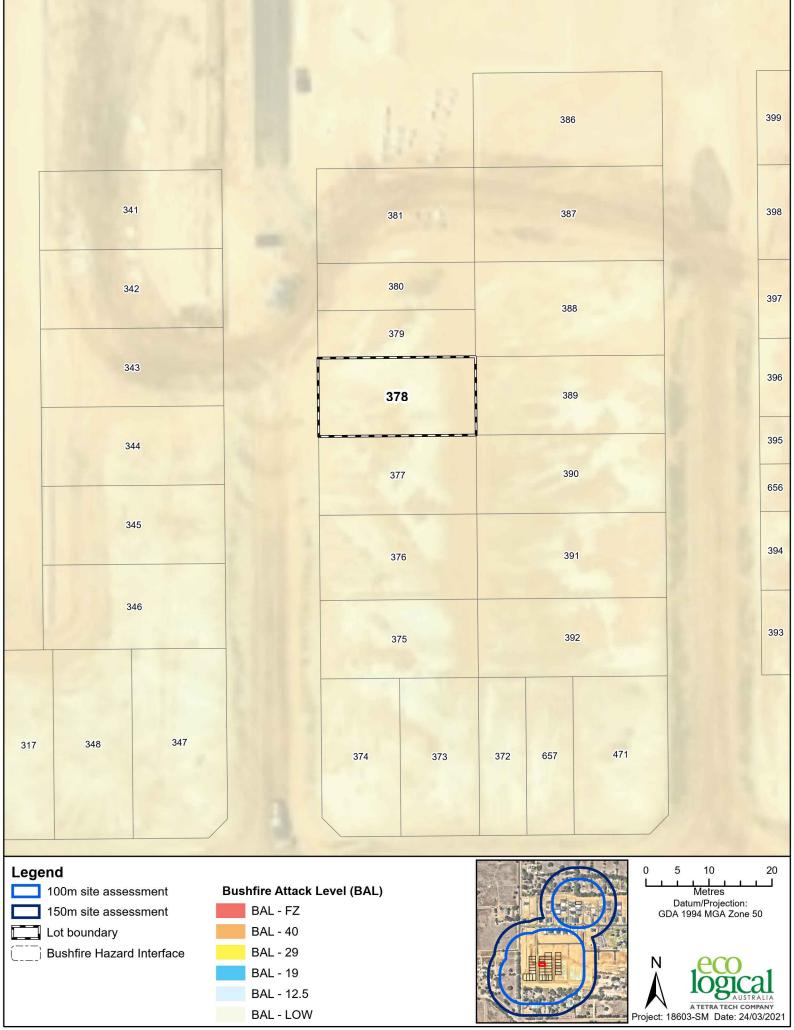
TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 378 (BAL - LOW)



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 379, Beenyup Grove Estate					
Suburb:	Byford, 6122	State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

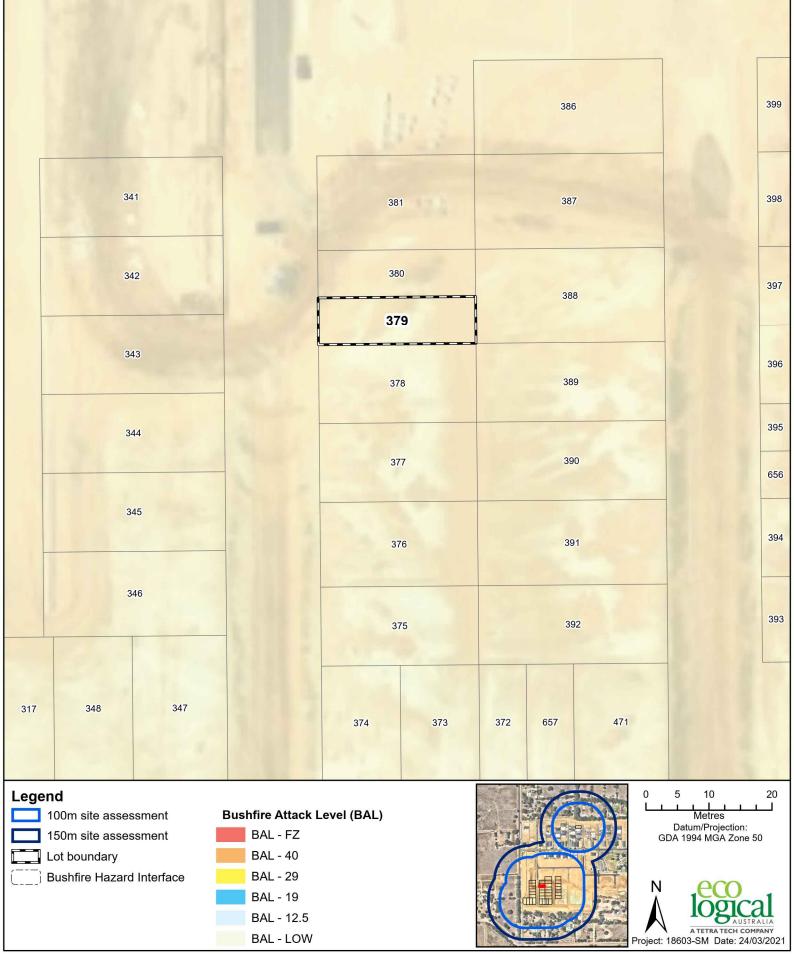
TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 379 (BAL - LOW)



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 380, Beenyup Grove Estate					
Suburb:	Byford, 6122	State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

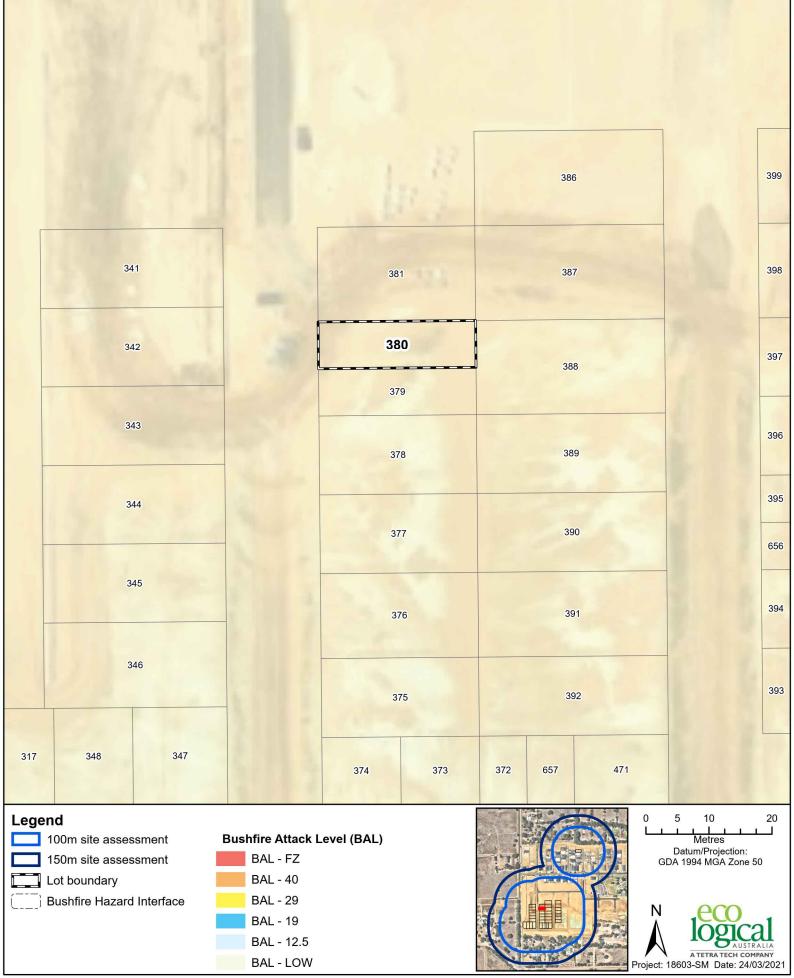
TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 380 (BAL - LOW)



Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 381, Beenyup Grove Estate					
Suburb:	Byford, 6122	State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Class 1a				
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021





Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 386, Beenyup Grove Estate					
Suburb:	Byford, 6122	State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling	Main BCA class:	Class 1a			
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021







Project: 18603-SM Date: 24/03/2021

BAL - 12.5

BAL - LOW

Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 387, Beenyup Grove Estate				
Suburb:	Byford, 6122	State: WA			
Local Government Area:	Shire of Serpentine-Jarra	hdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

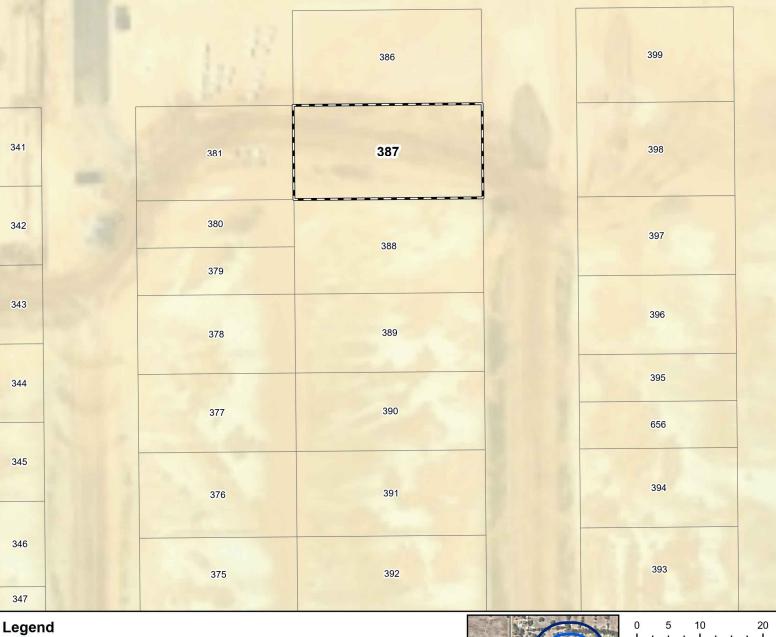
TR

Certificate Date:

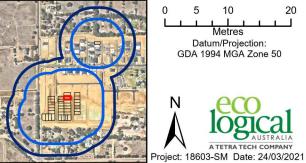
30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 387 (BAL - LOW)



- 100m site assessment
 150m site assessment
 Lot boundary
 Bushfire Hazard Interface
- Bushfire Attack Level (BAL) BAL - FZ BAL - 40 BAL - 29 BAL - 19 BAL - 12.5 BAL - LOW



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 388, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarra	hdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TA

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 388 (BAL - LOW)



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 389, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarra	hdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021

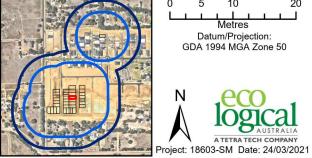


Bushfire Attack Level (BAL) Contours - Lot 389 (BAL - LOW)

										_
			18		386				399	
341		381	193		387			13	398	
342		380	2		388	3	7	-	397	
		379					1.6 1 6			
343		378	3		38	9			396	
	1000								395	
344		377	7		390	0	1		656	
	N		(and a			Tel Car	_		-	-
345	S 1 1 1									
		376	6		39	1			394	
	2.118.4						10.1-3			
346						1				
		375	5		39	2			393	
	1111 -									
	FILLS					100				
							2.1			
347		374	373	372	657	471	1.65112			
			0,0							
/			1.14							
		-								
Leger			undefine Att	المتحد الم			C C		0 5 10	20
	100m site assess 150m site assess		BAL - FZ		BAL)				Metres Datum/Projec GDA 1994 MGA	tion:
	_ot boundary		BAL - 12						GDA 1994 MGA .	Lone 50

Lot boundary (____) Bushfire Hazard Interface BAL - 40 BAL - 29 BAL - 19 BAL - 12.5

BAL - LOW



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 390, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarra	hdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 390 (BAL - LOW)





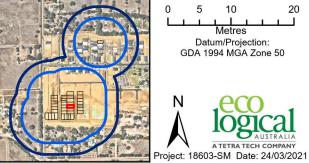
Lot boundary

Estimate (End of the second se

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

BAL - LOW

Bushfire Attack Level (BAL)



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 391, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarra	hdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

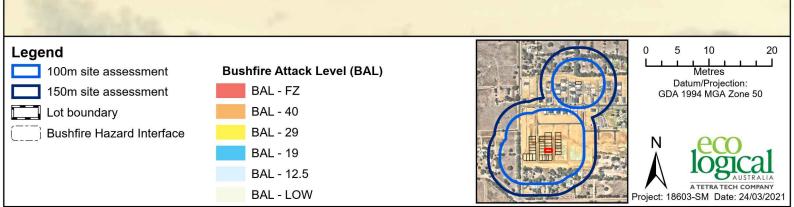
Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 391 (BAL - LOW)





Determined in accordance with AS 3959-2009

Site Details						
Address:	Lot 392, Beenyup Grove Estate					
Suburb:	Byford, 6122 State: WA					
Local Government Area:	Shire of Serpentine-Jarrahdale					
Use of building	Residential Dwelling Main BCA class: Class 1a					
Report / Job Number:	21PER-18603	Report Date:	30/03/2021			

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 392 (BAL - LOW)

				and the second					
341	-	38	1		387			398	
342	3	380	0		388		7	397	
		37	9				5 6		
343		37	8		389	1		396	
344			-		-			395	
	2	37	7		390	8		656	
345		37	6		391			394	
346							1		
		37	75		392	2		393	
				L					
347		374	373	372	657	471			



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 393, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level						
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL		
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

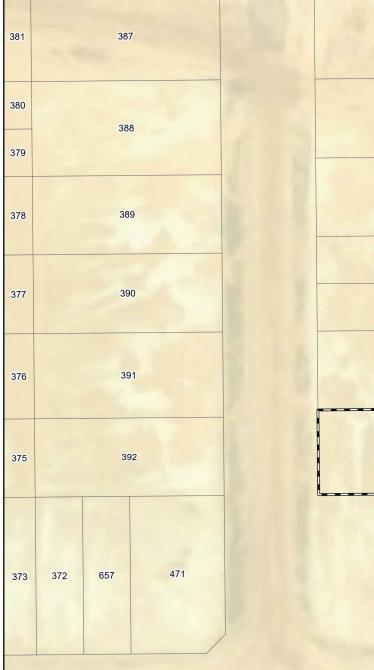
TR

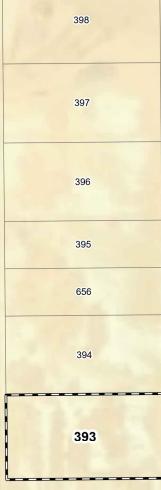
Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 393 (BAL - LOW)

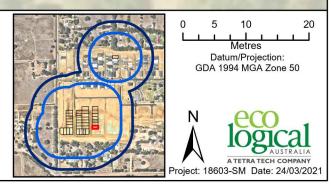






	100m site assessment
	150m site assessment
	Lot boundary
()	Bushfire Hazard Interface

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



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 394, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling Main BCA class: Class 1a				
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 394 (BAL - LOW)



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 395, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling Main BCA class: Class 1a				
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

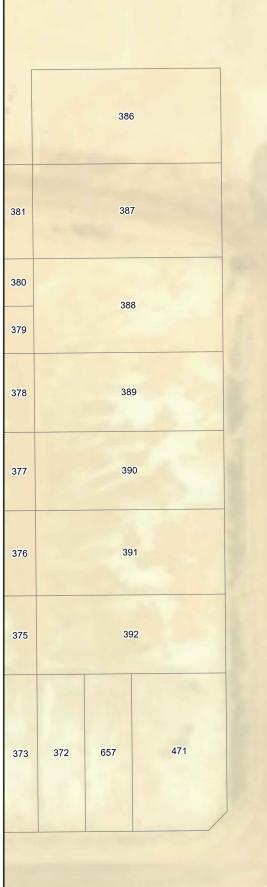
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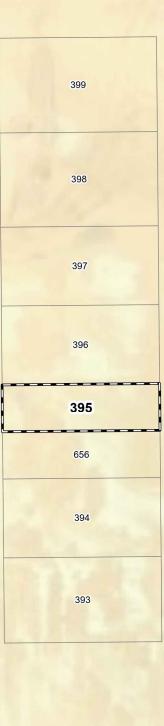
Certificate Date:

30/03/2021



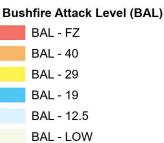
Bushfire Attack Level (BAL) Contours - Lot 395 (BAL - LOW)

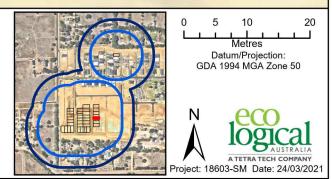












Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 396, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling Main BCA class: Class 1a				
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

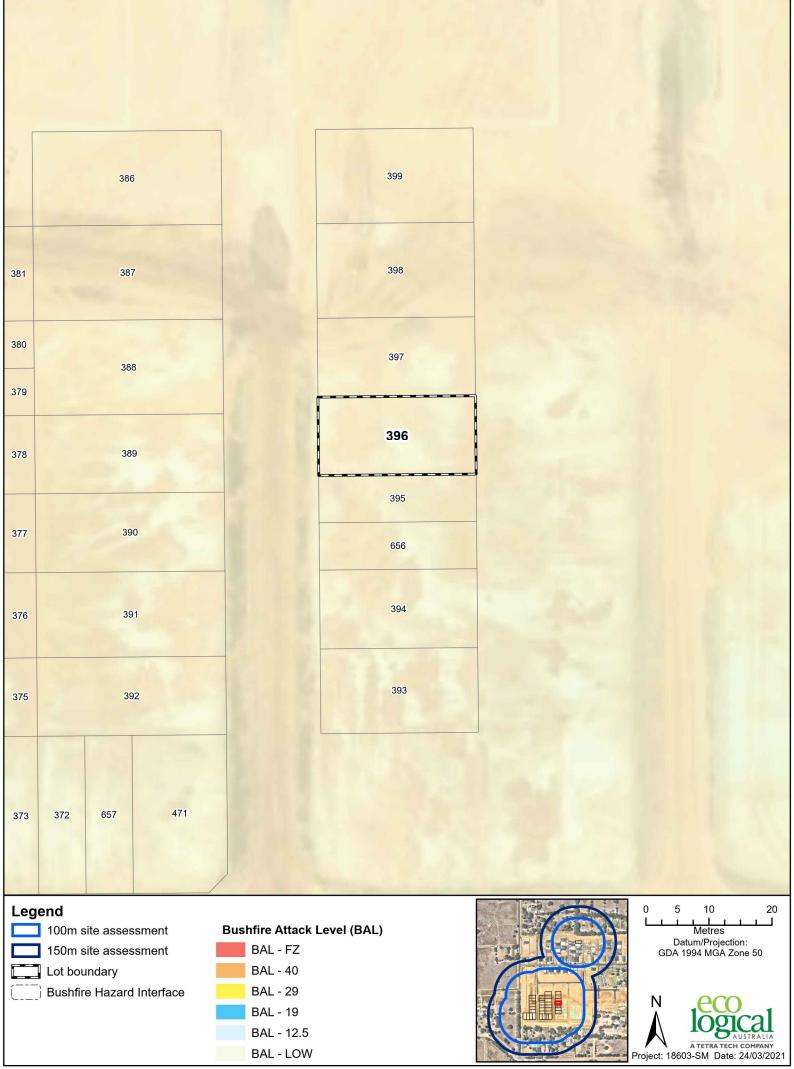
TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 396 (BAL - LOW)



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 397, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

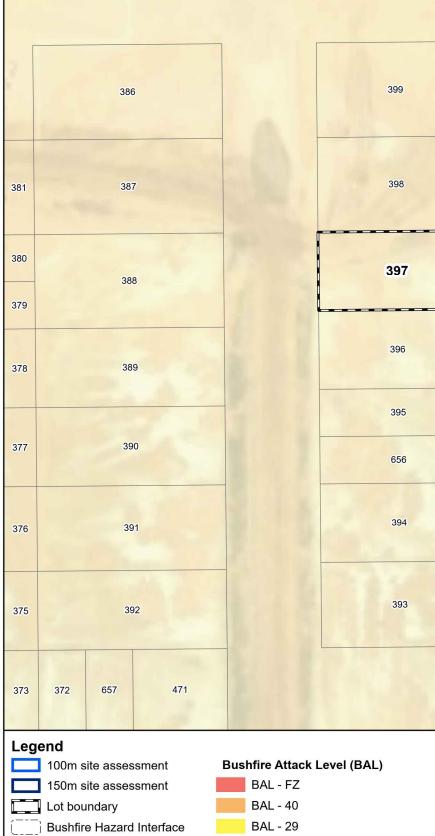
TR

Certificate Date:

30/03/2021

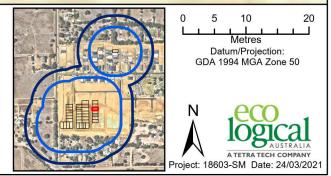


Bushfire Attack Level (BAL) Contours - Lot 397 (BAL - LOW)



BAL - 19 BAL - 12.5

BAL - LOW



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 398, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021





Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 399, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

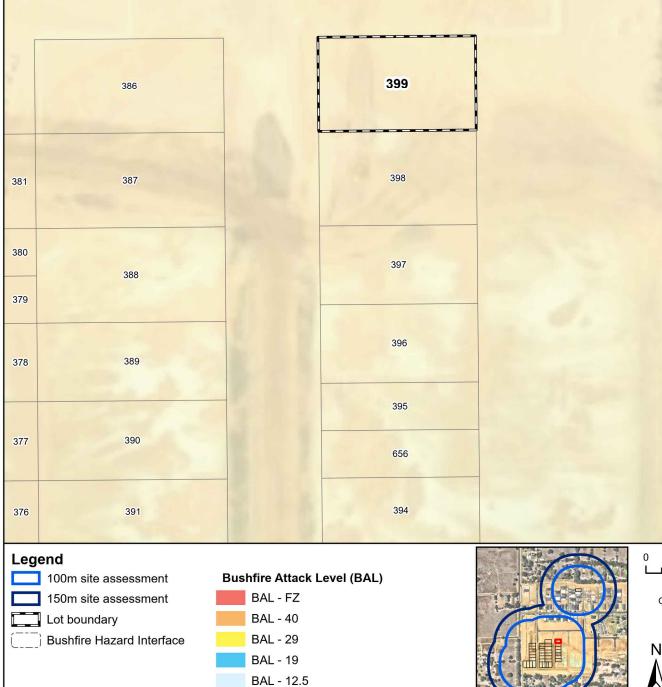
TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 399 (BAL - LOW)



BAL - LOW

10

Metres

Datum/Projection: GDA 1994 MGA Zone 50

A TETRA TECH COMP

Project: 18603-SM Date: 24/03/2021

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Т

Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 471, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

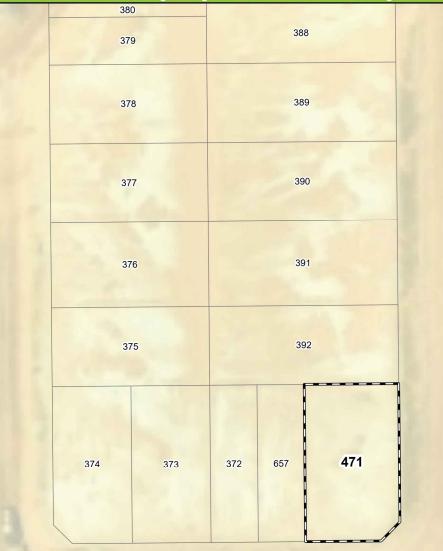
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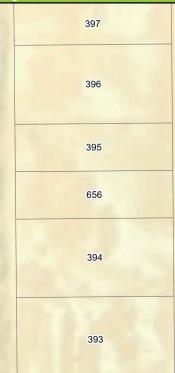
Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 471 (BAL - LOW)

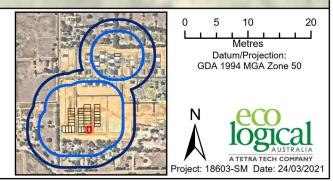




Legend

	100m site assessment
	150m site assessment
	Lot boundary
()	Bushfire Hazard Interface

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



Determined in accordance with AS 3959-2009

Site Details					
Address:	Lot 656, Beenyup Grove Estate				
Suburb:	Byford, 6122 State: WA				
Local Government Area:	Shire of Serpentine-Jarrahdale				
Use of building	Residential Dwelling	Main BCA class:	Class 1a		
Report / Job Number:	21PER-18603	Report Date:	30/03/2021		

Determination of Highest Bushfire Attack Level					
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL	
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

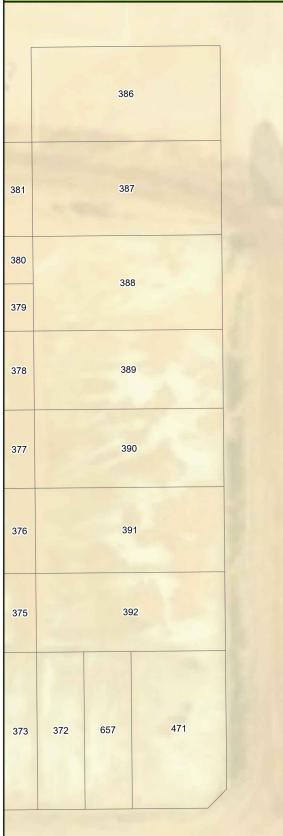
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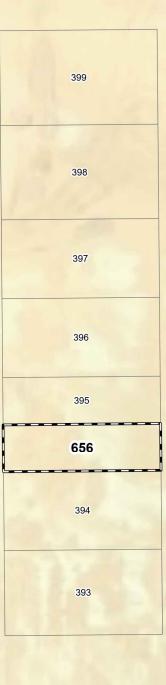
Certificate Date:

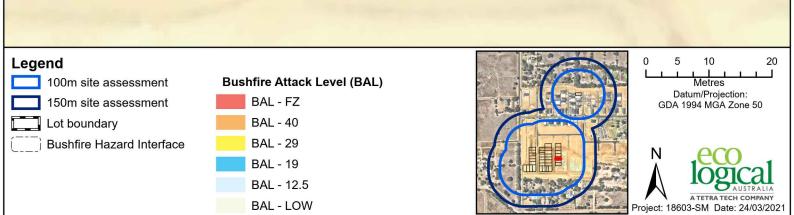
30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 656 (BAL - LOW)







Determined in accordance with AS 3959-2009

Site Details				
Address:	Lot 657, Beenyup Grove Estate			
Suburb:	Byford, 6122	State: WA		
Local Government Area:	Shire of Serpentine-Jarrahdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a	
Report / Job Number:	21PER-18603	Report Date:	30/03/2021	

Determination of Highest Bushfire Attack Level				
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021



Bushfire Attack Level (BAL) Contours - Lot 657 (BAL - LOW)

				,
342		380 379	388	397
343		378	389	396
344				395
		377	390	656
345		376	391	394
346		375	392	393
347	37	74 373	372 657 471	



- 100m site assessment
 150m site assessment
 Lot boundary
 Bushfire Hazard Interface
- Bushfire Attack Level (BAL)

 BAL FZ

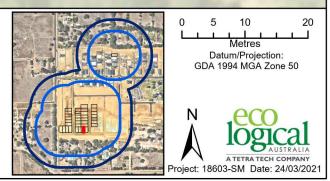
 BAL 40

 BAL 29

 BAL 19

 BAL 12.5

 BAL LOW



Determined in accordance with AS 3959-2009

Site Details				
Address:	Lot 699, Beenyup Grove Estate			
Suburb:	Byford, 6122	State: WA		
Local Government Area:	Shire of Serpentine-Jarrahdale			
Use of building	Residential Dwelling	Main BCA class:	Class 1a	
Report / Job Number:	21PER-18603	Report Date:	30/03/2021	

Determination of Highest Bushfire Attack Level				
AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	N/A	N/A	N/A	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 3959-2009.

Name

Daniel Panickar Eco Logical Australia

Signature:

TR

Certificate Date:

30/03/2021







Legend

 100m site assessment

 150m site assessment

 Lot boundary

 Bushfire Hazard Interface

 Bushfire Attack Level (BAL)

 BAL - FZ

 BAL - 40

 BAL - 29

 BAL - 19

 BAL - 12.5

BAL - LOW

