

26 November 2020

Our ref: 16864

Parcel Property
Level 3/14 Walters Drive,
OSBORNE PARK,
WA 6017

Bushfire Attack Level (BAL) Assessment Report for Stage 2A, Beenyup Grove Estate, Byford

Site Details

Address: Beenyup Grove Estate: (Lots 607, 740, 741, 742 and 743)

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: 20PER-16864 **Report version:** v1

Assessment date: 8/10/2020 **Report date:** 26/11/2020

Author: Stephen Moore and Daniel Panickar **Review:** Daniel Panickar (BPAD Level 3 – 37802)



SITE ASSESSMENT AND SITE PLAN

The assessment of the five subject lots was undertaken on 8 October 2020 and reassessed on 26 November 2020 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 100 m of the five 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 Shire of Serpentine-Jarrahdale in the future.

Plot 1 Classification or Exclusion Clause Excluded – clause 2.2.3.2 (e) & (f)

Photo Point 1

This plot has been excluded under Clause 2.2.3.2 (e) & (f) of AS 3959-2018. This is an area of low threat, maintained vegetation and footpaths.



Plot 1 Classification or Exclusion Clause Excluded – clause 2.2.3.2 (f)

Photo Point 2

This plot has been excluded under Clause 2.2.3.2 (f) of AS 3959-2018. This is an area of low threat, maintained grass.



Plot 1 Classification or Exclusion Clause Excluded – clause 2.2.3.2 (f)

Photo Point 3

This plot has been excluded under Clause 2.2.3.2 (f) of AS 3959-2018. This is an area that has been cleared for residential development within Beenyup Grove Estate.



Plot 1 Classification or Exclusion Clause Excluded – clause 2.2.3.2 (f)

Photo Point 4

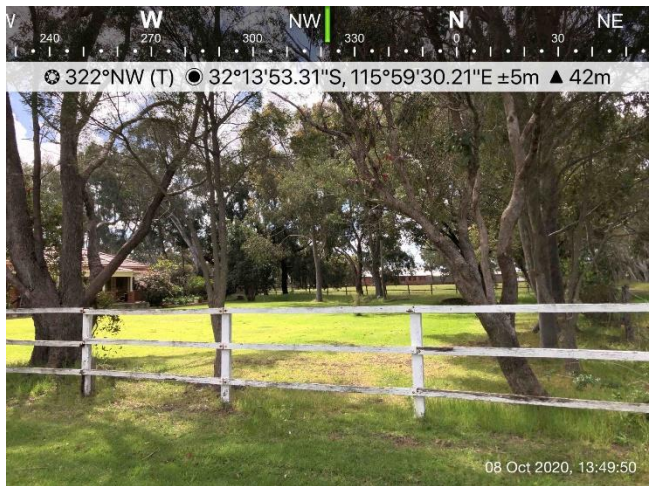
This plot has been excluded under Clause 2.2.3.2 (f) of AS 3959-2018. This is an area of low threat, maintained grass.



Plot 1 Classification or Exclusion Clause Excluded under clause 2.2.3.2 (f)

Photo Point 5

This plot has been excluded under Clause 2.2.3.2 (f) of AS 3959-2018. This is an area containing a residential dwelling and low threat, maintained grass.



RELEVANT FIRE DANGER INDEX

The Fire Danger Index (FDI) for this site has been determined in accordance with Table 2.1 of AS 3959-2018. The FDI for WA is FDI 80.

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 Analysis AS 3959-2018

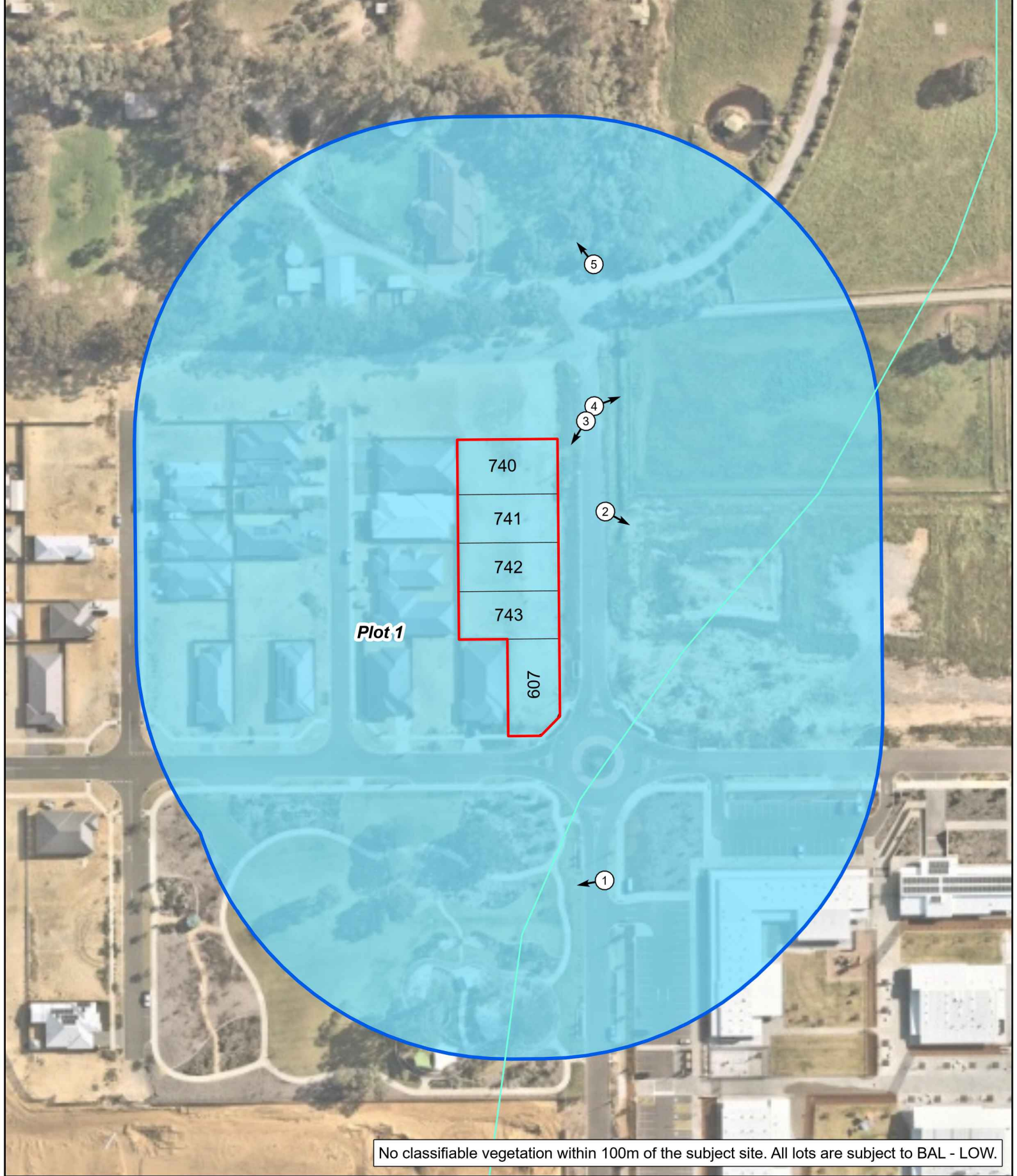
Plot	Vegetation Classification	Effective Slope	Separation distances required				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Excluded under Clause 2.2.3.2 (e) & (f)	N/A	No separation distances required – BAL-LOW				

DETERMINED BUSHFIRE ATTACK LEVEL (BAL)

The determined Bushfire Attack Level (highest BAL) for the site has been determined in accordance with Clause 2.2.6 of AS 3959-2018 using the above analysis. All lots within the site are subject to BAL ratings of **BAL-LOW**.

This BAL rating is based on the information current at the date of this document and is valid for 12 months.

Figure 1: Vegetation Classification



No classifiable vegetation within 100m of the subject site. All lots are subject to BAL - LOW.

- Legend**
- Subject site
 - 100m site assessment
 - Lot boundary
 - Contour (5m)

Photo location

Vegetation classification

- Excluded as per clause 2.2.3.2 (e) and (f)

0 12.5 25 50
Metres
Datum/Projection:
GDA 1994 MGA Zone 50

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Appendix A – Additional Information / Advisory Notes

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 607, 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:	20PER-16864	Report Date:	26/11/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Excluded as per clause 2.2.3.2 (e) and (f)	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 3959-2018.

Name Daniel Panickar
Eco Logical Australia

Signature: 

Certificate Date: 26/11/2020



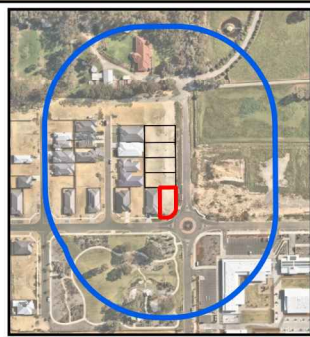
Accreditation No: BPAD 37802
Expiry: December 2021

Bushfire Attack Level (BAL) Contours - Lot 607 (BAL - LOW)



Legend
[Dashed black box] Lot location
[Blue box] 100m site assessment

Bushfire Attack Level (BAL)	
[Red box]	BAL - FZ
[Orange box]	BAL - 40
[Yellow box]	BAL - 29
[Blue box]	BAL - 19
[Light blue box]	BAL - 12.5
[Light green box]	BAL - LOW



0 5 10 20
Metres
Datum/Projection:
GDA 1994 MGA Zone 50

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Project: 16846-SM Date: 26/11/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 740, 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:	20PER-16864	Report Date:	26/11/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Excluded as per clause 2.2.3.2 (e) and (f)	N/A	N/A	BAL - LOW

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





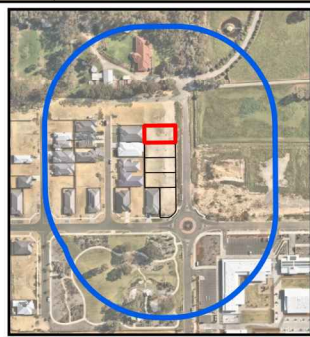
Accreditation No: BPAD 37802
Expiry: December 2021

Bushfire Attack Level (BAL) Contours - Lot 740 (BAL - LOW)



Legend
 Lot location
 100m site assessment

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



Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 741, 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:	20PER-16864	Report Date:	26/11/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Excluded as per clause 2.2.3.2 (e) and (f)	N/A	N/A	BAL - LOW

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Certificate Date: 26/11/2020









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Expiry: December 2021

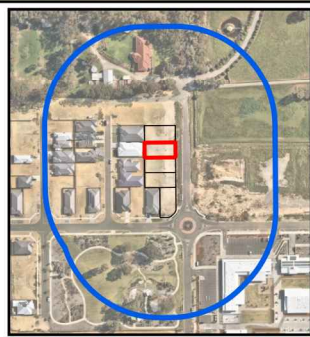
Bushfire Attack Level (BAL) Contours - Lot 741 (BAL - LOW)



Legend
 Lot location
 100m site assessment

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



Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 742, 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:	20PER-16864	Report Date:	26/11/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Excluded as per clause 2.2.3.2 (e) and (f)	N/A	N/A	BAL - LOW

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







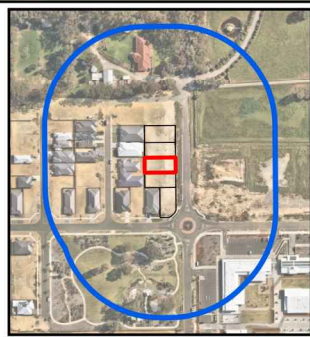
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Expiry: December 2021

Bushfire Attack Level (BAL) Contours - Lot 742 (BAL - LOW)



Legend
 Lot location
 100m site assessment

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



Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 743, 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:	20PER-16864	Report Date:	26/11/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Excluded as per clause 2.2.3.2 (e) and (f)	N/A	N/A	BAL - LOW

Practitioner Details

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Eco Logical Australia

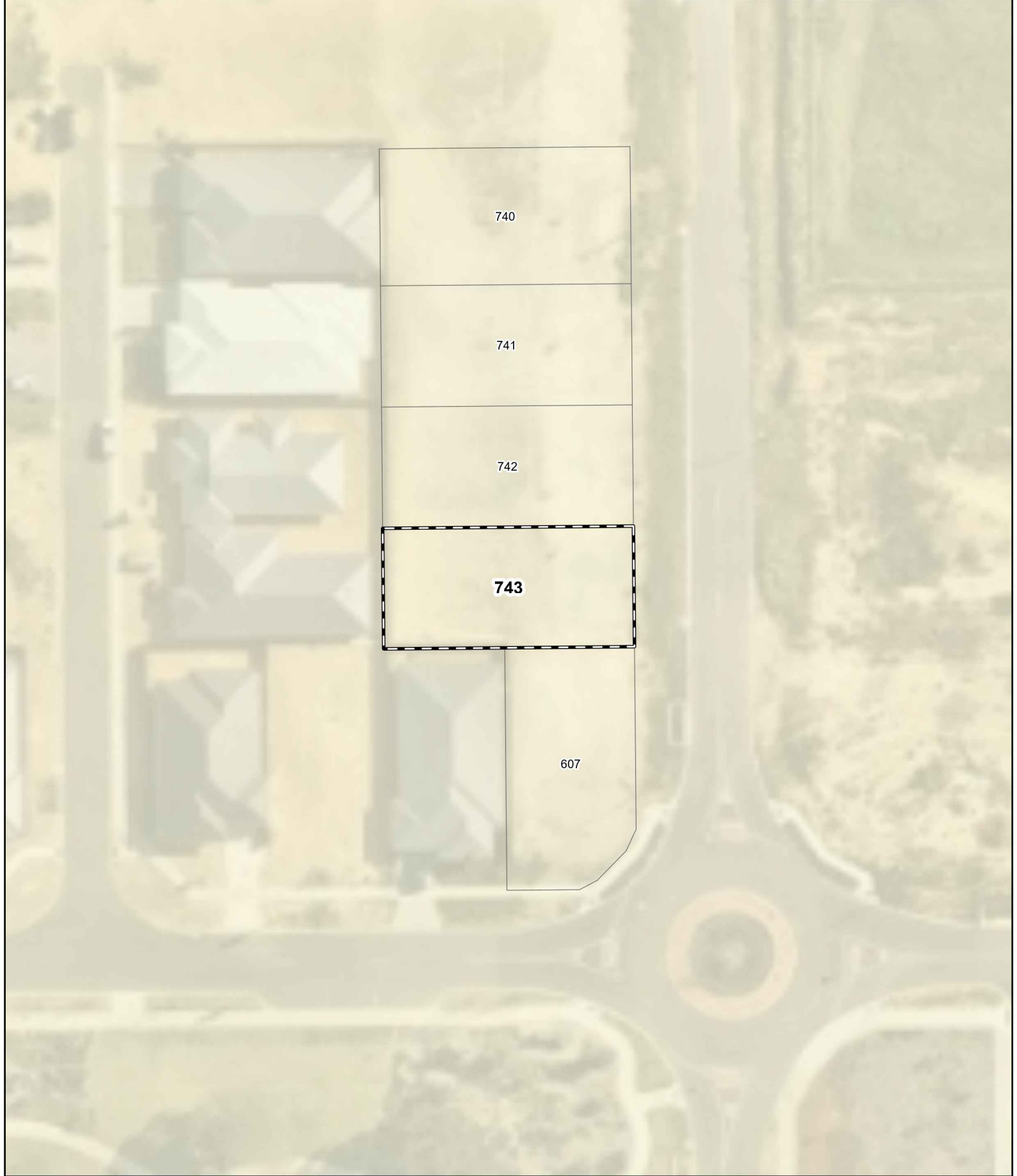
Signature: 

Certificate Date: 26/11/2020









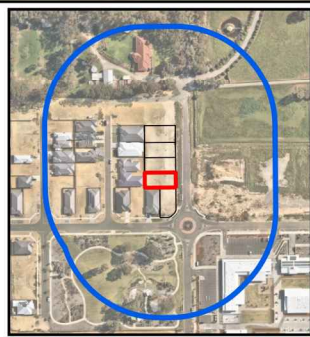
Accreditation No: BPAD 37802
Expiry: December 2021

Bushfire Attack Level (BAL) Contours - Lot 743 (BAL - LOW)



Legend
 Lot location
 100m site assessment

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


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Project: 16846-SM Date: 26/11/2020