

Date: 06 October 2020

Our ref: 20PER-17282

Parcel Property
Level 3/14 Walters Dr,
Osborne Park,
WA 6017

Bushfire Attack Level (BAL) Assessment Report for Stages 4A and 4B, Living Edge Estate, Wellard

Site Details

Address:

Stage 4A and Stage 4B: Lots 1, 2, 3, 110, 111, 112, 113, 114, 115, 116, 117, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 153, 154, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169

Suburb:	Wellard, 6170	State	Western Australia
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Local Government Area:	City of Kwinana
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Description of building works:	Residential Development
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Report details

Report/Job number:	17282	Report version:	V1
Assessment date:	12 September 2020	Report date:	06 October 2020
Author:	James Leonard	Review:	Daniel Panickar (BPAD Level 3 – 37802)




SITE ASSESSMENT AND SITE PLAN

The assessment of the 42 subject lots was undertaken on 12 September 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 42 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.

Plot	1	Classification or Exclusion Clause	Class A forest
Photo Point 1		<p>Classified vegetation within this plot is comprised of trees to 30 m tall with approximately 30 to 70% foliage cover. There is a well-developed understorey present.</p> <p>Slope under the vegetation has been assessed as upslope/flat land.</p>	
Plot	1	Classification or Exclusion Clause	Class A forest
Photo Point 2		<p>Classified vegetation within this plot is comprised of trees to 30 m tall with approximately 30 to 70% foliage cover. There is a well-developed understorey present.</p> <p>Slope under the vegetation has been assessed as upslope/flat land.</p>	

Plot 2 Classification or Exclusion Clause

Class B woodland

Photo Point 3

Classified vegetation within this plot is comprised of trees between 10 to 30 m tall with approximately 20 to 30% foliage cover. There is limited surface litter. Some grass is present at the base of the trees.

Slope under the vegetation has been assessed as upslope/flat land.



Plot 2 Classification or Exclusion Clause

Class B woodland

Photo Point 4

Classified vegetation within this plot is comprised of trees between 10 to 30 m tall with approximately 20 to 30% foliage cover. There is limited surface litter. Some grass is present at the base of the trees.

Slope under the vegetation has been assessed as upslope/flat land.



Plot 2 Classification or Exclusion Clause

Class B woodland

Photo Point 5

Classified vegetation within this plot is comprised of trees between 10 to 30 m tall with approximately 20 to 30% foliage cover.

Slope under the vegetation has been assessed as upslope/flat land.



Plot 3 Classification or Exclusion Clause

Class D scrub

Photo Point 6

Classified vegetation within this plot is comprised of shrubs taller than 2 m with foliage cover between 10 to 30%. Some grasses are present.

Slope under the vegetation has been assessed as upslope/flat land.



Plot 3 Classification or Exclusion Clause

Class D scrub

Photo Point 7

Classified vegetation within this plot is comprised of shrubs taller than 2 m with foliage cover between 10 to 30%. Some grasses are present.

Slope under the vegetation has been assessed as upslope/flat land.



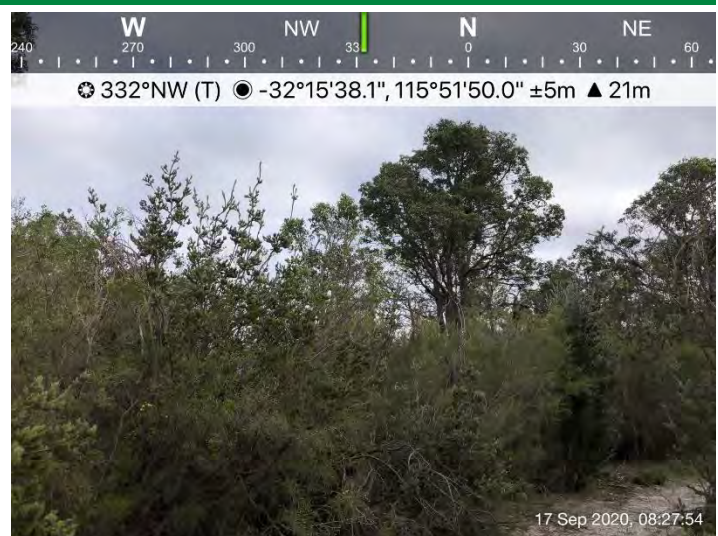
Plot 3 Classification or Exclusion Clause

Class D scrub

Photo Point 8 (foreground)

Classified vegetation within this plot is comprised of shrubs taller than 2 m with foliage cover between 10 to 30%. Some grasses are present.

Slope under the vegetation has been assessed as upslope/flat land.



Plot 4 Classification or Exclusion Clause

Excluded under clause 2.2.3.2 (e) and (f)

Photo Point 9

This plot has been excluded under Clause 2.2.3.2 (e) & (f) of AS 3959-2018.

This plot is comprised of cleared land ready for construction of the proposed subdivision.



Plot 4 Classification or Exclusion Clause

Excluded under clause 2.2.3.2 (e) and (f)

Photo Point 10

This plot has been excluded under Clause 2.2.3.2 (e) & (f) of AS 3959-2018.

This plot is comprised of maintained gardens and housing



RELEVANT FIRE DANGER INDEX

A blanket rating of FDI 80 is adopted for Western Australia, as outlined in Australian Standard (AS) 3959–2018 and endorsed by Australasian Fire and Emergency Service Authorities Council (AFAC).

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	Class A forest	Upslope / flat land	<16	16-<21	21-<31	31-<42	42-<100
2	Class B woodland	Upslope / flat land	<10	10-<14	14-<20	20-<29	29-<100
3	Class D scrub	Upslope / flat land	<10	10-<13	13-<19	19-<27	27-<100
4	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 proposed subject lot has been determined in accordance with Clause 2.2.6 of AS 3959-2018 using the above analysis. The BAL ratings are shown in Figure 2 and Table 2. Front of lot setbacks depicted in Figure 2 have reduce the BAL rating for Lots 112, 113, 131, 132, 133 and 169.

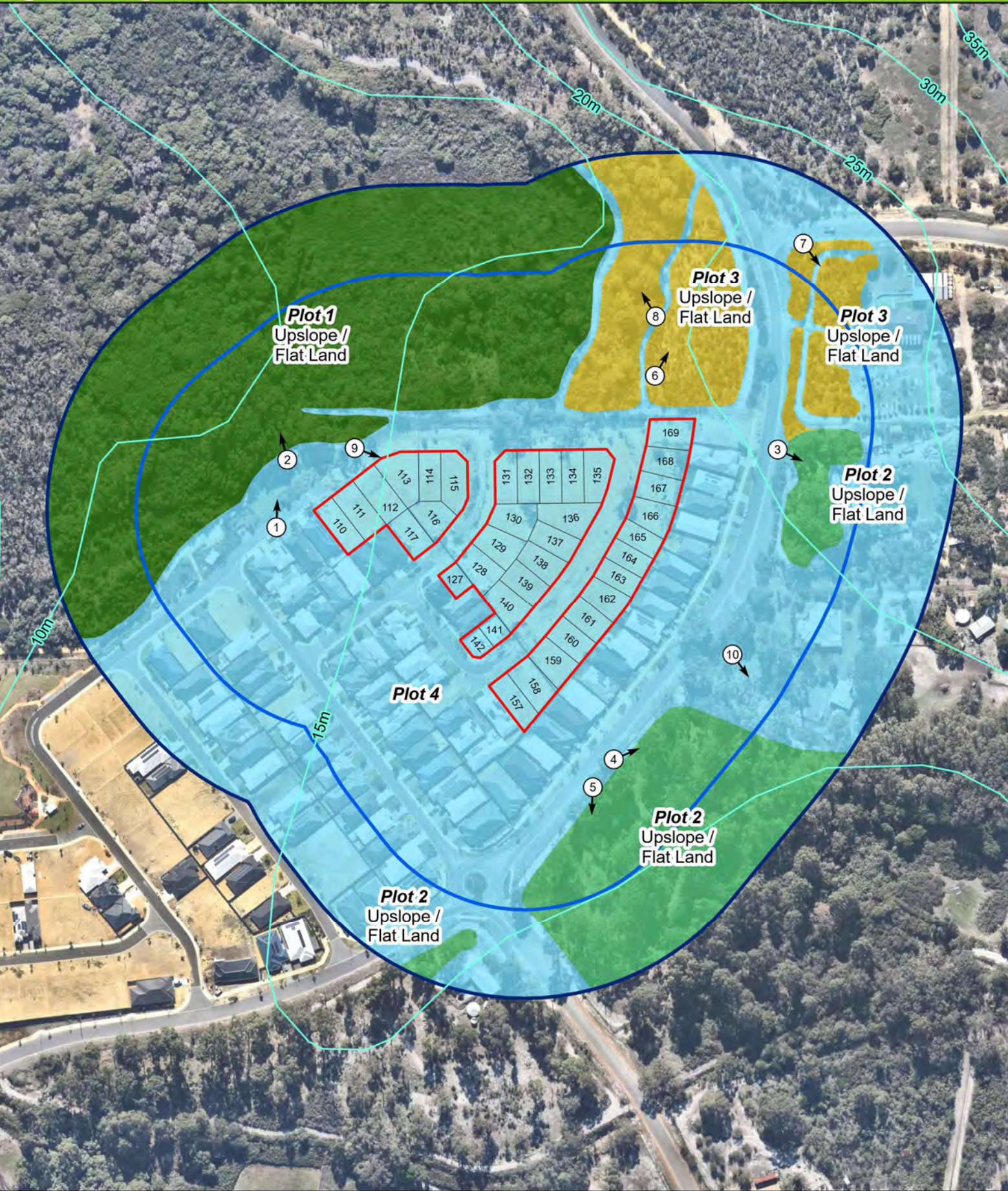
Table 2: BAL assessment summary

BAL	Affected lots	Construction sections to be consulted in AS 3959-2018
BAL-FZ	Determined Bushfire Attack Level for: Lot 112*, 113*, 169*	N/A
BAL-40	N/A	N/A
BAL-29	Determined Bushfire Attack Level for: Lots 111, 114, 115, 131*, 132*, 133*, 134*	3 and 7
BAL-19	Determined Bushfire Attack Level for: Lots 110, 135, 168*	3 and 6
BAL-12.5	Determined Bushfire Attack Level for: Lots 116, 117, 127, 128, 129, 130, 136, 137, 138, 139, 140*, 141*, 142*, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167	3 and 5
BAL-LOW	N/A	N/A

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

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



Legend

- Subject site
- 100m site assessment
- 150m site assessment
- Lot boundary
- ~ Contour (5m)

Photo location

Vegetation classification

- Class A forest
- Class B woodland
- Class D scrub
- Excluded as per clause 2.2.3.2 (e) and (f)

0 25 50 100

Metres

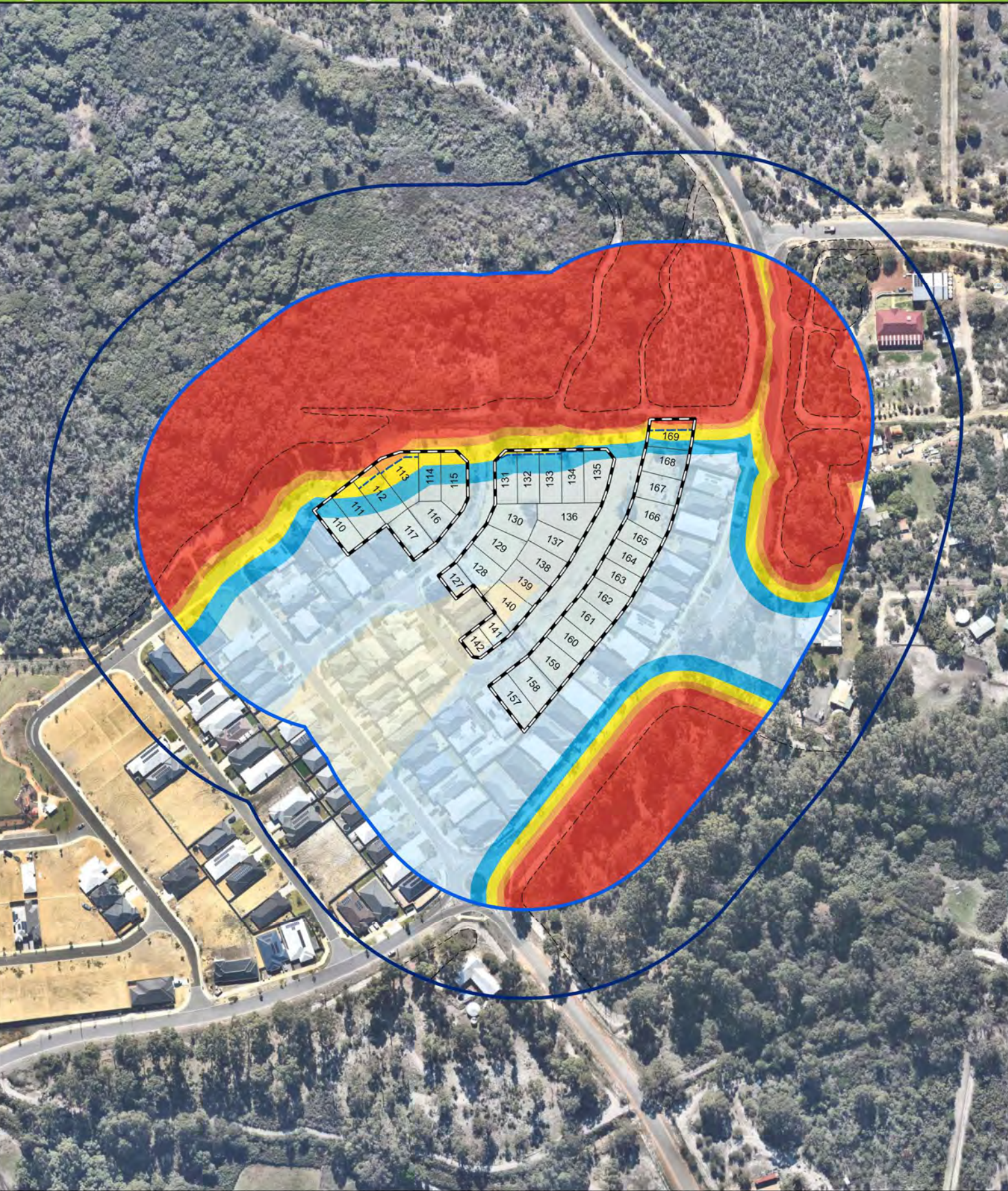
Datum/Projection:
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Prepared by: SM Date: 2/10/2020

Figure 2: Bushfire Attack Level (BAL) Contours



Legend

- Subject site
- 100m site assessment
- 150m site assessment
- Bushfire Hazard Interface
- Lot boundary
- Setback

Bushfire Attack Level (BAL)

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

0 25 50 100
Metres

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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 110, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	30 m	BAL - 29

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

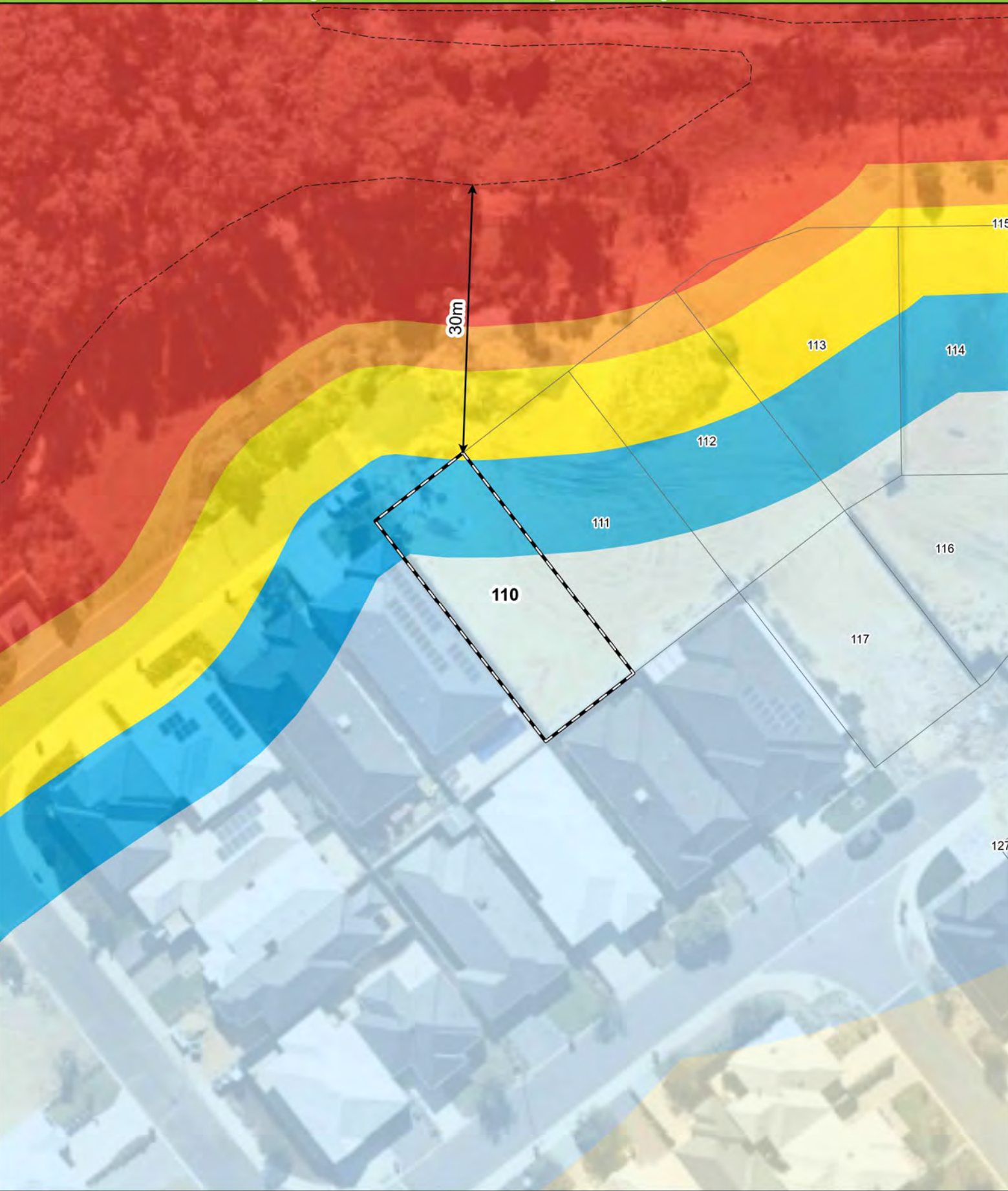
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 110 (*BAL - 29)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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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Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 111, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	22 m	BAL - 29

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
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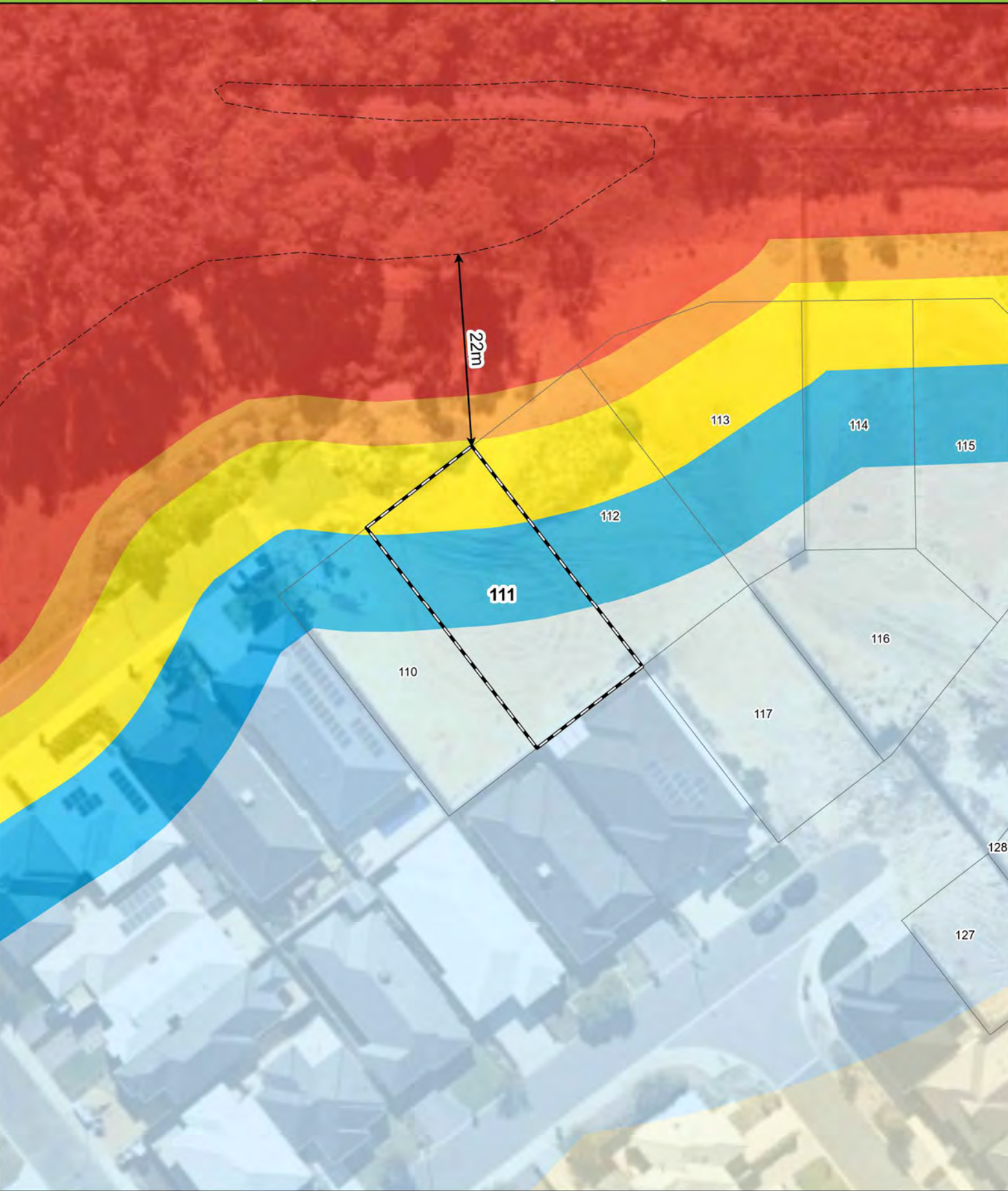
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 111 (*BAL - 29)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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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Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 112, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	21 m	BAL - 29

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.

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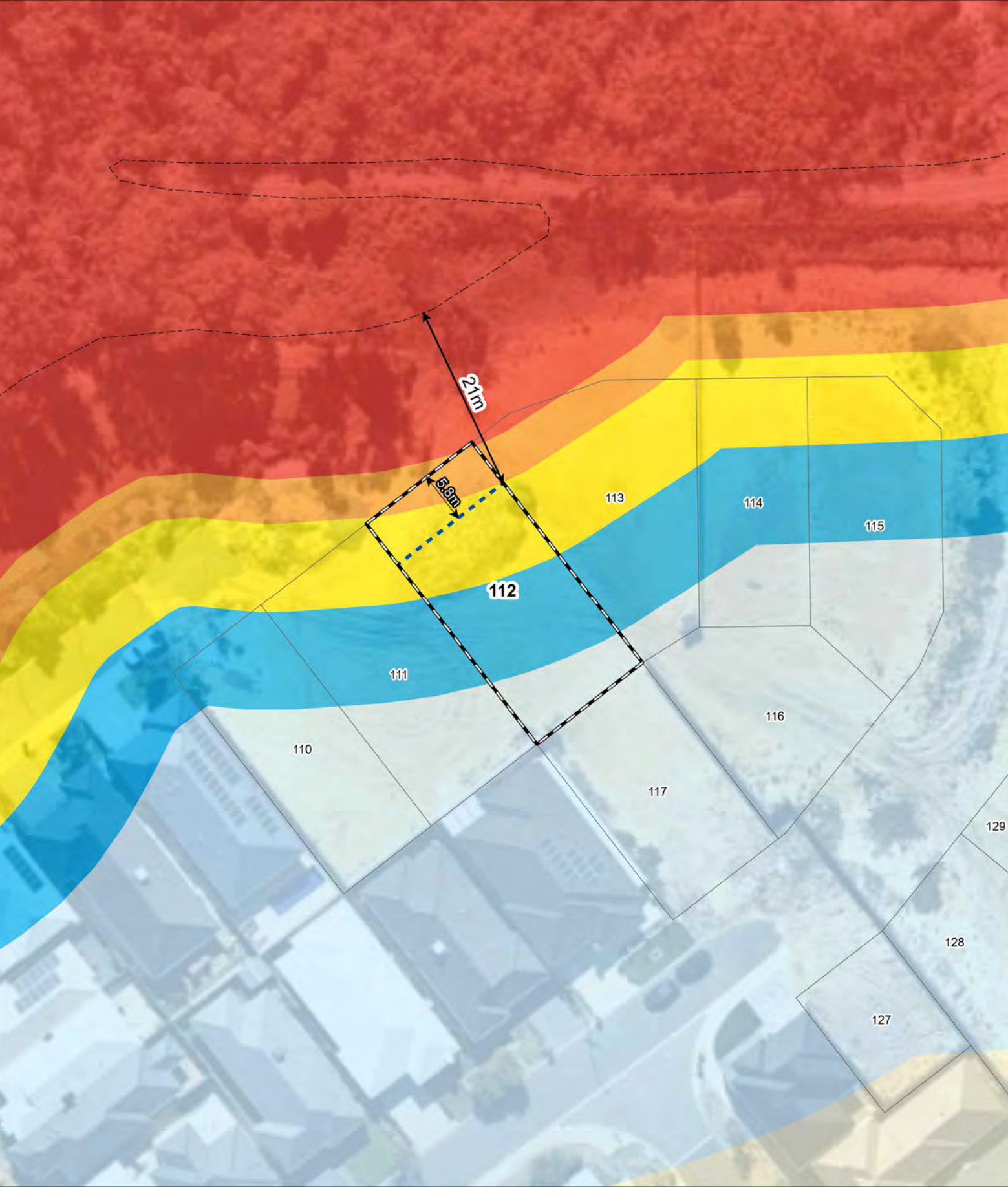
Signature: 

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Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 112 (BAL - 29)



Legend

- 100m site assessment
- 150m site assessment
- Lot location
- Setback
- 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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Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 113, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	21 m	BAL - 29

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.

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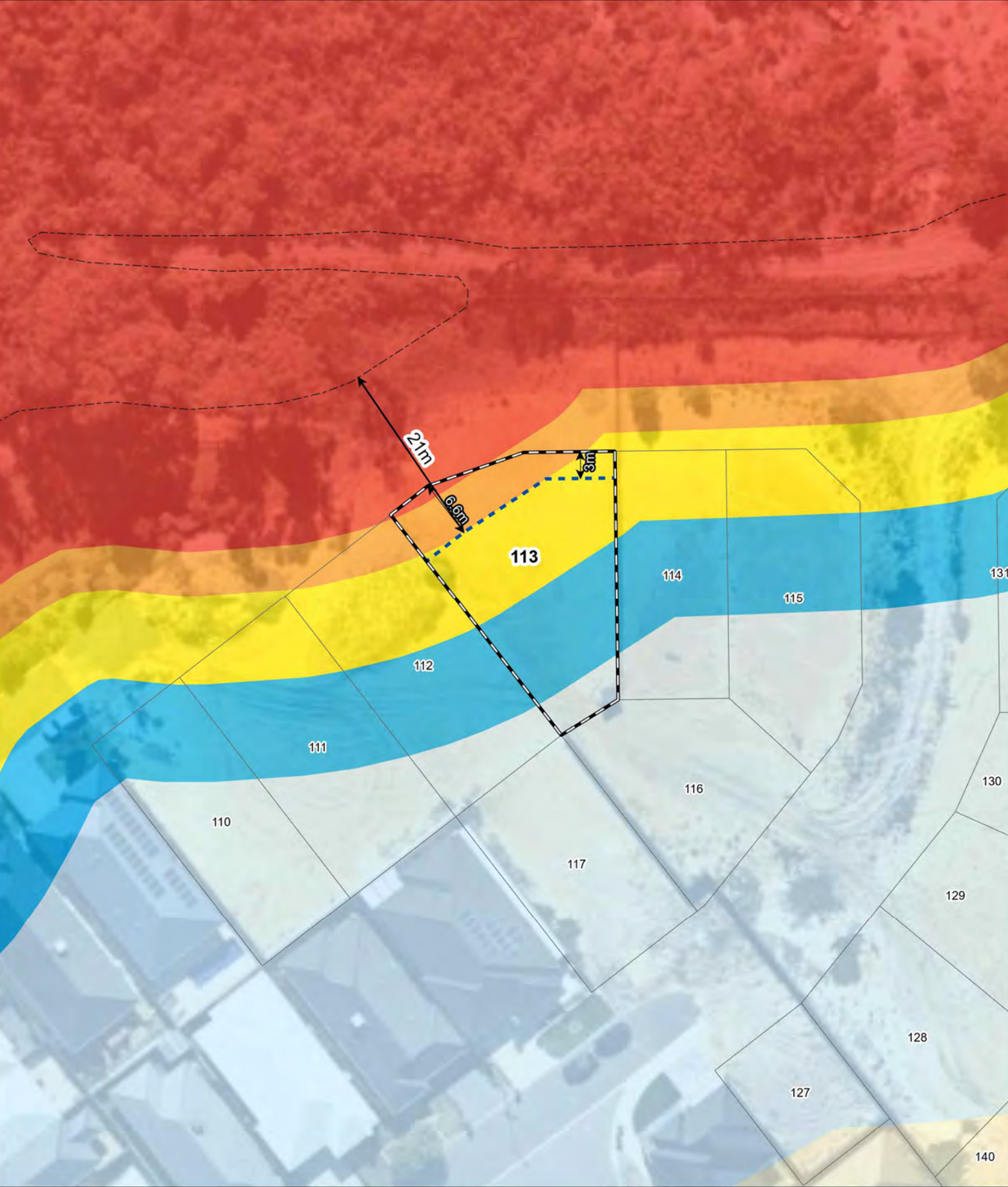
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 113 (BAL - 29)



Legend

- 100m site assessment
- 150m site assessment
- Lot location
- Setback
- 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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Prepared by: SM Date: 6/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 114, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	23 m	BAL - 29

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

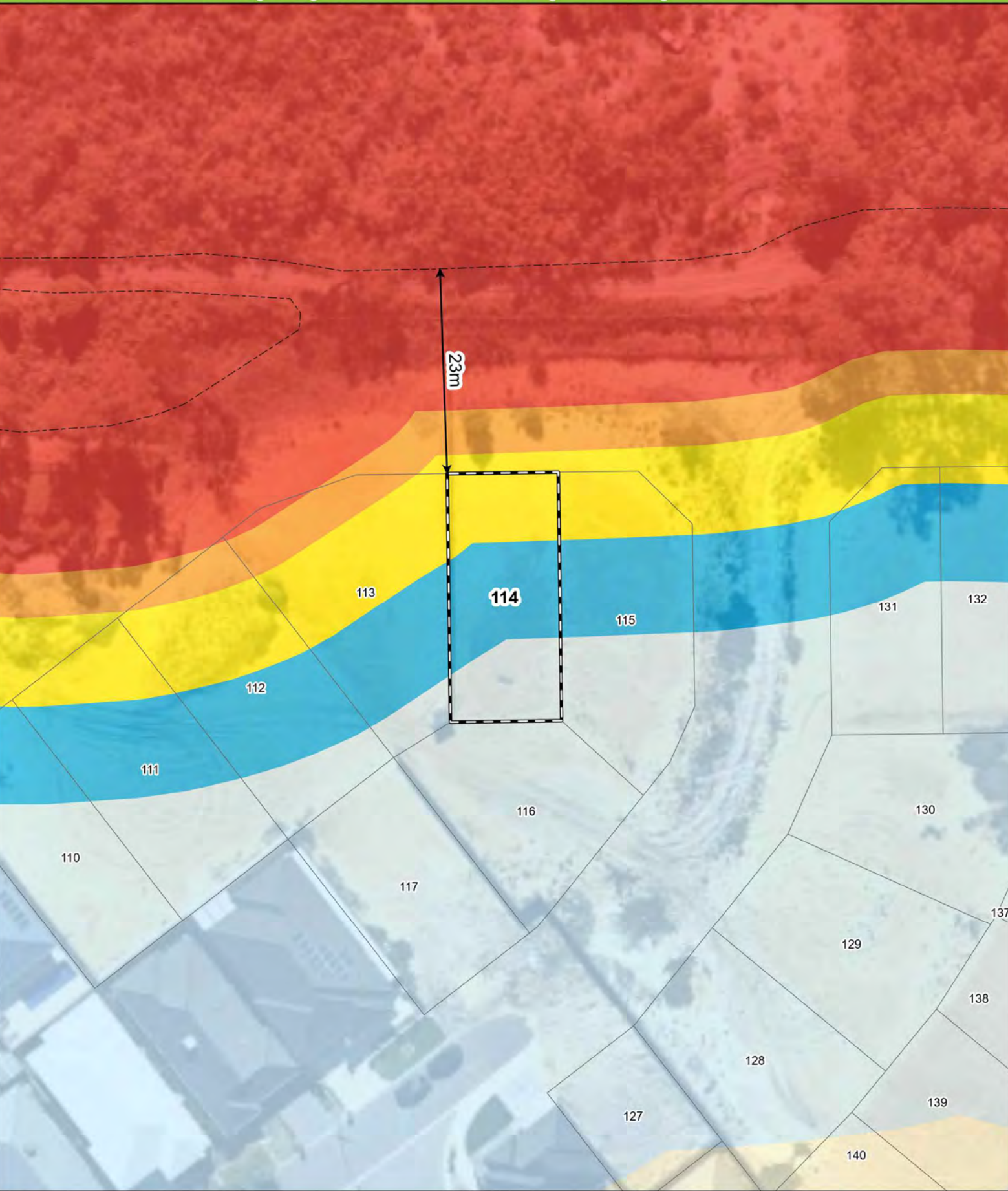
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Certificate Date: 06/10/2020



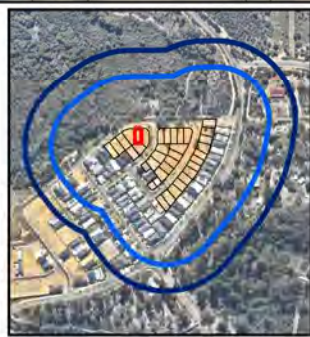
Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 114 (*BAL - 29)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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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Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 115, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	23 m	BAL - 29

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

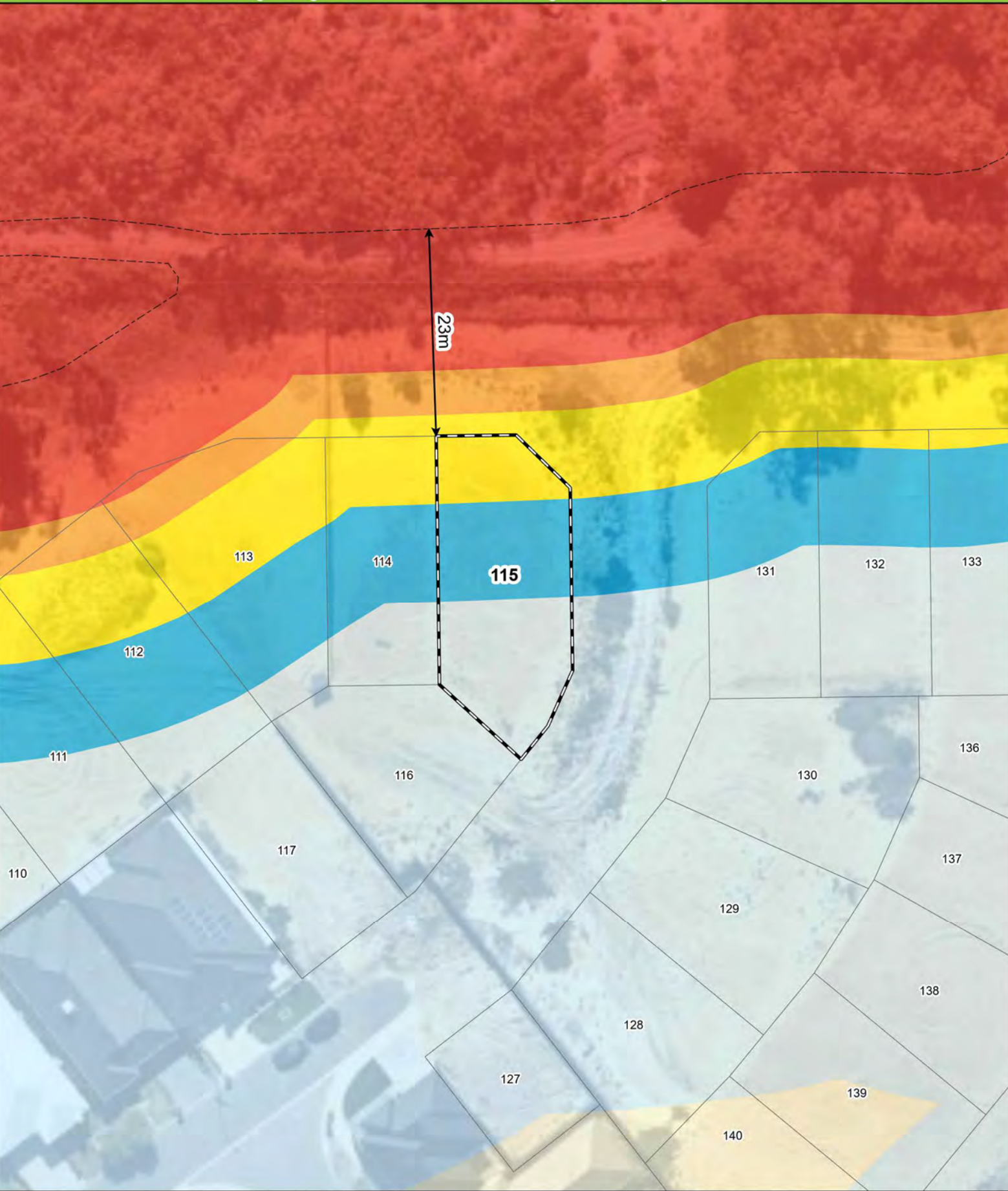
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 115 (*BAL - 29)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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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Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 116, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	46 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

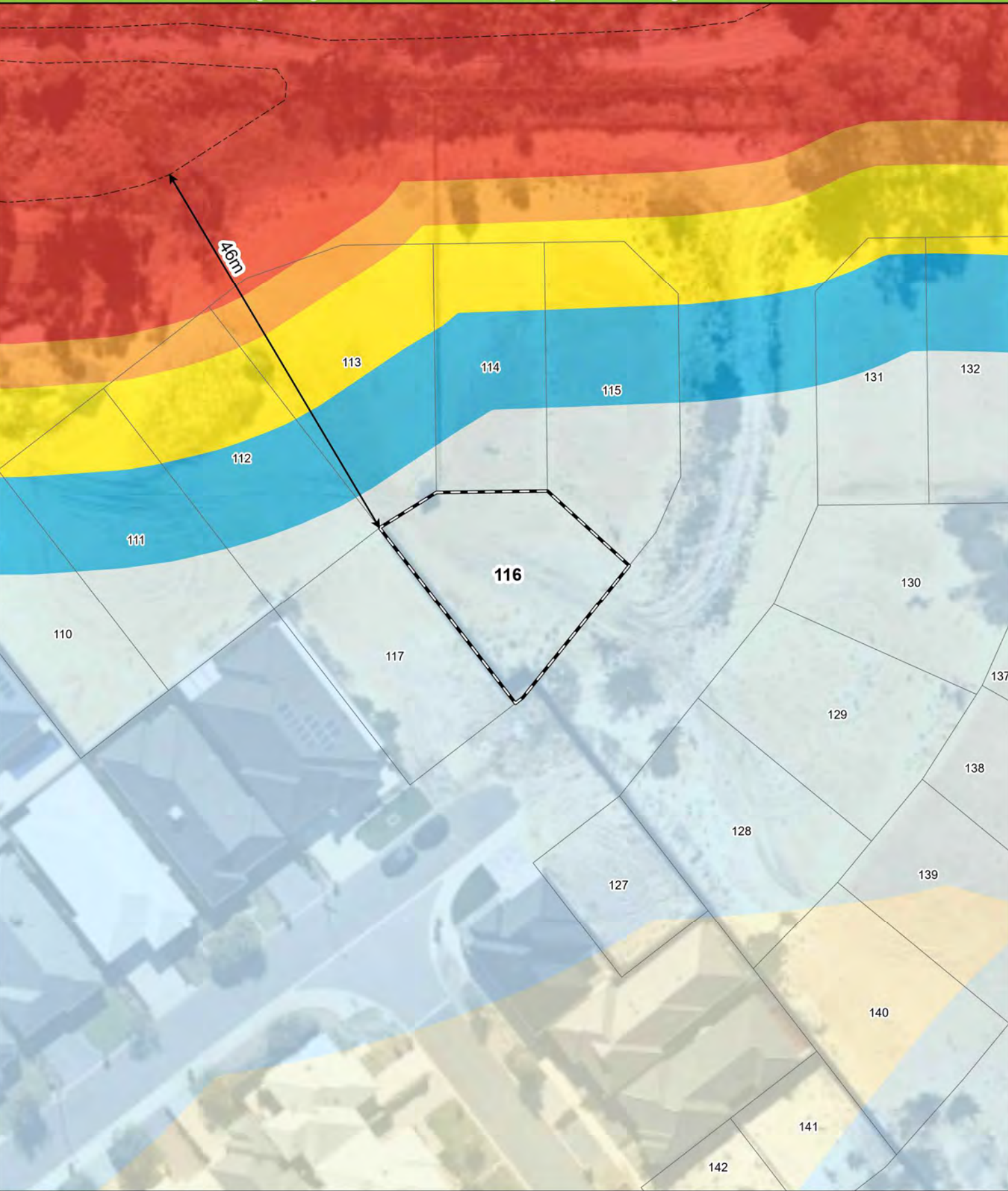
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 116 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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:
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Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 117, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	46 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.

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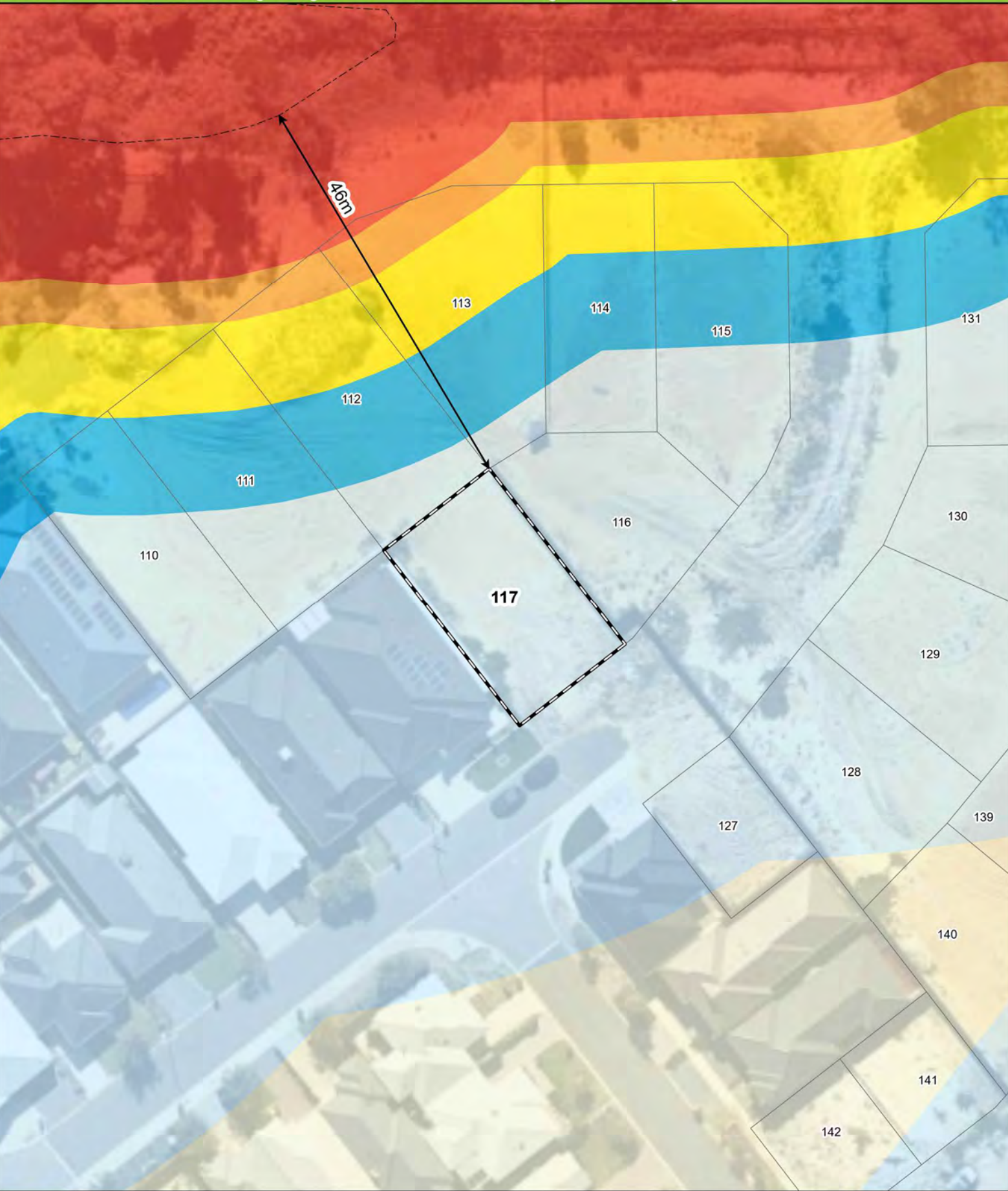
Signature: 

Certificate Date: 06/10/2020



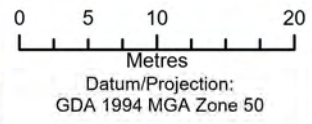
Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 117 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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	



Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 127, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	86 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: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 127 (*BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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:
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A TETRA TECH COMPANY

Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 128, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	75 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: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 128 (*BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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

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A TETRA TECH COMPANY

Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 129, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	66 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

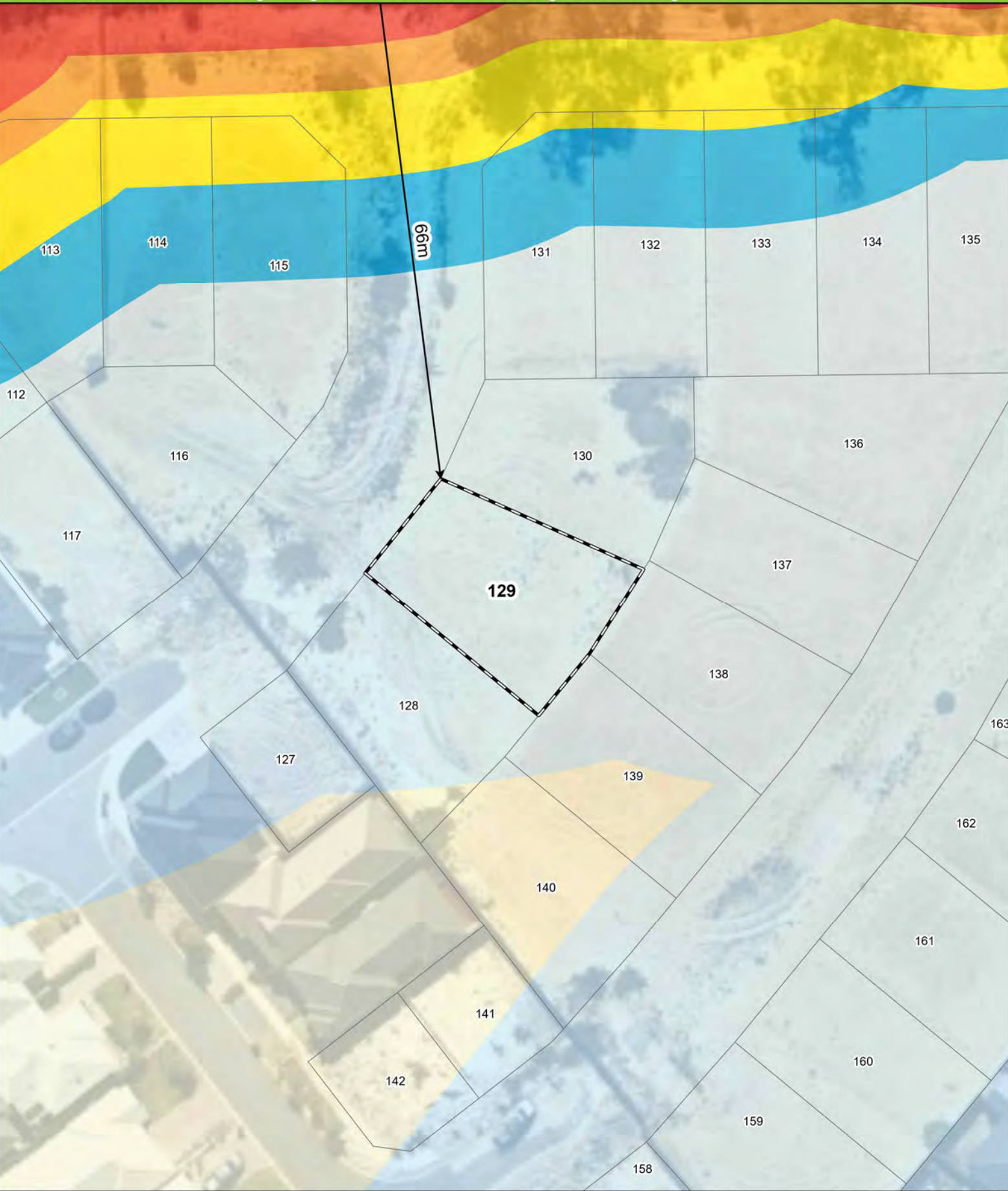
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 129 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 130, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	55 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

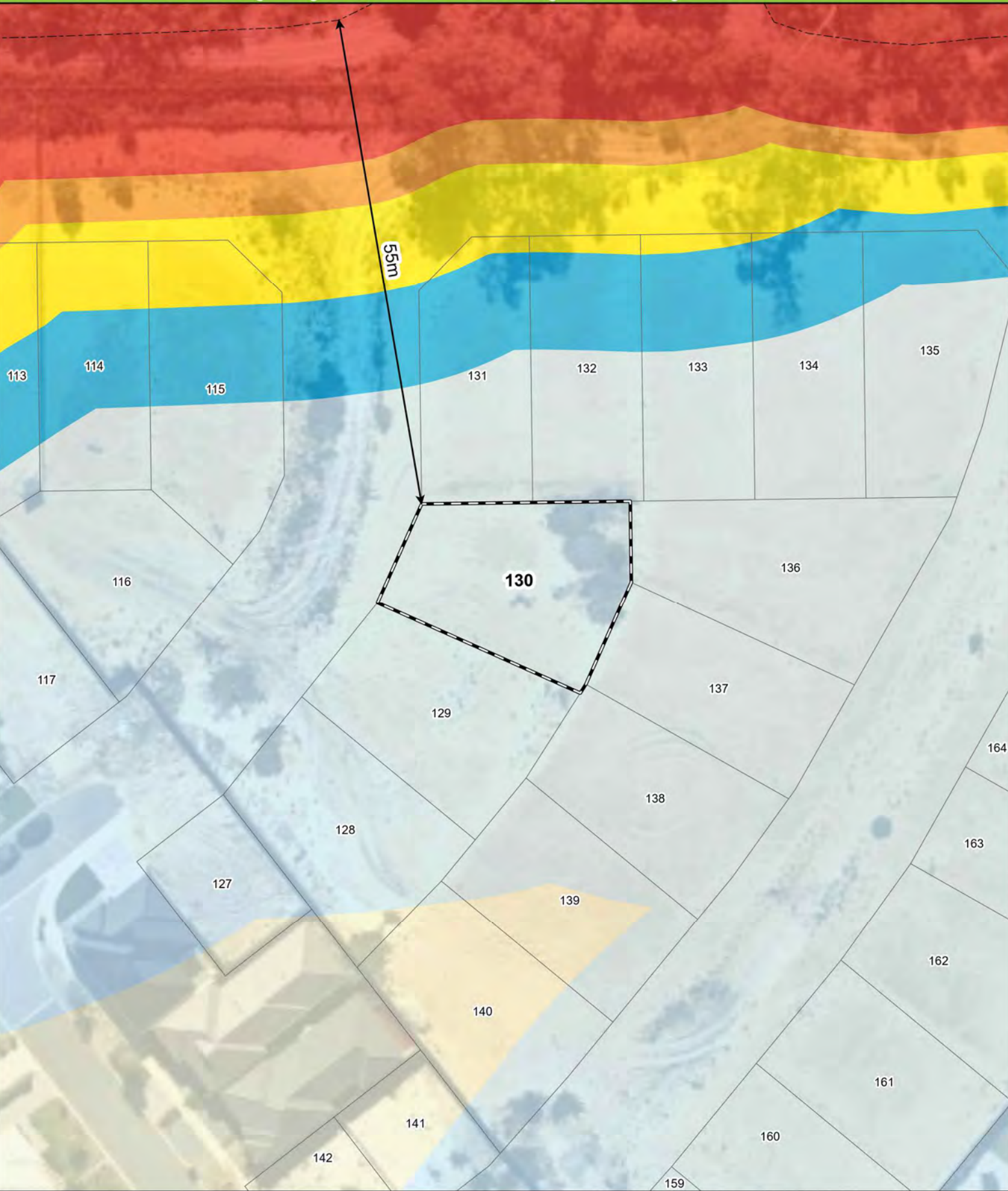
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 130 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

eco logical AUSTRALIA

A TETRA TECH COMPANY

Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 131, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	Upslope / Flat Land	31 m	BAL - 19

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

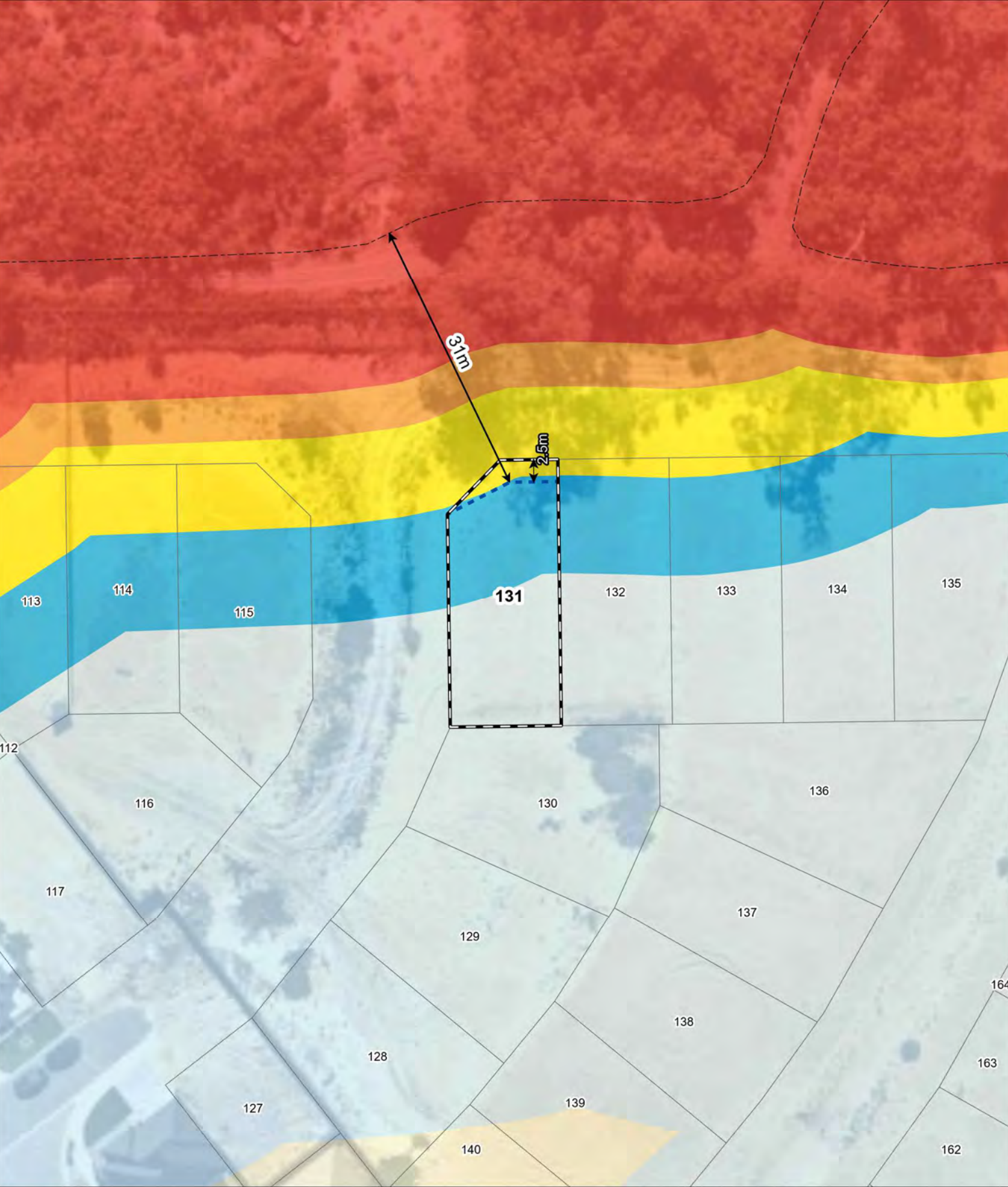
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 131 (BAL - 19)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - Setback
 - 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

N

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A TETRA TECH COMPANY

Prepared by: SM Date: 6/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 132, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	30 m	BAL - 19

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

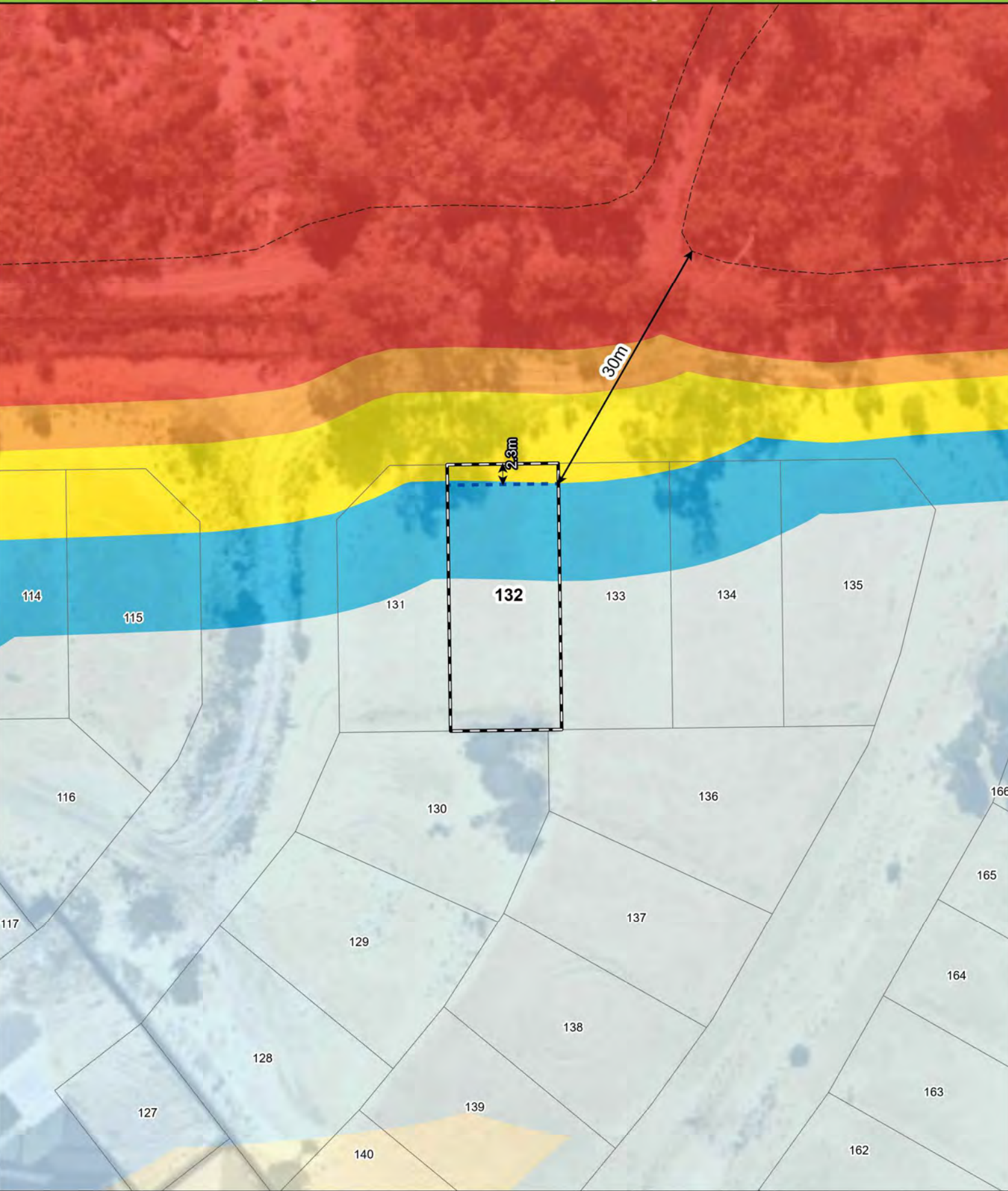
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 132 (BAL - 19)



Legend

- 100m site assessment
- 150m site assessment
- Lot location
- Setback
- 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

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A TETRA TECH COMPANY

Prepared by: SM Date: 6/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 133, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	26 m	BAL - 19

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

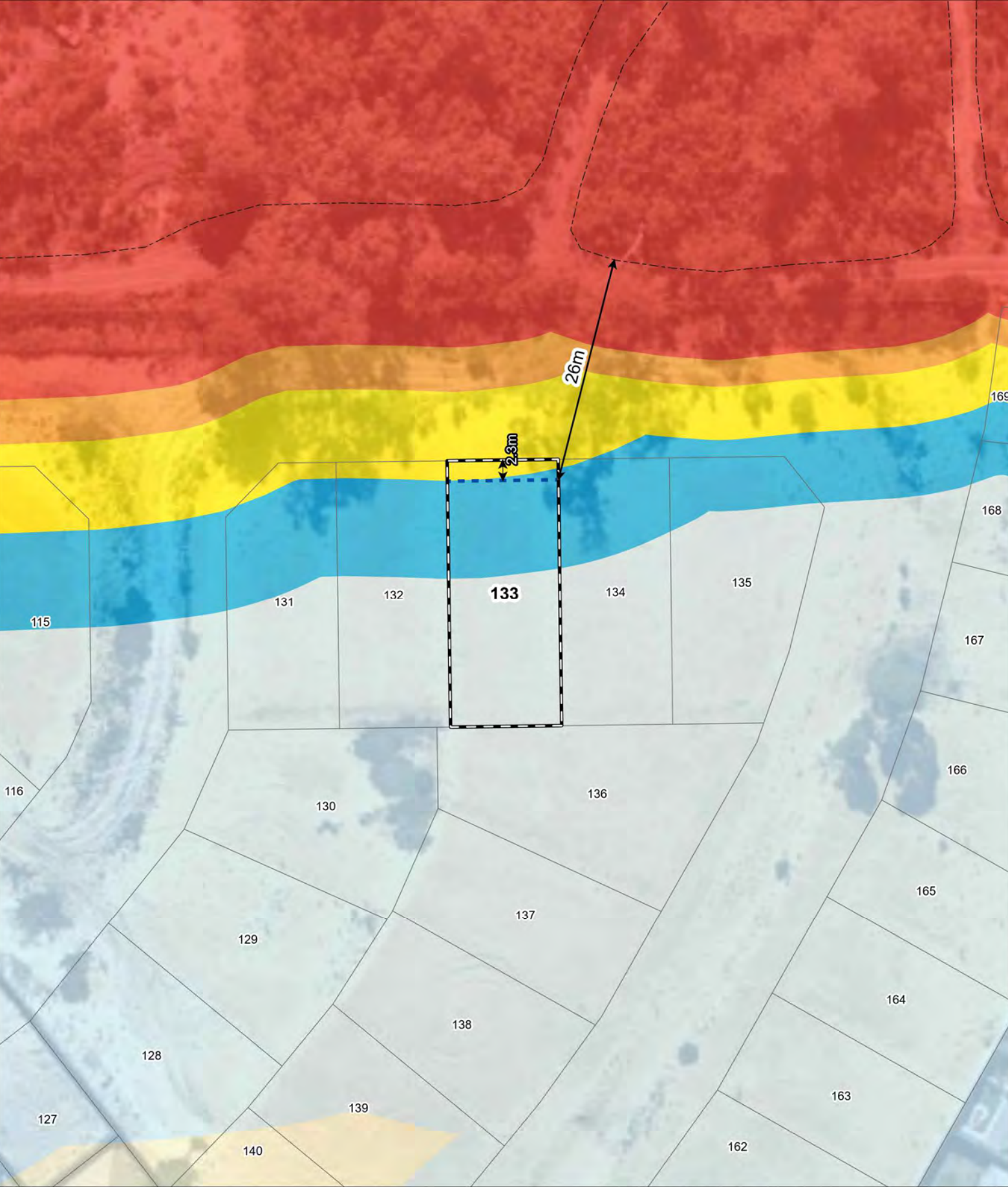
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 133 (BAL - 19)



Legend

- 100m site assessment
- 150m site assessment
- Lot location
- Setback
- 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

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A TETRA TECH COMPANY

Prepared by: SM Date: 6/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 134, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	22 m	BAL - 19

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

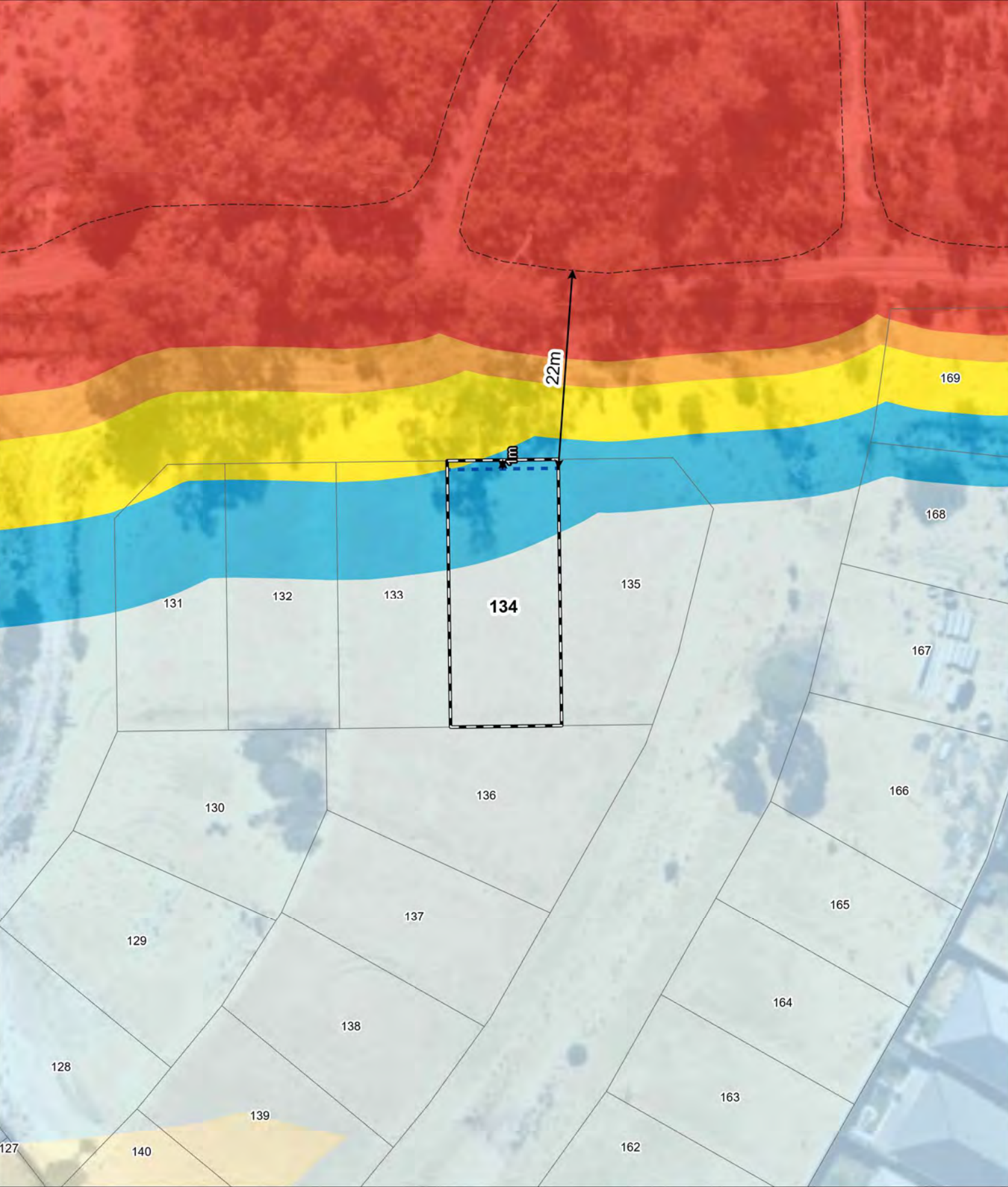
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 134 (BAL - 19)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - Setback
 - 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

N

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A TETRA TECH COMPANY

Prepared by: SM Date: 6/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 135, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	21 m	BAL - 19

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

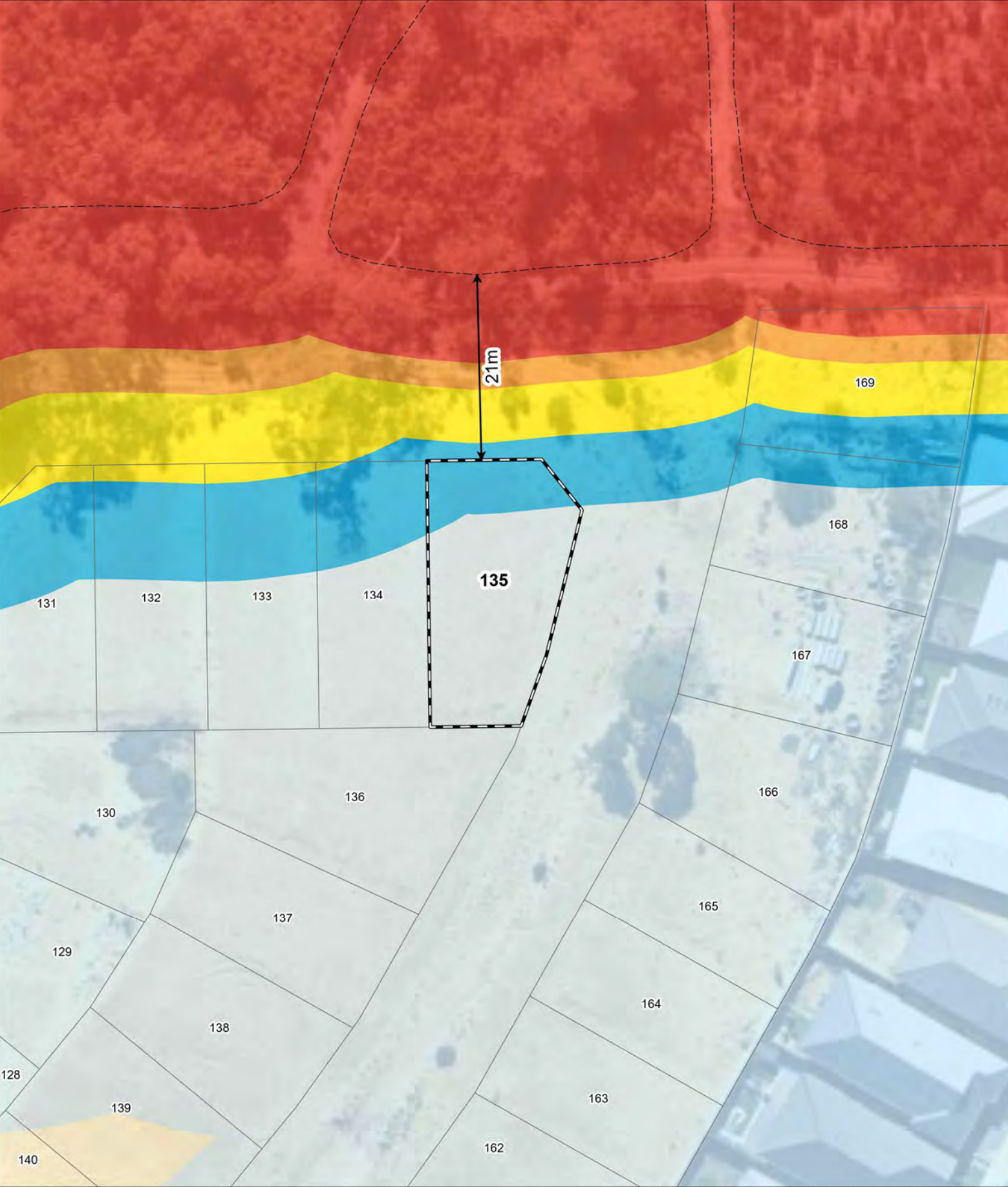
Signature: 

Certificate Date: 06/10/2020



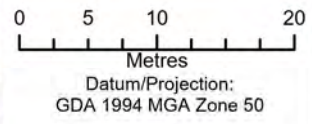
Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 135 (*BAL - 19)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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	



Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 136, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	51 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

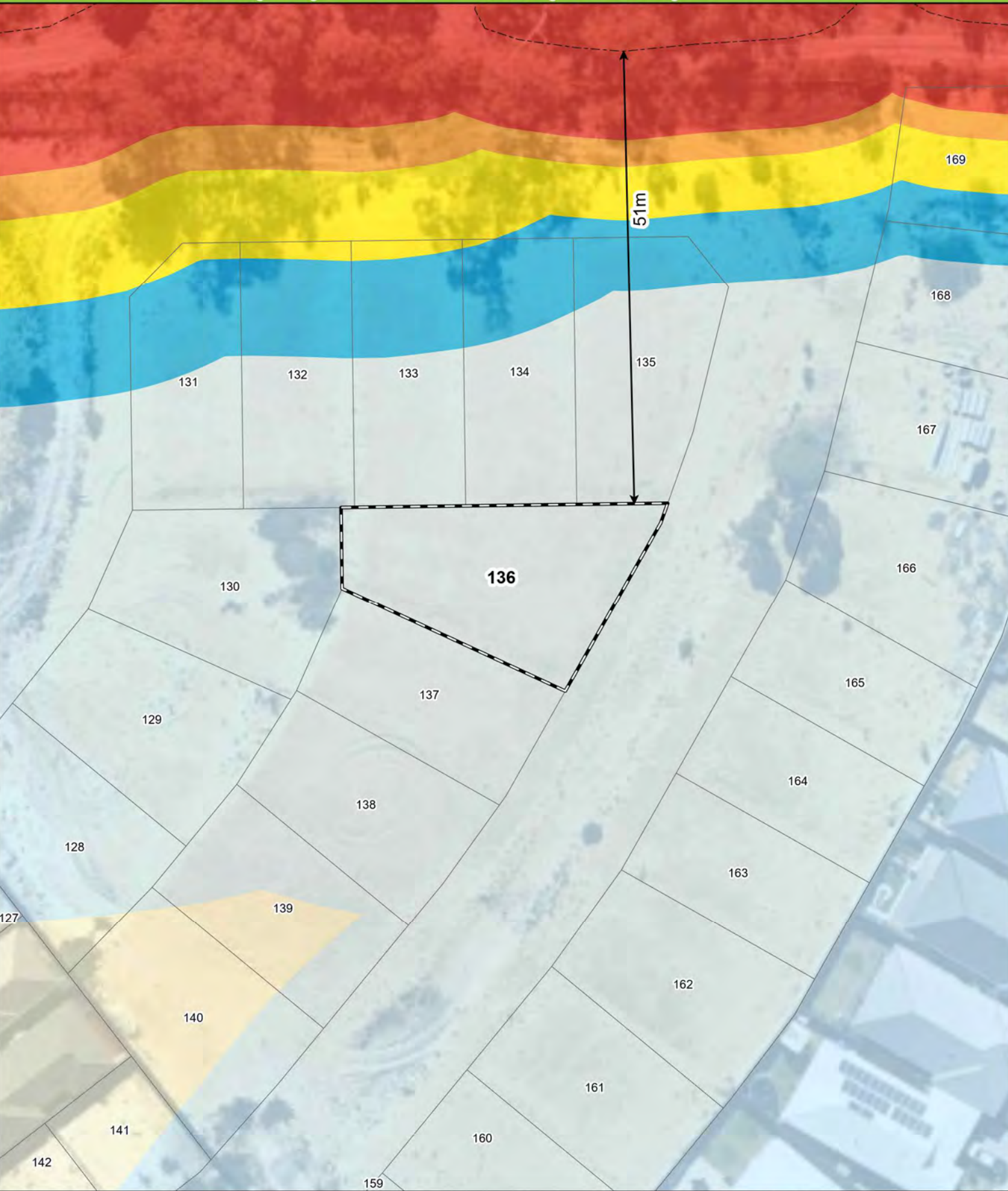
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 136 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 137, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	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

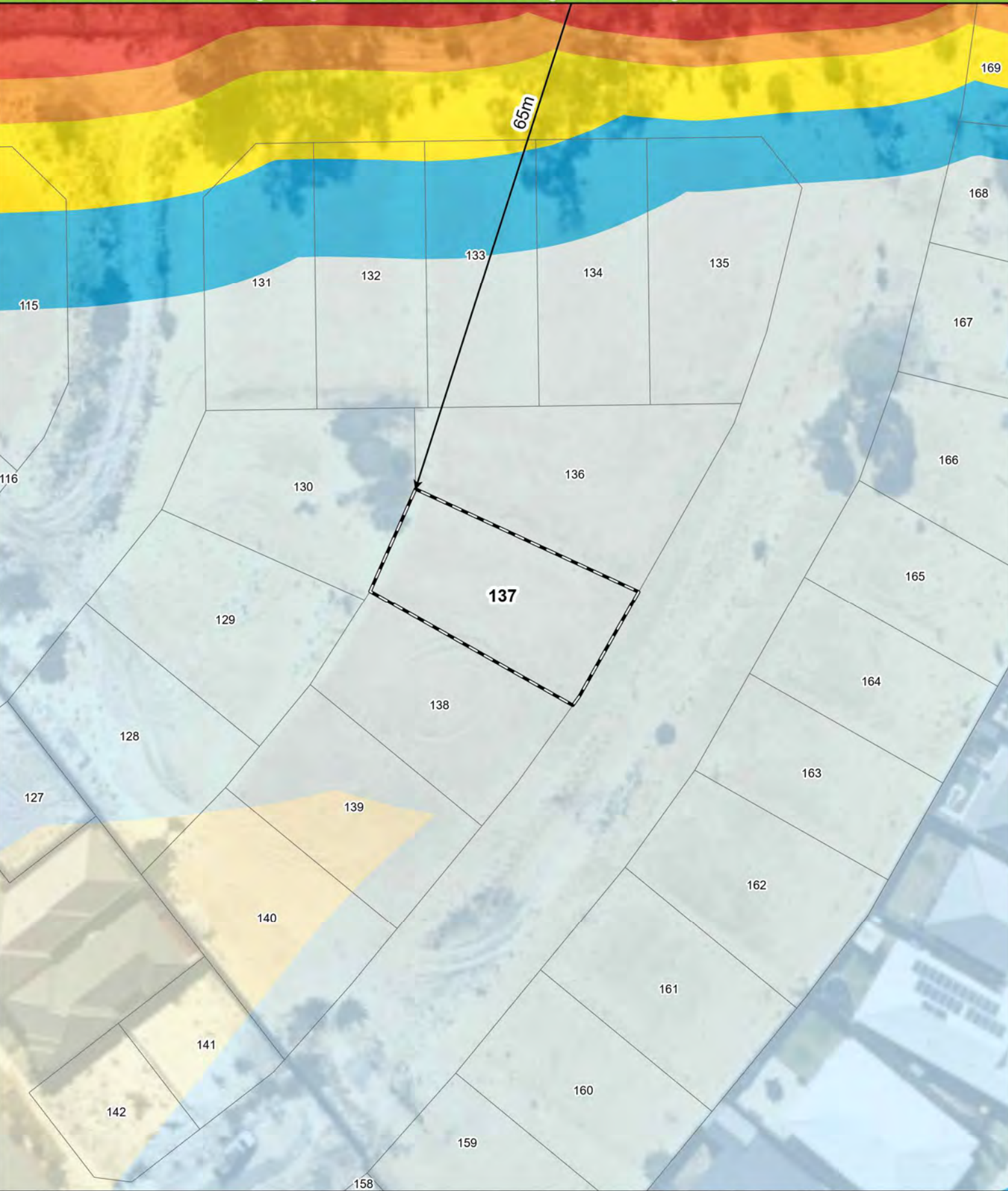
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 137 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

eco logical AUSTRALIA

A TETRA TECH COMPANY

Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 138, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	77 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

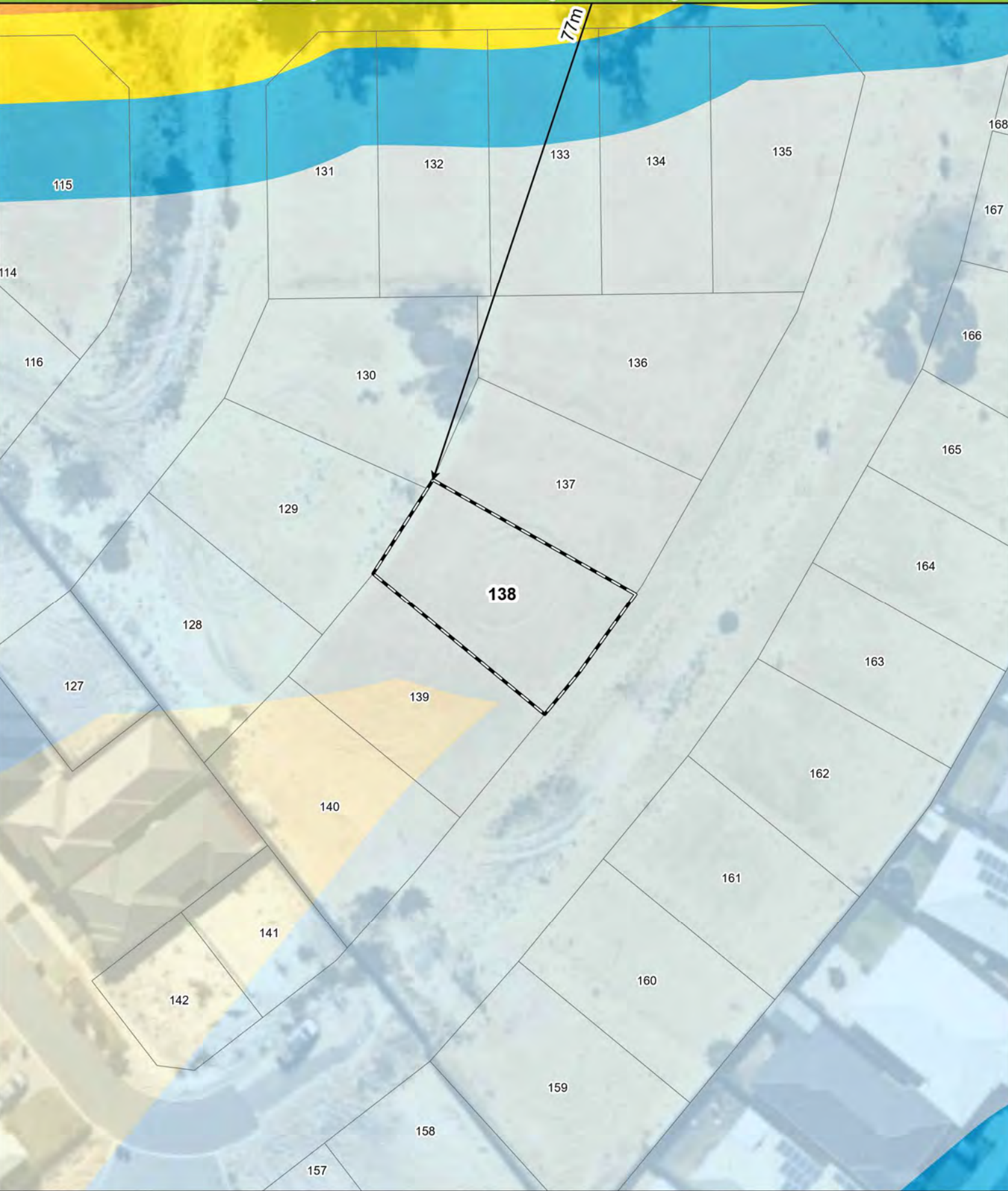
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 138 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 139, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class A forest	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

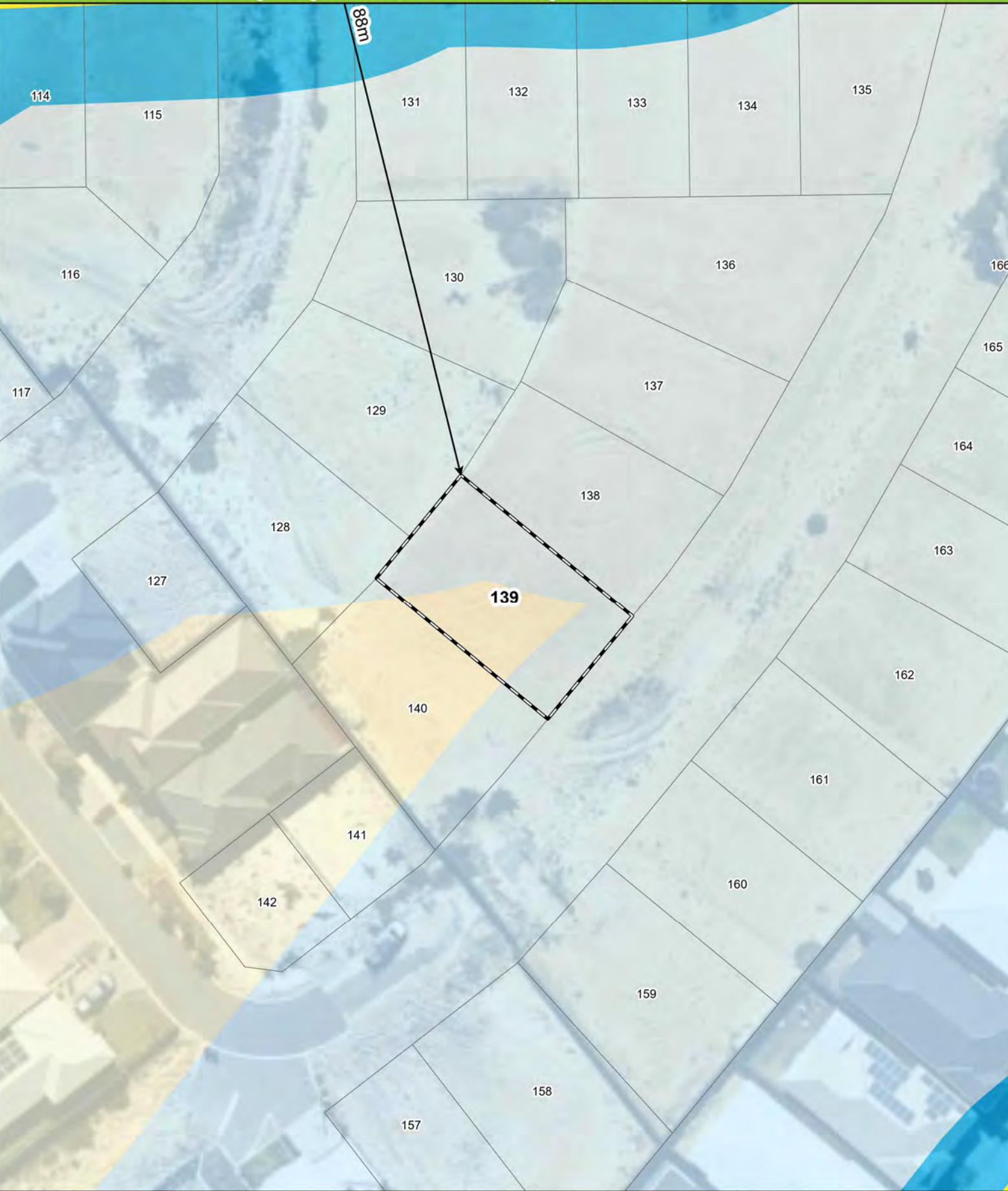
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 139 (*BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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

N

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A TETRA TECH COMPANY

Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 140, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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	93 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: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 140 (*BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 141, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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	94 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: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 141 (*BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 142, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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	96 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: 06/10/2020



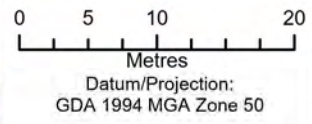
Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 142 (*BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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	



Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 157, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 157 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 158, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 158 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 159, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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

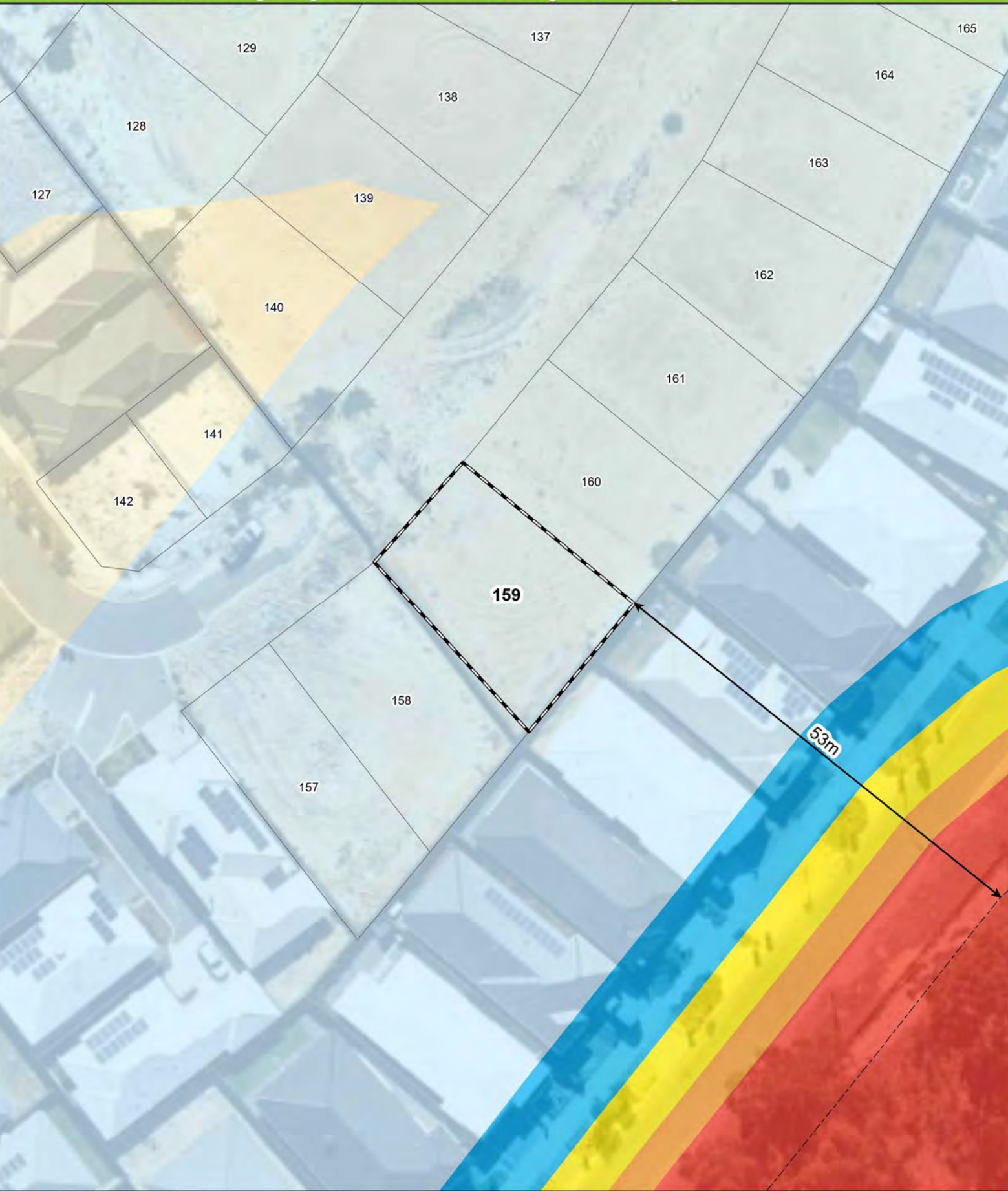
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 159 (BAL - 12.5)



Legend

- 100m site assessment
- 150m site assessment
- Lot location
- 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

N

eco logical
AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 160, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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

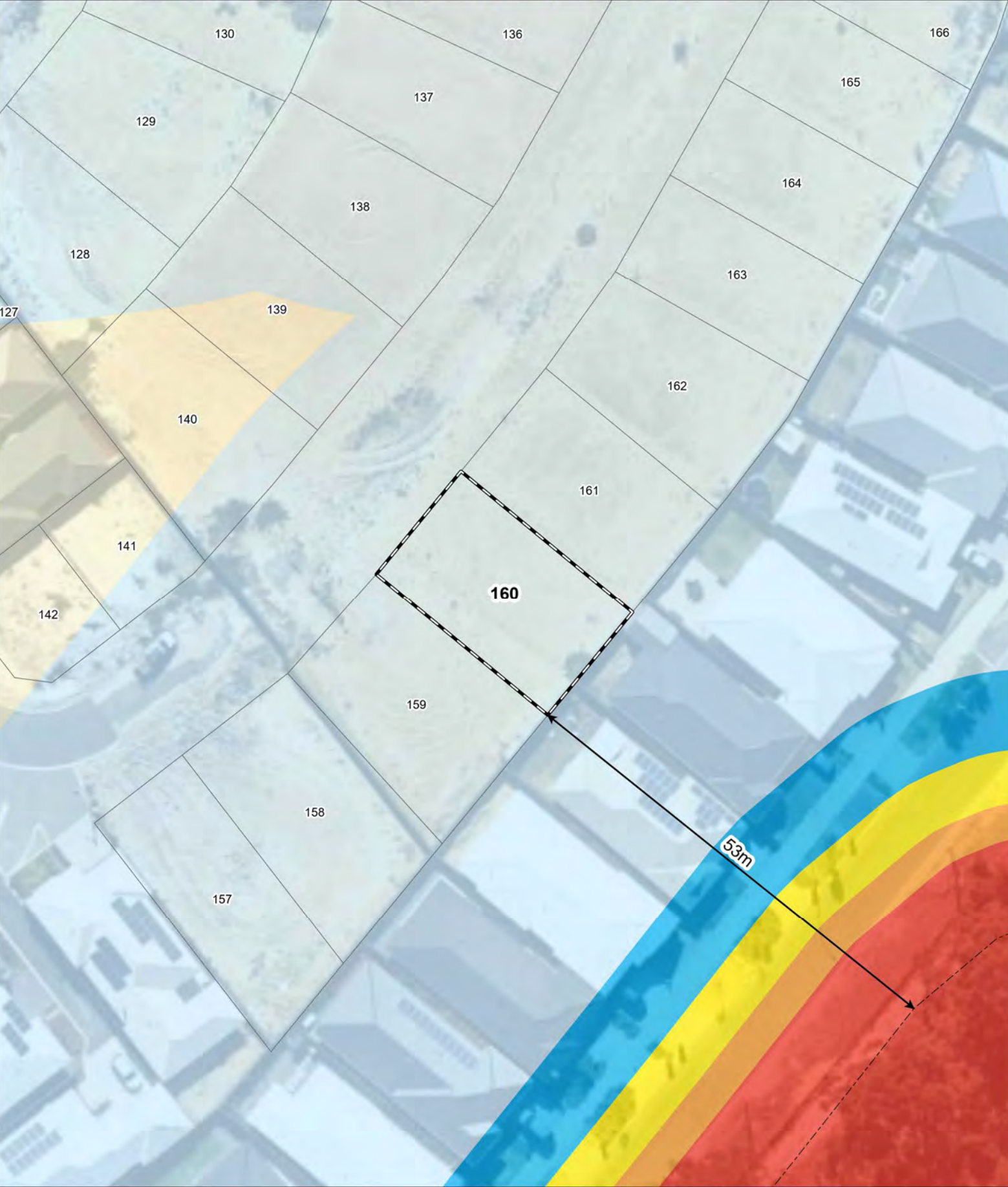
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 160 (BAL - 12.5)



Legend

- 100m site assessment
- 150m site assessment
- Lot location
- 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

N

eco logical AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 161, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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	54 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

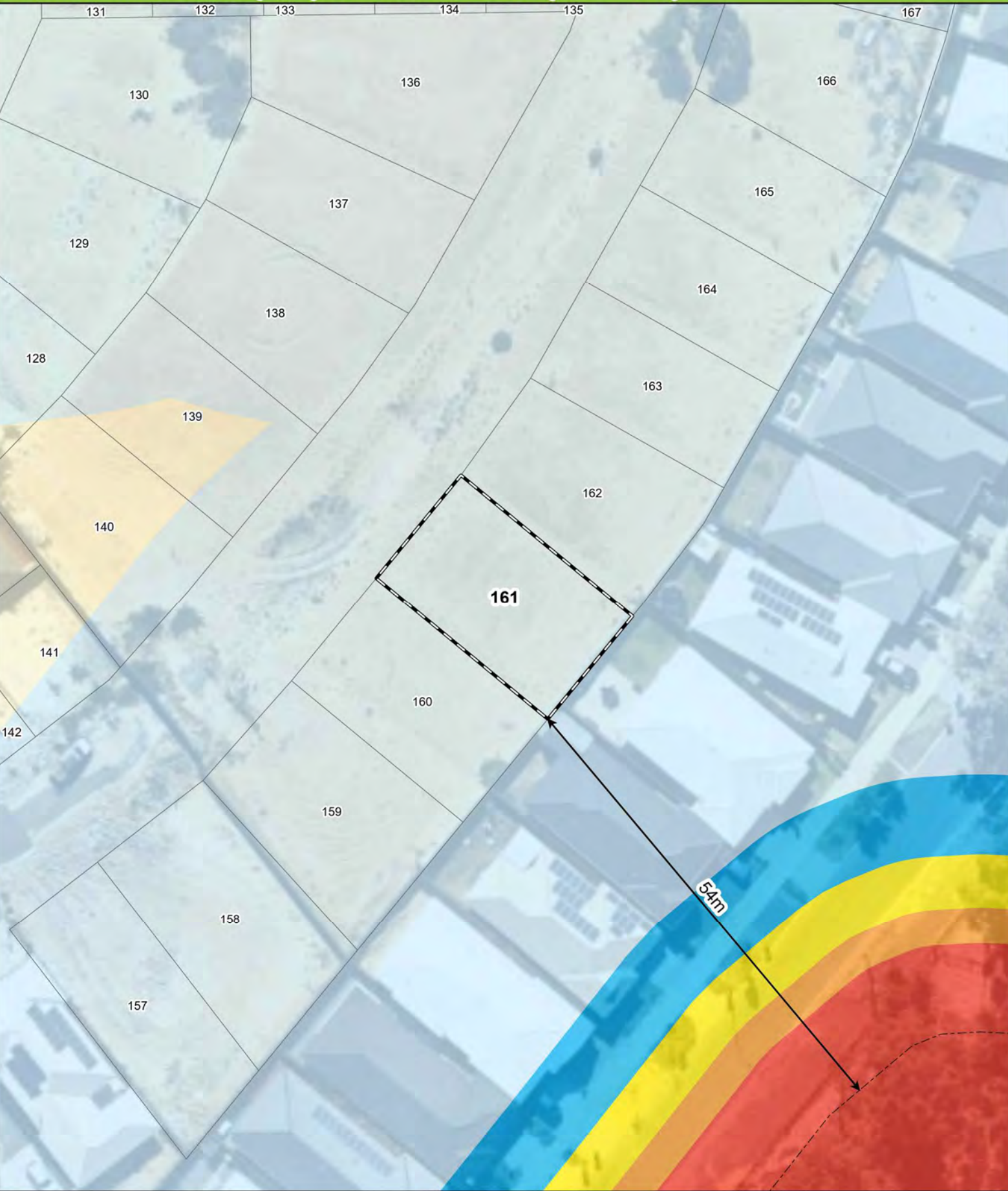
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 161 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

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A TETRA TECH COMPANY

Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 162, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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

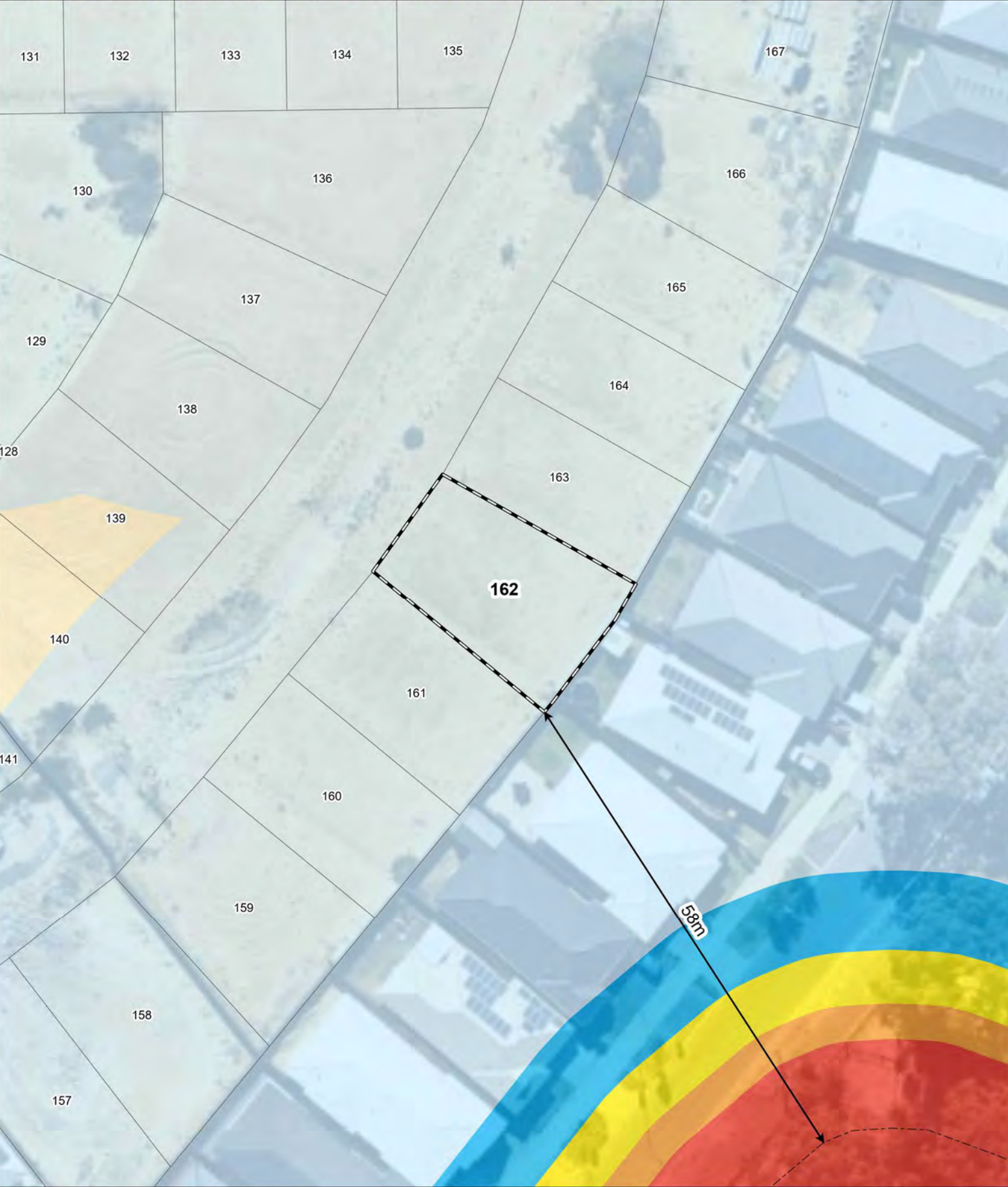
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 162 (BAL - 12.5)



Legend

- 100m site assessment
- 150m site assessment
- Lot location
- 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

N

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 163, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

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	66 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: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 163 (BAL - 12.5)



Legend

- 100m site assessment
- 150m site assessment
- Lot location
- 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

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 164, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	71 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: 06/10/2020



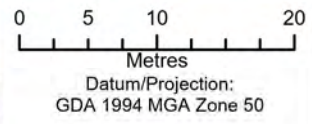
Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 164 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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



Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 165, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	61 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

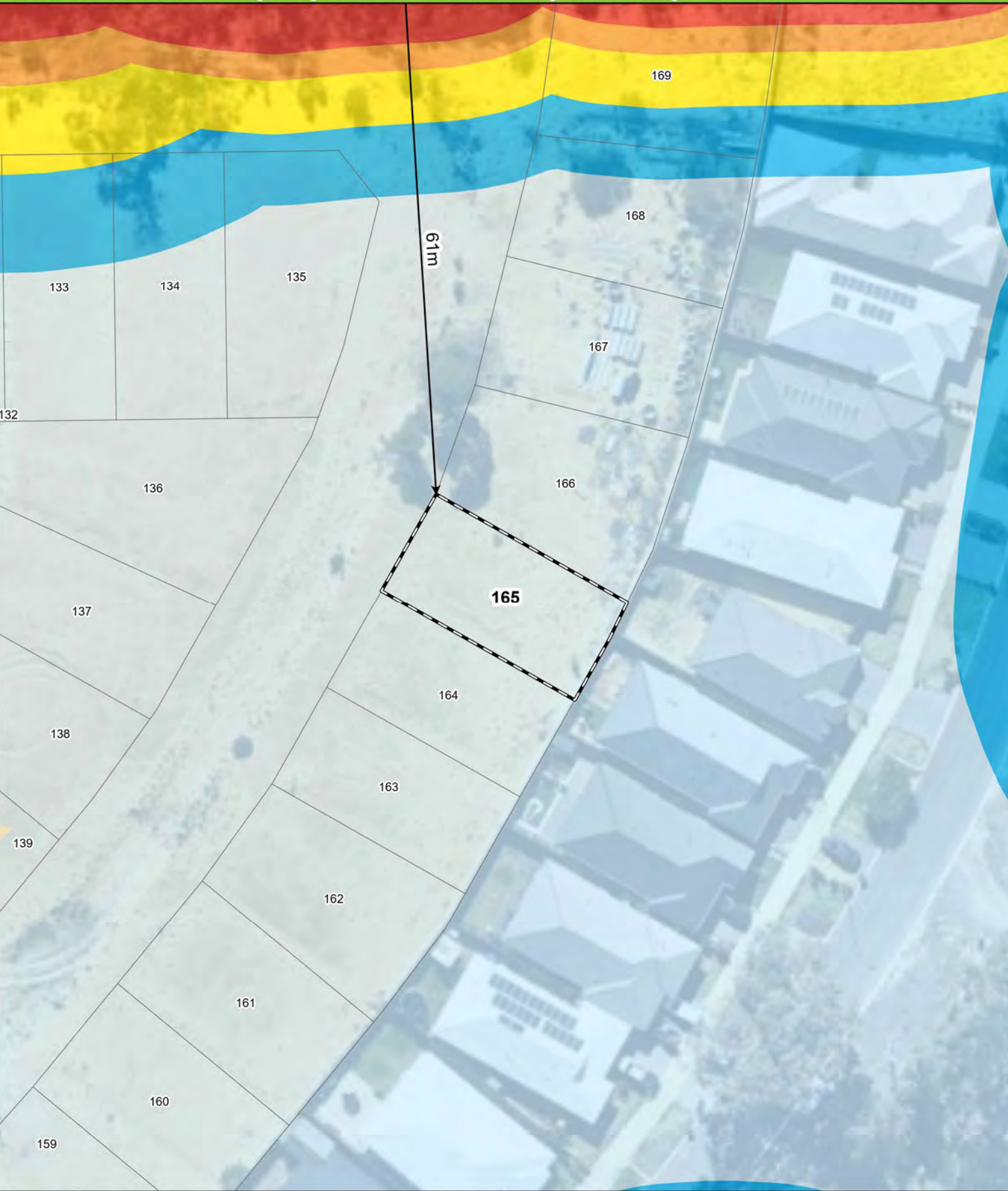
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 165 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

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AUSTRALIA
A TETRA TECH COMPANY

Prepared by: SM Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 166, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	49 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

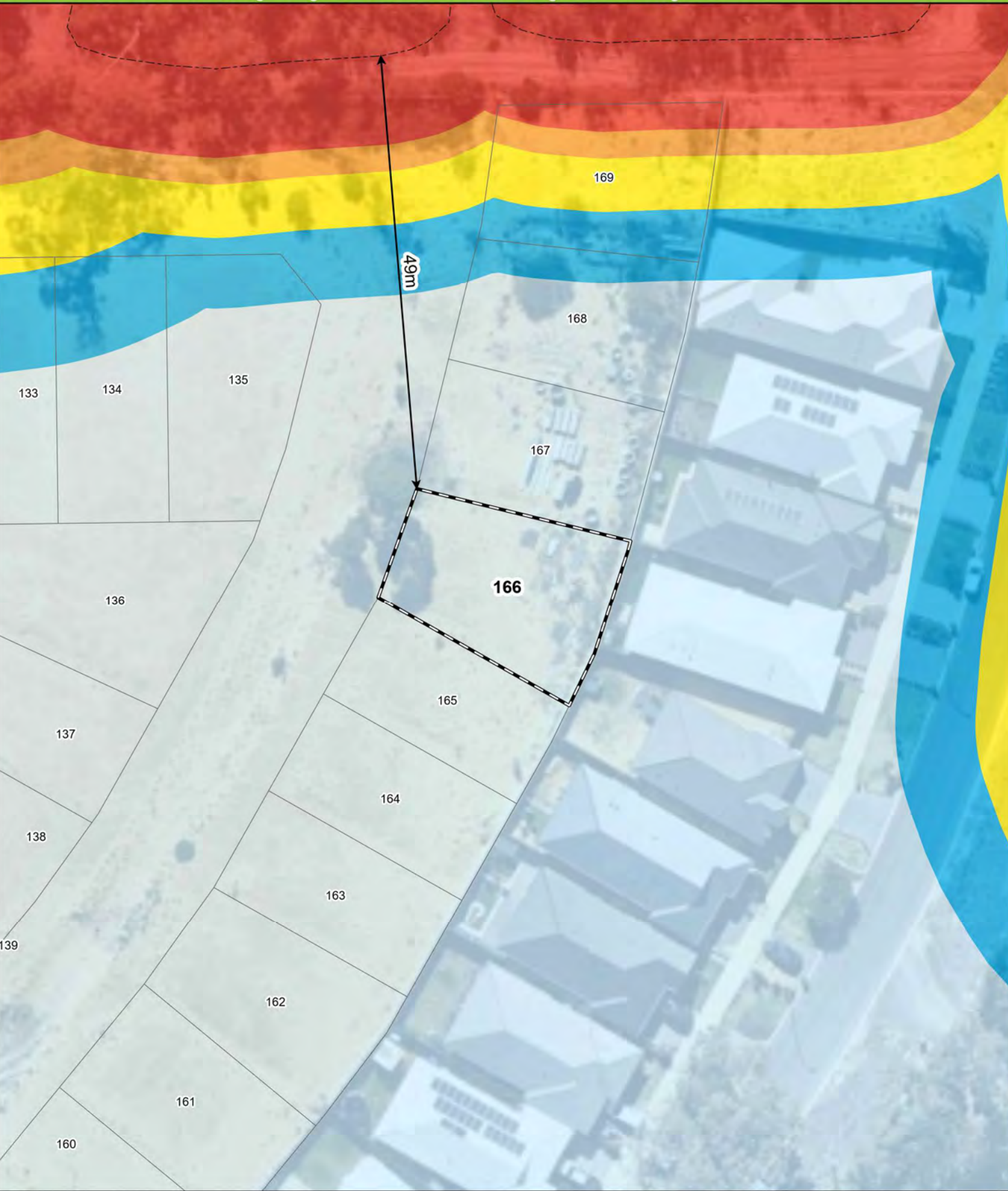
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 166 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

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A TETRA TECH COMPANY

Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 167, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	35 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

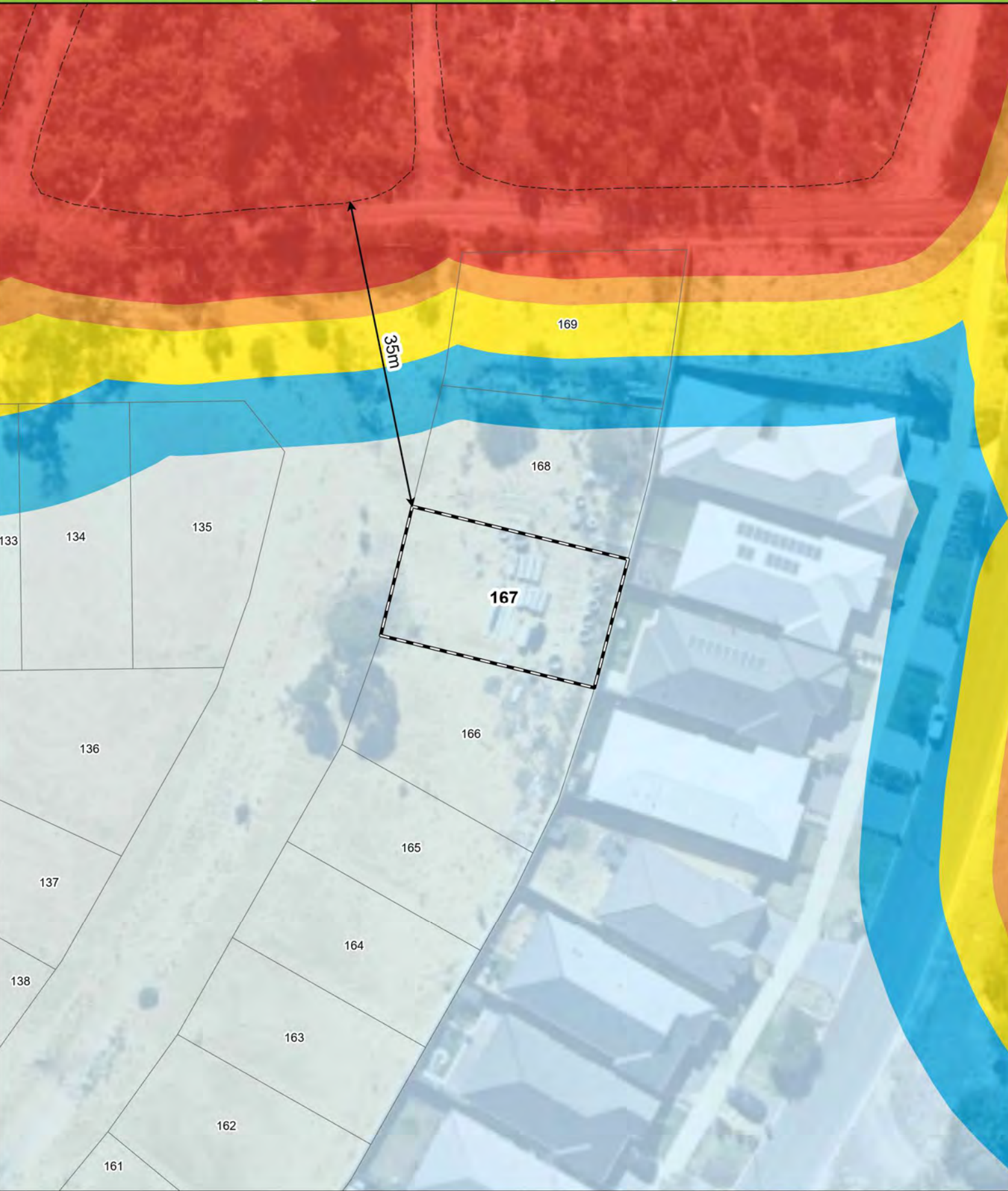
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 167 (BAL - 12.5)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - 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

N

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A TETRA TECH COMPANY

Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 168, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	23 m	BAL - 19

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

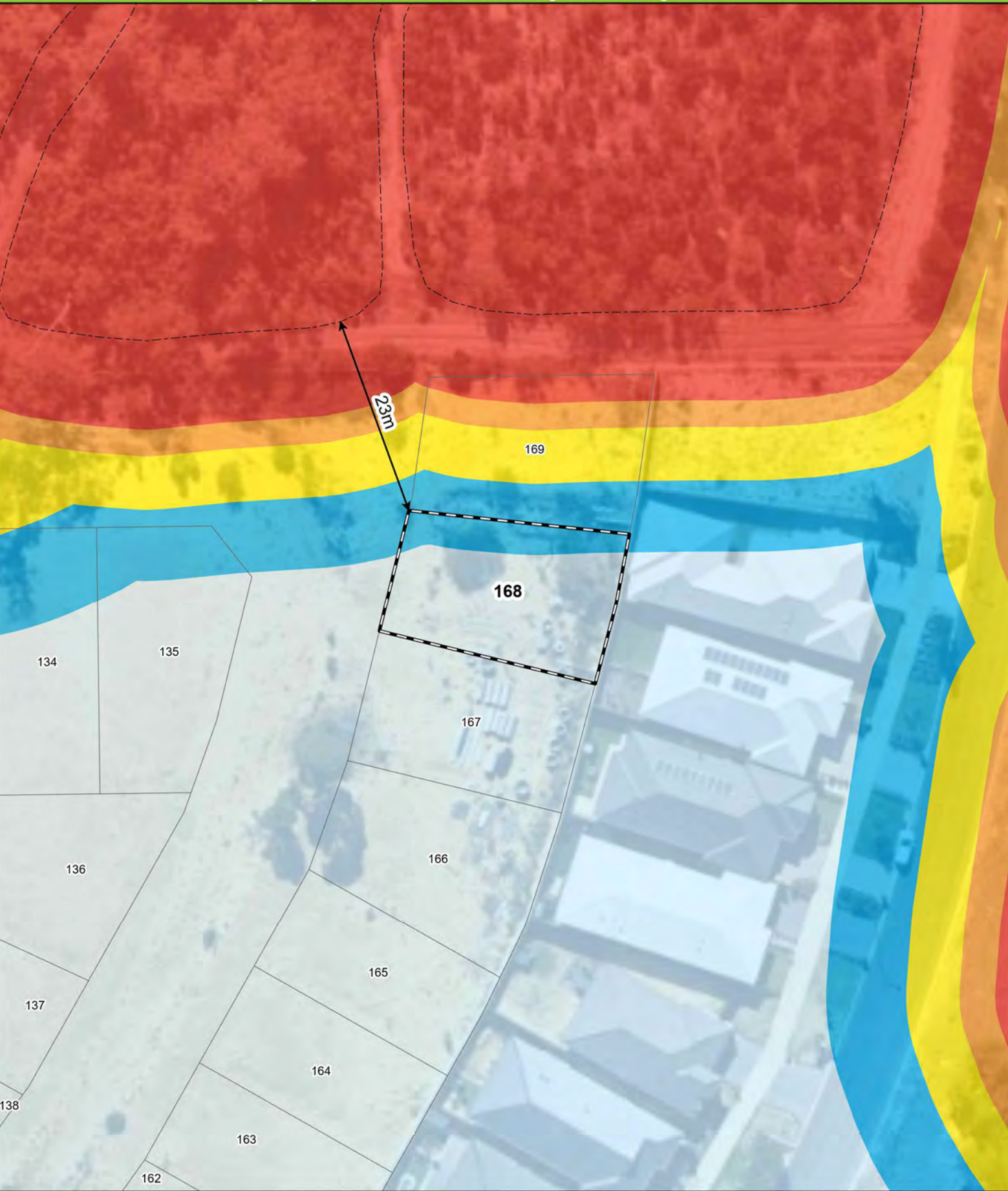
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 168 (*BAL - 19)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location *Intersects multiple BAL contours
 - 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

N

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A TETRA TECH COMPANY

Prepared by: SM

Date: 2/10/2020

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

Site Details

Address:	Lot 169, Stage 4 Living Edge Estate		
Suburb:	Wellard, 6170	State:	WA
Local Government Area:	City of Kwinana		
Use of building	Residential Dwelling	Main BCA class:	Class 1a
Report / Job Number:	20PER-17282	Report Date:	06/10/2020

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D scrub	Upslope / Flat Land	7 m	BAL - 29

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

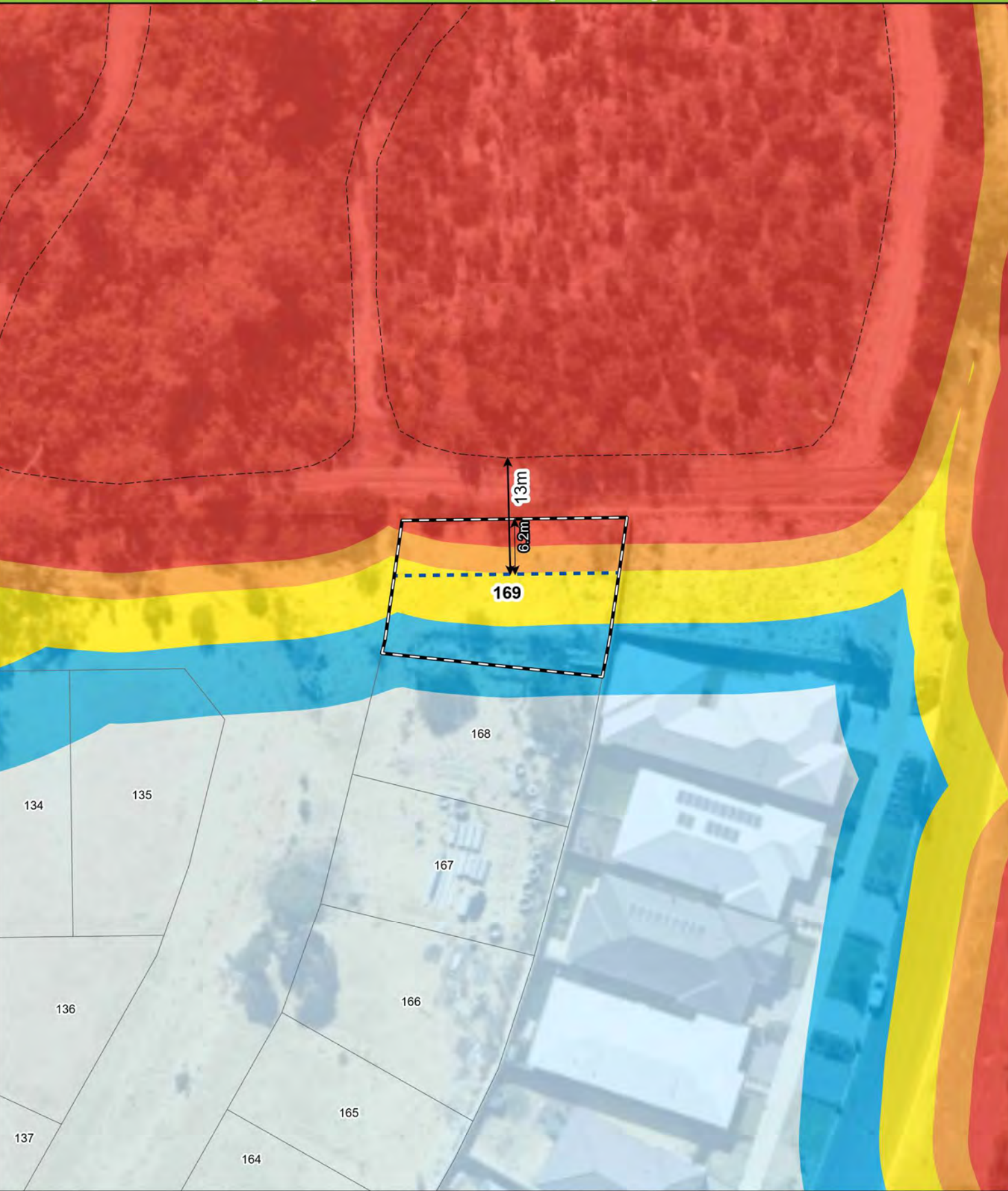
Signature: 

Certificate Date: 06/10/2020



Accreditation No: BPAD 37802
Expiry: December 2020

Bushfire Attack Level (BAL) Contours - Lot 169 (BAL - 29)



- Legend**
- 100m site assessment
 - 150m site assessment
 - Lot location
 - Setback
 - 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

N

eco logical AUSTRALIA

A TETRA TECH COMPANY

Prepared by: SM

Date: 6/10/2020