

BUSHFIRE PLANNING AND DESIGN (BPAD) ACCREDITED PRACTITIONER DETAILS

Name: Madison Smith


Company Details:

BPP Group Pty Ltd t/a Bushfire Prone Planning
 ACN: 39 166 551 784 | ABN: 39 166 551 784

Level 1, 159-161 James Street
 Guildford WA 6055

PO Box 388
 Guildford WA 6935

08 6477 1144 | admin@bushfireprone.com.au

I hereby declare that I am a BPAD accredited bushfire practitioner. 

Accreditation No. BPAD 56399

Signature *Madison Smith*

Date 6 September 2021

Authorised Practitioner Stamp

Reviewed By:	Accreditation	Signature
Kathy Nastov	BPAD 27794	<i>K. Nastov</i>

This report has been prepared by an Accredited BPAD Practitioner using the Simplified Procedure (Method 1) as detailed in Section 2 of AS 3959:2018.

Fire Protection Association Australia as the accrediting body for BPAD accreditation, makes no warranties as to the accuracy of the information provided in the report. All enquiries related to the information and conclusions presented in this report must be made to the practitioner who prepared this report.

Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated report and/or BAL Certificate issued.

Limitation of Liability: The measures contained in this Report, are considered to be minimum requirements and they do not guarantee that a building will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating. This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required bushfire protection measures will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.

All surveys, forecasts, projections and recommendations made in this report associated with the proposed development are made in good faith based on information available to Bushfire Prone Planning at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.

Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents, arising out of the services provided by their consultants.

BAL (Master) Template v12.3

LANDOWNER RESPONSIBILITIES

Construction Requirements: The bushfire construction standard to be applied to the assessed building works must be that which corresponds to the determined BAL in this assessment report and are established by AS 3959:2018 or the NASH Standard (refer to additional landowner information at the end of this report).

Comply with the Landowner Responsibilities Established by the Bushfire Management Plan (BMP): If the property (lot) is subject to an approved BMP (refer to the land title), all responsibilities created must be complied with. This will include the management of vegetation within the lot to a minimal fuel, low threat state to create an asset protection zone (APZ). The required dimensions of the APZ are established by either those corresponding to the determined BAL established by this BAL Assessment Report or those established by the Firebreak and Fuel Load Notice, whichever is greater (refer to additional landowner information at the end of this report).

Comply with the Local Government Firebreak & Fuel Load Notice: The requirement exists to comply with the relevant local government's Firebreak & Fuel Load Notice created under Section 33 of the Bushfires Act 1954 and issued annually to landowners (and available on their website).

TABLE OF CONTENTS

VEGETATION ASSESSMENT AND CLASSIFICATION6

RELEVANT FIRE DANGER INDEX..... 10

POTENTIAL BUSHFIRE IMPACTS –SUMMARY CALCULATION INPUT DATA (AS 3959:2018 METHOD 1 AND METHOD 2) AND BUSHFIRE ATTACK LEVELS (BAL)..... 11

ASSESSMENT RESULT - THE BUSHFIRE ATTACK LEVEL ESTABLISHING BUSHFIRE CONSTRUCTION REQUIREMENTS..... 12

REDUCTION IN CONSTRUCTION REQUIREMENTS DUE TO SHIELDING 12

PROVISION OF A CONDITIONAL BUSHFIRE ATTACK LEVEL (BAL)..... 13

ADDITIONAL LANDOWNER INFORMATION: EXPLANATION OF BUSHFIRE ATTACK LEVELS AND REFERENCES FOR CONSTRUCTION REQUIREMENTS..... 15

ADDITIONAL LANDOWNER INFORMATION: MAINTAINING THE ASSET PROTECTION ZONE (APZ) 16

LIST OF FIGURES

Site Plan / Drawings - relied upon to determine the bushfire attack level4

Site Assessment Map5

Site Assessment Map: Illustrating the establishment of the APZ corresponding to the conditional BAL 14

Site Plan / Drawings - relied upon to determine the bushfire attack level

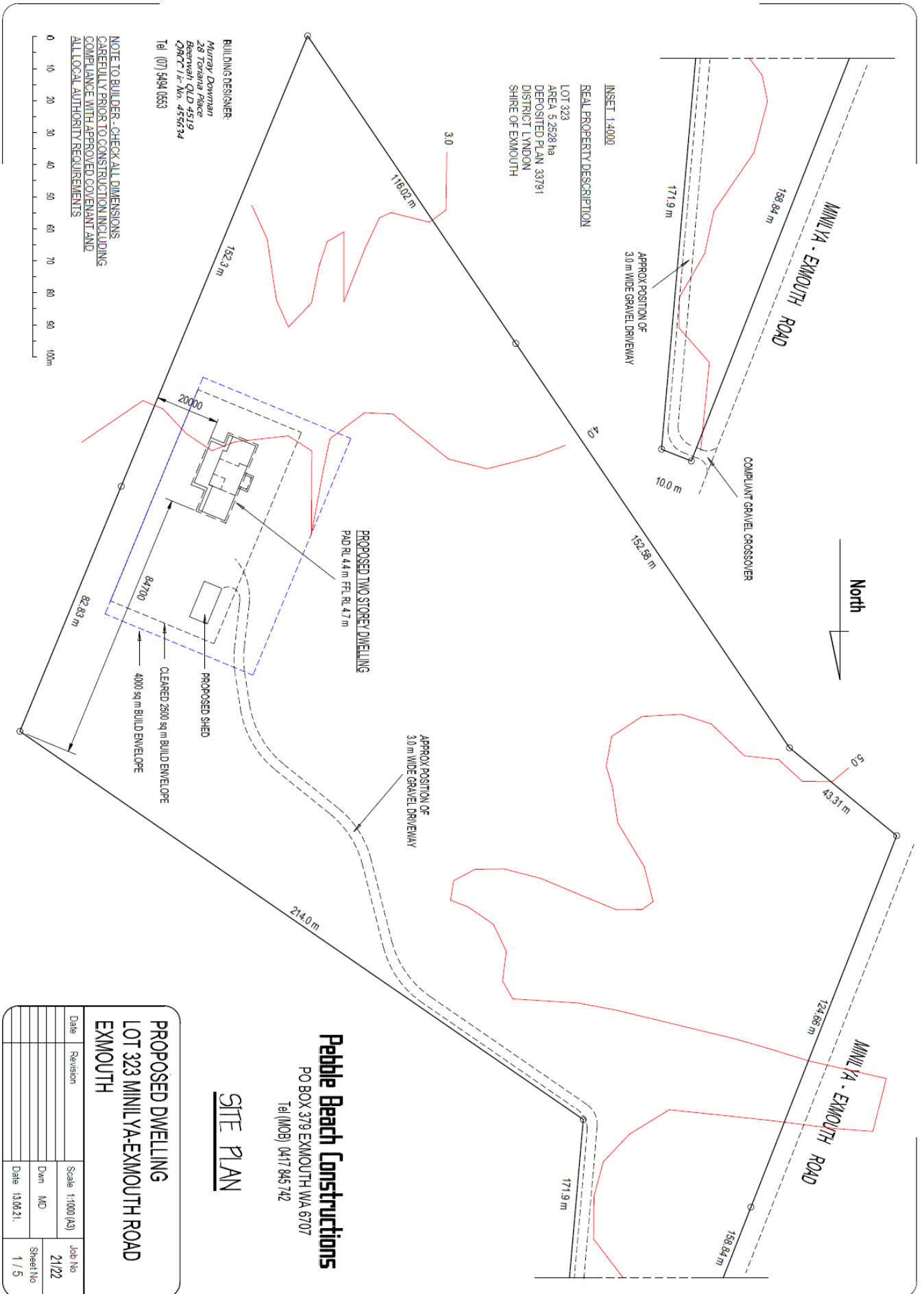
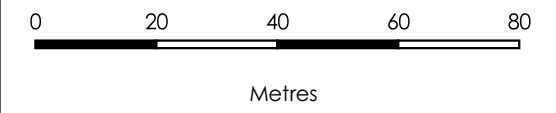


Figure 1
Site Assessment Map

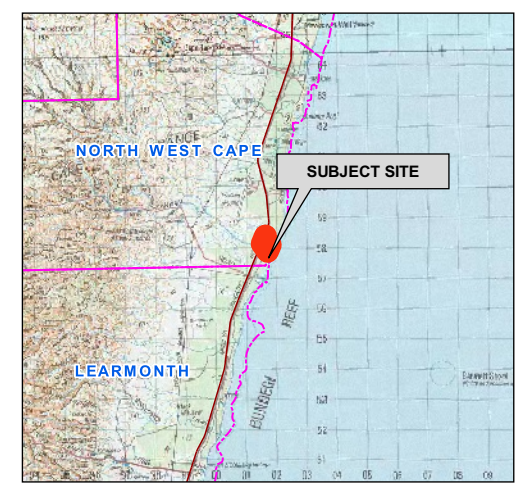
Lot 323 on Plan 33791, Area: 5.2528 ha
 Minilya-Exmouth Road
 NORTH WEST CAPE 6707
 SHIRE OF EXMOUTH

----- **LEGEND** -----

- Subject Site
 - Other Lots
 - 150m Assessment Area
 - 100m Assessment Area
 - Vegetation Distance (m)
 - Photo & Direction
- Building Areas**
- Building Envelope
 - Cleared Square
- Proposed Development**
- Residential Dwelling
 - Shed
 - Verandah
- Classified Vegetation**
- Class G - Grassland
 - Exclusion 2.2.3.2



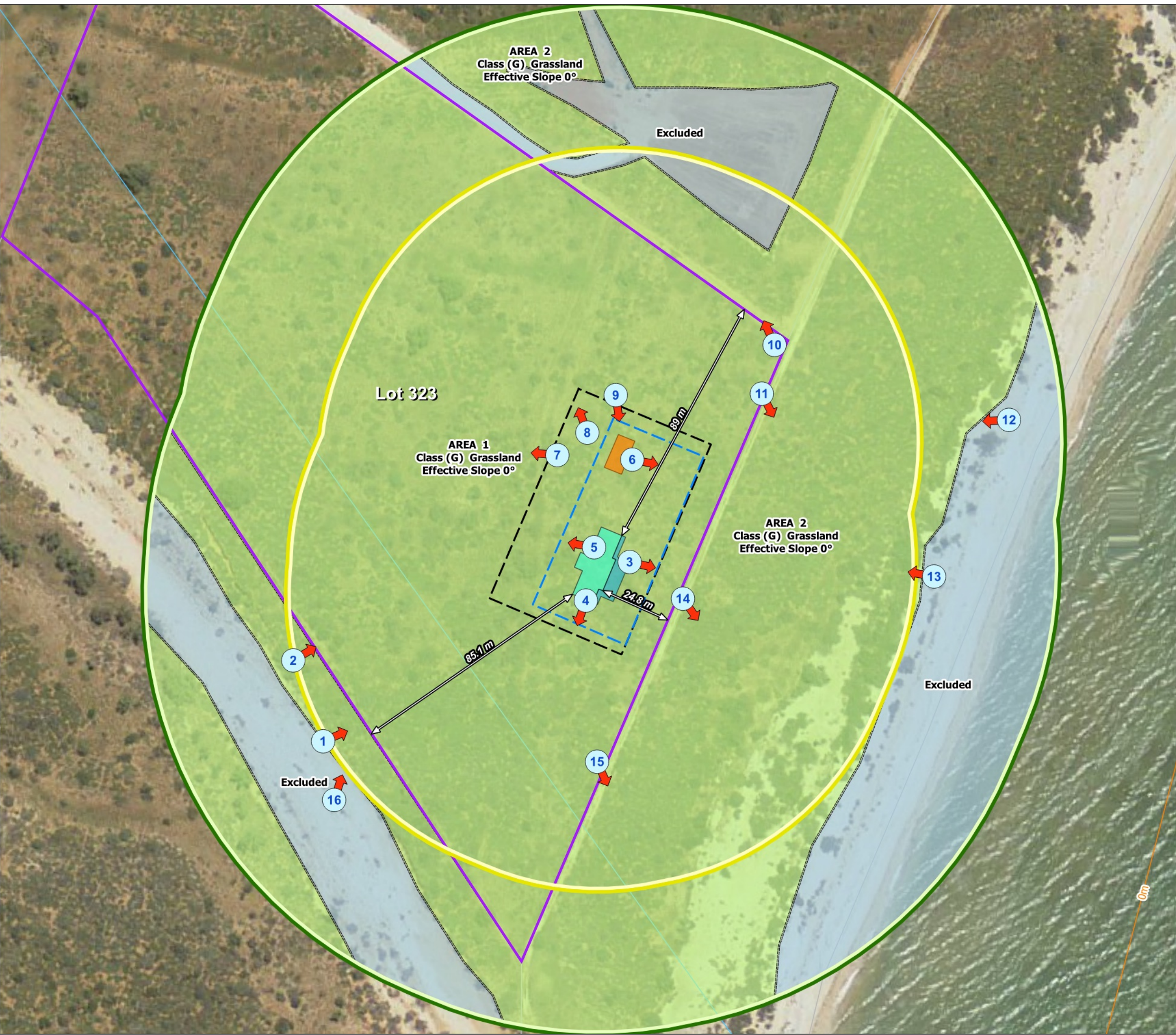
----- **LOCALITY** -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator Units: Metre
 Map by: Madison Smith 06-09-2021
 SCALE (A3): 1 : 1250



Disclaimer and Limitation: This map has been prepared for bushfire management planning purposes only. All depicted areas, contours and any dimensions shown are subject to survey. Bushfire Prone Planning does not guarantee that this map is without flaw of any kind and disclaims all liability for any errors, loss or other consequence which may arise from relying on any information depicted.

VEGETATION ASSESSMENT AND CLASSIFICATION

In accordance with AS 3959:2018 Clause 2.2.3, all vegetation within 100 metres of the site ("the part of the allotment of land on which a building stands or is to be erected") is assessed and classified, with the influence of vegetation more than 100m from the site being considered in those assessments. Classification will be guided by the Visual Guide for Bushfire Risk Assessment in WA. (DoP February 2016) and any FPA Australia practice notes.

VEGETATION AREA 1

AS 3959:2018 Vegetation Classification Applied:	Class G Grassland
Vegetation Types Present:	Low open shrubland G-19 Tussock grassland G-22
Description/Justification:	Open tall unmanaged mixed species of grass with sparse mixed species acacia <2 m in height, foliage cover <5%.
Post Development Assumptions:	Vegetation is onsite and can be managed or removed by the subject site landowner.



Photo ID: 1







Photo ID: 2




Photo ID: 3

Photo ID: 4

<p>Photo ID: 5</p>	<p>Photo ID: 6</p>
<p>Photo ID: 7</p>	<p>Photo ID: 8</p>
<p>Photo ID: 9</p>	<p>Photo ID: -</p>

VEGETATION AREA 2	
AS 3959:2018 Vegetation Classification Applied:	Class G Grassland
Vegetation Types Present:	Tussock grassland G-22 Low open shrubland G-19
Description/Justification:	Open tall unmanaged mixed species of grass with sparse mixed species acacia <2 m in height, foliage cover <5%.
Post Development Assumptions:	Vegetation is offsite and cannot be managed by the subject site landowner. Vegetation is classified as worst-case scenario.
<div style="background-color: #000080; color: white; padding: 2px; font-size: 8px;"> DIRECTION 337 deg(T) 22.05683°S ACCURACY 5 m 114.11083°E DATUM WGS84 </div>  <div style="background-color: #000080; color: white; padding: 2px; font-size: 8px; text-align: right;"> Taken With Context Camera 2021-09-02 11:47:04+08:00 </div>	<div style="background-color: #000080; color: white; padding: 2px; font-size: 8px;"> DIRECTION 153 deg(T) 22.05689°S ACCURACY 5 m 114.11082°E DATUM WGS84 </div>  <div style="background-color: #000080; color: white; padding: 2px; font-size: 8px; text-align: right;"> Taken With Context Camera 2021-09-02 11:49:00+08:00 </div>
Photo ID: 10	Photo ID: 11
<div style="background-color: #000080; color: white; padding: 2px; font-size: 8px;"> DIRECTION 267 deg(T) 22.05679°S ACCURACY 12 m 114.11153°E DATUM WGS84 </div>  <div style="background-color: #000080; color: white; padding: 2px; font-size: 8px; text-align: right;"> Taken With Context Camera 2021-09-02 11:52:59+08:00 </div>	<div style="background-color: #000080; color: white; padding: 2px; font-size: 8px;"> Taken With 2021-09-02 11:50:57+08:00 Location: 22.05694°S 114.11025°E ± 5 m WGS84 Altitude: 711 ± 3 m Orientation: 356 deg(T) Software: Ubuntu Linux (Open AS 6707-01) </div>  <div style="background-color: #000080; color: white; padding: 2px; font-size: 8px; text-align: right;"> Taken With Context Camera </div>
Photo ID: 12	Photo ID: 13
<div style="background-color: #000080; color: white; padding: 2px; font-size: 8px;"> Taken With 2021-09-02 11:50:57+08:00 Location: 22.05694°S 114.11025°E ± 5 m WGS84 Altitude: 711 ± 3 m Orientation: 356 deg(T) Software: Ubuntu Linux (Open AS 6707-01) </div>  <div style="background-color: #000080; color: white; padding: 2px; font-size: 8px; text-align: right;"> Taken With Context Camera </div>	<div style="background-color: #000080; color: white; padding: 2px; font-size: 8px;"> Taken With 2021-09-02 11:50:57+08:00 Location: 22.05694°S 114.11025°E ± 5 m WGS84 Altitude: 711 ± 3 m Orientation: 356 deg(T) Software: Ubuntu Linux (Open AS 6707-01) </div>  <div style="background-color: #000080; color: white; padding: 2px; font-size: 8px; text-align: right;"> Taken With Context Camera </div>
Photo ID: 14	Photo ID: 15

VEGETATION AREA 4	
AS 3959:2018 Vegetation Classification Applied:	Excluded as per Section 2.2.3.2 (e)
Vegetation Types Present:	Non-Vegetated Area
Description/Justification:	Cleared areas consisting of sand, rocks, and pebbles (beach), firebreaks, and walkways. Non-vegetated areas also include the Indian Ocean (Pebble Beach Bay).
Post Development Assumptions:	It can be reasonably expected that non-vegetates areas remain in a low threat state in perpetuity.
	<div style="display: flex; align-items: center;"> <div style="font-size: 8px; margin-right: 5px;"> DATE/TIME: 2024/06/04 10:00:00 LOCATION: 35.358113, 149.114121 4 12 1 0059 SNAPSHOT: 5 1 2 1 DEPTH: 10 0000 ORIPACK: 4000 1500 300 10 000 01 </div>  </div>
	Photo ID: 16

RELEVANT FIRE DANGER INDEX

The fire danger index (FDI) for this site has been determined in accordance with AS 3959:2018 Table 2.1 or otherwise determined in accordance with a jurisdictional variation applicable to the site.

The vegetation separation distances that will correspond to each Bushfire Attack Level (BAL) when Method 1 BAL determination methodology is applied, are established in Tables 2.4 to 2.7 (as associated with each FDI).

FDI 40 (Table 2.7) FDI 50 (Table 2.6) FDI 80 (Table 2.5) FDI 100 (Table 2.4)

POTENTIAL BUSHFIRE IMPACTS –SUMMARY CALCULATION INPUT DATA (AS 3959:2018 METHOD 1 AND METHOD 2) AND BUSHFIRE ATTACK LEVELS (BAL)											
Existing/Proposed Building (Works) and/or Use	Vegetation Area	Method 1 and 2			Method 1		Method 2				Calculated Bushfire Attack Level
		Vegetation Classification	Separation Distance (metres)	Effective Slope Under Classified Vegetation			Site Slope (degrees)	EOR (metres)	Flame Width (metres)	Flame Temp (deg K)	
				Measured (degrees)	Applied (degree range)	Applied (degrees)					
Proposed residential dwelling	1	Class G Grassland	0	Flat 0	Upslope or flat 0	-	-	-	-	-	BAL-FZ
	2	Class G Grassland	24.8	Flat 0	Upslope or flat 0	-	-	-	-	-	BAL-12.5
	3	Excluded AS3959:2018 2.2.3.2 (e)	-	N/A	N/A	-	-	-	-	-	BAL-LOW

ASSESSMENT RESULT - THE BUSHFIRE ATTACK LEVEL ESTABLISHING BUSHFIRE CONSTRUCTION REQUIREMENTS

In accordance with clause 2.2.6 of AS 3959:2018 and the application of the above BAL analysis, the highest assessed BAL will apply to each entire building works - excepting where an elevation is considered to be shielded (see below).

The BAL will be considered as '**Determined**', and a BAL Certificate can be issued, if the design and position of the proposed building works on the lot is known and there is no requirement for additional vegetation to be modified or cleared – as this establishes the vegetation separation distance that will exist in perpetuity.

The BAL will be considered as '**Indicative**' (conditional) if the above condition cannot be met. The proposed building works and/or use will be subject to meeting certain conditions (established below if applicable) before the BAL can be considered determined and a BAL Certificate issued. The single exception to this condition is when the proposed works of any dimension can be positioned anywhere on a proposed lot (within R-Code building setbacks) or within a defined building envelope, and always remain subject to the same BAL, regardless of the ongoing existence of existing classified vegetation either onsite or offsite.

Existing/Proposed Building (Works) and/or Use	Proposed residential dwelling	DETERMINED BUSHFIRE ATTACK LEVEL	BAL-FZ
---	-------------------------------	----------------------------------	--------

REDUCTION IN CONSTRUCTION REQUIREMENTS DUE TO SHIELDING

In accordance with AS 3959:2018 Clause 3.5, where an elevation is not exposed to the source of bushfire attack, then the construction requirements for that elevation (excluding subfloors and roofs), can reduce to the next lower BAL, but not below BAL-12.5.

Existing/Proposed Building (Works) and/or Use	Proposed residential dwelling	The shielding provisions cannot be applied.
---	-------------------------------	---

Note: The proposed shed is exempt from requiring to be constructed to a determined BAL rating.

AS3959 – 2018 s3.2.3 Adjacent structures on the subject allotment

Where any garage, carport, or similar roofed structure on the subject allotment is not attached to a building required to conform with this Standard, that structure shall conform with the construction requirements of this Standard.

Alternatively, the adjacent structure shall be separated from the subject building by one of the following:

- a) A distance of not less than 6m from the building required to conform with this Standard. This distance is measured as any of the horizontal straight lines from the adjacent structure to the subject building

PROVISION OF A CONDITIONAL BUSHFIRE ATTACK LEVEL (BAL)

The assessments conducted to produce this report have determined that by meeting the following conditions, it is possible to achieve a lower Bushfire Attack Level.

Conditions to be Met:

1. Modify relevant areas(s) of classified vegetation to enable justifiable reclassification to a lower threat classification.
2. Establish a larger Asset Protection Zone (APZ) by increasing the separation distances between the subject building works and the classified vegetation. It has been determined that these distances can potentially be achieved through the modified design/location of any proposed building works and/or modification/removal of bushfire prone vegetation.
3. The APZ must be established within the boundaries of the lot on which the proposed building works or use is situated, and can only include land outside the lot where that land is non-vegetated and/or any existing vegetation is managed in a minimal fuel, low threat state (and it can be justified that it will be maintained in this state on an ongoing basis, in perpetuity).
4. When native vegetation modification/removal is required, this may require environmental approval from the relevant authorities. Check with the local government prior to modifying / removing native vegetation.

Process and Information Provided by Bushfire Prone Planning (BPP):

1. When modification/removal of native vegetation is proposed, BPP will limit the conditional BAL to BAL-29 (any further reduction of the BAL would need the approval of the local government, and BPP would subsequently determine the required APZ dimensions).
2. When modification/removal of non- native vegetation is proposed, BPP will state the lowest BAL that can be achieved and that results in an APZ size that is considered realistic to maintain.
3. Once the required conditions are met, a compliance report will be produced, and the BAL Certificate can be issued. Note that a site re-visit will be required if vegetation is modified/removed, to confirm the achievement of the vegetation separation distances or any change to the classification of vegetation.

MINIMUM VEGETATION SEPARATION DISTANCES REQUIRED TO ACHIEVE THE CONDITIONAL BAL

Existing/Proposed Building (Works) and/or Use	Vegetation Area	Vegetation Classification	Conditional Bushfire Attack Level	Vegetation Separation Distance (metres)		
				Required	Current	Additional Required (minimum)
Proposed residential dwelling	1	Class G Grassland	BAL-19	12	0	12
	2	Class G Grassland		12	24.8	0
	4	Excluded AS3959:2018 2.2.3.2 (e)		-	-	-












Comments: All vegetation to be managed is on the subject site and is the responsibility of the landowner to manage and maintain in a low threat state in perpetuity.

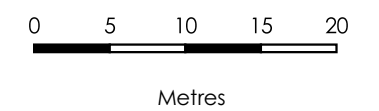
Figure 2

Indicative APZ Map: BAL-19

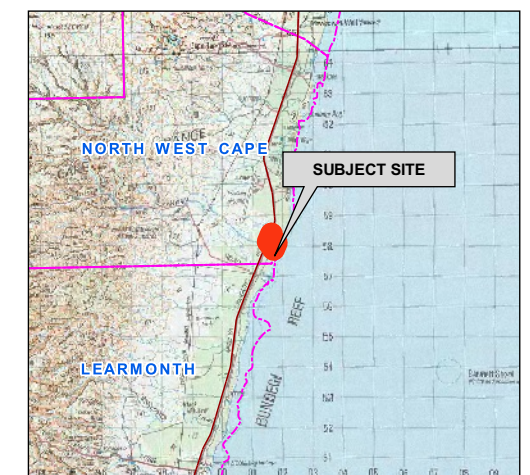
Lot 323 on Plan 33791, Area: 5.2528 ha
Minilya-Exmouth Road
NORTH WEST CAPE 6707
SHIRE OF EXMOUTH

----- **LEGEND** -----

-  Subject Site
-  150m Assessment Area
-  100m Assessment Area
- APZ**
-  BAL-19
-  APZ Distance (m)
- Building Areas**
-  Building Envelope
-  Cleared Square
- Proposed Development**
-  Residential Dwelling
-  Shed
-  Verandah
- Classified Vegetation**
-  Class G - Grassland



----- **LOCALITY** -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: Madison Smith 06-09-2021
SCALE (A3): 1 : 500

ADDITIONAL LANDOWNER INFORMATION: EXPLANATION OF BUSHFIRE ATTACK LEVELS AND REFERENCES FOR CONSTRUCTION REQUIREMENTS

AS 3959:2018 *Construction of buildings in bushfire prone areas*, defines a Bushfire Attack Level (BAL) as a “means of measuring the severity of a building’s potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat flux expressed in kW/m², and is the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire.”

Bushfire Attack Level	Explanation of BAL Levels	References for Construction Requirements	
		AS 3959:2018 Construction of Buildings in Bushfire Prone Areas	The Nash Standard – Steel Framed Construction in Bushfire Areas
		Referenced by the Building Code of Australia for Building Classes 1, 2, 3 & 10a	Referenced by the Building Code of Australia for Building Classes 1 & 10a
BAL – LOW	There is insufficient risk to warrant specific construction requirements but there is still some risk. <i>(Note: DFES recommend that ember attack protection features be incorporated in the design where practicable).</i>	Section 4. No Requirements	No Requirements
BAL – 12.5	There is a risk of ember attack. Construction elements are expected to be exposed to heat flux not greater than 12.5 kW/m ²	Sections 3 & 5.	All construction requirements for BAL-12.5 to BAL-40 are the same except for windows and external doors, which must comply with AS 3959. The construction requirements are set out as essentially non-combustible construction systems for each of the following building elements: Section 1.4: General Requirements Section 2: Roof and Ceiling System Section 3: External Wall System Section 4: Floor System Section 5: Carports Verandahs and Decks.
BAL – 19	There is a risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 19 kW/m ² .	Sections 3 & 6	
BAL – 29	There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 29 kW/m ² .	Sections 3 & 7.	
BAL – 40	There is a much increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux not greater than 40kW/m ² .	Sections 3 & 8.	
BAL – FZ (Flame Zone)	There is an extremely high risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux greater than 40 kW/m ² .	Sections 3 & 9.	The construction requirements are set out in Sections 1-5 and differ from the requirements for all other BAL ratings.

ADDITIONAL LANDOWNER INFORMATION: MAINTAINING THE ASSET PROTECTION ZONE (APZ)

The determined BAL for the subject building works and/or use (or the Conditional BAL if the conditions are met and it is applied), establishes the bushfire construction requirements that will be applied to the proposed building works and/or use.

Consequently, it is important that the required minimum standards and dimensions of the APZ are maintained into the future to ensure the proposed building works or use remains subject to the BAL to which the building is constructed (so that it will continue to better withstand the potential bushfire impact). The minimum dimensions (vegetation separation distances) are stated below. These may differ from the distances that currently exist (i.e. existing distances may exceed the minimum required).

The minimum distances may also differ from those established by the Firebreak and Fuel Load Notice issued by the local government. Refer to the relevant information on the following pages as to the implications.

The required dimensions of the APZ are depicted on the Site Assessment Map (and the Bushfire Management Statement if included in this report).

MINIMUM VEGETATION SEPARATION DISTANCES REQUIRED TO ENSURE THE BUILDING WORKS AND/OR USE REMAIN SUBJECT TO THE ASSESSED BAL (DETERMINED OR CONDITIONAL)

Existing / Proposed Building (Works)	Vegetation Area	Vegetation Classification	Assessed Bushfire Attack Level	Minimum Required Vegetation Separation Distance (metres)
Proposed residential dwelling	1	Class G Grassland	The Conditional BAL	12
	2	Class G Grassland		12
	4	Excluded AS3959:2018 2.2.3.2 (e)	BAL-19	-

REQUIREMENTS ESTABLISHED BY THE GUIDELINES – THE APZ

(Source: *Guidelines for Planning in Bushfire Prone Areas - WAPC 2017 v1.3 Appendix 4, Element 2, Schedule 1 and Explanatory Note E2.1*)

DEFINING THE ASSET PROTECTION ZONE (APZ)

Description: An APZ is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level (by reducing fuel loads). The width of the required APZ varies with slope and vegetation and varies corresponding to the BAL rating determined for a building (lower BAL = greater dimensioned APZ).

For planning applications, the minimum sized acceptable APZ is that which is of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29). It will be site specific.

For subdivision planning, design elements and excluded/low threat vegetation adjacent to the lot(s) can be utilised to achieve the required vegetation separation distances and therefore reduce the required dimensions of the APZ within the lot(s).

Defendable Space: The APZ includes a defendable space which is an area adjoining the asset within which firefighting operations can be undertaken to defend the structure. Vegetation within the defendable space should be kept at an absolute minimum and the area should be free from combustible items and obstructions. The width of the defendable space is dependent on the space, which is available on the property, but as a minimum should be 3 metres.

Establishment: The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity.

The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

[Note: Regardless of whether an Asset Protection Zone exists in accordance with the acceptable solutions and is appropriately maintained, fire fighters are not obliged to protect an asset if they think the separation distance between the dwelling and vegetation that can be involved in a bushfire, is unsafe.]

Schedule 1: Standards for APZ

Fences: within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.

Objects: within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.

Fine Fuel Load: combustible dead vegetation matter less than 6 mm in thickness reduced to and maintained at an average of two tonnes per hectare (example below).

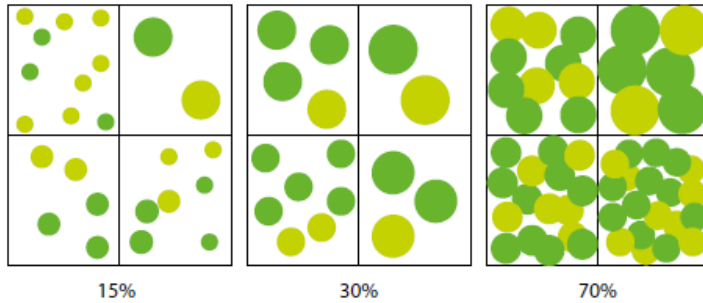


Example: Fine fuel load of 2 t/ha

(Image source: Shire of Augusta Margaret River's Firebreak and Fuel Reduction Hazard Notice)

Trees (> 5 metres in height): trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy. Diagram below represents tree canopy cover at maturity.

Tree canopy cover – ranging from 15 to 70 per cent at maturity



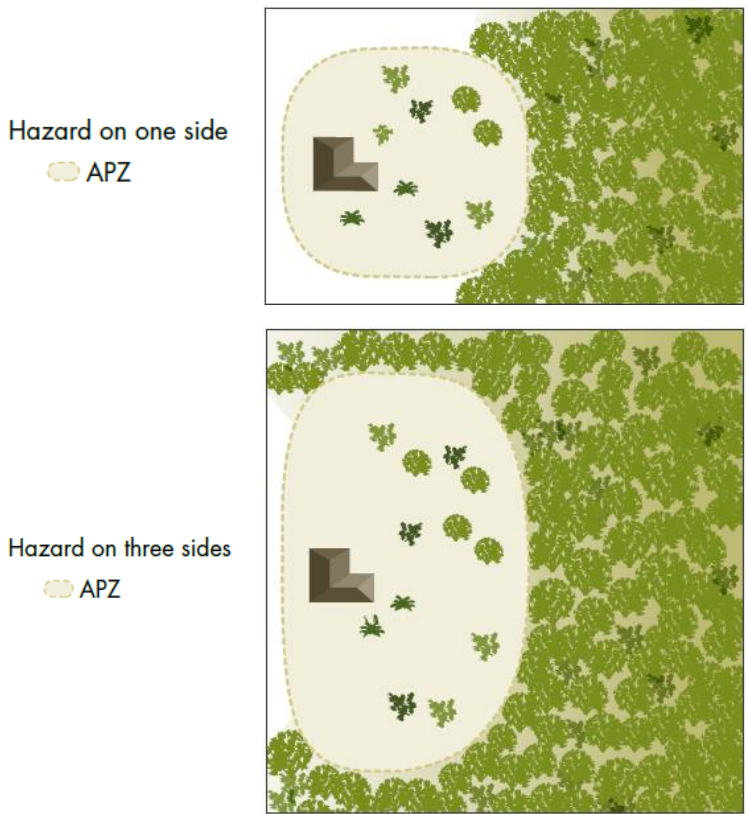
(Source: Guidelines for Planning in Bushfire Prone Areas 2017, Appendix 4)

Shrubs (0.5 metres to 5 metres in height): should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.

Ground covers (<0.5 metres in height): can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 mm in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.

Grass: should be managed to maintain a height of 100 mm or less.

The following example diagrams illustrate how the required dimensions of the APZ will be determined by the type and location of the vegetation.



REQUIREMENTS ESTABLISHED BY THE LOCAL GOVERNMENT – THE FIREBREAK NOTICE

The relevant local government's current Firebreak Notice is available on their website, at their offices and is distributed as ratepayer's information. It must be complied with.

These requirements are established by the relevant local government's Firebreak Notice created under s33 of the Bushfires Act 1954 and issued annually (potentially with revisions). The Firebreak Notice may include additional components directed at managing fuel loads, accessibility and general property management with respect to limiting potential bushfire impact.

If Asset Protection Zone (APZ) specifications are defined in the Firebreak Notice, these may differ from the Standards established by the Guideline's, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with.

The APZ dimensions to be physically established and maintained, will be based on which of the following establishes the larger APZ dimension:

- The dimensions corresponding to the determined BAL of a building; or
- The APZ dimensions established by the local government's Firebreak Notice.

REQUIREMENTS RECOMMENDED BY DFES – PROPERTY PROTECTION CHECKLISTS

Further guidance regarding ongoing/lasting property protection (from potential bushfire impact) is presented in the publication 'DFES – Fire Chat – Your Bushfire Protection Toolkit'. It is available from the Department of Fire and Emergency Services (DFES) website.

REQUIREMENTS ESTABLISHED BY AS 3959:2018 – 'MINIMAL FUEL CONDITION'

This information is provided for reference purposes. It identifies what is required for an area of land to be excluded from classification as a potential bushfire threat.

"Australian Standard - AS 3959:2018 Section 2.2.3.2: Exclusions - Low threat vegetation and non-vegetated areas:

The Bushfire Attack Level shall be classified BAL-LOW where the vegetation is one or a combination of the following:

- a) Vegetation of any type that is more than 100m from the site.*
- b) Single areas of vegetation less than 1ha in area and not within 100m of other areas of vegetation being classified vegetation.*
- c) Multiple area of vegetation less than 0.25ha in area and not within 20m of the site or each other or other areas of vegetation being classified vegetation.*
- d) Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified vegetation.*
- e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.*
- f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a **minimal fuel condition**, (means insufficient fuel available to significantly increase the severity of a bushfire attack – for example, recognisable as short cropped grass to a nominal height of 100mm), mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks (single row of trees)."*