



# Bushfire Management Plan Compliance



Produced to meet the relevant requirements of STATE PLANNING POLICY 3.7 Planning in Bushfire Prone Areas & Guidelines

Pt Lot 9011 Lakewood Parkway, Coodanup

**City of Mandurah** 

**Subdivision Application** 

8 March 2024

Job Reference No: 220028



# **BUSHFIRE PLANNING AND DESIGN (BPAD) ACCREDITED PRACTITIONER DETAILS**

Name: Ian Macleod

### **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 39131 (Level 2)

Signature Jan Maclad

Date

8th March 2024

Authorised Practitioner Stamp

VE	(2IC	)N H	11211	OKY

Version	Status/Details	Date
1.1	Further vegetation management	24 April 2024

This report has been prepared by an Accredited BPAD Practitioner.

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.

BMP Compliance v1.0

#### LANDOWNER RESPONSIBILITIES

**Construction Requirements:** The bushfire construction standard to be applied to building works must be that which corresponds to the determined BAL and are established by AS 3959:2018 or the NASH Standard.

Comply with the Landowner Responsibilities Established by the Bushfire Management Plan (BMP): Where 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 or those established by the Firebreak and Fuel Load Notice, whichever is greater.

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).



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# BUSHFIRE MANAGEMENT PLAN COMPLIANCE

This report assesses compliance with the measures contained in Section 6 "Responsibilities for Implementation and Management of the Bushfire Protection Measures" Table 6.1 of the Bushfire Management Plan: Forest Walk Precinct & Rivers Edge, Frasers Landing Stage 3-6 and 9-10 Subdivision (167 lots) (v1.0 dated 27 January 2022).

- An inspection was undertaken on 8 March 2024.
- Photographic evidence is included.

Management of the subdivisional area of land will be in accordance with the approved **Bushfire Management Plan** and the **City of Mandurah Fire Compliance Notice**, as issued annually.



FIGURE 1: SITE PLAN





# REVISED POTENTIAL BUSHFIRE IMPACTS – INDICATIVE BUSHFIRE ATTACK LEVELS FOR FUTURE BUILDINGS ON PROPOSED LOTS

The distances that have been applied to illustrating the width of each BAL contour shown in Figure 3 are confirmed in Table 1.1 Potential Bushfire Impacts, below. These correspond to each Bushfire Attack Level (Table 1.2) and are specific to the proposed development site.

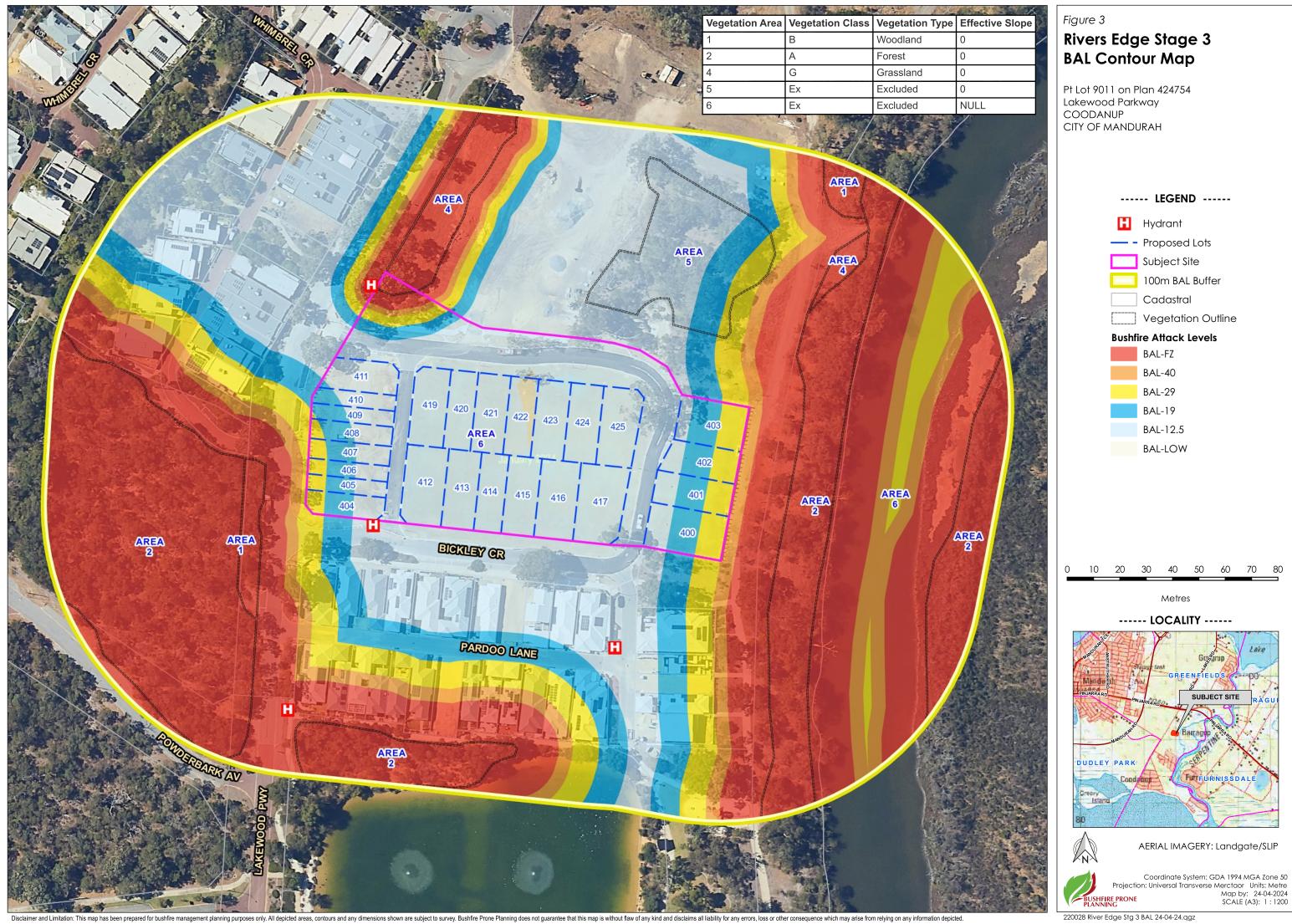
Table 1.1: Potential Bushfire Impacts

	BAL CONTOUR MAP – APPLIED VEGETATION SEPARATION DISTANCES														
Der	Derived from the Application of Method 1 BAL Determination Methodology (AS 3959:2009 Section 2, Table 2.4.3)														
coit D Vegetation	Effective Slope	BAL	and Corre	sponding	Separatio	n Distance	· (m)								
Veget	to t	(degree range)	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL12.5	BAL- LOW							
1	Class B Woodland	0 Upslope or flat	10	10-<14	14-<20	20-<29	29-<100	>100							
2	Class A Forest	0 Upslope or flat	16	16-<21	21-<31	31-<42	42-<100	>100							
3	Class D Scrub	0 Upslope or flat	10	10-<13	10-<19	19-<27	27-<100	>100							
4	Class G Grassland	0 Upslope or flat	6	6-<8	8-<12	12-<17	17-<50	>50							
5	Excluded 2.2.3.2 (f)	N/A	N/A	N/A	N/A	N/A	N/A	N/A							

Table 1.2: Determined BAL(s) for proposed lots.

DETERMINED BUSHFIRE ATTACK LEVEL FOR PROPOSED LOTS													
BAL Determination Methodology Applied <sup>1</sup> Method 1 as per AS 3959:2018 s2.2.6 and Table 2.5.													
Lot Number	Determined BAL (BAL Contour Map Post Subdivisional Works)	Lot Number	Determined BAL (BAL Contour Map Post Subdivisional Works)	Lot Number	Determined BAL (BAL Contour Map Post Subdivisional Works)								
400	BAL-29	409	BAL-29	419	BAL-12.5								
401	BAL-29	410	BAL-19	420	BAL-12.5								
402	BAL-29	411	BAL-19	421	BAL-12.5								
403	BAL-29	412	BAL-12.5	422	BAL-12.5								
404	BAL-29	413	BAL-12.5	423	BAL-12.5								
405	BAL-29	414	BAL-12.5	424	BAL-12.5								
406	BAL-29	415	BAL-12.5	425	BAL-12.5								
407	BAL-29	416	BAL-12.5										
408	BAL-29	417	BAL-12.5										
Note: Final BAL	Note: Final BAL's to be determined at building stage subject to survey of building location within the Lot.												







# CERTIFICATION FOR IMPLEMENTATION OF THE BUSHFIRE PROTECTION MEASURES (BMP)

	LANDOWNER / PROPONENT RESPONSIBILITIES PRIOR TO ISSUE OF TITLES											
Item.	Implementation Actions	Subdivision Clearance										
1	Condition (as per Code F2 of Model Subdivision Schedule, WAPC April 2020):  A notification, pursuant to Section 165 of the Planning and Development Act 2005, may be required to be placed on the certificate(s) of title of the proposed lot(s) with a Bushfire Attack Level (BAL) rating of 12.5 cabove, advising of the existence of a hazard or other factor.  Notice of this notification is to be included on the diagram or plan of survey (deposited plan). The notification is to state as follows:  "This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Service Commissioner and is/may be subject to a Bushfire Management Plan. Additional planning and building requirements may apply to development on this land. (Western Australian Planning Commission).	Will Comply.  All proposed lots are subject to BAL ratings from BAL-12.5 to BAL-29.  A Notification is required to be placed on the Certificate of Title for all proposed lots.										
2	Condition (as per Code F3 of Model Subdivision Schedule, WAPC April 2020):  A restrictive covenant to the benefit if the local government pursuant to section 129BA of the Transfer of Land Act 1893, may be required to be placed on the certificate(s) of title of the proposed lot(s) advising of the existence of a restriction on the use of land within areas that have been assessed a BAL-40 or BAL-FZ.	Not Required.  All proposed lots have determined BAL ratings below BAL-40 and BAL-FZ.										
3	Construct the public roads and cul-de-sacs to the standards stated in the BMP.	Complies.  Roads are constructed in accordance with local government requirements per the approved engineering plans.										
4	Construct the private driveways and battle axes to the standards stated in the BMP.	Complies.  All future driveways will be:  Within a lot serviced by reticulated water;  No greater than 70 metres in length between the most distant external part of the lot and the public road measured as a hose lay; and  Accessed by a public road where the road speed limit is no greater than 70km/hr.										



5	Install the reticulated water supply (hydrants) to the standards stated in the BMP.	Complies.  Hydrant(s) are installed to the requirements of the relevant authorities.
6	Include notification on title for the lot located in the north eastern corner will be excised from sale due to BAL -FZ encroachment, until the land to the north is developed and the excised lot can achieve BAL 29 or less (refer Figure 3.3.0).	Not Applicable to this Stage.



# APPENDIX 1 - PHOTOGRAPHIC EVIDENCE OF VEGETATION ASSESSMENT AREAS (SEE FIGURE 2)

VEGETATION AREA 1											
Classification B. WOODLAND											
Types Identified					Low w	oodland B-07					
Exclusion Clause	N/A										
Effective Slope	Measur	Measured flat 0 degrees Applied Range (Method 1) Upslope or flat					or flat 0 degrees				
Foliage Cover (all la	ayers)	<30% Shrub/Heath H		leight	N/A	Tre	ee Height	Up to 10m			
Dominant & Sub-Do Layers (species as r		Low j	arrah, s	neoak, banksia	S						
Understorey:		Leaf	litter an	d slashes grasse	es						
Additional Justification: Photos 1a and 1b: Area is to be maintained by developer until that site is construction.					site is cleared for						
Post Development Assumptions:											





PHOTO ID: 1a PHOTO ID: 1b





PHOTO ID: 1c PHOTO ID: 1d



VEGETATION AREA 2											
Classification		A. FOREST									
Types Identified					Ope	n forest A-03					
Exclusion Clause	N/A	/A									
Effective Slope	Measur	red	flat	0 degrees	Applied Range (Me		d 1)	Upslope or flat 0 degre			
Foliage Cover (all le	ayers)	<	30%	Shrub/Heath H	Height	>2m	Tre	ee Height	Up to 15m		
Dominant & Sub-Do Layers (species as r		Jarra	Jarrah, sheoak, banksia, saplings, scrub.								
Understorey:		Low:	Low shrubs and grasses.								
Additional Justifica	tion:	Not Required.									
Post Development Assumptions:		Nil									





PHOTO ID: 2a PHOTO ID: 2b



PHOTO ID: 2c



VEGETATION AREA 2											
Classification		A. FOREST									
Types Identified					Ope	n forest A-03					
Exclusion Clause	N/A										
Effective Slope	Measur	Measured flat 0			Appli	ied Range (Metho	d 1)	Upslope (	or flat 0 degrees		
Foliage Cover (all la	ayers)	<	<30% Shrub/Heath Height >2m Tree Height Up to			Up to 15m					
Dominant & Sub-Do Layers (species as re		Jarra	h, sheo	ak, banksia, sap	olings,	scrub.					
Understorey:		Low shrubs and grasses.									
Additional Justificat	tion:	Not Required.									
Post Development Assumptions:	Nil										





PHOTO ID: 2e PHOTO ID: 2f





PHOTO ID: 2g PHOTO ID: 2h



VEGETATION AREA 3											
Classification		D. SCRUB									
Types Identified					Ope	n scrub D-14					
Exclusion Clause	N/A										
Effective Slope	Measur	Measured flat 0 degrees				ed Range (Metho	d 1)	Upslope	or flat 0 degrees		
Foliage Cover (all la	ayers)	<<	<30% Shrub/Heath Height Up to 3m Tree Height			N/A					
Dominant & Sub-Do Layers (species as r		Scrub	regrov	vth up to 3metr	es tall.						
Understorey:		Grasses.									
Additional Justification: Not Required.											
Post Development Assumptions:		Nil									



PHOTO ID: 3a



VEGETATION AREA 4											
Classification		G. GRASSLAND									
Types Identified		Tussock grassland G-22 Open tussock G-23									
Exclusion Clause	N/A										
Effective Slope	Measur	ed	flat	0 degrees	Applie	d Range (Metho	d 1)	Upslope or flat 0 degrees			
Foliage Cover (all la	ayers)	١	I/A	Shrub/Heath H	leight	N/A	Tre	ee Height N/A			
Dominant & Sub-Do Layers (species as r		N/A									
Understorey:	Grasses.										
Additional Justifica	Iditional Justification: Not Required.										
Post Development Assumptions:  Nil											



PHOTO ID: 4a



VEGETATION AREA 5											
Classification	N/A										
Types Identified		Open forest A-03									
Exclusion Clause	2.2.3.2 (c)	Multi	Multiple areas <0.25ha, >20m from site, each other or other classified vegetation.								
Effective Slope	Measur	ed	flat	t 0 degrees	Appli	plied Range (Method 1) Upslope or flat 0 degrees					
Foliage Cover (all la	ayers)	<;	30%	Shrub/Heath H	leight	>2m	Tree Height Up to 15m				
Dominant & Sub-Do Layers (species as re		Jarra	h, sheo	n, sheoak, banksia, saplings, scrub.							
Understorey:	Understorey: Low shrubs and grasses.										
Additional Justificat	Additional Justification: Not Required.										
Post Development Assumptions:  This site will eventually be managed to a low bushfire threat state as a public space.							as a public open				



PHOTO ID: 5a



VEGETATION AREA 6											
Classification	N/A										
Types Identified		Low bushfire threat vegetation.									
Exclusion Clause	2.2.3.2 (e)	Non-	Non-vegetated areas and (f) Low threat vegetation - minimal fuel condition.								
Effective Slope	Measur	ed		N/A	Appli	ed Range (Metho	Range (Method 1) N/A				
Foliage Cover (all le	ayers)	١	1/A	Shrub/Heath H	leight	N/A	Tree Height N/A				
Dominant & Sub-Do Layers (species as r		Nil									
Understorey: Nil											
Additional Justification: Managed private gardens and road verges, site cleared for sale of new lot							new lots.				
Post Development Assumptions:											





PHOTO ID: 6a PHOTO ID: 6b





PHOTO ID: 6c PHOTO ID: 6d



VEGETATION AREA 6										
Classification	N/A									
Types Identified		Cleared of vegetation.								
Exclusion Clause	2.2.3.2 (e)	(e) Non-vegetated areas and (f) Low threat vegetation - minimal fuel condition.								
Effective Slope	Measur	ed		N/A	Appli	olied Range (Method 1) N/A				
Foliage Cover (all la	ayers)	١	1/A	Shrub/Heath H	Height	N/A	Tree Height N/A			
Dominant & Sub-Do Layers (species as r	1 Nil									
Understorey: Nil										
Additional Justification: Managed roads and verges, land cleared for development.										
Post Development Assumptions:		Nil								





PHOTO ID: 6e PHOTO ID: 6f





PHOTO ID: 6g



VEGETATION AREA 6											
Classification	N/A										
Types Identified		Cleared of vegetation.									
Exclusion Clause	2.2.3.2 (e)	Non-	Non-vegetated areas and (f) Low threat vegetation - minimal fuel condition.								
Effective Slope	Measur	ed		N/A	Appli	ed Range (Metho	thod 1) N/A				
Foliage Cover (all la	ayers)	١	1/A	Shrub/Heath H	leight	N/A	Tre	N/A			
Dominant & Sub-Do Layers (species as r		Zil									
Understorey:	Understorey: Nil										
Additional Justification: Managed APZ, smaller trees removed, trees underpruned, understorey removed							ey removed.				
Post Development Assumptions:											





PHOTO ID: 6j





PHOTO ID: 6k PHOTO ID: 6l



# APPENDIX 2 - PHOTOGRAPHIC EVIDENCE OF IMPLEMENTATION OF THE BUSHFIRE PROTECTION MEASURES

# POST SUBDIVISIONAL WORKS - FRASERS LANDING STAGE 6

Description: Items 1 to 4:

**Photos 1 and 2:** All lots are located outside areas subject to BAL-40 and BAL-FZ, Asset Protection Zones are established, road reserves are cleared and all lots comply with the City of Mandurah Fire Compliance Notice.

Photo 3: Roads installed to required specifications.

**Photo 4:** Hydrant(s) installed to required specifications.





Photo ID: 1 Photo ID: 2





Photo ID: 3 Photo ID: 4





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# **Fire Compliance Notice**

# Preparing for fire is a shared responsibility

The City of Mandurah has a role in setting the requirements for fire preparation on properties within its boundaries.

Owners are encouraged to contact Ranger Services to discuss fire management measures in the lead up to fire season, or seek further information from the City's website.

# What is required?

According to Section 33 of the Bush Fires Act 1954 you are required to carry out fire prevention work on land you own. Work must be carried out by 17 November 2023 or within 14 days of becoming the owner, and maintained until 31 May 2024.

# Who can enter my property?

Under Section 39 of the Bush Fires Act 1954 an Authorised Officer can enter your property to inspect firebreaks and/or anything they consider to be a fire hazard.

#### **Firebreak variations**

If it is impractical to clear firebreaks or if natural features make firebreaks unnecessary, you may apply to the City by 1 November 2023 for an alternate solution.

## **Fire Management Plans**

Where an approved Fire Management Plan relates to a property, owners must fully comply with the requirements of that approved plan.

## It can happen to you...

All properties within Mandurah may be subject to ember attacks from nearby fires. Preparing your property can help prevent damage and loss.

If you do not meet your fire prevention responsibilities as a property owner, you could be liable for a **maximum penalty of \$5,000** plus costs.

The City may access a property and undertake required work at the expense of the owner.



# Property preparation requirements

# **Larger Blocks**





# Occupied or unoccupied land 4000m<sup>2</sup> and over

When the area of land is 4000m<sup>2</sup> and over, provide a trafficable mineral earth firebreak of 4m wide, with a vertical height clearance of 4.2m:

- · Immediately inside all external boundaries of the land.
- · Immediately surrounding all outbuildings erected on the land.
- · Immediately surrounding haystacks or fuel storage.
- A vertical height clearance of 4.2m must be maintained on driveway access.
- On all land 4000m<sup>2</sup> and greater a minimum 2m gap between trees shrubs and any habitable building must be maintained.
- In addition no part of any tree should overhang any habitable building.

**NOTE:** Properties with dense vegetation will also need to be thinned out to reduce any significant fire risk, to the satisfaction of the City.





# **Urban Areas**





# Occupied or unoccupied land less than 4000m<sup>2</sup>

- Have the entire property clear of all flammable material, this does not include green standing trees, growing bushes and plants in gardens, and/or lawns.
- Mowing or slashing down to 40mm or other approved method by an Authorised Officer for this purpose.
- If moving or slashing is carried out, then the height of the vegetation must not exceed, as far as is reasonably practicable, 40mm over the entire area of land.
- A four metre firebreak alone is not adequate on land less than 4000m<sup>2</sup>.

# **Asset Protection Zones (APZ)**

Properties zoned rural residential, or rural small holding under the City of Mandurah Local Planning Scheme 12, or on all land 4000m² and greater are required to:

- Maintain a minimum 2 metre gap between trees, shrubs and any habitable building.
- · Ensure that no trees overhang any habitable building.

An Authorised Officer may issue a variation from Asset Protection Zone requirements where it is considered that adequate risk mitigation measures have been implemented, such as the reduction of fuel loads and appropriate management of understorey vegetation.

Property owners are encouraged to contact the City to discuss the installation of an APZ.

Applications must be made to the City to remove trees or vegetation in order to create an Asset Protection Zone within a tree preservation area as designated in the City of Mandurah Local Planning Scheme No 12.



# Burning during the prohibited and restricted burning times

This section relates specifically to fuel hazard reduction burns or running burns. Fuel hazard reduction burns or running burns are generally not permitted within the district of Mandurah. Any exemption is based on a full assessment of the hazard by an Authorised Officer in consultation with the City's Chief Bush Fire Control Officer. Full demonstration of appropriate risk mitigation planning is required and a Permit to Burn must be issued by an Authorised Officer prior to commencement of any fuel hazard reduction or running burn.

The following sets out the Prohibited and Restricted Burning times in the Mandurah Districts

**RESTRICTED BURNING TIMES** 1/4/2023 - 30/11/2023 PERMIT REQUIRED

**PROHIBITED BURNING TIMES 1/12/2023 - 31/3/2024** 

**RESTRICTED BURNING TIMES 1/4/2024 - 30/11/2024**PERMIT REQUIRED

# **Burning garden refuse**

In accordance with the requirements of Section 24G(2) of the Bush Fires Act 1954 the City notifies that it prohibits the burning of garden refuse or rubbish at all times within the district of Mandurah with the following exemptions:

- properties zoned rural residential, or rural small holding under the City of Mandurah Local Planning Scheme 12; or
- on all land 4000m<sup>2</sup> and greater

For these properties a Permit to Burn is required and **permits will only be issued between 1 May and 31 October inclusive**. Conditions of an issued permit must be fully complied with. Any other exemption is based on an assessment of the hazard by an Authorised Officer.

NOTE: Only those properties that are <u>4000m</u><sup>2</sup> or greater are able to obtain permits to burn, all other sized properties are unable to have a fire to burn garden waste.

# **Camping or Cooking**

Pursuant to the powers contained in Section 25(1a) of the Bush Fires Act 1954, the City of Mandurah prohibits the lighting of a fire in the open air for the purpose of camping or cooking within the district unless specifically approved by the Chief Bush Fire Control Officer in writing.



# **Definitions**

Where defined meanings are in accordance with the Bush Fires Act 1954. Where not defined in the Bush Fires Act 1954 and referred to in this Notice, unless the context requires otherwise meanings are:

#### **Asset Protection Zone**

Means a low fuel area immediately surrounding a building.

#### **Authorised Officer**

Means an employee of the City of Mandurah appointed as a Bush Fire Control Officer.

### Driveway

Means a point of access to a Habitable Building accessible for both conventional two-wheel drive vehicles and firefighting appliances that is totally clear of obstructions.

#### Fire Management Plan

Means a plan that has been developed in accordance with State Planning Policy 3.7 and approved by the City of Mandurah to reduce and mitigate fire hazards within a particular subdivision, lot or other area of land anywhere in the district.

#### **Habitable Building**

Means a permanent or temporary structure on land that -

- a. is fully or partially enclosed; and
- b. has at least one wall of solid material and a roof of solid material; and
- is used for a purpose that involves the use of the interior of the structure by people for living, working, studying, or being entertained.

### Haystack

Means any collection of hay including fodder rolls placed or stacked that exceeds 100m3 in size (e.g. five (5) metres x five (5) metres x four (4) metres), whether in a shed, other structure or in the open air.

# Flammable Material

Means accumulated fuel such as dry grass, leaf litter, twigs, branches, trash, bush, dead trees, firewood, stored fuels and scrub that can be easily ignited or is likely to catch fire and burn. It includes any other thing deemed by an Authorised Officer to be likely to catch fire but excludes living standing trees, growing bushes and plants in gardens and/or lawn areas under cultivation.

#### **Trafficable Mineral Earth Firebreak**

Means a 4 metre wide area of the owner(s)/occupier(s) land, cleared and maintained totally clear of all vegetation material (living or dead) providing an unimpeded route – (can be ploughed, cultivated, sprayed or otherwise cleared) accessible and traversable by 4WD fire vehicles.