



# **Bushfire Management Plan Coversheet**

This Coversheet and accompanying Bushfire Management Plan has been prepared and issued by a person accredited by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme.

Bushfire Management Plan and Site Details				
Site Address / Plan Reference: Illyarrie Land Lease Community				
Suburb: Sinagra		State	WA	P/code: 6065
Local government area: City of Wanneroo				
Description of the planning proposal: Development Application				
BMP Plan / Reference Number: JBS&G66711-158,192	Version: M01 Re	ev 0	Date of Issue:	4/04/2024
Client / Business Name: Stockland				

Reason for referral to DFES	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?		R
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the BPC elements)?		R
Is the proposal any of the following special development types (see SPP 3.7 for definitions)?		
Unavoidable development (in BAL-40 or BAL-FZ)		$\mathbf{V}$
Strategic planning proposal (including rezoning applications)		$\checkmark$
Minor development (in BAL-40 or BAL-FZ)		$\mathbf{A}$
High risk land-use		V
Vulnerable land-use		$\mathbf{\overline{A}}$

If the development is a special development type as listed above, explain why the proposal is considered to be one of the above listed classifications (E.g. considered vulnerable land-use as the development is for accommodation of the elderly, etc.)? N/A

Note: The decision maker (e.g. local government or the WAPC) should only refer the proposal to DFES for comment if one (or more) of the above answers are ticked "Yes".

BPAD Accredited Practitioner Details and Declaration							
Name Zac Cockerill	Accreditation Level Level 2	Accreditation No. BPAD37803	Accreditation Expiry 31/08/2024				
Company JBS&G Australia Pty Ltd		<b>Contact No.</b> (08) 9792 4797					

I declare that the information provided within this bushfire management plan is to the best of my knowledge true and correct

Signature of Practitioner

Date 4/04/2024



JBS&G66711-158,192 66711 M01 Illyarrie LLC DA BMP addendum (Rev 0) 4 April 2024

Jack Wagner Stockland Via email: Jack.wagner@stockland.com.au

## Bushfire Management Plan Addendum: Illyarrie LLC Development Application, Sinagra

## Introduction

Strategen-JBS&G (now JBS&G) prepared a comprehensive Bushfire Management Plan (BMP) in September 2021 to support Stockland in their subdivision application for proposed residential development of Illyarrie Estate situated within Lot 1665 Wanneroo Road, Sinagra in the City of Wanneroo. The subdivision was approved under WAPC Ref. 161417. A BMP addendum was subsequently prepared by Strategen-JBS&G in August 2022 to support Stockland in the creation of the proposed Land Lease Community (LLC) superlot, which was approved under WAPC Ref. 162837. Stockland now intends to development the Illyarrie LLC site (hereon referred to as the project area) through Development Application (DA) in accordance with the layout depicted in Figure 1, resulting in creation of 153 lease lots, three common use lots and internal private access network.

This BMP is an addendum to the previously prepared BMP (Strategen-JBS&G 2021) and addendum (Strategen-JBS&G 2022) and provides an updated bushfire assessment specific to the proposed DA and site plan contained in Figure 1. This BMP addendum should be read in conjunction with the previous Strategen-JBS&G (2021 & 2022) BMP and BMP addendum.

This BMP addendum includes the following information:

- 1. A revised bushfire assessment including:
  - a. an updated Vegetation Classification and Effective Slope map (Figure 2) depicting the postdevelopment vegetation classifications and exclusions specific to the project area
  - b. an updated BAL Contour map (Figure 3) specific to the project area and post-development vegetation conditions mapped from Item 1a above.
- 2. An updated assessment against the bushfire protection criteria of the Guidelines (Table 3), including updated statements of compliance against acceptable solutions to demonstrate compliance within the boundary of the development site.
- 3. A works program (Table 4) outlining responsibilities and timing for implementation of the bushfire management measures that can be conditioned a part of DA approval.

This BMP addendum has been prepared to accompany the DA for the proposed Illyarrie LLC and address requirements under Policy Measure 6.5 of *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP3.7; WAPC 2015) in accordance with *Guidelines for Planning in Bushfire-Prone Areas Version 1.4* (the Guidelines; WAPC 2021).

The majority of the project area is designated as bushfire prone on the Map of Bush Fire Prone Areas (DFES 2021; Plate 1); therefore, bushfire risk considerations and BAL assessment are required to inform proposed DA design and application, as per requirements of Policy Measure 6.2 of SPP3.7.







Plate 1: Bushfire prone area designation

$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	(9)     8.8     4.9     4.8       122     376m <sup>2</sup> 6       22.5     123     6       22.5     123     6       22.5     123     6       22.5     122     7       22.5     122     7       22.5     122     7       22.5     122     7       22.5     122     7       22.5     122       22.5     122       22.5     122       22.5     122       22.5     122       22.5     129       236m <sup>2</sup> 7       22.5     130       22.5     131       22.5     132       236m <sup>2</sup> 236m <sup>2</sup> 236m <sup>2</sup> 225.5       236m <sup>2</sup> 236m <sup>2</sup> 225.5       236m <sup>2</sup> <	
	Image: state     Image: state     Image: state     Image: state     Image: state       10     0     SCALE 1:600 @ A1     50	Iha       Iba       PLANKER'S DESIGN SOURCE for Rev B       Planker'S DESIGN SOURCE for Rev B       Planker'S DESIGN SOURCE for Rev B       Promer :- cdp       Barowed rate:       Parole of there:	HALCYON - SINAGRA	

					10 0	SCALE 1:600 @ A1	
					For a true to scale reprodu	ALL DISTANCES ARE IN MET	TRES vith the F
					The contents of this plan are current and correct as of the date stated within	FILES	See b
B A	Update lots frontage Initial Issue	JIN TAV	19/02/2024 25/8/2023	MBW MBW	the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plans currency by contacting the McMullen Nolan Group.	Control Register:- 100859	
Ver.	Description	Drawn	Date	Checked		гие Name:- IU 5889pr-UU Ib.dgn	

R	ISF	









Plan Version Number

PCG94

Stockland



# **Bushfire assessment results**

## 2.1 Assessment inputs

## 2.1.1 Vegetation classifications and exclusions

Classified vegetation and exclusions were assessed on 5 August 2021 as part of the Strategen-JBS&G (2021) subdivision stage BMP in accordance with AS 3959—2018 *Construction of Buildings in Bushfire-Prone Areas* (AS3959; SA 2018). Desktop re-validation of site conditions was completed on 3 March 2024, which confirmed that aside from on-site earthworks and clearing associated with implementation of the development, site conditions are consistent with those assessed as part of the Strategen-JBS&G (2021) assessment. The assessed vegetation classifications and exclusions are depicted in Figure 2 and the supporting georeferenced site photos and on-ground evidence is contained in Appendix B of the Strategen-JBS&G (2021) BMP.

The following classified vegetation occurs within the 150 m assessment area:

- Class A forest to the south and southwest containing a predominant canopy of eucalypts and multitiered fuel structure
- Class B woodland to the south, southeast, east, north and west containing sparse eucalypts or banksia over a grass/weed understorey.

Land occupied by the existing cleared/earthworked extent (future lots/roads/POS within adjacent unconstructed areas of Illyarrie Estate), as well as existing firebreaks, were assessed to be excluded from classification under Clauses 2.2.3.2 (e) and (f) of AS3959.

All land within the project area and adjacent 100 m wide low threat staging buffer (as depicted in Figure 2) will be modified to a non-vegetated/low threat managed state as part of implementation of the proposal and broader Illyarrie Estate development. This land will, on completion of development, be excluded from classification under Clauses 2.2.3.2 (e) and (f) of AS3959.

## 2.1.2 Effective Slope

Effective slope under classified vegetation was assessed as part of the Strategen-JBS&G (2021) BMP on 5 August 2021 in accordance with AS3959. Desktop re-validation of site conditions was completed on 3 March 2024 and results were cross-referenced with DPIRD 2m contour data and are depicted in Figure 2. Effective slope results are consistent with the Strategen-JBS&G (2021) BMP.

Effective slope under classified vegetation was assessed to be flat/up-slope (i.e. 0 degrees) under Class A forest and Class B woodland to the southeast, east, north and west. Effective slope under classified vegetation was assessed to be downslope >0–5 degrees under Class A forest and Class B woodland to the southwest and south.

## 2.1.3 Post-development inputs

Figure 2 illustrates the anticipated post-development vegetation classifications, exclusions and effective slope following completion of development works and implementation of low threat landscaping and staging buffers. The post-development vegetation classifications, exclusions and effective slope are summarised in Table 1.



Vegetation plot	Vegetation classification	Effective slope	Comments
1	Class A Forest	Downslope >0–5°	Trees 10–30 m in height containing a multi-tiered fuel structure
2	Class A Forest	Flat/upslope (0°)	Trees 10–30 m in height containing a multi-tiered fuel structure
3	Class B Woodland	Downslope >0–5°	Sparse eucalypts or banksias with a prominent grassy understorey
4	Class B Woodland	Flat/upslope (0°)	Sparse eucalypts or banksias with a prominent grassy understorey
5	Excluded – Non- vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Existing non-vegetated and low threat managed land including the cleared/earthworked extent and existing firebreaks
6	Excluded – Non- vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	The project area and adjacent 100 m wide low threat staging buffer to be modified to a non- vegetated/low threat managed state

## Table 1: Summary of post-development vegetation classifications, exclusions and effective slope



File Name: C:\Users\jcrute\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Stockland\66711 Illyarrie LLC\GIS\02\_MapProjects\66711\_Illyarrie\_LLC\_M01\_RevA\66711\_Illyarrie\_LLC\_M01\_RevA.aprx Image Reference: www.nearmap.com© - Imagery Date: 03. February 2024.



## 2.2 Assessment outputs

### 2.2.1 Bushfire Attack Level (BAL) contour assessment

JBS&G has undertaken a BAL contour assessment for the project area in accordance with Method 1 of AS3959 and Appendix 3 of the Guidelines (Figure 3). The Method 1 procedure incorporates the following factors:

- state adopted FDI 80 rating
- vegetation classification
- effective slope
- distance maintained between proposed development areas and the classified vegetation.

The BAL rating gives an indication of the level of bushfire attack (i.e. the radiant heat flux) that may be received by proposed development and subsequently informs the standard of building construction and/or setbacks required for proposed habitable development to potentially withstand such impacts and deliver compliance with relevant bushfire protection criteria of the Guidelines.

The BAL contours are based on:

- the vegetation classifications, exclusions and effective slope observed during the original site inspection and updated desktop re-validation
- consideration of the proposed on-site clearing extent and adjacent 100 m wide low threat staging buffers and resultant separation distances achieved in line with the site plan in Figure 1.

Results of the BAL contour assessment are detailed in Table 2 and illustrated in Figure 3. Without mitigation of the temporary bushfire hazards to the south, the determined worst case BAL impact to proposed habitable development is BAL–FZ, as per the Strategen-JBS&G (2021 and 2022) BMPs. However, through the provision of a temporary Asset Protection Zone (APZ) setback and quarantining strategy to manage these temporary hazards, the worst case BAL impact to proposed habitable development is BAL–29. The temporary APZ setback and quarantining strategy will result in the following (as depicted in Figure 3) and will be enforced through condition of DA approval:

- provision of a temporary 20 m wide APZ setback into proposed Common Use Lot 153 prohibiting habitable development in areas of temporary BAL–40/FZ until such time that the temporary bushfire hazards to the south have been removed and/or BAL-29 or lower can be demonstrated
- temporary quarantining of proposed Lots 20–21 and 135–152 until such time that the temporary bushfire hazards to the south have been removed and/or BAL-29 or lower can be demonstrated.

	Method 1 BAL determination						
Vegetation plot	Vegetation classification	Effective slope	Separation distance	Highest BAL	Separation distance with temporary APZ/quarantining strategy	Reduced BAL with APZ/quarantining strategy	
1	Class A Forest	Downslope >0–5°	7 m	BAL–FZ	27 m	BAL-29	
2	Class A Forest	Flat/upslope (0°)	68 m	BAL-12.5	85 m	BAL-12.5	
3	Class B Woodland	Downslope >0–5°	7 m	BAL–FZ	21 m	BAL-29	
4	Class B Woodland	Flat/upslope (0°)	7 m	BAL–FZ	21 m	BAL-19	
5	Excluded – Non- vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A	N/A	N/A	
6	Excluded – Non- vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A	N/A	N/A	

#### **Table 2: BAL contour assessment results**



File Name: C:\Users\jcrute\JBS&G Australia\JBS&G - DCS - Internal - Documents\Projects\Stockland\66711 Illyarrie LLC\GIS\02\_MapProjects\66711\_Illyarrie\_LLC\_M01\_RevA\66711\_Illyarrie\_LLC\_M01\_RevA.aprx Image Reference: www.nearmap.com© - Imagery Date: 03. February 2024.



# 2.3 Assessment against bushfire protection criteria

## 2.3.1 Compliance with Elements 1-4

Compliance with Elements 1–4 of the bushfire protection criteria of the Guidelines (Version 1.4) is demonstrated by meeting the acceptable solutions, as detailed in Table 3.

Bushfire	Deufermenne Drinsiele	Method of compliance	Statement of developmen <u>t</u>	Compliance
criteria		Acceptable solutions	compliance	achieved
Element 1: Location	<b>Performance Principle P1</b> The strategic planning proposal, subdivision and development application is located in an area where the bushfire hazard assessment is or will, on completion, be moderate or low, or a BAL–29 or below, and the risk can be managed. For unavoidable development in areas where BAL– 40 or BAL–FZ applies, demonstrating that the risk can be managed to the satisfaction of the decision-maker.	<b>A1.1 Development location</b> The strategic planning proposal, subdivision and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL–29 or below.	Without mitigation of the temporary bushfire hazards to the south, the determined worst case BAL impact to proposed habitable development is BAL–FZ. However, through the provision of a temporary APZ setback and quarantining strategy to manage these temporary hazards, the worst case BAL impact to proposed habitable development is BAL–29.	~
Element 2: Siting and design	Performance Principle P2 The siting and design of the strategic planning proposal, subdivision or development application, including roads, paths and landscaping, is appropriate to the level of bushfire threat that applies to the site. The proposal incorporates a defendable space and significantly reduces the heat intensities at the building surface thereby minimising the bushfire risk to people, property and infrastructure, including compliance with AS 3959 if appropriate.	A2.1 Asset Protection Zone Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the requirements set out in Schedule 1.	<ul> <li>No formal permanent APZs are required to deliver BAL-29 or lower for the proposed development.</li> <li>However, the temporary APZ and quarantining strategy outlined above will result in:</li> <li>provision of a temporary 20 m wide APZ setback into proposed Common Use Lot 153 prohibiting habitable development in areas of temporary BAL–40/FZ until such time that the temporary bushfire hazards to the south have been removed and/or BAL-29 or lower can be demonstrated</li> </ul>	~



Bushfire	Deufermennen Drinstelle	Method of compliance	Statement of development	Compliance	
criteria		Acceptable solutions	compliance	achieved	
			<ul> <li>temporary quarantining of proposed Lots 20–21 and 135– 152 until such time that the temporary bushfire hazards to the south have been removed and/or BAL-29 or lower can be demonstrated.</li> </ul>		
			The above strategy, which is consistent with the Strategen- JBS&G (2021 and 2022) BMPs, will be enforced through condition of DA approval requiring implementation of this BMP.		
			Establishment of any APZs is to comply with Schedule 1 APZ Standards of the Guidelines, as outlined in Appendix A.		
Element 3:	Performance Principle P3i	A3.1 Public roads	No public roads are proposed as	N/A	
Vehicular access	The design and capacity of vehicular access and egress is to provide for the community to evacuate to a suitable destination before a bushfire arrives at the site, allowing emergency services personnel to attend the site and/or hazard vegetation.	The minimum requirements under this acceptable solution are applicable to all proposed and existing public roads.			
		Public roads are to meet the minimum technical requirements in Table 6, Column 1.			
		The trafficable (carriageway/pavement) width is to be in accordance with the relevant class of road in the Local Government Guidelines for Subdivisional Development (IPWEA Subdivision Guidelines), Liveable Neighbourhoods, Austroad standards and/or any applicable standards for the local government area.			
		A3.2a Multiple access routes	The proposed DA design indicates	✓	
		Public road access is to be provided in two different directions to at least two different suitable destinations with an all-weather surface (two-way access). If the public road access to the subject site is via a no-	multiple vehicular access connections to the surrounding public road network leading to two different suitable destinations, including:		
		through road which cannot be avoided due to demonstrated site constraints, the road access is to be a			

## 

Bushfire protection	Performance Principle Method of compliance		Statement of development	Compliance
criteria		<ul> <li>Acceptable solutions</li> <li>maximum of 200 metres from the subject lot(s) boundary to an intersection where two-way access is provided.</li> <li>The no-through road may exceed 200 metres if it is demonstrated that an alternative access, including an emergency access way, cannot be provided due to site constraints and the following requirements are met:</li> <li>the no-through road travels towards a suitable destination; and</li> <li>the balance of the no-through road, that is greater than 200 metres from the subject site, is wholly within BAL-LOW, or is within a residential built-out area – Figure 23</li> </ul>	<ul> <li>connection to Illyarrie Rise to the north, which ultimately leads to Wanneroo Road to the west, providing the option of travelling north to Ashby and south to Wanneroo.</li> <li>connection to Catspaw Street, which provides access north to adjacent development areas of the Sinagra locality.</li> <li>These measures comply with provisions for multiple access</li> </ul>	
		<ul> <li>A3.2b Emergency access way</li> <li>Where it is demonstrated that A3.2a cannot be achieved due to site constraints, or where an alternative design option does not exist, an emergency access way can be considered as an acceptable solution.</li> <li>An emergency access way is to meet all the following requirements:</li> <li>requirements in Table 6, Column 2;</li> <li>provides a through connection to a public road;</li> <li>be no more than 500 metres in length; and</li> <li>must be signposted and if gated, gates must open the whole trafficable width and remain unlocked.</li> </ul>	routes, as outlined in Appendix B. Should construction and occupation of the project area precede construction and creation of Catspaw Street as a public road, then a temporary Emergency Access Way (EAW) is to be constructed along the Catspaw Street alignment, linking Illyarrie Rise with the constructed portion of Catspaw Street further north in order to ensure a secondary access route for the project area. The temporary EAW is to meet the technical requirements of the Guidelines, as outlined in Appendix	×
		<ul> <li>A3.3 Through-roads</li> <li>All public roads should be through-roads. No-through roads should be avoided and should only be considered as an acceptable solution where: <ul> <li>it is demonstrated that no alternative road layout exists due to site constraints; and</li> <li>the no-through road is a maximum length of 200 metres to an intersection providing two-way access,</li> </ul> </li> </ul>	N/A –applies to strategic planning proposals and subdivision applications only.	N/A

nfire ection eria	Performance Principle	Method of compliance Acceptable solutions	Statement of development compliance	Compliance achieved	
		A no-through road is to meet all the following requirements:			
		<ul> <li>requirements of a public road (Table 6, Column 1); and</li> <li>turn-around area as shown in Figure 24.</li> </ul>			
	Performance Principle P3ii	A3.4a Perimeter roads	N/A –applies to strategic planning	N/A	
	<ul> <li>The design of vehicular access and egress provides:</li> <li>access and egress for emergency service vehicles while allowing the community to evacuate;</li> <li>a defendable space for emergency services personnel on the interface between classified vegetation and development site; and</li> <li>hazard separation between classified vegetation and the subject site to reduce the potential radiant heat that may impact a lot(s).</li> </ul>	<ul> <li>A perimeter road is a public road and should be provided for greenfield or infill development where 10 or more lots are being proposed (including as part of a staged subdivision) with the aim of:</li> <li>separating areas of classified vegetation under AS3959, which adjoin the subject site, from the proposed lot(s); and</li> <li>removing the need for battle-axe lots that back onto areas of classified vegetation.</li> <li>A perimeter road is to meet the requirements contained in Table 6, Column 1.</li> <li>A perimeter road may not be required where:</li> <li>the adjoining classified vegetation is Class G Grassland;</li> <li>lots are zoned for rural living or equivalent;</li> <li>it is demonstrated that it cannot be provided due to site constraints; or</li> <li>all lots have frontage to an existing public road.</li> </ul>	proposals and subdivision applications only.		
	<ul> <li>Performance Principle P3iii</li> <li>Vehicular access is provided which allows:</li> <li>access and egress for emergency service vehicles;</li> <li>defendable space for emergency services</li> <li>personnel on the interface between classified vegetation and development; and</li> </ul>	A3.4b Fire service access route Where proposed lots adjoin classified vegetation under AS3959, and a perimeter road is not required in accordance with A3.4a, a fire service access route can be considered as an acceptable solution to provide firefighter access, where access is not available, to the classified vegetation.	N/A –applies to strategic planning proposals and subdivision applications only. Notwithstanding, three fire service access gates (as depicted in Figure 3) will be provided to the access easement and firebreak to the south to enable emergency fire access along this hazard interface.	N/A	

				JBS&G
Bushfire protection criteria	Performance Principle	Method of compliance	Statement of development	Compliance
		Acceptable solutions	compliance	achieved
	<ul> <li>hazard separation between classified vegetation and the site to reduce the potential radiant heat that may impact a lot(s).</li> </ul>	<ul> <li>A fire service access route is to meet all the following requirements:</li> <li>requirements in Table 6, Column 3;</li> <li>be through-routes with no dead-ends;</li> <li>linked to the internal road system at regular intervals, every 500 metres;</li> <li>must be signposted;</li> <li>no further than 500 metres from a public road;</li> <li>if gated, gates must open the required horizontal clearance and can be locked by the local government and/or emergency services, if keys are provided for each gate; and</li> <li>turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres.</li> </ul>		
	Performance Principle P3iv Vehicular access is provided which allows emergency service vehicles to directly access all habitable buildings and water supplies and exit the lot without entrapment.	<ul> <li>A3.5 Battle-axe access legs</li> <li>Where it is demonstrated that a battle-axe cannot be avoided due to site constraints, it can be considered as an acceptable solution.</li> <li>There are no battle-axe technical requirements where the point the battle-axe access leg joins the effective area of the lot, is less than 50 metres from a public road in a reticulated area.</li> <li>In circumstances where the above condition is not met, or the battle-axe is in a non-reticulated water area, the battle-axe is to meet all the following requirements:</li> <li>requirements in Table 6, Column 4; and</li> <li>passing bays every 200 metres with a minimum length of 20 metres (i.e. the combined trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres).</li> </ul>	N/A –applies to subdivision applications only.	N/A
		A3.6 Private driveways	Internal private driveways will be constructed in accordance with	~



Bushfire protection criteria	Performance Principle	Method of compliance	Statement of development C compliance a	Compliance achieved
		Acceptable solutions		
		<ul> <li>There are no private driveway technical requirements where the private driveway is:</li> <li>within a lot serviced by reticulated water;</li> <li>no greater than 70 metres in length between the most distant external part of the development site and the public road measured as a hose lay; and</li> <li>accessed by a public road where the road speed limit is not greater than 70 km/h.</li> <li>In circumstances where all of the above conditions are not met, or the private driveway is in a non-reticulated water</li> </ul>	relevant technical requirements of the Guidelines, as per Appendix B.	
		<ul> <li>area, the private driveway is to meet all the following requirements:</li> <li>requirements in Table 6, Column 4;</li> <li>passing bays every 200 metres with a minimum length of 20 metres and a minimum</li> <li>additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres); and</li> <li>turn-around area as shown in Figure 28 and within 30 metres of the habitable building.</li> </ul>		
Element 4: Water	No performance principle applies	A4.1 Identification of future water supply Evidence that a reticulated or sufficient non-reticulated water supply for bushfire fighting can be provided at the subdivision and/or development application stage, in accordance with the specifications of the relevant water supply authority or the requirements of Schedule 2. Where the provision of a strategic water tank(s) is required a suitable area within a road reserve or a dedicated lot the location should be identified, should be identified on the structure plan, to the satisfaction of the local government.	N/A – applies to strategic planning proposals only.	N/A
	<ul> <li>Performance Principle P4</li> <li>Provide a permanent water supply that is:</li> <li>sufficient and available for firefighting purposes;</li> </ul>	A4.2 Provision of water for firefighting purposes Where a reticulated water supply is existing or proposed, hydrant connection(s) should be provided in accordance with the specifications of the relevant water supply	A reticulated water supply and network of hydrants will be provided for the proposed development in accordance with	~

## **JBS&G**

Bushfire	Performance Principle	Method of compliance	Statement of development	Compliance
criteria		Acceptable solutions	compliance	achieved
	<ul> <li>constructed from non-combustible materials (e.g. steel), or able to maintain its integrity throughout a bushfire; and</li> <li>accessible, with legal access for maintenance and refilling by tankers and emergency service vehicles.</li> </ul>	<ul> <li>authority. Where these specifications cannot be met, then the following applies:</li> <li>The provision of a water tank(s), in accordance with the requirements of Schedule 2; and</li> <li>Where the provision of a strategic water tank(s) is applicable, then the following requirements apply:</li> <li>land to be ceded free of cost to the local government for the placement of the tank(s);</li> <li>the lot or road reserve where the tank is to be located is identified on the plan of subdivision;</li> <li>tank capacity, construction, and fittings, provided in accordance with the requirements of Schedule 2; and</li> <li>a strategic water tank is to be located no more than 10 minutes from the subject site (at legal road speeds).</li> <li>Where a subdivision includes an existing habitable building(s) that is to be retained, a water supply should be provided to this existing habitable building(s), in accordance with the requirements listed above.</li> </ul>	Water Corporation Design Standard 63. The proposed infrastructure will be connected to reticulated water supply proposed along Illyarrie Rise.	



# 2.4 Responsibilities for implementation and management of the bushfire measures

Implementation of the BMP addendum applies to the developer and prospective landowners to ensure bushfire management measures are adopted and implemented on an ongoing basis. A bushfire responsibilities table is provided in Table 4 to drive implementation of all relevant bushfire management works associated with this BMP addendum.

Table 4: Responsibilities for in	plementation and management	t of the bushfire measures
----------------------------------	-----------------------------	----------------------------

Implementation/management table			
	Developer – prior to occupation of buildings		
No.	Implementation action		
1	Construct the private driveways to the standards stated in this BMP addendum.		
2	Construct the reticulated water supply to the standards stated in this BMP addendum.		
3	If required, construct the temporary EAW along the Catspaw Street alignment to the north to the standards		
	stated in this BMP addendum.		
4	Establish the 20 m wide temporary APZ setback within proposed Common Use Lot 153 (as depicted in Figure		
	3) to the standards stated in this BMP until such time that the temporary bushfire hazards to the south have		
	been removed and/or BAL-29 or lower can be demonstrated.		
5	Temporarily quarantine proposed Lots 20–21 and 135–152 from development (as depicted in Figure 3) until		
	such time that the temporary bushfire hazards to the south have been removed and/or BAL-29 or lower can		
	be demonstrated.		
6	Establish three fire service access gates (as depicted in Figure 3) to the access easement and firebreak to the		
	south to enable emergency fire access along this hazard interface.		
7	Establish non-vegetated and low threat managed areas as required within the project area and adjacent		
	100 m wide low threat staging buffer in accordance with the requirements of this BMP addendum.		
8	Comply with the relevant requirements of the City of Wanneroo annual firebreak notice (refer to Appendix C).		





## 2.5 References

- Department of Fire and Emergency Services (DFES) 2021, *Map of Bush Fire Prone Areas*, [Online], Government of Western Australia, available from: <u>https://maps.slip.wa.gov.au/landgate/bushfireprone/</u>, [27/02/2024].
- Department of Planning (DoP) 2016, Visual guide for bushfire risk assessment in Western Australia, Department of Planning, Perth.
- Standards Australia (SA) 2018, Australian Standard AS 3959–2018 Construction of Buildings in Bushfire-prone Areas, Standards Australia, Sydney.
- Strategen-JBS&G 2021, Bushfire Management Plan (Subdivision) Lot 1665 Wanneroo Road, Sinagra, report prepared for Stockland, September 2021.
- Strategen-JBS&G 2022, Bushfire Management Plan (Subdivision Addendum) Lot 1665 Wanneroo Road, Sinagra, report prepared for Stockland, August 2022.

Western Australian Planning Commission (WAPC) 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth.

Western Australian Planning Commission (WAPC) 2021, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.4 December 2021, Western Australian Planning Commission, Perth.



# Appendix A APZ standards (Schedule 1 of the Guidelines)



Schedule 1: Standards for Asset Protection Zones			
Object	Requirement		
Fences within the APZ	<ul> <li>Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).</li> </ul>		
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness) Trees* (>6 metres in height)	<ul> <li>Should be managed and removed on a regular basis to maintain a low threat state.</li> <li>Should be maintained at &lt;2 tonnes per hectare (on average).</li> <li>Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch &gt;6 millimetres in thickness.</li> <li>Trunks at maturity should be a minimum distance of six metres from all elevations of the building.</li> <li>Branches at maturity should not touch or overhang a building or powerline.</li> <li>Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation.</li> <li>Canopy cover within the APZ should be &lt;15 per cent of the total APZ area.</li> </ul>		
	• Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity $ \int_{0}^{0} \int_{0}^{0}$		
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	<ul> <li>Should not be located under trees or within three metres of buildings.</li> <li>Should not be planted in clumps &gt;5 square metres in area.</li> <li>Clumps should be separated from each other and any exposed window or door by at least 10 metres.</li> </ul>		
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul> <li>Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above.</li> <li>Can be located within two metres of a structure, but three metres from windows or doors if &gt;100 millimetres in height.</li> </ul>		
Grass	<ul> <li>Grass should be maintained at a height of 100 millimetres or less, at all times.</li> <li>Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.</li> </ul>		



Schedule 1: Standards for Asset Protection Zones		
Defendable space	Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.	
LP Gas Cylinders	Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building.	
	The pressure relief valve should point away from the house.	
	No flammable material within six metres from the front of the valve.	
	Must sit on a firm, level and non-combustible base and be secured to a solid structure.	

\* Plant flammability, landscaping design and maintenance should be considered – refer to explanatory notes Source: Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)

#### **Element 2 Explanatory Notes**

#### E2 Managing an Asset Protection Zone (APZ) to a low threat state

An APZ is a low fuel area maintained around a habitable building to increase the likelihood that it will survive a bushfire, by providing a defendable space and reducing the potential for direct flame contact, radiant heat exposure and ember attack.

Vegetation management within an APZ should provide defendable space and be maintained to a low threat state, in perpetuity, in accordance with the requirements outlined in Schedule 1.

The width of an APZ varies with slope and vegetation type, however it should only be as wide as needed to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m<sup>2</sup> (BAL-29), or 10kW/m<sup>2</sup> where a building is identified for use as an on-site shelter. An APZ is generally not required where a building or development site achieves 29kW/m<sup>2</sup> (BAL-29) or lower in its pre-development state (prior to any vegetation clearing or modification).

An APZ should include an area of defendable space immediately adjoining a building, that is kept free from combustible items and obstructions, within which firefighting operations can be undertaken to defend the structure. Where a lot contains a building envelope, it may not be necessary for the entire building envelope to achieve 29kW/m<sup>2</sup> (BAL-29) as this may result in significant unnecessary clearing. It is recommended that the BMP identifies that a sufficient APZ can be accommodated within the building envelope, with the development site and associated APZ to be determined at the development approval stage.

An APZ should be contained within the boundaries of the lot on which the building is situated, except in instances where it is demonstrated that the vegetation on the adjoining land is managed in a low threat state, as per cl. 2.2.3.2 of AS 3959, such as a road, managed park, rocky outcrop or a water body.

The siting of a habitable building and associated APZ should aim to minimise the clearing of vegetation. The BMP should demonstrate that the proposed APZ has minimised the unnecessary loss of vegetation or potential for conflict with landscape or environmental objectives; and complies with environmental approvals/exemptions (where necessary). A re-design or reduction in lot yield may be necessary to minimise the removal and modification of remnant vegetation.

It is recommended that development be located on flat areas or slopes less than 20 degrees (especially where classified vegetation is located downslope to a building) and away from ridge tops, crests or narrow gullies, as bushfire can spread rapidly in these areas. Circumstances where these locations may be suitable for development to occur include where the land is already cleared, and 29kW/m<sup>2</sup> (BAL-29) or lower can be achieved for the whole development site without the use of an APZ. To ensure soil stability within an APZ, vegetation removal on slopes exceeding 18 degrees is discouraged.

Fine fuel load should be maintained to less than two tonnes per hectare, however this is often a subjective assessment. Reducing fuel load levels does not necessarily require the removal of existing vegetation. A combination of methods can be utilised to reduce fuel load such as raking, weed removal, pruning, mulching and/or the removal of plant material.

A simple method to estimate fuel load is to roughly equate one tonne of fuel load per hectare as 100 grams per square metre. For example, two tonnes per hectare of leaf litter is roughly 200 grams of leaf litter per square metre and eight tonnes per hectare is roughly 800 grams. Eucalyptus leaf litter is approximately 100 grams per handful, so two handfuls



#### **Element 2 Explanatory Notes**

of litter per square metre will roughly equate to two tonnes per hectare. Different types of fine fuel, like mulch or pine needles may be more or less than a handful, however the 100 grams per square metre rule of thumb can still be used.

The landowner or proponent is responsible for maintaining an APZ in accordance with Schedule 1 - Standards for Asset Protection Zones. Ongoing maintenance of an APZ is usually enforced through the local government firebreak notice issued under section 33 of the Bushfires Act 1954, and/or through a condition of a development approval, which requires the implementation of measures identified within a BMP.

A copy of the firebreak notice and Schedule 1 should be included in a BMP specifically as a how-to guide for the landowner, and to demonstrate to decision-makers that the measures outlined in the BMP to achieve the appropriate BAL rating through provision and ongoing management of an APZ, can be implemented.

#### E2 Landscaping and design of an Asset Protection Zone

Landscaping, design, and maintenance of an APZ in a bushfire prone area can significantly improve the bushfire resilience of a building. An APZ should not be seen as an area entirely cleared of vegetation, but as a strategically designed space that gives holistic consideration to how existing or proposed vegetation or non-combustible features interact with, or affect the building's bushfire resilience.

A well designed APZ provides a greater level of vegetation management within the first few metres of a building with, for example, less vegetation or inclusion of non-combustible materials. The vegetation within the remainder of an APZ can increase further away from the building with carefully considered plant selection and landscaping techniques.

Strategic landscaping measures can be applied, such as replacing weeds with low flammability vegetation (refer to E2 Plant Flammability) to create horizontal and vertical separations between the retained vegetation. The accumulation of fine fuel load from different plants is an important consideration for ongoing maintenance in accordance with Schedule 1. For example, when planting ground covers under deciduous trees within an APZ, the total fine fuel load prescribed in Schedule 1 will include any dead plant material from ground covers and leaf litter from the trees.

Plant density and final structure and form of mature vegetation should be considered in the initial landscaping stages. For example, clumps of sapling shrubs planted at a density without consideration of future growth, may increase the bushfire risk as a clump will quickly grow to exceed 5m<sup>2</sup>. It should be noted that in some cases, a single shrub in a mature state may be so dense as to fill a 5m<sup>2</sup> clump alone.

The location of plants within an APZ is a key design technique. Separation of garden beds with areas of low fuel or noncombustible material, will break up fuel continuity and reduce the likelihood of a bushfire running through an APZ and subjecting a dwelling to radiant heat or direct flame contact. It is important to note, where mature trees are separated from a building by six metres, but the canopy has grown to extend or overhang a building, maintenance and pruning to remove the overhanging branches should be undertaken without the entirety of the tree being removed.

Mulches used within the APZ should be non-combustible. The use of stone, gravel, rock and crushed mineral earth is encouraged. Wood mulch >6mm in thickness may be used, however it is recommended that it is used in garden beds or areas where the moisture level is higher by regular irrigation. These materials could be sourced from non-toxic construction and demolition waste giving the added benefit of reducing the environmental impact of any 'hard landscaping' actions.

Combustible objects, plants, garden supplies such as mulches, fences made from combustible material, should be avoided within 10 metres of a building. Vines or climbing plants on pergolas, posts or beams, should be located away from vulnerable parts of the building, such as windows and doors. Non-flammable features can be used to provide hazard separation from classified vegetation, such as tennis courts, pools, lawns and driveways or paths that use inorganic mulches (gravel or crushed rock). Consider locating firewood stacks away from trees and habitable buildings.

Incorporation of landscaping features, such as masonry feature walls can provide habitable buildings with barriers to wind, radiant heat and embers. These features can include noise walls or wind breaks. Use of Appendix F of AS 3959 for bushfire resistant timber selection within areas of 29kW/m<sup>2</sup> (BAL-29) or below, or the use of non-combustible fencing materials such as iron, brick, limestone, metal post and wire is encouraged.

In addition to regular maintenance of an APZ, further bushfire protection can be provided at any time by:

- ensuring gutters are free from vegetation;
- installing gutter guards or plugs;
- regular cleaning of underfloor spaces, or enclosing them to prevent gaps;
- trimming and removing dead plants or leaf litter;



#### **Element 2 Explanatory Notes**

- pruning climbing vegetation (such as vines) on a trellis, to ensure it does not connect to a building, particularly near windows and doors;
- removing vegetation in close proximity to a water tank to ensure it is not touching the sides of a tank; and/or
- following the requirements of the relevant local government section 33 fire break notice, which may include additional provisions such as locating wood piles more than 10 metres from a building.

Preparation of a property prior to the bushfire season and/or in anticipation of a bushfire is beneficial even if your plan is to evacuate. As embers can travel up to several kilometres from a bushfire and fall into small spaces and crevices or land against the external walls of a building, best practice recommends that objects within the APZ are moved away from the building prior to any bushfire event. Objects may include, but are not limited to:

- door mats;
- outdoor furniture;
- potted plants;
- shade sails or umbrellas;
- plastic garbage bins;
- firewood stacks;
- flammable sculptures; and/or
- playground equipment and children's toys.

#### E2 Plant flammability

There are certain plant characteristics that are known to influence flammability, such as moisture or oil content and the presence and type of bark. Plants with lower flammability properties may still burn during a bushfire event, but may be more resistant to burning and some may regenerate faster post-bushfire.

There are many terms for plant flammability that should not be confused, including:

- Fire resistant plant species that survive being burnt and will regrow after a bushfire and therefore may be highly flammable and inappropriate for a garden in areas of high bushfire risk.
- Fire retardant plants that may not burn readily or may slow the passage of a bushfire.
- Fire wise plants that have been identified and selected based on their flammability properties and linked to maintenance advice and planting location within a garden.

Although not a requirement of these Guidelines, local governments may develop their own list of fire wise or fire retardant plant species that suit the environmental characteristics of an area. When developing a recommended plant species list, local governments should consult with ecologists, land care officers or environmental authorities to ensure the plants do not present a risk to endangered ecological communities, threatened, or endangered species or their habitat.

When selecting plants, private landholders and developers should aim for plants within the APZ that have the following characteristics:

- grow in a predicted structure, shape and height;
- are open and loose branching with leaves that are thinly spread;
- have a coarse texture and low surface-area-to-volume ratio;
- will not drop large amounts of leaves or limbs, that require regular maintenance;
- have wide, flat, and thick or succulent leaves;
- trees that have bark attached tightly to their trunk or have smooth bark;
- have low amounts of oils, waxes, and resins (which will often have a strong scent when crushed);
- do not produce or hold large amounts of fine dead material in their crowns; and/or
- will not become a weed in the area.

Refer to the WAPC Bushfire and Vegetation Fact Sheet for further information on clearing and vegetation management and APZ landscaping, design and plant selection reference material.

Source: Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)



Appendix B Vehicular access technical requirements of the Guidelines



#### Acceptable Solution A3.2a – Multiple access routes

#### **Explanatory Note E3.2a**

Two-way public road access is public road access from a lot in at least two different directions to two suitable destinations, and provides residents and the community, as well as emergency services, with access and egress from both the subdivision and individual habitable buildings/development in the event of a bushfire emergency. A single road provides no alternative route if the access becomes congested or is unable to be traversed due to smoke and/or fallen trees during a bushfire.

Two-way public road access applies to access/egress routes leading into a subdivision, as well as those within a subdivision. A road that loops back onto itself does not constitute the option of two different directions.

Two-way public road access should always be the first option. Where the site is not able to achieve two-way access within 200 metres of the lot boundary, due to demonstrated site or environmental constraints, the proponent should identify options for an emergency access way from the subject site to a suitable destination. Where an emergency access way cannot be provided, the proponent should demonstrate compliance with the performance principle.

Subject sites or proposed lots greater than 200 metres from an intersection, which provides two-way access, do not satisfy the requirement for two-way access unless they meet the provisions which allow for no-through roads greater than 200 metres in A3.2a.

To demonstrate compliance with the performance principle for two-way access, the bushfire planning practitioner may have regard to:

- a. the extent of the bushfire hazard, location and vegetation classification, the likelihood, potential severity and impact of bushfire to the subject site and the road network;
- b. time between fire detection and the onset of conditions in comparison to travel time for the community to evacuate to a suitable destination;
- c. available access route(s) travelling towards a suitable destination; and
- d. turn-around area for a fire appliance for no-through roads.



Figure 21: Example of compliant and non-compliant two-way

Source: Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)



#### Acceptable Solution A3.2b – Emergency access way

#### **Explanatory Note E3.2b**

An emergency access way is not a preferred alternative to through public road access and should only be considered acceptable where it has been demonstrated that it will provide the safety and performance needs of emergency services and the community, including consideration for future needs, and that public road access to satisfy A3.2a cannot be achieved due to site constraints, such as an established road network with no opportunity to provide a public road for secondary access. Acceptance of an emergency access way should also consider the ability to accommodate reasonable worst-case vehicle volumes.

The principle function of the emergency access way is to provide a contingency (second) community evacuation route and simultaneously provide access for emergency services, in the event of a bushfire emergency. Where an emergency access way traverses classified vegetation, which has the potential to create a bushfire hazard, an emergency access way performs the secondary function of providing access by emergency services to this vegetation.

Emergency access ways should connect to a public road to allow alternative two-way through access. An emergency access way should not exceed 500 metres in length as they may not be as safe for road-use due to not being designed or constructed to the full requirements of a public road and may present uncertainties to emergency service personnel and the public as they are not part of the daily road network and not identified on Maps.

#### Permanent public emergency access way

An emergency access way can be provided as either a public easement in gross or a right-of-way. In both approaches, the management of the emergency access way is by the local government as the grantee of the easement or management body of the right-of-way. The proponent must obtain written consent from the local government that the local government will accept care, control and management of the easement or right-of-way; this must be provided to the decision-maker prior to granting planning approval. The approach taken is at the discretion of the decision-maker and/ or the local government and is also dependent on whether the land is to remain in private ownership or be ceded to the Crown. Consultation with Land Use Management at the Department of Planning, Lands and Heritage should also be considered if the land is to be ceded to the Crown or if the local government is uncertain of which approach to take.

If the emergency access way is provided as an easement, it should be provided as a public easement in gross under sections 195 and 196 of the Land Administration Act 1997 in favour of the local government and/or public authority, to ensure accessibility for emergency services and the public at all times. To be provided as a right-of-way the emergency access way should be vested in the Crown under section 152 of the Planning and Development Act 2005 as a right-of-way and such land to be ceded free of cost and without any payment or compensation by the Crown. If gates are used to control traffic flow during non-emergency periods, these will be managed by the local government and must not be locked. Gates should be double gates wide enough to access the full pavement width and accommodate Type 3.4 fire appliances with the design and construction to be approved by the relevant local government.

#### Temporary public emergency access way

A temporary emergency access way may be proposed to facilitate the staging arrangements of a subdivision. The provision of two public roads may not be possible in the first stage of the subdivision and an emergency access way can be provided as an interim access route until the second public road is developed and gazetted in a subsequent stage of the subdivision (see figure 22). The emergency access way should be provided in the same manner as a permanent emergency access way, but it should be removed from the certificate of title once the public road is developed and gazetted. Where an emergency access way is proposed as an alternative to a public road, the Bushfire Management Plan should provide thorough justification for its use.

#### Restricted public emergency access way

There may be some instances where a restricted emergency access way is proposed as a performance principle based solution where access is only available to the public in the event of a bushfire emergency. This option can only be considered where the local government or Main Roads WA have advised that vehicular access on the emergency access way is not allowed during non-emergency periods, as it provides an additional thoroughfare and entry point on a local or State road. In this scenario, the emergency access way can be provided as an easement under section 195 of the Land Administration Act 1997, as public access in the event of a bushfire emergency or vested in the Crown as a reserve under section 152 of the Planning and Development Act 2005. Such land is to be ceded free of cost without any payment or compensation by the Crown. The proponent must obtain written consent from the local government that



#### Acceptable Solution A3.2b – Emergency access way

#### Explanatory Note E3.2b

the local government will accept care, control and management of the proposed reserve and agree to the terms of the Management Order Conditions (if applicable); this must be provided to the decision-maker prior to granting planning approval.

The purpose of the reserve should be for a public purpose specified in the condition related to the subdivision, for example for emergency access only, or for emergency access and recreation. A reserve for emergency access and recreation can optimise the land-use as a dual purpose where it provides vehicular access in the event of a bushfire emergency, but can be accessed by the public (on foot) on a day-to-day basis as a recreation link. Appropriate signage can ensure the general public is aware of the purpose of the reserve. The approach taken is at the discretion of the decision-maker and/or local government.

#### Right-of-carriageway emergency access way

There may be some instances where a right-of-carriageway easement is proposed as a performance principle-based solution. This may be where particular landowner(s) and emergency services, but not the public, require access over a neighbouring lot(s). A right-of-carriageway easement should be provided under section 195 of the Land Administration Act 1997. The easement is to provide alternative access for the particular landowner(s) in the event of a bushfire emergency and not for use by the public. In this scenario, support will be necessary from the adjoining lot owner(s). The easement is to be granted to the local government and it is to agree with the landowner on the arrangements of the management of the easement area by deed. These management arrangements will be at the discretion of the local government. If gated, the easement area can be locked to restrict day-to-day vehicular access.



Figure 22: Example of an emergency access way

**Source:** Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)



#### Acceptable Solution A3.6 – Private driveways

#### **Explanatory Note E3.6**

In areas serviced by reticulated water, where the road speed limit is not greater than 70 km/h, and where the distance from the public road to the further part of the habitable building is no greater than 70 metres, emergency service vehicles typically operate from the street frontage.

In the event the habitable building cannot be reached by hose reel from the public road, then emergency service vehicles will need to gain access within the property. Emergency service vehicles will also need to gain access within the property, where access to reticulated water (fire hydrants) is not possible. In these situations, the driveway and battle-axe (if applicable) will need to be wide enough for access for an emergency service vehicle and a vehicle to evacuate.

Turnaround areas should be available for both conventional two-wheel drive vehicles of residents and Type 3.4 fire appliances. Turn-around areas should be located within 30 metres of habitable buildings. Circular and loop driveway design may also be considered. Note that the design requirements for a turn-around area for a private driveway or battle-axe differ to a cul-de-sac.



**Source:** Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)



# Appendix C City of Wanneroo Fire Mitigation Notice



# Fire mitigation measures must be in place by <u>1 NOVEMBER</u> and maintained until <u>30 APRIL EACH YEAR</u>.

This is a requirement under the Bush Fires Act 1954 Section 33. Failure to comply with this notice may incur penalties of up to \$5,000 and the works required by this notice will be carried out at the expense of the owner/occupier.

# Fire management requirements for land LESS than 4000sqm

- Maintain grasses and inflammable materials with the exception of living trees on the entire property to a height of no more than 50 millimetres. The entire property is required to be maintained below 50 millimetres from 1 November each year until 30 April the following year.
   OR
- A 3 metre wide trafficable firebreak as close as possible to all external boundaries of the property must be installed by 1 November each year and maintained until 30 April the following year.
  - If it is not possible to install the firebreak adjacent to the external boundary of the property due to naturally occurring obstacles, it is acceptable to install the firebreak around the obstacle. If this requires the firebreak to be greater than 5 metres away from the external boundary, a firebreak variation is required.
  - Ensure a minimum vertical clearance of 4 metres is maintained along the firebreaks to enable vehicles to drive along the firebreaks without access being obstructed.
- Where a property is affected by an approved bushfire management plan, property owners must still comply with all requirements in this notice and with any additional requirements outlined within that plan.
- Additional mitigation work may be required by a Fire Control Officer to maintain a 20 metre asset protection zone around buildings.

# Fire management requirements for land <u>GREATER</u> than 4000sqm

- A 3 metre wide trafficable firebreak as close as possible to all external boundaries of the property must be installed by 1 November each year and maintained until 30 April the following year.
  - If it is not possible to install the firebreak adjacent to the external boundary of the property due to naturally occurring obstacles, it is acceptable to install the firebreak around the obstacle. If this requires the firebreak to be greater than 5 metres away from the external boundary, a firebreak variation is required.
  - Ensure a minimum vertical clearance of 4 metres is maintained along the firebreaks to enable vehicles to drive along the firebreaks without access being obstructed.
- Install and maintain a 20 metre bare earth area around all hay stacks and/or fuel storage.
- Where a property is affected by an approved bushfire management plan, property owners must still comply with all requirements in this notice and with any additional requirements outlined within that plan.
- Additional mitigation work may be required by a Fire Control Officer to maintain a 20 metre asset protection zone around buildings.



# All vacant land **GREATER** than 4000sqm

- A 3 metre wide trafficable firebreak as close as possible to all external boundaries of the property must be installed by 1 November each year and maintained until 30 April the following year.
- Ensure a minimum vertical clearance of 4 metres is maintained along the firebreaks to ensure vehicles can drive along the firebreaks without being impeded by tree branches.
- If the land is an area of 50,000sqm (5 hectares) or greater, the grass must be maintained on the land to a height no greater than 50 millimetres for a distance of 10 metres from any firebreak.

# Frequently asked questions

## I live in a residential area, does this notice apply to me?

Yes. All City of Wanneroo property owners must comply with the Bush Fires Act 1954.

Please refer overleaf for fire management requirements to be in place by 1 November to ensure your property is compliant.

Most properties under 1000sqm will automatically comply if gardens are maintained.

## How will inspections be carried out?

Inspections will be carried out by trained Fire Control Officers who are authorised to enter a property by foot, vehicle, guad bike and /or drone.

## Do I need a Bushfire Survival Plan?

If you live in, on or near bushland, you are at risk from a bushfire and developing a bushfire survival plan is critical.

Visit the Department of Fire and Emergency Services website for information on how to develop a plan for your properdfes.wa.gov.au

## I am concerned my neighbour's property is not compliant, what can I do?

All properties are required to be compliant by 1 November.

If you think your neighbour's property does not comply with the requirements as outlined in this notice, please contact the Community Safety and Emergency Management team on 9405 5000.

## I own a vacant lot, do I need a firebreak?

Yes. A 3 metre wide trafficable firebreak as close as possible to all external boundaries of the property must be installed by 1 November each year and maintained until 30 April the following year.

## I am unable to meet the requirements outlined, what should I do?

If it is considered impracticable for any reason to implement any of the requirements of this notice, an application for a firebreak variation must be made to the City of Wanneroo by no later than 18 October of each year.

If permission is not granted, the requirements of this notice must be complied with.

Visit the City's website wanneroo.wa.gov.au/firebreakvariation to apply for a variation.



## Where can I learn more about this notice and bushfire prevention?

Visit the City's website wanneroo.wa.gov.au/bushfireprevention to learn more.



Please note, in addition to the requirements of this notice, if a City of Wanneroo Fire Control Officer considers further works are necessary to reduce the risk of bushfire, landowners will be notified via letter to the address shown on the City of Wanneroo rates record for the relevant land.

The City strongly recommends creating a 20 metre asset protection zone around buildings.



For further information call the City of Wanneroo Community Safety and Emergency Management Team on 9405 5000 or visit wanneroo.wa.gov.au/fireandemergencymanagement

