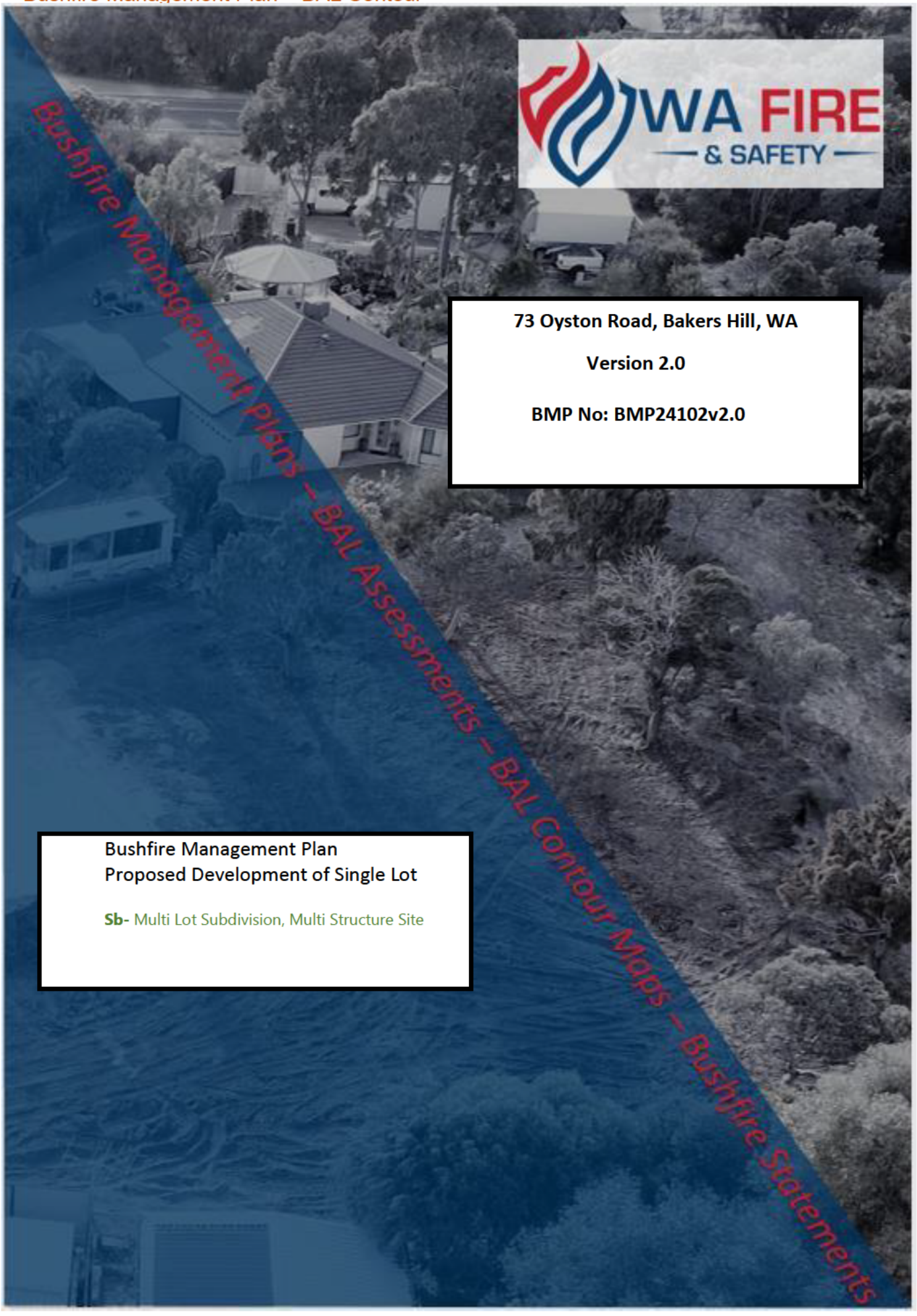


73 Oyston Road, Bakers Hill, WA

Version 2.0

BMP No: BMP24102v2.0

Bushfire Management Plan
Proposed Development of Single Lot

Sb- Multi Lot Subdivision, Multi Structure Site

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Bushfire Management Plan Coversheet

Addressing the Bushfire Protection Criteria

Site Address: 73 Oyston Road, Bakers Hill, Western Australia,

Site Visit: Yes☒ No☐
Date of site visit: 6th September 2023

Report Author: Dwayne Griggs, WA Fire & Safety

(BMP) Bushfire Management Plan Number: BMP24102v2.0

BMP Date: 27th February 2024

	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)?		X
Have any of the bushfire protection criteria elements been addressed using a performance principle (tick no if only acceptable solutions have been used to address all the bushfire protection criteria elements)?		X
Is the proposal any of the following (see SPP 3.7 for definitions)?		
Unavoidable development (in BAL-40 or BAL-FZ)		X
Strategic planning proposal (including rezoning applications)		X
High risk land-use		X
Vulnerable land-use		X

Note: Only if one (or more) of the above answers in the tables is yes should the decision maker (e.g. local government or the WAPC) refer the proposal to DFES for comment.

The information provided within this bushfire management plan to the best of my knowledge is true and correct:

[redacted]

Document control

Report version	Purpose	Author/reviewer and accreditation details	Date submitted
1.0	Approval of a 6 Lot Subdivision	Dwayne Griggs Level 2- BPAD40466	6th October 2023
2.0	Changes to Lot Layout	Dwayne Griggs Level 2- BPAD40466	27th February 2024

Disclaimer

The Bushfire Management Plan prepared by WA Fire & Safety (Dwayne Griggs BPAD40466), is solely intended for the use of:

1. Current & future landowners
2. Developers & contractors engaged by the current landowners
3. Local Government Authority (LGA)

The enclosed strategies intended for the mitigation of the bushfire risk for this development are the minimum standard and the risk is assessed to the ability of the bushfire consultant and provided information from all stakeholders at the time of the accepted task.

This BMP considers the bushfire aspects of planning only and does not consider all the environmental aspects involved. A limited environmental survey has been completed and further consultation and/or approval for vegetation clearances is up to the Local Government Authority (LGA).

The setbacks and distances for the Asset Protection Zone(s) APZs should be confirmed at the time of vegetation modification for the proposed structures and after the vegetation clearance a final inspection may be required to provide a to confirm distance and issue a BAL certificate, thus ensuring the correct risk mitigation distances has been achieved, the decision for a final inspection is up to the LGA.

There is no guarantee that in the event of a bushfire that property loss will not occur, and the author has used the information provided, appropriate guidelines and due care to provide what they believe is the best possible solution to combat a relatively unpredictable fire threat.

WA Fire & Safety (Dwayne Griggs) excludes all liability for any damage, loss, injury or claim from any fire event, by the acceptance of this BMP the property owner is made aware and agrees to this exclusion of liability.

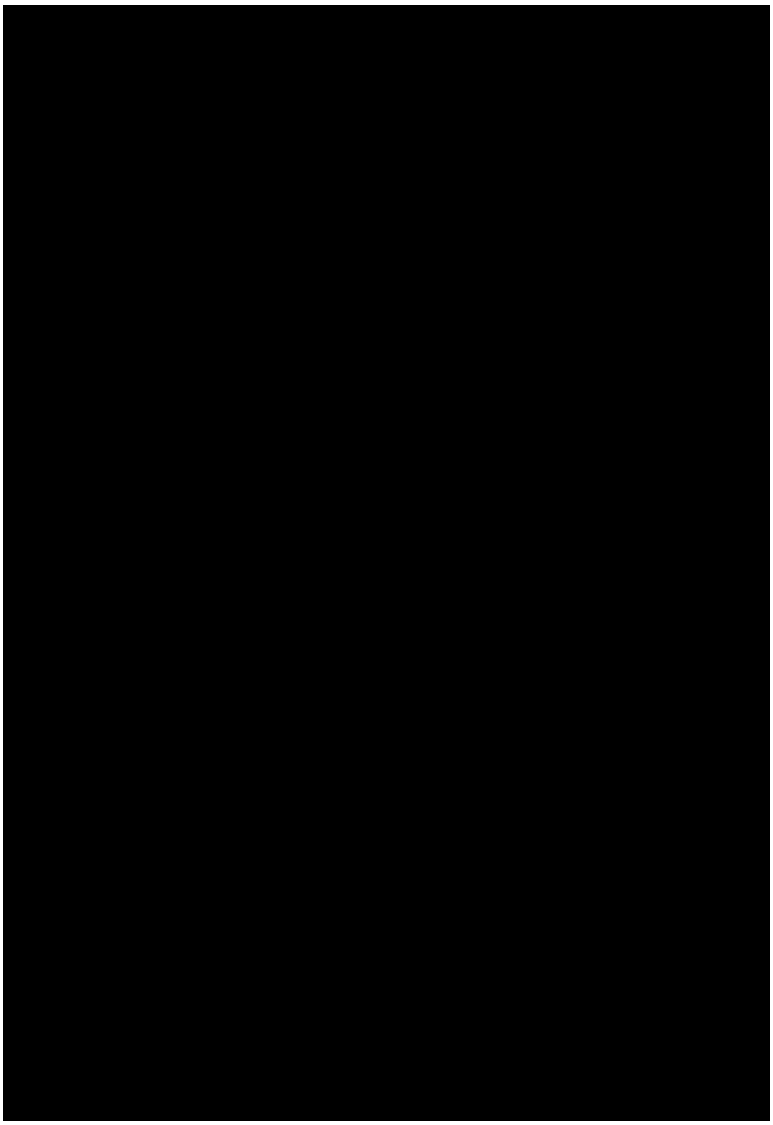
The ongoing responsibility falls on the landowner for the correct site maintenance to maintain the BAL Levels outlined inside this BMP and their continuance to mitigate the risks involved with extreme fire behaviour. The poor maintenance of vegetation, fuel loads, APZ requirements, Local government fire break notices and fire risk mitigation strategies provided within this BMP can severely impact the level of risk that a fire event can have. If the landowner believes that any factors have changed or modified the potential risk, then the bushfire consultant should be informed, and a new BMP may be required.

On submission of this BMP the landowner authorises direct contact from the LGA to the bushfire consultant for any issues, changes, or queries, contact details are below.

This Bushfire Management Plan is Valid for 3 years from the date completed.

Compliance Statement

This document has been prepared in accordance to the State Planning Policy 3.7 Planning in bushfire prone areas 2021 and the Guidelines for planning in bushfire prone areas v1.4 December 2021.



1.0 Introduction and Proposal Details

This BMP has been requested by the landowners for the proposed subdivision of 73 Oyston Road, Bakers Hill, Western Australia, within the LGA of the Shire of Northam.

The zoned rural residential lot is currently identified as inside the bushfire prone area, this lot has an established class 1a Dwelling, class 10a non associated shed and residential water tank. These are positioned in the middle of the lot.

This proposed application is for a five-lot subdivision with the subject lot being split horizontally, creating;

1. Lot 201 (South) of 1.8703ha being the ability to provide building envelope (BE) entirely inside the lot that achieves BAL-29 or less.
2. Lot 202 of 1.8702ha with the ability to provide building envelope (BE) entirely inside the lot that achieves BAL-29 or less.
3. Lot 203 of 3.7403ha keeping its established structures.
4. Lot 204 of 1.8283ha keeping existing structures having the ability to provide a building envelope (BE) entirely inside the lot that achieves BAL-29 or less for future use.
5. Lot 205 of 1.8281ha having the ability to provide a building envelope (BE) entirely inside the lot that achieves BAL-29 or less.

The assessed bushfire risk for the lot is moderate to extreme, BAL-29 or less is achievable for all lots with future vegetation separation and an APZ (Asset Protection Zone) established entirely inside the proposed lots. Building envelopes have been provided that can achieve and maintain BAL-29 or less and building of class 1a structures outside of these would not be supported.

1.1 Site Location

The proposed development is located on Oyston Road and Cook Road with access from the North, South and East.

1.2 Aims and Objectives

The aim of this Bushfire Management Plan is to identify issues, requirements and provide bushfire risk mitigation measures for the proposed development. Aims for this site include:

- avoid increasing the threat to people, property and infrastructure
- reduce the developments vulnerability from extreme bushfire behaviour
- allow ingress and egress for fire and emergency services
- consider and minimize environmental impacts by reducing vegetation modification.

The objectives of this Bushfire Management Plan are to:

- demonstrate suitability for development
- display bushfire risk levels, fuels, vegetation types and the impact before and after
- show Bushfire management strategies recommended for the site
- demonstrate compliance with the bushfire protection criteria and the use of acceptable solutions for the site.

1.3 Document Preparation

Dwayne Griggs from WA Fire & Safety a BPAD Level 2 accredited practitioner with the Fire Protection Association of Australia has conducted the site assessment and prepared this BMP.

FIGURE 1: Copy of Site Plans

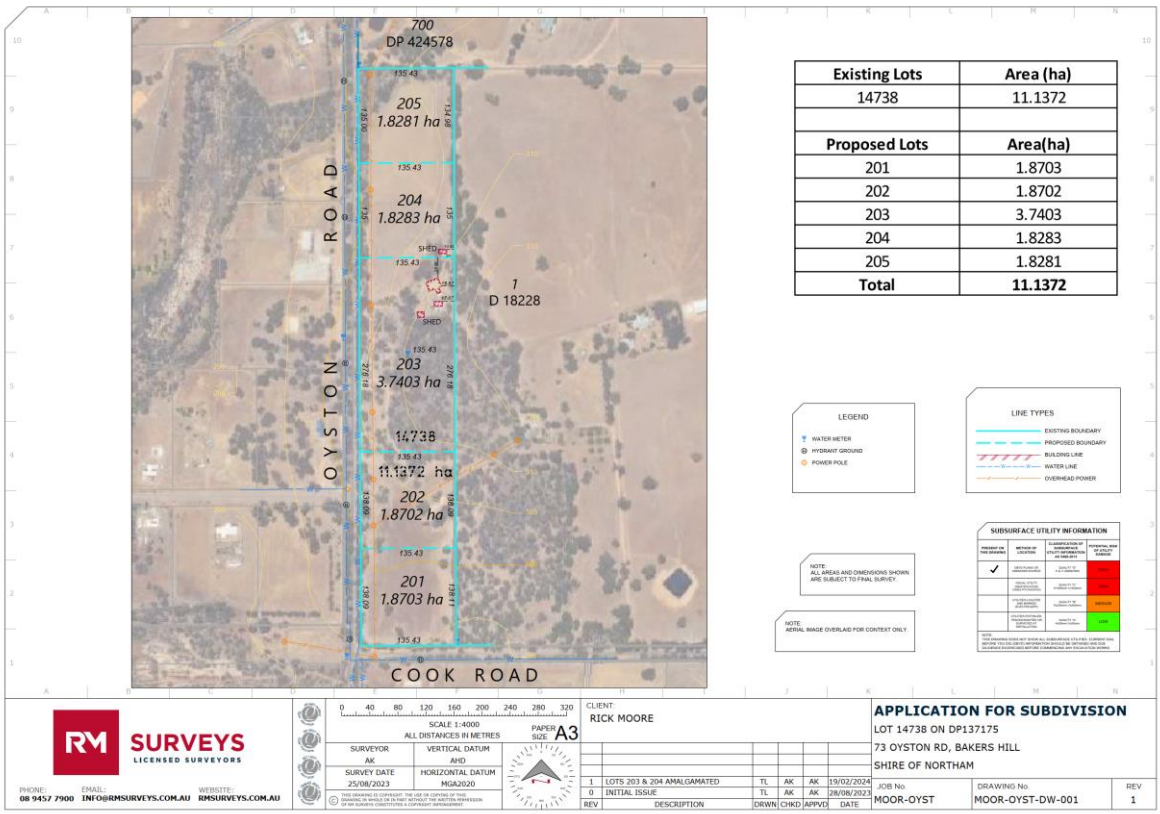
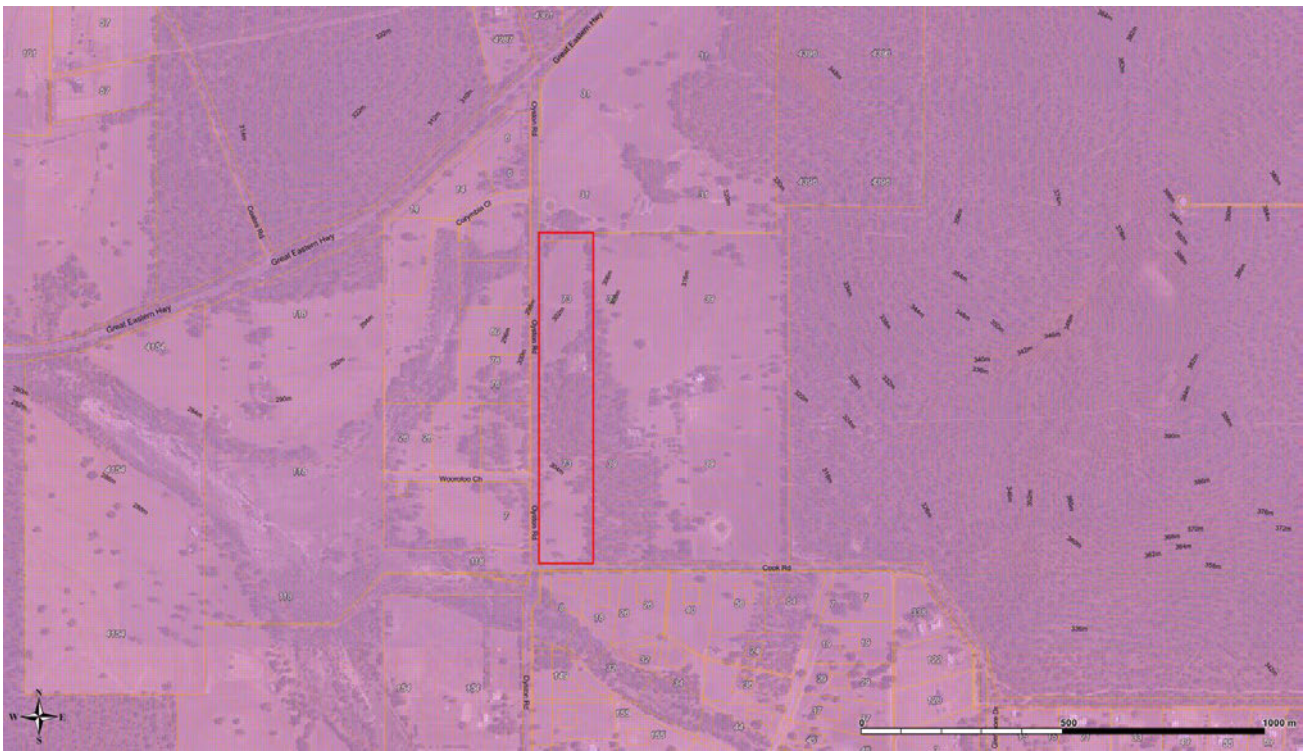


FIGURE 2: Proposed Location



FIGURE 3: **Map of Bushfire Prone Areas for the subject site**



Site is entirely inside the bushfire prone area.

2.0 Environmental Considerations

Limited considerations below have been assessed with no issues:
Department of Biodiversity, Conservation and Attractions (DBCA)
Conservation category wetlands and buffer **DBCA-019,**
Augusta to Walpole **DBCA-017**)
RAMSAR wetlands (**DBCA-010**)
Threatened and priority flora (**DBCA-036**)
Threatened Ecological Communities (**DBCA-038**)
Department of Planning, Lands and Heritage
Bush Forever areas 2000 (**DOP-071**)
Department of Water and Environmental Resources (DWER)
Clearing regulations – Environmentally Sensitive Areas (**DWER-046**)
Swan Bioplan Regionally Significant Natural Areas 2010 (**DWER-070**)
Department of Primary Industries and Regional Development (DPIRD)
Conservation Covenants Western Australia (**DPIRD-023**)

2.1 Native vegetation – Modification and Clearing

For the application no vegetation will be required to be modified to the Schedule 1 of the Guidelines for Planning in Bushfire Prone Areas – Appendices (appendix 1) and the requirements of the Local Government Authority Firebreak Notice (Appendix 2), this will be done at a later stage when structures are sited on each lot within the provided building envelopes.

The building envelopes have been sighted to reduce the clearance of native Class A within the lots, where places they achieve separation from some areas that can remain untouched.
There are no alternative bushfire management design solutions that will reduce the extent of vegetation clearing as the BE locations have been provided to minimise vegetation modification using minimum setbacks.

The proposed layout will result in an appropriate balance between bushfire risk mitigation and vegetation retention.

2.2 Revegetation/Landscape Plans

Revegetation inside the APZ's will be designed and maintained as per the standards for APZ's (Appendix 1) and the Local Government Authority Firebreak Notice (Appendix 2)

Landscaping plans have not been provided; the future intention is to have the existing native vegetation modified to a low threat state inside the APZ's as per the Standard for APZ's (Appendix 1), once the structures are sighted and approved by the LGA.

3.0 Bushfire Assessment Results

The site requires a BAL assessment in accordance with clause 6.5 of SPP 3.7. The assessment of this site or development was undertaken by Dwayne Griggs of WA Fire & Safety, a BPAD Accredited Level 2 Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959 - 2018 Simplified Procedure (Method 1). All vegetation within 150m of the proposed site has been assessed and classified in accordance with AS3959.

3.1 Vegetation Classification

Vegetation and land use within 150 m of the site has been classified as per descriptions included in *AS 3959 – 2018 Construction of Buildings within Bushfire Prone Areas*.

All vegetation inside the 150m Vegetation survey is either Class A Forest or Class G Grassland.

FIGURE 5: Vegetation Classification Map

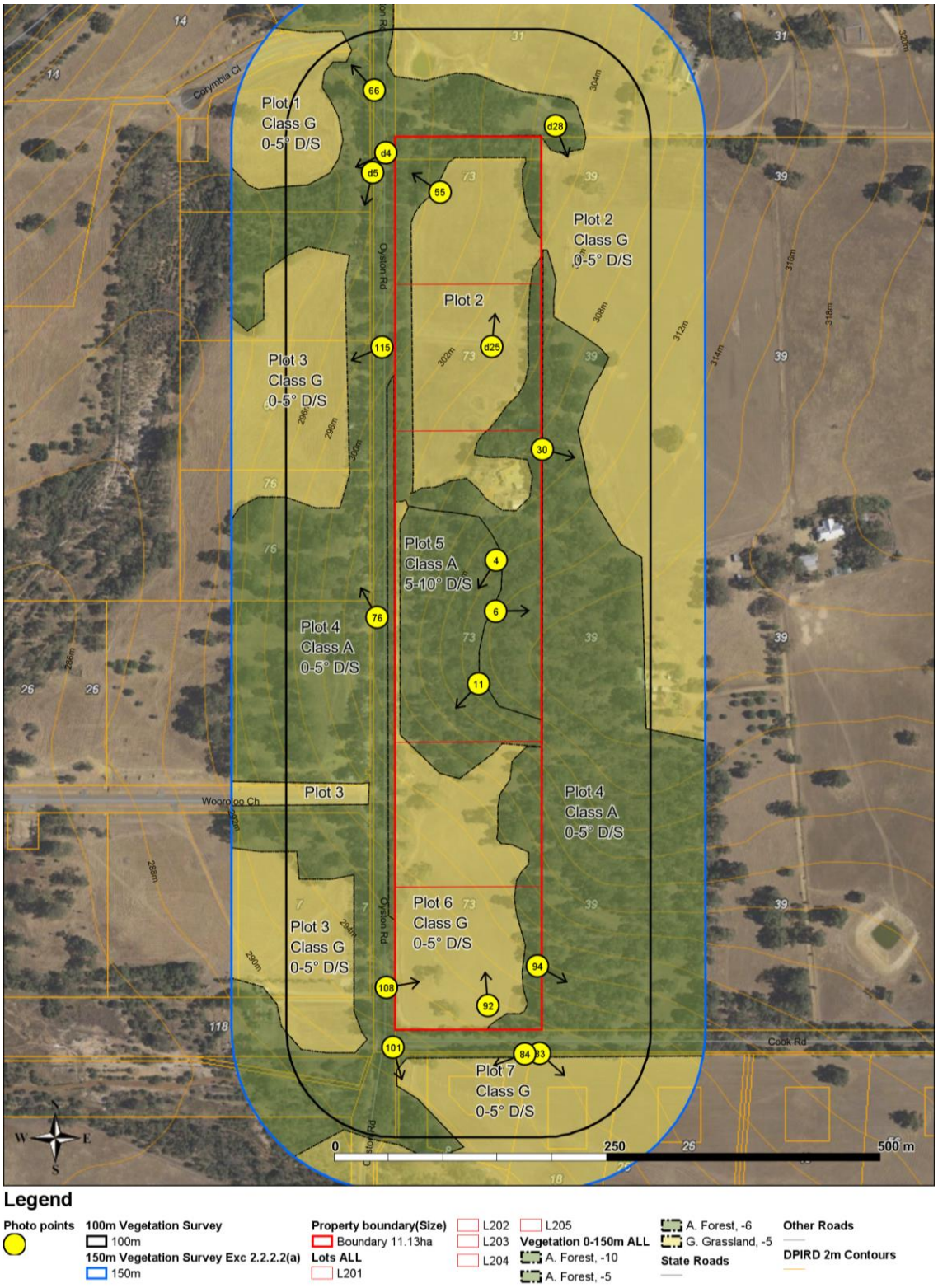


Photo ID:	66	Plot:	1	
Vegetation Classification or Exclusion Clause				
Class G Grassland				
Description / Justification for Classification				
Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads				

Photo ID:	D25	Plot:	2	
Vegetation Classification or Exclusion Clause				
Class G Grassland				
Description / Justification for Classification				
Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads				

Photo ID:	D28	Plot:	2	
Vegetation Classification or Exclusion Clause				
Class G Grassland				
Description / Justification for Classification				
Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads				

Photo ID:	115	Plot:	3	

Vegetation Classification or Exclusion Clause			
Class G Grassland			
Description / Justification for Classification			
Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads			
Photo ID:	D4	**Plot:**	4
Vegetation Classification or Exclusion Clause			
Class A Forest			
Description / Justification for Classification			
Overstorey up to 30m in height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads			
Photo ID:	D5	**Plot:**	4
Vegetation Classification or Exclusion Clause			
Class A Forest			
Description / Justification for Classification			
Overstorey up to 30m in height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads			
Photo ID:	30	**Plot:**	4

Vegetation Classification or Exclusion Clause	
Class A Forest	
Description / Justification for Classification	
Overstorey up to 30m in height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads	

Photo ID:	55	Plot:	4
Vegetation Classification or Exclusion Clause			
Class A Forest			
Description / Justification for Classification			
Overstorey up to 30m in height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads			

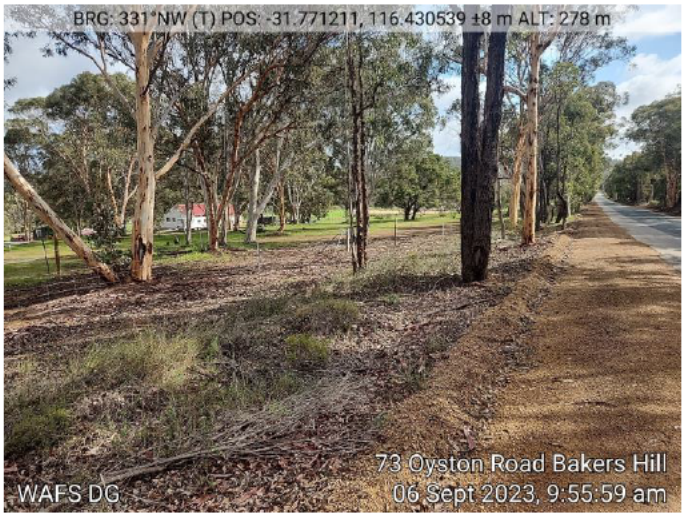
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Vegetation Classification or Exclusion Clause			
Class A Forest			
Description / Justification for Classification			
Overstorey up to 30m in height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads			

Photo ID:	94	Plot:	4
Vegetation Classification or Exclusion Clause			
Class A Forest			
Description / Justification for Classification			
Overstorey up to 30m in height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads			



Photo ID:	4	Plot:	5
Vegetation Classification or Exclusion Clause			
Class A Forest			
Description / Justification for Classification			
Overstorey up to 30m in height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads			



Photo ID:	11	Plot:	5
Vegetation Classification or Exclusion Clause			
Class A Forest			
Description / Justification for Classification			

Overstorey up to 30m in height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads	

Photo ID:	92	**Plot:**	6
Vegetation Classification or Exclusion Clause			
Class G Grassland			
Description / Justification for Classification			
Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads			



Photo ID:	108	**Plot:**	6
Vegetation Classification or Exclusion Clause			
Class G Grassland			
Description / Justification for Classification			
Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads			



Photo ID:	83	Plot:	7
Vegetation Classification or Exclusion Clause			
Class G Grassland			
Description / Justification for Classification			
Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads			



Photo ID:	84	Plot:	7
Vegetation Classification or Exclusion Clause			
Class G Grassland			
Description / Justification for Classification			
Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads			



Photo ID:	101	Plot:	7
Vegetation Classification or Exclusion Clause			
Class G Grassland			
Description / Justification for Classification			

Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads	

3.2 Slope

For the purposes of this assessment all vegetation within the 150m being Class A or G is -0° to -5° downslope apart from a small plot within lots 204 and 203 being -6° Downslope.

Table 3A: Vegetation Classification and Slopes

Plot	Vegetation Classification	Effective Slope
1	Class G Grassland	0-5 Downslope
2	Class G Grassland	0-5 Downslope
3	Class G Grassland	0-5 Downslope
4	Class A - Forest	0-5 Downslope
5	Class A - Forest	5-10 Downslope
6	Class A - Forest	0-5 Downslope
7	Class G Grassland	0-5 Downslope

3.3 Fire Danger Index

The nominated fire danger index (FDI) for Western Australia is 80

3.4 BAL- Contour Assessment

Figure 6 is a BAL Contour assessment that shows the ratings within the subject lot in the current state, this shows what the impacts from the vegetation on the day of the site assessment.

Figure 6: Determined BAL Contour Map

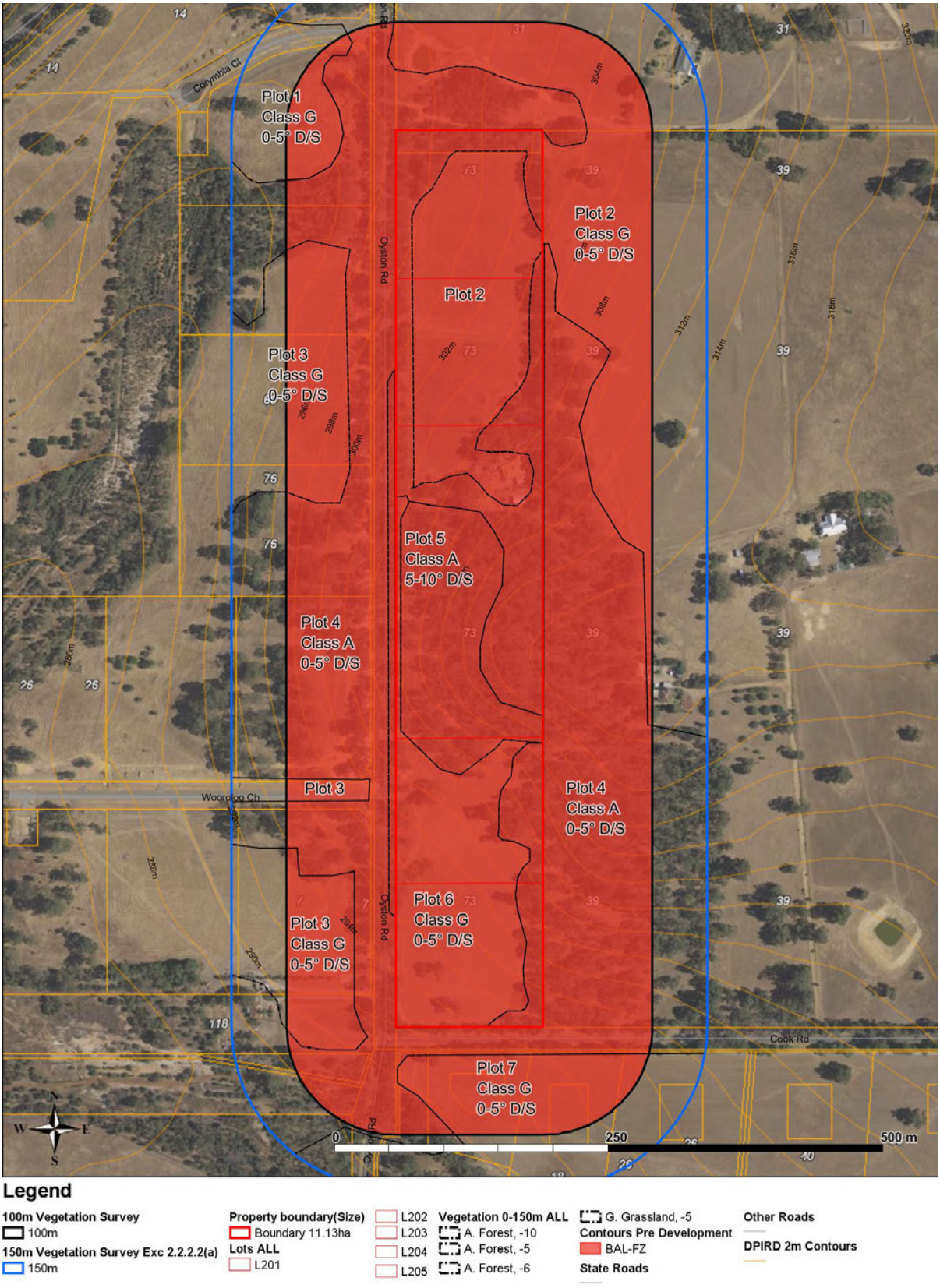


Figure 7 is a BAL Contour assessment that shows the ratings within the subject lots where the vegetation inside each lot is in a managed state, this is not an accurate picture of what the site will be when completed and demonstrates what ratings are possible inside the subject lot. This includes each individual lot and the impacts to the neighbouring lots as well.

The below BAL Contour shows the minimum vegetation clearance required from the building envelope to achieve BAL-29 or less.

When future dwellings or associated structures are sited within the building envelopes vegetation modification should be significantly less that shown in the BAL contour as the APZ's will be structure specific.

Building envelopes have been provided for the siting of any class 1a or associated structures at a rating of BAL-29 or less, building outside of these envelopes may not be supported.

Figure 7: Prescribed BAL Contour Map

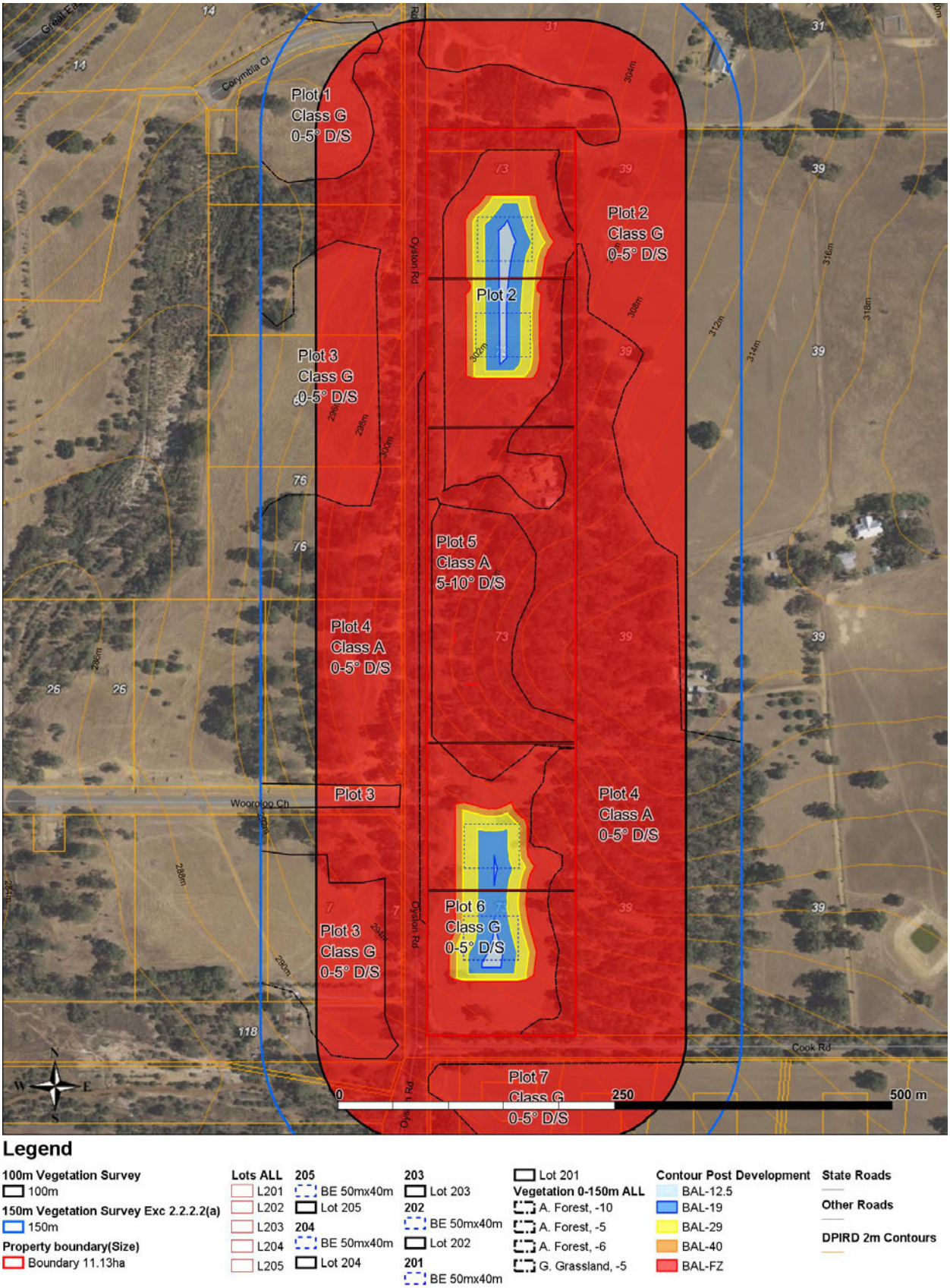


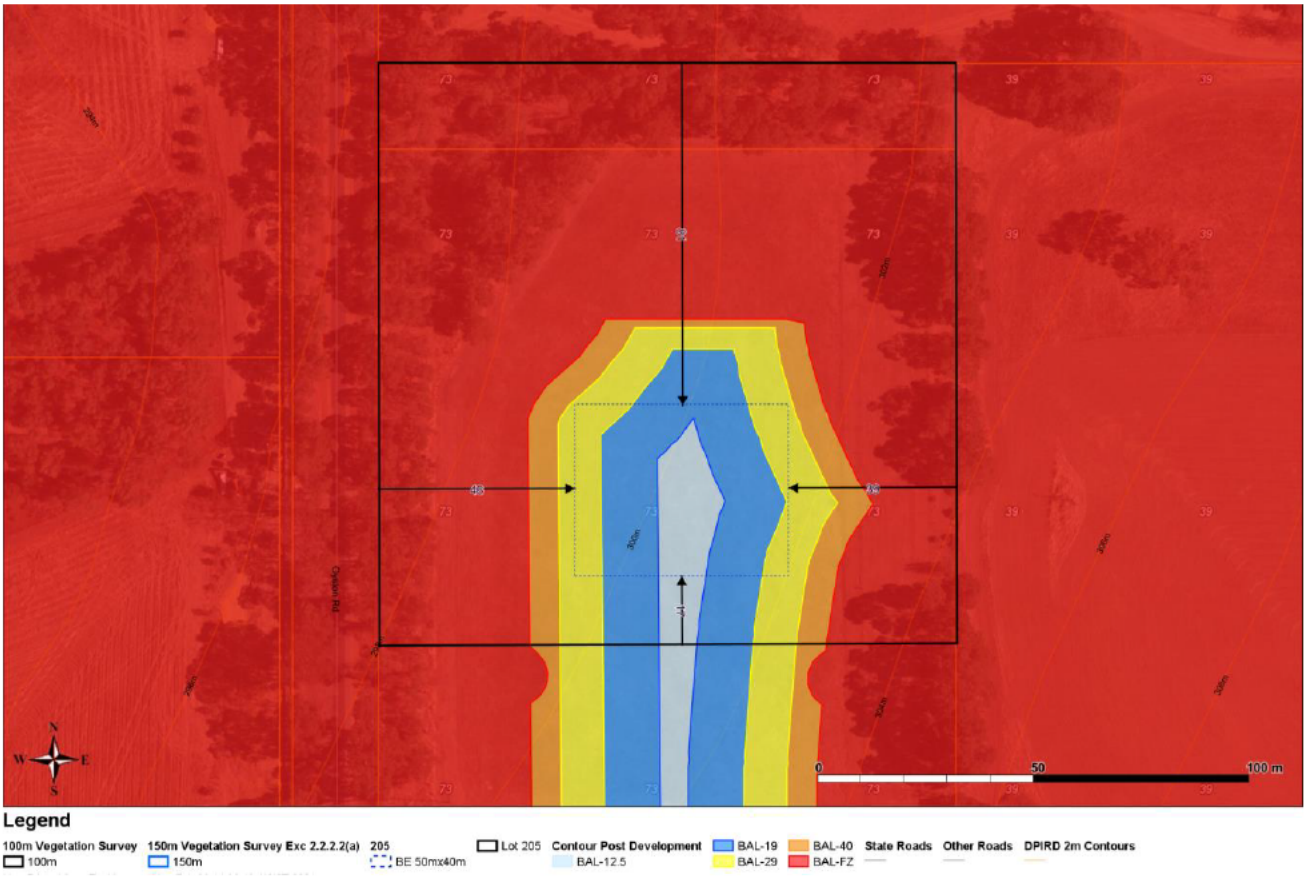
Table 3B provides the indicative BAL separation distances to the subject lot BE with applicable APZ and indicates that BAL-29 or less is achievable within all lots.

Table 3B: Indicative BAL contour ratings

Lot	Vegetation Class	Effective Slope	Separation (m)	Highest BAL	Lowest BAL
205	Class A - Forest	0-5 Downslope	27m(APZ)	BAL – 29	BAL – 12.5
204	Class A - Forest	5-10 Downslope	33m(APZ)	BAL – 29	BAL – 19
203	Class A - Forest	5-10 Downslope	0m	BAL – FZ	BAL – FZ
202	Class A - Forest	0-5 Downslope	27m(APZ)	BAL – 29	BAL – 12.5
201	Class A - Forest	0-5 Downslope	27m(APZ)	BAL – 29	BAL – 12.5

Figure 8 Individual Lot minimum Setback Maps

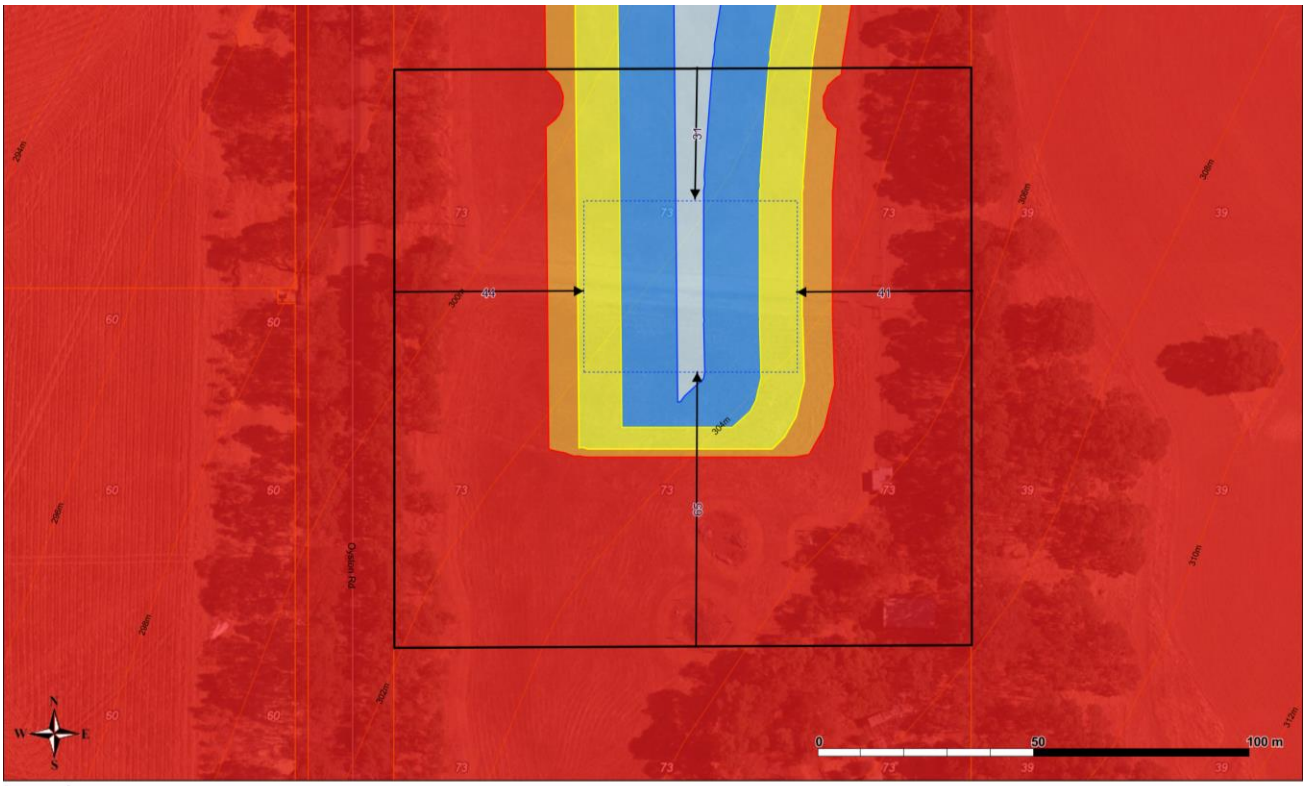
Lot 205



Legend

100m Vegetation Survey 100m | 150m Vegetation Survey Exc 2.2.2.2(a) 150m | 205 BE 50mx40m | Lot 205 | Contour Post Development BAL-12.5 | BAL-19 | BAL-29 | BAL-40 | BAL-FZ | State Roads | Other Roads | DPIRD 2m Contours

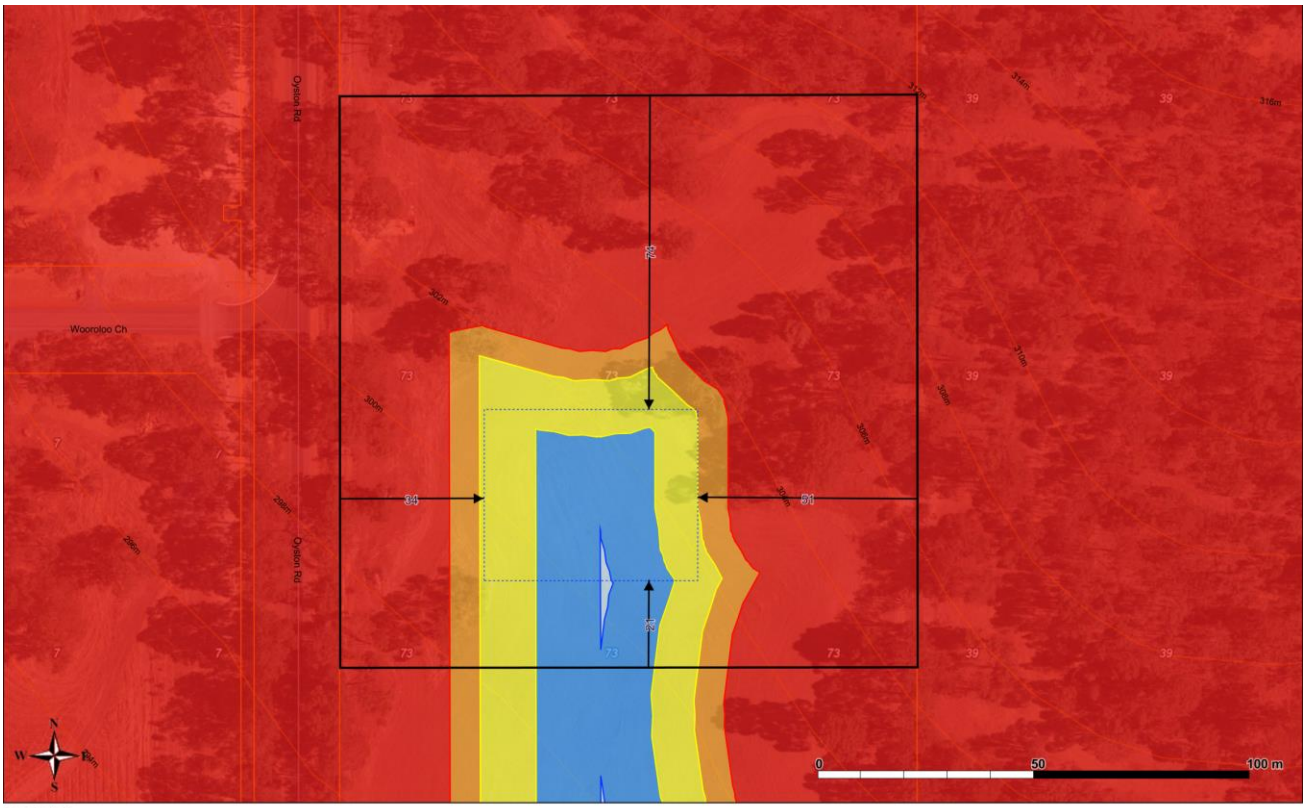
Lot 204



Legend

100m Vegetation Survey 100m | 150m Vegetation Survey Exc 2.2.2.2(a) 150m | 204 BE 50mx40m | Lot 204 | Contour Post Development BAL-12.5 | BAL-19 BAL-29 | BAL-40 BAL-FZ | State Roads | Other Roads | DPIRD 2m Contours

Lot 202



Legend

100m Vegetation Survey 100m | 150m Vegetation Survey Exc 2.2.2.2(a) 150m | 202 BE 50mx40m | Lot 202 | Contour Post Development BAL-12.5 | BAL-19 BAL-29 | BAL-40 BAL-FZ | State Roads | Other Roads | DPIRD 2m Contours

Lot 201

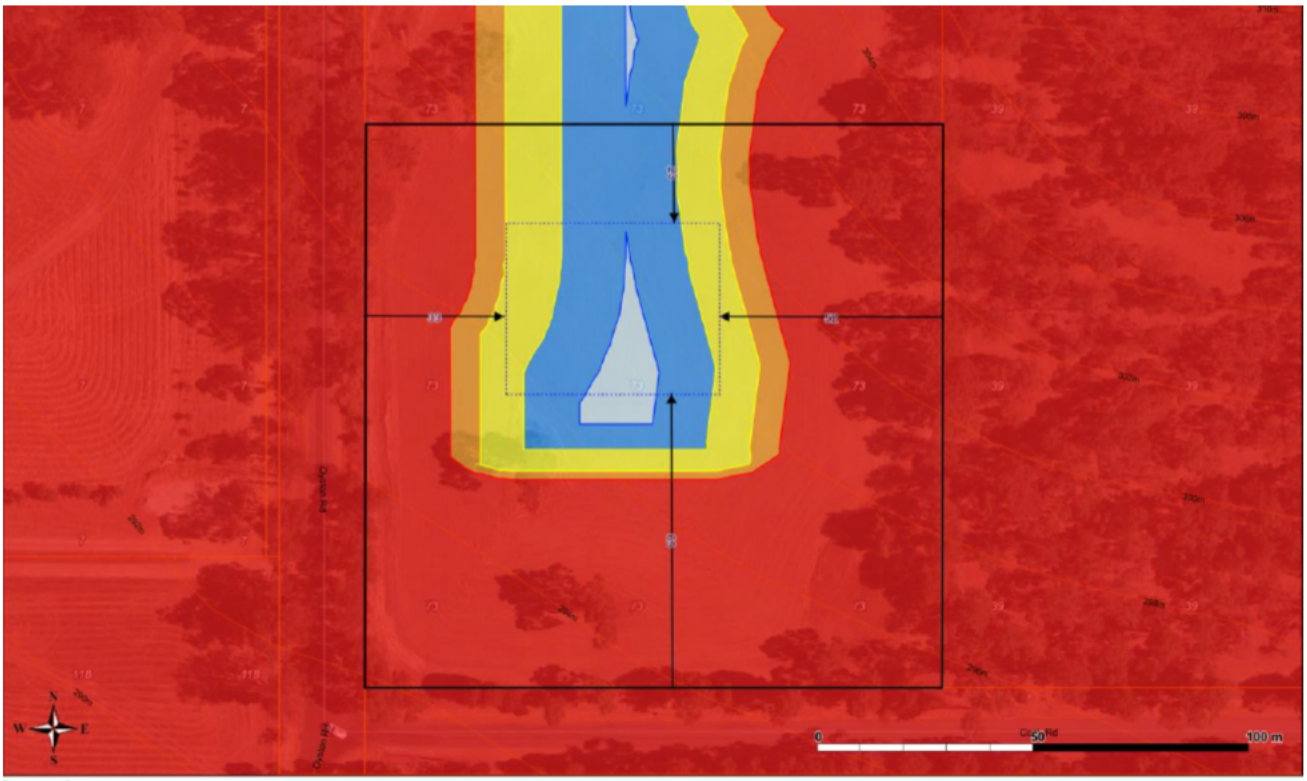


Table 3C: Lot Setbacks

Lot	North	South	East	West
205	81m	17m	39m	46m
204	31m	65m	41m	44m
203	0m	0m	0m	0m
202	74m	21m	51m	34m
201	23m	69m	52m	33m

3.5 Additional Bushfire Hazard Issues

Below are the identified bushfire hazard issues relating to this site:

- The subject lot consists mainly of Class G Grassland and Class A Forest.
- Indicative building envelopes are provided to ensure the proposed future class 1a dwellings will achieve BAL-29, or less with an APZ entirely inside each lot.
- Building outside the provided building envelopes will not be supported.
- The indicative BAL ratings are to demonstrate compliance only and will need to be established during the building process.
- As this development is above BAL-LOW the relevant bushfire protection criteria apply and will need to be addressed (section 4.0).

4.0 Compliance and Justifications

4.1 SPP 3.7 Objectives and Application of Policy Measures

The intent of *State Planning Policy (SPP) 3.7 Planning in Bushfire Prone Areas* (Department of Planning and Western Australian Planning Commission, 2015) is to ensure that bushfire risks are considered in a timely manner and that planning documents demonstrate the appropriate application of the various policy measures. Table 3 summarises the intent and objectives of SPP 3.7 and provides evidence of how the site complies.

Table 3: Evidence of compliance with SPP 3.7 intent and objectives

SPP Reference	Description	Evidence of Compliance
Intent	▪ Ensure that risks associated with bushfires are planned using a risk-based approach	▪ Preparation of a bushfire management plan in accordance with SPP 3.7 ▪ BAL assessment indicates risks associated with bushland are manageable
Objective 1	▪ Avoid any increase in the threat of bushfire to people, property and infrastructure	▪ BAL assessment indicates risks associated with bushland are manageable ▪ Structures within 100 m of vegetation assigned BAL-rating as per AS-3959 – 2018
Objective 2	▪ Reduce vulnerability to bushfire	▪ BAL assessment indicates risks associated with bushland are manageable ▪ Structures within 100 m of vegetation assigned BAL-rating as per AS-3959 – 2018
Objective 3	▪ Ensure that higher order strategic planning documents and proposals consider bushfire protection requirements at an early stage	▪ Planning at the site is largely complete, with bushfire risk being considered at an appropriate stage of the development ▪ This bushfire management plan documents the risks as they stand
Objective 4	▪ Achieve an appropriate balance between bushfire risk management and biodiversity conservation	▪ Biodiversity values will remain in the surrounding bushland area ▪ Site environmental values have been considered during previous stages of the planning approvals process

4.2 Compliance table

The Bushfire protection criteria have been provided to assist in the assessment of proposed bushfire risk management measures required for development applications in bushfire prone areas. Table 4 demonstrates the Site's Compliance with Bushfire Protection Criteria.

Table 4: Compliance with bushfire protection criteria

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
Element 1: Location Ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure	**A1.1 Development location** 1. Bushfire hazard level is or on completion will be moderate or low or 2. BAL Rating is BAL-29 or lower	BMP concludes that with the provided building envelopes, appropriate vegetation modification and APZ establishment a BAL-29 rating is possible for all lots.
Element 2: Siting and design To ensure that the siting and design of development minimises the level of bushfire impact	**A2.1 Asset Protection Zone** Every habitable building is surrounded by, and every proposed lot can achieve an APZ depicted on plans that meets the following: 1. Width – bushfire radiant heat does not exceed radiant heat of 29 kW/m^2 (BAL-29) as measured from any external wall or supporting post or column in all circumstances 2. Location – APZ contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot(s) will be managed in a low-fuel state on an ongoing basis, in perpetuity 3. Management – the APZ is managed in accordance with the requirements of Schedule 1 '*Standards for Asset Protection Zones*' (BMP Appendix 1)	An APZ will not be established top the building envelopes and will be done at a future stage of development, the APZ's will be Lot, location and structure specific and below is a guide of what is to be expected. A split APZ for some lots may reduce the vegetation clearance further and may be considered when siting a dwelling. Future APZ sizes will be: Lot 201 APZ of 27m Lot 202 APZ of 27m Lot 204 APZ of 27m Lot 205 APZ of 27m APZs have been sited with the proposed building envelopes, designed to minimise environmental impact within the lot boundary and position the dwellings at suitable locations to be managed in perpetuity. Future APZ's are to be maintained in perpetuity in accordance with: 1. Schedule 1 of the Guidelines for Planning in Bushfire Prone Areas (Appendix 1) and 2. Local Government Authority Firebreak Notice (Appendix 2).

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
Element 3: Vehicular access Vehicular access servicing a subdivision/development is available and safe during a bushfire event	**A3.1 Public Roads** Minimum requirements under the acceptable solution are applicable to all proposed and existing roads. 1. Public Roads are to meet minimum technical requirements in Table 6, Column 1 (BMP Appendix 3) SP – Strategic planning proposal and structure plan where the lot layout is not known Sb – Structure plan where the lot layout is known and subdivision application Do – Development application for any other development	The surrounding roads are suitable and comply with Table 6, Column 1
	A3.2a Multiple Access Routes Public road access is to be provided in two different directions to at least two different destinations with an all-weather surface (Two Way Access) 1. If the public road access to the subject site is via a no-through road which cannot be avoided due to demonstrated site constraints, the road access is to be a maximum of 200m from the subject lot(s) boundary to and intersection providing two way access. 2. 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: a. the no-through road travels towards a suitable destination; and the balance of the no-through road, that is greater than 200 metres from the subject b. site, is wholly within BAL-LOW, or is within a residential built-out area	Public road access is provided in three different directions to at least three different destinations with an all-weather surface on a public road. Access north Via Oyston Road to Great Eastern Highway Access south Via Oyston Road Access east Via Cook Road

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
	SP – Strategic planning proposal and structure plan where the lot layout is not known Sb – Structure plan where the lot layout is known and subdivision application Do – Development application for any other development	
	A3.2b Emergency Access Way 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. An emergency access way is to meet all the following requirements: 1. requirements in Table 6, Column 2 (BMP Appendix 3); 2. provides a through connection to a public road. 3. be no more than 500 metres in length; and 4. must be signposted and if gated, gates must open the whole trafficable width and remain unlocked. SP – Strategic planning proposal and structure plan where the lot layout is not known Sb – Structure plan where the lot layout is known and subdivision application Do – Development application for any other development	N/A as A3.2a is achieved.
	A3.3 Through Roads All public roads should be through-roads. No-through roads should be avoided and should only be considered as an acceptable solution where: 1. it is demonstrated that no alternative road layout exists due to site constraints; and 2. the no-through road is a maximum length of 200 metres to an intersection providing 3. two-way access, unless it satisfies the exemption provisions in A3.2a of this table. 4. A no-through road is to meet all the following requirements: 5. requirements of a public road Table 6, Column 1 (BMP	The surrounding roads / access routes are suitable and are all through roads.

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
	Appendix 3); and 6. turn-around area as shown in (BMP Appendix 3) SP – Strategic planning proposal and structure plan where the lot layout is not known Sb – Structure plan where the lot layout is known and subdivision application	
	A3.4a Perimeter roads A perimeter road is a public road and should be provided for greenfield or infil development where 10 or more lots are being proposed (including staged subdivision) with the aim of: 1. Separating areas of classified vegetation under AS3959, which adjoin the subject site, from the proposed lot(s)l and 2. Removing the need for battle-axe lots that back onto the areas of classified vegetation A perimeter road is to meet the requirements contained in Table 6, Column 1 (BMP Appendix 3) A Perimeter Road may not be required where: 1. The adjoining classified vegetation is class G 2. Lots are zoned for rural living or equivalent 3. It is demonstrated that it cannot be provided due to site constraints; or 4. All lots have frontage to an existing public road SP – Strategic planning proposal and structure plan where the lot layout is not known Sb – Structure plan where the lot layout is known and subdivision application	N/A – less than 10 lots
	A3.4b Fire service access route (FSA) Where proposed lots adjoin classified vegetation under AS3959, and a perimeter road is not required in accordance with A3.4a, a FSA route can be	N/A access is provided to the vegetation to the north and to the east.

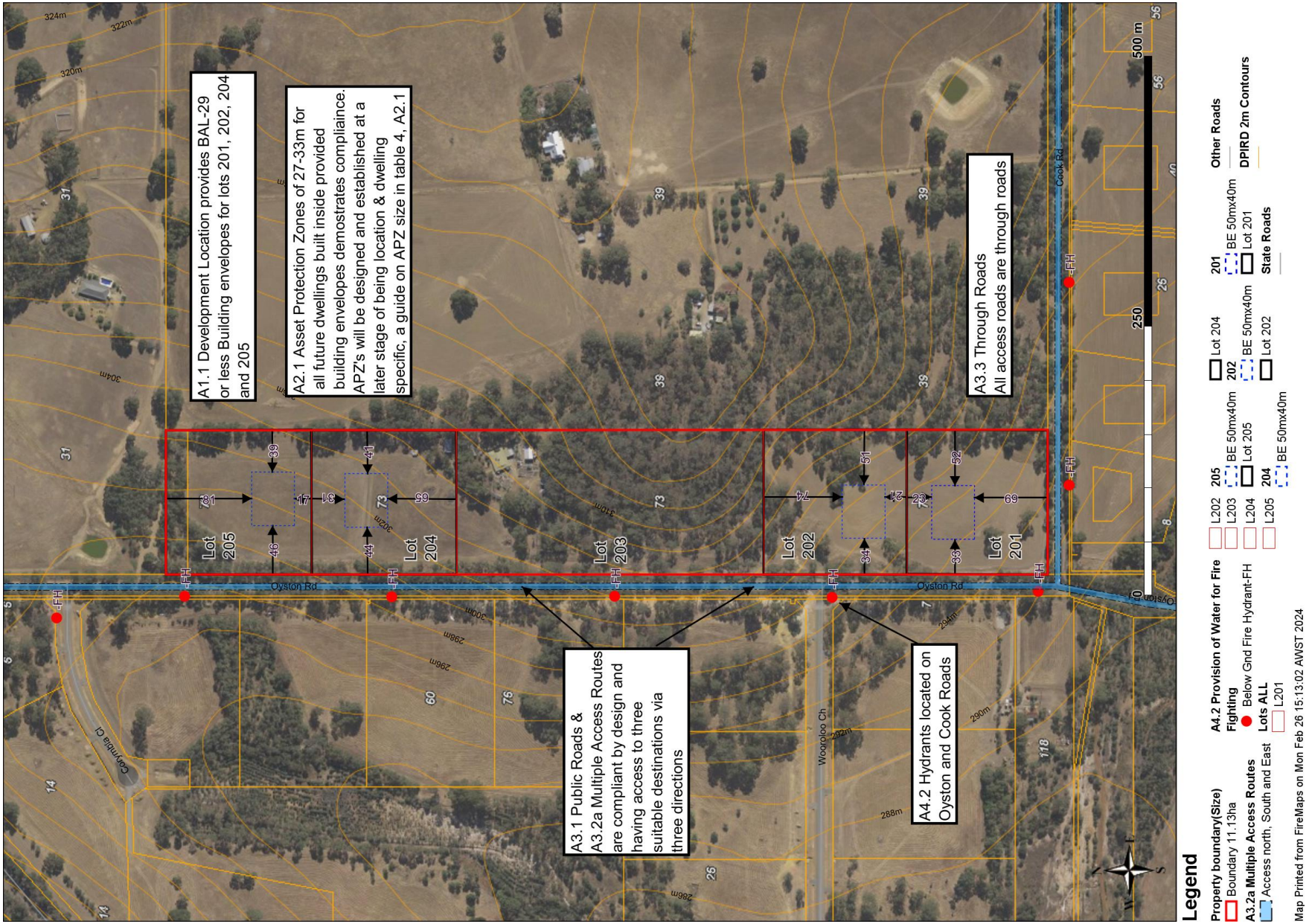
Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
	considered as an acceptable solution to provide fire fighter access, where access is not available to the classified vegetation. FSA is to meet all the following requirements: 1. Table 6, column 3 (BMP Appendix 3) 2. Be "through roads" with no dead ends 3. Linked to an internal road system at regular intervals, every 500 metres 4. Be signposted 5. No further than 500 metres to a public road 6. If gated, gates must open the required horizontal clearance and can be locked by the LGA or emergency services, if keys are provided for each gate 7. Have turn-around areas for 3.4 fire appliances every 500m SP – Strategic planning proposal and structure plan where the lot layout is not known Sb – Structure plan where the lot layout is known and subdivision application	
	A3.5 Battle-axe access legs Where it is demonstrated that a battle-axe cannot be avoided due to site constraints, it can be considered as an acceptable solution. 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. 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: 1. requirements in Table 6, Column 4; and 2. passing bays every 200 metres with a minimum length of 20 metres and a 3. minimum additional trafficable width of two metres (i.e. the	N/A

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
	combined trafficable 4. width of the passing bay and constructed private driveway to be a minimum six metres). See (BMP Appendix 3 E3.5) **Sb** – Structure plan where the lot layout is known and subdivision application	
	A3.6 Private Driveways There are no private driveway technical requirements where the private driveway is: 1. within a lot serviced by reticulated water; 2. 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 3. accessed by a public road where the road speed limit is not greater than 70 km/h. In circumstances where all of the above conditions are not met, or the private driveway is in a non-reticulated water area, the private driveway is to meet all the following requirements: 1. Requirements in Table 6, Column 4; 2. Passing bays every 200 metres with a minimum length of 20 metres and a minimum 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 3. Turn-around area as shown in (BMP Appendix 3, E3.6) and within 30 metres of the habitable building. See BMP Appendix 3, E3.6 **Dd** – Development application for a single dwelling, ancillary dwelling or minor development **Do** – Development application for any other development	N/A However all lots will need to comply with A3.6 as the rear of all building envelopes are more than 70m to the road curb. This will be considered at a later stage in development when siting a future dwelling and is not part of this development application. See BMP Appendix 3, E3.6 for information
Element 4: Water Water is available to the subdivision, development or	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,	N/A

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
land use to enable people, property and infrastructure to be defended from bushfire	in accordance with the specifications of the relevant water supply authority or the requirements of Schedule 2 (BMP Appendix 4, 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. SP – Strategic planning proposal and structure plan where the lot layout is not known	
	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 authority. Where these specifications cannot be met, then the following applies: 1. The provision of a water tank(s), in accordance with the requirements of Schedule 2 (BMP Appendix 4, Schedule 2); and 2. Where the provision of a strategic water tank(s) is applicable, then the following requirements apply: 3. land to be ceded free of cost to the local government for the placement of the tank(s); 4. the lot or road reserve where the tank is to be located is identified on the plan of subdivision. 5. tank capacity, construction, and fittings, provided in accordance with the requirements of Schedule 2(BMP Appendix 4, Schedule 2); and 6. a strategic water tank is to be located no more than 10 minutes from the subject site (at legal road speeds). 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.	Fire Hydrants have been installed on Oyston and Cook roads being spaced correctly and make A4.2 compliant.

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
	Sb – Structure plan where the lot layout is known and subdivision application **Dd** – Development application for a single dwelling, ancillary dwelling or minor development **Do** – Development application for any other development that is not a single dwelling, ancillary dwelling or minor development	

5.0 Bushfire Management Strategies



6.0 Roles & Responsibilities

Responsibilities & implementation measure for the proposed development, these are shared by the Current and future landowners, project developer and the Local Government Authority (LGA).

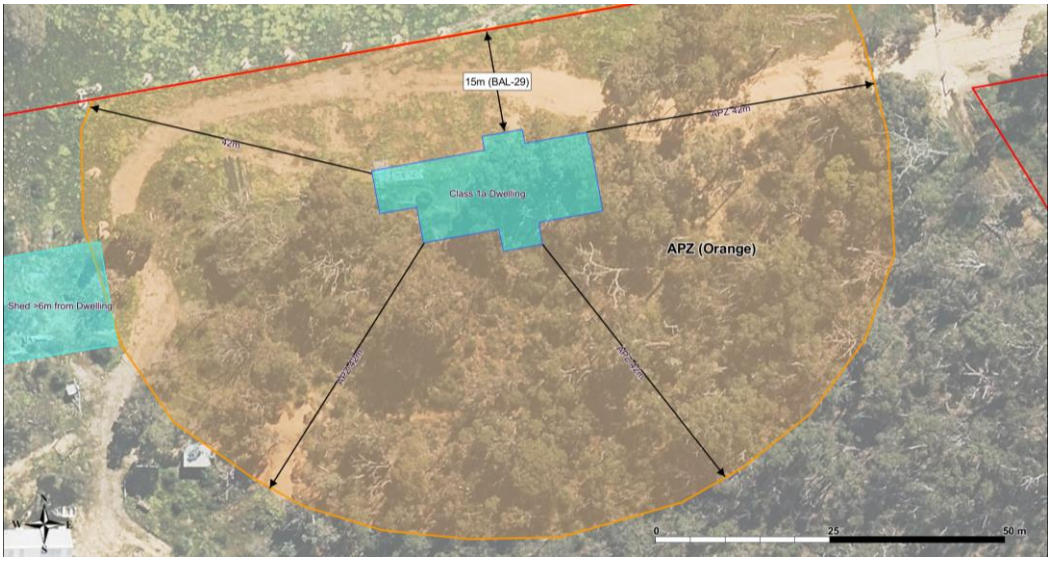
Table 5: Roles & Responsibilities

DEVELOPER/LANDOWNER/CONSULTANT – PRIOR TO USE	
No.	Implementation action
1	A notification, pursuant to Section 165 of the Planning and Development Act 2005, is 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 or above, 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 Services 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).
2	Establish and maintain lot firebreaks to required standard in perpetuity as per Local Government Authority Firebreak Notice (Appendix 2)
LANDOWNER – ONGOING	
No.	Management action
1	Maintain the firebreaks and comply with the relevant Local Government Authority (LGA) annual firebreak notice issued under s33 of the Bush Fires Act 1954 to required standard in perpetuity as per Local Government Authority Firebreak Notice (Appendix 2).
LOCAL GOVERNMENT AUTHORITY (LGA) – ONGOING MANAGEMENT	
No.	Management action
1	Inspection and issue of works orders or fines for non-compliance, this includes firebreaks, access, APZ and water supply.

Bushfire Management Plan Appendices

Appendix 1 – Information and SPP3.7, Schedule 1 - Standards for APZ's

An APZ is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level. The width of the required APZ varies with slope and vegetation. The APZ should at a minimum be of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29). It should be lot specific and will extend from the walls and supporting posts of a dwelling or any structure that is associated (<6m) from the dwelling.



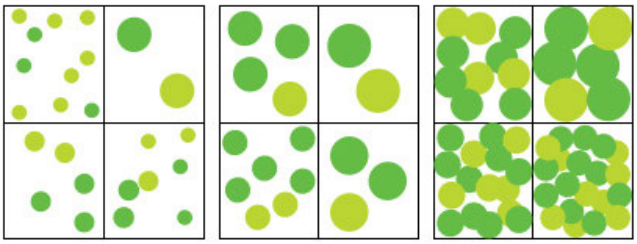
The APZ includes a defendable space which is an area adjoining the asset within which firefighting operations can be undertaken to defend the structure. Vegetation within the defendable space should be kept at an absolute minimum and the area should be free from combustible items and obstructions. The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

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 or rating of BAL-29 or less is achieved.

APZs can adversely affect the retention of native vegetation. Where the loss of vegetation is not acceptable or causes conflict with landscape or environmental objectives, such as waterway foreshore areas and wetland buffers, reducing lot yield may be necessary in order to minimise the removal and modification of remnant vegetation.

It is the responsibility of the landowner/proponent to maintain their APZ in accordance with Schedule 1 'Standards for Asset Protection Zones'. It is further recommended that maintenance of APZs is addressed through the local government firebreak notice, issued under s33 of the Bushfires Act 1954, and preferably included in a Bushfire Management Plan specifically as a how-to guide for the landowner.

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Fences within the APZ	• 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).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	• Should be managed and removed on a regular basis to maintain a low threat state. • Should be maintained at <2 tonnes per hectare (on average). • Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	• Trunks at maturity should be a minimum distance of six metres from all elevations of the building. • Branches at maturity should not touch or overhang a building or powerline. • Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. • Canopy cover within the APZ should be <15 per cent of the total APZ area. • 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  15% 30% 70%
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	• Should not be located under trees or within three metres of buildings. • Should not be planted in clumps >5 square metres in area. • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	• Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. • Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
Grass	• Grass should be maintained at a height of 100 millimetres or less, at all times. • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
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.

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/m² (BAL-29), or 10kW/m² 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/m² (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/m² (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/m² (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 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.

Regardless of whether an Asset Protection Zone exists in accordance with the acceptable solutions and is appropriately maintained, it should be noted that fire fighters are not obliged to protect an asset if they think the separation distance between the dwelling and vegetation is unsafe.

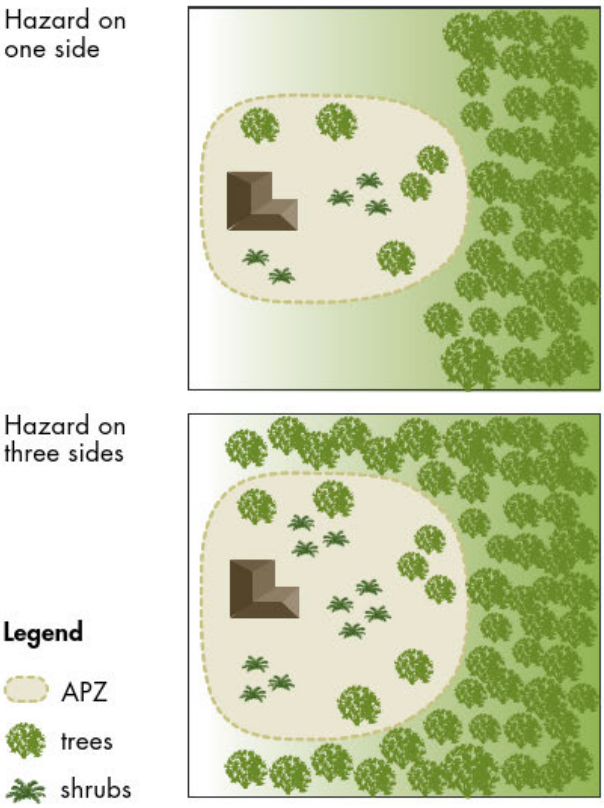


Figure 18: Design of Asset Protection Zone

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^2. It should be noted that in some cases, a single shrub in a mature state may be so dense as to fill a 5m^2 clump alone.

The location of plants within an APZ is a key design technique. Separation of garden beds with areas of low fuel or non-combustible 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^2 (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;
- 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.

Appendix 2 – Local Government Authority Firebreak Notice



FIRE BREAK & FIRE SAFETY INFORMATION 2022/23

000 EMERGENCY

Inside:
- Property owner obligations under the Bush Fires Act 1954.
- How to prepare your property against the threat of bushfire.
- Understanding Fire Danger Ratings and other Emergency Info.

Shire of Northam

Your Home

Building Protection Zone

The Building Protection Zone is an area of very low fuel levels and managed vegetation 20 metres out from habitable buildings (As defined in the Residential Design Codes of WA and in AS 3959) and must meet the following requirements.

Habitable building means a dwelling, workplace, place of gathering or assembly, a building used for the storage or display of goods or produce for sale by wholesale in accordance with classes 1-9 of the Building Code of Australia. The term habitable building includes attached and adjacent structures like garages, carports, verandas or similar roofed structures that are attached to, or within 6 metres of, the dwelling or primary building.

- Building Protection Zones for habitable buildings must extend a minimum of 20 metres out from any external walls of the building, attached structures, or adjacent structures within 6 metres of the habitable building.
- On sloping ground the Building Protection Zone distance shall increase at least 1 metre for every degree in slope on the sides of the habitable building that are exposed to down slope natural vegetation.
- Building Protection Zones must consist of non-flammable managed vegetation, reticulated lawns and gardens and other non-flammable features.
- All grass in Building Protection Zones must be maintained to or under 5cm in height.
- Fuel loads within Building Protection Zones must be maintained at 2 tonnes per hectare or lower.
- The crowns of trees must be separated to create a clear separation distance between adjoining or nearby tree crowns. The separation distance between tree crowns is not required to exceed 10 metres.



- A small group of trees within close proximity to one another may be treated as one crown provided the combined crowns do not exceed the area of a large or mature crown size for that species.
- Trees are to be low pruned (or under pruned) to at least a height of 2 metres from ground.
- No tree, or shrub over 2 metres high are to be within 2 metres of a habitable building.
- Trees and shrubs over 2 metres high must not be planted in groups close to the habitable building and there must be a gap of at least 3 times the height (at maturity) of the shrub away from the habitable building.
- There must be no tree crowns or branches hanging over habitable buildings.
- Firewood and flammable materials must be stored 20m from habitable buildings.
- Driveways and access ways are to be a minimum of (3) metres wide with a vertical clearance of (4)metres to allow for the safe passage of a fire appliance to all buildings and assets on the land.
- Roof gutters should be free of leaves and other combustible material.

The Building Protection Zone is an area of very low fuel levels and managed vegetation 20 metres out from habitable buildings. (As defined in the Residential Design Codes of WA and in AS 3959) and must meet the listed requirements.

Your Home



Your Property

Land with area less than 10,000m² (1 hectare)

- Maintain all grass on the land to a height no greater than 10cm all windrows or dead flammable material must be removed.
- Maintain fuel loadings in natural bush areas at less than 8 tonnes per hectare across the land
- Land with a habitable building on it must maintain a Building Protection Zone in line with the requirements of Section 1 of this notice.

Land with an area g 10,000m² (1 hectare) to 100,000m² (10 hectares)

Options (selected one out of the three options)

1. Install bare earth firebreaks three (3) metres wide immediately inside within (10) metres of all boundaries in a continuous form. All overhanging branches, trees, limbs etc. to be trimmed back from over the firebreak area to a minimum height of four (4) metres to allow for the safe passage of a fire appliance or;

2. Maintain all grass on the land to a height no greater than 10cm all windrows and or dead flammable material must be removed. An access area within (10) metres of the boundary with a minimum width of (3) metres with a vertical clearance of (4) metres where all overhanging branches are trimmed back to allow for the safe passage of a fire appliance or;

3. A combination of the above two options for properties with natural bush sections and pastured land sections

- Land with a building on it must maintain a Building Protection Zone in line with the requirements of Section 1 of this notice.
- On land for the use of tendering livestock a level of feed can be maintained to last the season. All grass a distance of 5m from any firebreak must be maintained to a height no greater than 10cm.
- Maintain fuel loadings in natural bush areas at less than 8 tonnes per hectare across the land.

Firebreak

Means a strip or area of trafficable ground, which is at least three (3) metres wide for cropped/stubble areas, or Three (3) metres wide for bushland/remnant

vegetation areas with a minimum height of four (4) metres, which is kept and maintained totally clear of all inflammable matter. Such firebreaks may be constructed by one or more of the following methods: PLOUGHING, CULTIVATING, SCARIFYING, RAKING, BURNING, CHEMICAL SPRAYING OR OTHER METHOD as approved by an Authorised Officer.

In agricultural areas it is considered acceptable if a vehicle can travel through crop area within 10m of the property boundary to traverse around low branches or limbs.

Land with areas greater than 100,000m² (10 hectares) *(Select one out of the three options)*

1. Install bare earth firebreaks two (2) metres wide immediately inside within (10) metres of all boundaries in a continuous form, for all cropped/stubble areas, or three (3) metres wide for all natural bush/remnant vegetation areas on the property within ten (10) metres of the property boundary. All overhanging branches, trees, limbs etc. to be trimmed back from over the firebreak area to a minimum height of four (4) metres to allow for the safe passage of a fire appliance or;

2. Maintain all grass on the land to a height no greater than 10cm all windrows and or dead flammable material must be removed. An access area within (10) metres of the boundary with a minimum width of (3) metres with a vertical clearance of (4) metres where all overhanging branches are trimmed back to allow for the safe passage of a fire appliance or;

3. A combination of the above two options for properties with natural bush sections and pastured land sections.

- On land for the use of tendering livestock a level of feed can be maintained to last the season. All grass a distance of 5m from any firebreak must be maintained to a height no greater than 10cm.
- Maintain fuel loadings in natural bush areas at less than 8 tonnes per hectare across the land.

Firebreak

Means a strip or area of trafficable ground, which is at least two (2) metres wide for cropped/stubble areas, or Three (3) metres wide for bushland/remnant vegetation areas with a minimum height of four (4) metres, which is kept and maintained totally clear of all inflammable matter. Such firebreaks may be constructed by one or more of the following methods: PLOUGHING, CULTIVATING, SCARIFYING, RAKING, BURNING, CHEMICAL SPRAYING OR OTHER METHOD as approved by an Authorised Officer.

In agricultural areas it is considered acceptable if a vehicle can travel through crop area within 10m of the property boundary to traverse around low branches or limbs.

Your Property

Other Conditions

Fuel Depot and Storage Areas, Haysheds, Stockpiled Flammable Materials and Stationary Machinery.

- Remove all flammable matter within ten (10) metres of Fuel Depot and Storage Areas of where fuel drums whether containing fuel or not, fuel ramps or fuel dumps are located, Hay Shed, Stockpiled Flammable Materials, Stationary Machinery are stored.
- Install bare earth firebreaks three (3) metres wide immediately inside and along all boundaries of land in a continuous form with a vertical clearance of four (4) metres where overhanging branches are trimmed back immediately adjacent to Stationary Motors, Haystacks, Stockpiled Flammable Materials and Stationary Machinery.

Bushfire or Emergency Management Plans

Compliance is required throughout the year, every year.

Means a bushfire management plan, emergency management plan or an approved Bushfire attack level (BAL) assessment that has been developed and approved to reduce and mitigate fire hazards as part of a Town Planning Scheme, subdivision approval, development approval or a building permit

- All properties with a Bush Fire, Fire or Emergency Management Plan shall comply with the plan in its entirety.
- Any requirements identified in a Bush Fire, Fire or Emergency Management Plan are in addition to the requirements of this notice.



Application to vary the Firebreak Requirements with Alternative Arrangements

If it is considered impracticable for any reason whatsoever to implement any of the requirements of this Notice, you may apply in writing to the Shire of Northam by no later than the 1st October each year for permission to implement alternative measures under the following options,

a) A temporary variation for extenuating circumstances only

b) A permanent feature of the property requires a variation to his order, if approved the variation will apply until specifically rescinded or replaced with a new individual notice by the shire.

Take notice if permission is not granted in writing you must comply with the requirements of this notice.



Other Conditions

Burning & Permits

The Burning of Garden Refuse

Pursuant to the powers contained in section 24G (2) of the Bush Fires Act 1954, the Shire of Northam prohibits the burning of all garden refuse within its district during the Prohibited Burning Times. This prohibition applies to all persons within the Shire's district.

- The burning of garden refuse or rubbish on the ground or in an incinerator that would otherwise be permitted under Section 24F is prohibited absolutely on all land within the district during the Prohibited Burning Period.
- The burning of garden refuse or rubbish on the ground or in an incinerator that would otherwise be permitted under Section 24F is prohibited on all land under 2000m² (square metres) in size during the Restricted Burning Time, without a Fire Permit issued under Regulation 15 of the Bush Fires Act 1954.
- The burning of garden refuse or rubbish on the ground or in an incinerator that would otherwise be permitted under Section 24F is prohibited absolutely on all land within the district during the Restricted Burning period between 1st Mar – 30 Apr each year.
- During the Restricted Burning period October 1st & Nov 30th each year , residents on land that is greater than 2,000m² in area it is permissible to undertake the burning of garden refuse (dry leaves, small branches, off cuts, etc.) in a single pile on the ground no larger than 1.0 m³ between the hours of 18:00 (6pm) and 23:00 (11pm) and by complying with all the conditions of section 24F (3) in the Bush Fires Act 1954 & Regulation 15B Bush Fires Regulations 1954.
- Reticulated water supply or min 600lts of water must be available for immediate use at all times, the fire is to be completely extinguished with water prior to leaving area unattended.

The New Fire Danger Ratings



There are four levels of fire danger in the new system:

1. **Moderate:** Plan and prepare
2. **High:** Be ready to act.
3. **Extreme:** Take action now to protect your life and property.
4. **Catastrophic:** For your survival, leave bushfire risk areas.

https://www.emergency.wa.gov.au

EmergencyWA

Permits to burn

Means a "Permit to Burn the Bush" as issued by an Authorised Officer under section 18 of the Bush Fires Act 1954.

- Applications for Permits are available from the Shire of Northam at no cost.
- You must comply with all conditions imposed by the Shire or an Authorised Officer in respect of any Permit issued by the Shire.
- Permits will not be valid on days of "HIGH", "EXTREME" or "CATASTROPHIC" fire danger.
- Permits may also be revoked if in the opinion of an authorised officer the conditions are not deemed suitable for prescribed burns.

Take notice that the Shire of Northam prohibits the burning of any road verge within the entire district.

Take Notice that pursuant to Section 18 (11) of the Bush Fires Act 1954 - Where a person starts a fire on land, if the fire escapes from the land or if the fire is in the opinion of a Bush Fire Control Officer or an officer of a Bush Fire Brigade out of control on the land, the person shall be liable to pay to the local government on the request of and for recoup to its bush fire brigade, any expenses up to a maximum amount of $10 000 incurred by it in preventing the extension of or extinguishing the fire, and such expenses may be recovered in any court of competent jurisdiction.

A person who commits a breach of this section other than subsection (11) is guilty of an offence.

Penalty: For a first offence $4 500.

For a second or subsequent offence $10 000.

Burning & Permits

Fire Bans & Burning Periods

Restricted and Prohibited Burning Times

- The "Prohibited Burning Time" means the 1 December each calendar year through until 28th February the following calendar year (inclusive, and as varied pursuant to Sections 17 and 18 of the Bush Fires Act 1954).
- The "Restricted Burning Time" means the 1 October through until 30 November and the 1 March through until 30 April each calendar year (inclusive, and as varied pursuant to Sections 17 and 18 of the Bush Fires Act 1954)..

Cooking & Camping

Pursuant to the powers contained in section 25H (1) of the Bush Fires Act 1954, the Shire of Northam prohibits the lighting of a fire in the open air for the purpose of camping or cooking during the prohibited period. This prohibition applies to all persons within the Shire's district.

For the purposes of this section (1aa) a gas appliance, comprising a fire the flame of which is encapsulated by the appliance and which does not consume solid fuel, shall not be taken to be a fire in the open air.

An appliance that burns a solid fuel, (BBQ, Pizza Oven, Meat Smoker etc.) cannot be operated on days of "**HIGH**", "**EXTREME**" or "**CATASTROPHIC**" fire danger rating.

- Any chimney on the appliance must be fitted with a suitable spark arrestor that is maintained in a clean, sound and efficient condition.
- If solid fuel is being consumed, then the burning fuel must be sealed from the open air by a secure, sealable door.
- Appliance must not be left unattended and a reticulated water supply must be available for immediate use.
- Take notice a person/s who contravenes a of this section is guilty of an offence that carries a penalty of $3,000.

BURNING PERIOD	
UNRESTRICTED BURNING PERIOD *1 MAY – 30 SEPT*	BURN PREPARE YOUR PROPERTY NOW
RESTRICTED PERIOD *1 OCT - 30 NOV*	PERMIT REQUIRED
PROHIBITED PERIOD *1 DEC – 28 FEB*	NO BURNING
RESTRICTED PERIOD *1 MARCH – 30 APRIL*	PERMIT REQUIRED

Reserves vested with the Shire of Northam

The Shire of Northam reserves the right to conduct any mitigation works deemed necessary on any reserves vested with Shire of Northam for the purpose of reducing the risk of fire to the community. Each reserve will be assessed in accordance with ISO 31000:2018 and identified in the Bushfire Risk Management Plan.

Treatments implemented may include but are not limited to prescribed burns, slashing, mulching or any other means necessary as determined by the Shire of Northam to ensure the risk is reduced to a satisfactory level.

Harvest, Movement of Vehicles and Hot Works Bans

All persons within the Shire of Northam are required to comply with a direction declared under Reg 38A, 38B, 38C & 38D, Bush Fires Regulations 1954.

- A Harvest, Vehicle Movement & Hot Works Ban (HVMB) requires the cessation of all harvesting, vehicle movements and hot work operations within the Shire of Northam.
- A Harvest, Vehicle Movement & Hot Works Ban (HVMB) prohibits the movement of vehicles on properties within the Shire of Northam except for the essential watering of stock in a diesel powered vehicle.
- A Harvest, Vehicle Movement & Hot Works Ban (HVMB) prohibits the use of all welding, grinding and abrasive tools on properties within the Shire of Northam in the open air. Exemptions in accordance with Council Policy may be available. Further information is available by contacting Shire of Northam (08) 9622 6100.

Take notice a person/s who contravenes a declaration made under regulation 38A, 38B, 38C or 38D or who fails to carry out any direction given to him is guilty of an offence that carries a penalty of $5,000.

A Harvest Vehicle Movement and Hot works Ban will be advertised on the Shire of Northam Website, Shire of Northam Facebook page, and via the FREE SMS notification service.

Where possible notification are broadcast on ABC Radio 531AM, MMM 864 AM.

Register for our free SMS notification service for Harvest Ban and other important information, directly to your phone.

https://www.northam.wa.gov.au/community/online-services/onlineservices.asPX



Fire Bans & Burning Periods



90% of WA is bushfire prone. Bushfires are unpredictable and happen every year. The single biggest killer is indecision.

What will you do if there is a bushfire?
https://mybushfireplan.wa.gov.au/

Information Conditions

Emergency Service Volunteers

WOULD YOU LIKE TO MAKE A DIFFERENCE?

The Emergency Services are always looking for volunteers. If you'd like to get involved contact you local Bushfire Brigade on the above contact details. The Shire of Northam proudly supports the efforts of our Emergency Service Volunteers and encourage the community to get involved.

Northam State Emergency Service
Henry Street Northam
0407 112 436

Bakers Hill Bushfire Brigade
17 Tame Road, Bakers Hill
0400 207 773

Clackline Bushfire Brigade
Tighe Road, Warranine
0417 310 397

Northam Youth in Emergency Services Cadets
Henry Street Northam
0458 08 08 18

Inkpen Bushfire Brigade
Inkpen Road after Colgongine Rd, Inkpen
0427 058 698

Irishtown Bushfire Brigade
Cnr Irishtown and Haddrill Rd, Irishtown
0418 462 011

Grass Valley Bushfire Brigade
Cnr Keane and Wilson Street, Grass Valley
0428 916 677

Northam Central Bush Fire Brigade
Henry Street Northam
0428 127 889

Southern Brook Bushfire Brigade Southern
Brook Road, Southern Brook
0409 089 482

Northam Fire and Rescue
43 Wellington Street, Northam
9622 1071

Wundowie Fire and Rescue
8 Wandoo Parade, Wundowie
9576 6454



Reducing fuel increases the chances of your property surviving a bushfire.
The more fuel available to a bushfire, the hotter the fire can burn and the harder it is to control.
For tips on how to Burn Smart on your property, visit https://www.dfes.wa.gov.au/plannedburning/

Emergency Service Volunteers

Shire of Northam
395 Fitzgerald Street, Northam WA 6401
PO Box 613, Northam WA 6401
(08) 9622 6100
records@northam.wa.gov.au
www.northam.wa.gov.au

Shire of Northam
Heritage, Commerce and Lifestyle

Appendix 3 – Vehicular Access Requirements

Table 6: Vehicular access technical requirements

TECHNICAL REQUIREMENTS	1 Public roads	2 Emergency access way [1]	3 Fire service access route [1]	4 Battle-axe and private driveways [2]
Minimum trafficable surface (metres)	In accordance with A3.1	6	6	4
Minimum horizontal clearance (metres)	N/A	6	6	6
Minimum vertical clearance (metres)	4.5			
Minimum weight capacity (tonnes)	15			
Maximum grade unsealed road[3]	As outlined in the IPWEA Subdivision Guidelines	1:10 (10%)		
Maximum grade sealed road[3]		1:7 (14.3%)		
Maximum average grade sealed road		1:10 (10%)		
Minimum inner radius of road curves (metres)		8.5		

E3.6 Private driveways

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.

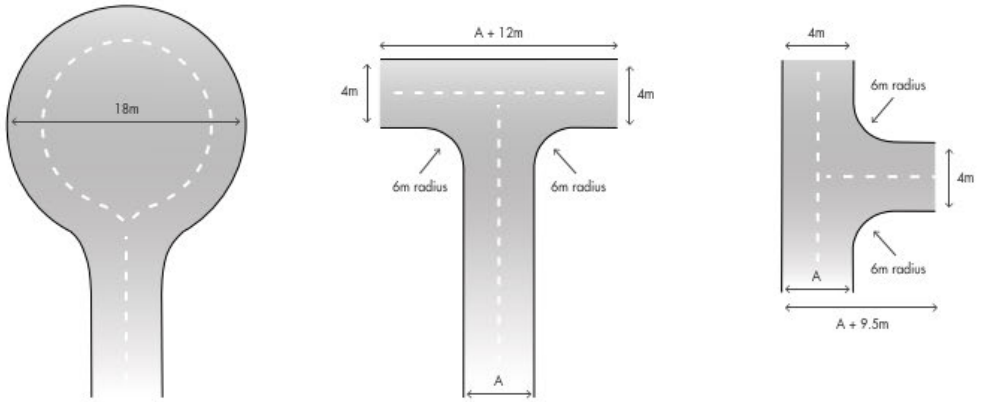


Figure 28: Design requirements for a turn-around area for a private driveway or battle-axe

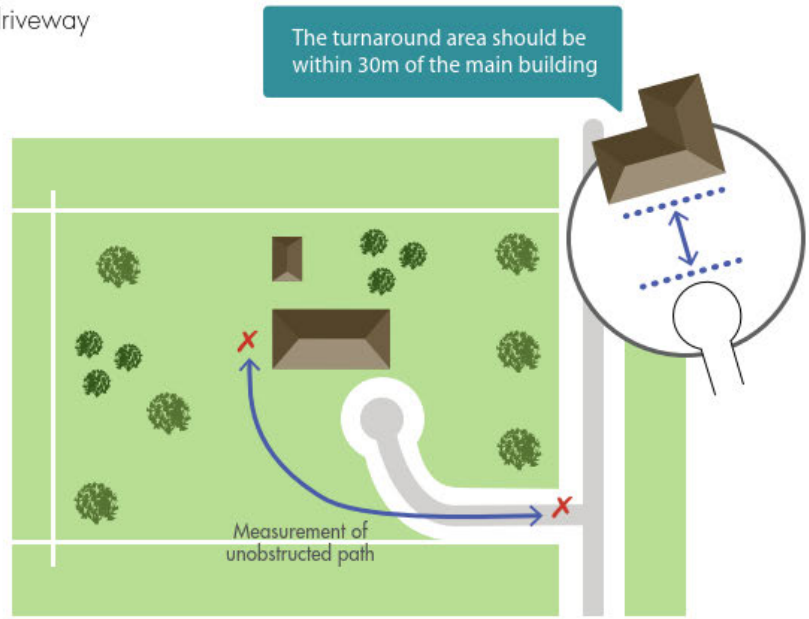
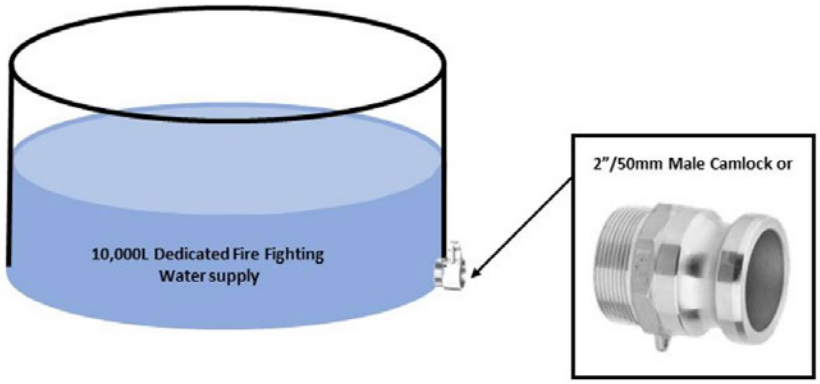


Figure 29: Design requirements for a private driveway where required under A3.6

Appendix 4 – Water Supply & Schedule 2

To ensure that water is available to enable people property and infrastructure to be defended a permanent dedicated fire water supply with:

1. Water tank with 10,000L capacity, constructed of steel or able to maintain integrity though a bushfire



2. 50mm male camlock coupling with full flow valve shielded from the bushfire hazard by facing away from the threat and towards the emergency vehicle access.
3. Having unobstructed hardened ground provided 4m from water supply point where emergency vehicles can freely move.
4. Within 50m of the dwelling and 30m from the turn around area.



Use of Water Supply:

Water supply for firefighting in the event of a bushfire can be provided on a lot for use by emergency services or for use by the landowner, if their Bushfire Survival Plan is to stay and defend their property. Water supply in the form of a dedicated standalone tank may be provided solely for use by emergency services, and/or a water supply may be provided for use by the landowner in the form of non-drinking water (garden or grey water for firefighting) or drinking water. **It is important to note, that a combined tank of drinking water and water for firefighting purposes is not recommended**. It is required to be separated in accordance with section 4.2.3 of AS/NZS 3500.1:2018.

This requirement is necessary, as stagnant water may alter the quality of the drinking water and the emergency services, by law, may not be able to take water from the water supply to suppress a bushfire.

SCHEDULE 2: WATER SUPPLY DEDICATED FOR BUSHFIRE FIREFIGHTING PURPOSES

2.1 Water supply requirements

Water dedicated for firefighting should be provided in accordance with Table 7 below, and be in addition to water required for drinking purposes.

Table 7: Water supply dedicated for bushfire firefighting purposes

PLANNING APPLICATION	NON-RETICULATED AREAS
Development application	10,000L per habitable building
Structure Plan / Subdivision: Creation of 1 additional lot	10,000L per lot
Structure Plan / Subdivision: Creation of 3 to 24 lots	10,000L tank per lot **or** 50,000L strategic water tank
Structure Plan / Subdivision: Creation of 25 lots or more	50,000L per 25 lots or part thereof Provided as a strategic water tank(s) or 10,000L tank per lot

2.2 Technical requirements

2.2.1 Construction and design

An above-ground tank and associated stand should be constructed of non-combustible material. The tank may need to comply with AS/NZS 3500.1:2018.

Below ground tanks should have a 200mm diameter access hole to allow tankers or emergency service vehicles to refill direct from the tank, with the outlet location clearly marked at the surface. The tank may need to comply with AS/NZS 3500.1:2018. An inspection opening may double as the access hole provided that the inspection opening meets the requirements of AS/NZS 3500.1:2018. If the tank is required under the BCA as part of fire hydrant installation, then the tank will also need to comply with AS 2419.

Where an outlet for an emergency service vehicle is provided, then an unobstructed, hardened ground surface is to be supplied within four metres of any water supply.

2.2.2 Pipes and fittings

All above-ground, exposed water supply pipes and fittings should be metal. Fittings should be located away from the source of bushfire attack and be in accordance with the applicable section below, unless otherwise specified by the local government.

2.2.2.1 Fittings for above-ground water tanks:

- Commercial land uses: 125mm Storz fitting; or
- Strategic water tanks: 50mm or 100mm (where applicable and adapters are available) male camlock coupling with full flow valve; or
- Standalone water tanks: 50mm male camlock coupling with full flow valve; or
- Combined water tanks: 50mm male camlock coupling with full flow valve or a domestic fitting, being a standard household tap that enables an occupant to access the water supply with domestic hoses or buckets for extinguishing minor fires.

2.2.2.2 Remote outlets

In certain circumstances, it may be beneficial to have the outlet located away from the water supply. In such instances in which a remote outlet is to be used, the applicant should consult the local government and DFES on their proposal.