



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: Hamelin Grove, Lot 9001 Brockman Highway				
Suburb: KarridaleState: WAP/code: 6288				
Local government area: Shire of Augusta-Margaret River				
Description of the planning proposal: Subdivision into Residential and Rural Residential Lots				
BMP Plan / Reference Number:19684Version:Rev BDate of Issue:18/05/2020				
Client / Business Name: Hamelin Grove C/- Martin Richards Town Planning & Project Management				

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)?		Ø	
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)?		V	
Is the proposal any of the following special development types (see SPP 3.7 for definitions)?			
Unavoidable development (in BAL-40 or BAL-FZ)		Ø	
Strategic planning proposal (including rezoning applications)	M		
Minor development (in BAL-40 or BAL-FZ)		V	
High risk land-use		V	
Vulnerable land-use		V	

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.)?

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	Accreditation Level	Accreditation No.	Accreditation Expiry		
Kelly Lamp	Level 2	38253	02/21		
Company Contact No.					
Ecosystem Solutions (08) 9759 1960					

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

Signature of Practitioner



PO Box 685 DUNSBOROUGH WA 6281 Ph: +61 8 9759 1960 Fax: +61 8 9759 1920 Mobile: 0427 591 960 info@ecosystemsolutions.com.au www.ecosystemsolutions.com.au

Bushfire Management Plan

Hamelin Grove, Lot 9001 Brockman Highway, Karridale

18 May 2020

Prepared for: Hamelin Grove C/- Martin Richards Town Planning & Project Management Att: Martin Richards



Limitations Statement

This report has been prepared in accordance with the Agreement between Ecosystem Solutions Pty Ltd and Hamelin Grove C/- Martin Richards Town Planning & Project Management ("Client"). It has been solely prepared for a Subdivision Lot 9001 Brockman Highway, Karridale ("Site").

Information

In undertaking this work the authors have made every effort to ensure the accuracy of the information used. Unless otherwise stated in the report, Ecosystem Solutions Pty Ltd has not independently verified such information and cannot guarantee its accuracy or completeness.

Conclusions

Within the limitations imposed by the scope of work, preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable bushfire consultants under similar circumstances. No other warranty, expressed or implied, is made.

Reliance

This report is solely for the use of the Client and any reliance on this report by third parties will be at such party's sole risk. This report must only be presented in full and may not be used to support any other purpose than those set out in the report and the Agreement, except where prior written approval with comments are provided by Ecosystem Solutions Pty Ltd. All intellectual property rights in documents created by Ecosystem Solutions Pty Ltd remain the property of Ecosystem Solutions Pty Ltd. Other parties should not rely on the report or the accuracy or completeness of any conclusions and should make their own enquiries and obtain independent advice in relation to such matters. Ecosystem Solutions Pty Ltd accepts no Liability, or responsibility whatsoever for or in respect of any use or reliance upon this report and its supporting material subsequently used by others. Please note that the contents of this report may not be directly applicable towards another organisation's needs and may not contain sufficient information for purposes of other parties or for other uses.

Ecosystem Solutions Pty Ltd will not be liable to update or revise the report to take into account any events or emergent circumstances or facts occurring or becoming apparent after the date of this report.

Other limitations

The measures contained in this report cannot guarantee that a structure or building will not be damaged or would survive a bushfire event on every occasion. This is due to the degree of vegetation management, the unpredictable nature of fire behaviour (knowledge in this field continues to develop) and the unpredictable nature of extreme weather conditions.

The growth, planting or removal of vegetation, poor maintenance of any fire prevention/mitigation measures, addition of structures not included in this report, or other activity can and will change the bushfire threat to all properties detailed in this report. The implementation of fire precautions will depend on the actions of the landowner or occupiers of the land, over which Ecosystem Solutions Pty Ltd has no control. Should changes be made to the Site, a new Bushfire Management Plan is required. Ecosystem Solutions Pty Ltd accepts no Liability, including Liability for any Loss in connection with:

- a Claim, damage, or injury to property, or persons caused by fire;
- further growth, planting or removal of vegetation on the Site;
- poor maintenance of any fire protection measures;
- additional structures not included in this assessment; or
- any other activity that may change the bushfire threat level.

The Client and owner of the Site each acknowledge that they have been made aware of the exclusions above and that such exclusion of Liability is reasonable in all the circumstances.

This report is valid for a period of two years only from the date of its issue. All BAL ratings identified in this report are indicative and are required to be verified at the time of construction of individual buildings to ensure appropriate setbacks identified in the Site/building have been achieved.

STATEMENT OF CONFORMITY - PLANNING AND DEVELOPMENT ACT 2005



Kelly Lamp B.Sc Hons. Nat Rs Mgmt., BPAD Level 2 (38253)

The signatory declares that this Bushfire Management Plan meets the requirements of State Planning Policy 3.7 and the Guidelines for Planning in Bushfire Prone Areas V1.3.

DISCLAIMER

*All capitalised terms used in the Limitations Statement above that are not defined are defined in the Agreement between Ecosystem Solutions Pty Ltd and the Client.

** The limitations above are subject to any relevant rights or remedies that the Client may be entitled to under legislation, including Schedule 2 of the Competition and Consumer Act 2010 (Cth).

Document Control

Client - Hamelin Grove C/- Martin Richards Town Planning & Project Management Att: Martin Richards Site - Hamelin Grove, Lot 9001 Brockman Highway, Karridale

Version	Version Revision Purpose Author Reviewer		Revision	vision Purpose	Su	bmitted
					Form	Date
Report	Rev A	Initial Report	DC (BPAD 48409 – Level 1)	KL (BPAD 38253 – Level 2)	Electronic (email)	14/05/2020
Report	Rev B	MR Comments	DC (BPAD 48409 – Level 1)	KL (BPAD 38253 – Level 2)	Electronic (email)	18/05/2020

Filename: Z:\PROJECTS\20865 Hamelin Grove, Karridale BMP\Reports\Hamelin Grove Lot 9001 Brockman Hwy, Karridale BMP.docx

Contents

1	Proposal	7
2	Bushfire Assessment Results	10
2.1	Assessment Inputs	10
2.2	Assessment Outputs	18
3	Environmental Considerations	22
3.1	Native Vegetation - modification and clearing	22
3.2	Re-vegetation / Landscape Plans	22
4	Assessment Against the Bushfire Protection Criteria	24
4.1	Compliance with the Acceptable Solutions for each Element	24
4.2	Performance Based Solutions	33
4.3	Summary of the Assessment Outcomes	33
5	Responsibilities for Implementation and Management of the Required	
	Bushfire Measures	35
6	References	39
7	Glossary	40

Appendices

- Appendix A Shire of Augusta-Margaret River Firebreak Notice
- Appendix B APZ Requirements

List of Figures

Figure 1	Structure Plan for Lot 9001 Brockman Highway, Karridale	8
Figure 2	Map of Bushfire Prone Areas for Hamelin Grove	9
Figure 3	Vegetation Classification - Current Extent	16
Figure 4	Vegetation Classification - Post Development	17
Figure 5	Post Development BAL Contour for Hamelin Grove	19
Figure 6	BAL Contour - detailed view west	20
Figure 7	BAL Contour - detailed view east	21
Figure 8	Vehicular access technical requirements	30
Figure 9	Example of Strategic Water Tank Hardstand and Turn around area	32
Figure 10	Map of Bushfire Management Strategies	34

List of Tables

Table 1	Site Assessment Results	18
Table 2	Significant environmental values identified within the Site	22
Table 3	Developer Responsibilities	35
Table 4	Builder Responsibilities	36
Table 5	Landowner / Occupier Responsibilities	37
Table 6	Shire of Augusta-Margaret River Responsibilities	38

1 Proposal

This Bushfire Management Plan (BMP) has been prepared for Hamelin Grove, Lot 9001 Brockman Highway, Karridale by Ecosystem Solutions Pty Ltd, Dani Cuthbert (Dip. TM., Dip BM., BPAD 48409 - Level 1) and Kelly Lamp (B.Sc. Hons. Nat Rs Mgmt, BPAD 38253 - Level 2).

The proposal is to subdivide the lots into large residential lots between $2,000m^2$ and $10,000m^2$, with a balance lot of just over 43 ha (Figure 1).

The Site is located within the Shire of Augusta-Margaret River. Karridale town centre is directly to the west, with Augusta located approximately 12 km to the south of the Site. The Site is located within a bushfire prone area, as declared by *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (Figure 2).

The Site is currently vegetated with a plantation, which is currently being harvested, and will be completely removed prior to subdivision. The Site and surrounding landscape is predominantly flat with a very gentle slope in some areas, with maximum slope category of >0 to 5 degrees.

The purpose of this BMP is to detail the fire management methods and requirements that will be implemented within the Site as part of the subdivision of the Site. The aim of the BMP is to reduce the threat to residents and fire fighters in the event of a fire within or near the Site.

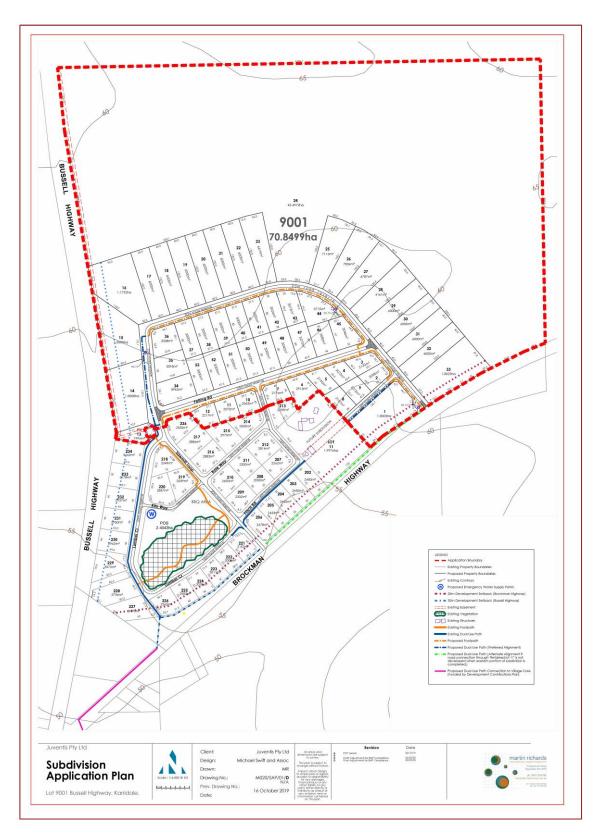


Figure 1 Proposed Subdivision Plan for Lot 9001 Brockman Highway, Karridale



Figure 2 Map of Bushfire Prone Areas for Hamelin Grove, Lot 9001 Brockman Highway, Karridale, within the blue polygon

2 Bushfire Assessment Results

2.1 Assessment Inputs

A Site inspection was conducted on 4th April 2019 by Kelly Lamp (B.Sc Hons, Nat Rs Mgmt., BPAD Level 2) and Dani Cuthbert (Dip Bus & Dip TM, BPAD Level 1), for the purpose of determining the Bushfire Attack Level in accordance with AS 3959-2018 Simplified Procedure (Method 1).

All vegetation within 150 m of the Site was classified and the slope under the vegetation determined in accordance with AS 3959-2018, shown in the photos below with map provided in Figure 3.

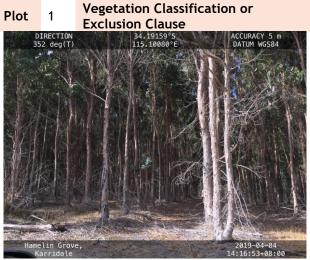






Photo ID: 3

Class A Forest Downslope >0 to 5 degrees



Photo ID: 2



Photo ID: 4

Overstorey including *Eucalyptus globulus and *Pinus radiata, with canopy of 30 - 70%. Within the Site itself this vegetation is currently being removed (Photos 1 & 4), with the management of the Site in a low fuel state reflected in Figure 4 -Vegetation Classification Post Development. The topography within the Site is slightly undulating, with maximum slope category recorded being Downslope at >0 to 5 degrees. The slope under adjacent vegetation will depend on the final location of any dwelling within each lot, with the BAL Contour Map (Figure 5) reflecting the separation distances required for the worst-case scenario slope of Downslope >0 to 5 degrees.

Description / Justification for Classification:



Description / Justification for Classification:

Canopy including *Agonis flexuosa* with cover of 10 - 30% and understorey of introduced grasses. The topography within the assessment area is slightly undulating, with maximum slope category recorded being Downslope at >0 to 5 degrees. The slope under adjacent vegetation will depend on the final location of any dwelling within each lot, with the BAL Contour Map (Figure 5) reflecting the separation distances required for the worst case scenario slope of Downslope >0 to 5 degrees.



Photo ID: 9

Class G Grassland Downslope >0 to 5 degrees



Photo ID: 10 Unmanaged paddocks, including introduced grasses and other pasture species with scattered trees including Agonis flexuosa and Corymbia calophylla. Post development, the grasses within the Site will be managed at under 10cm in height in perpetuity, with the majority of the land becoming roads, houses, managed gardens in the future and therefore excluded under S 2.2.3.2 (e) or (f) in Figure 4 - Vegetation Classification Post Development.

The topography within the assessment area is slightly undulating, with maximum slope category recorded being Downslope at >0 to 5 degrees. The slope under adjacent vegetation will depend on the final location of any dwelling within each lot, with the BAL Contour Map (Figure 5) reflecting the separation distances required for the worst case scenario slope of Downslope >0 to 5 degrees.

Description / Justification for Classification:



Photo ID: 11

Excluded S 2.2.3.2 (a), (e) or (f)



Areas greater than 100m from the Site are excluded under S 2.2.3.2 (a). Non-vegetated areas including roads are excluded under S 2.2.3.2 (e). Low threat vegetation including grasses managed at under 10cm in height, managed lawns and gardens and single lines of trees are excluded under S 2.2.3.2 (f). The Post Development Vegetation Map shows that the majority of the Site is excluded under S 2.2.3.2 (e) or (f) post development, with the developer being responsible for establishing and maintaining the Site in a low fuel state, with the blue gum plantation harvested and all grasses kept at under 10cm in height until individual lots are sold, when this will become the responsibility of the individual landowners, with the Shire of Augusta-Margaret River's Firebreak Notice and Bushfire Information booklet (which may be subject to review from time to time) requiring vegetation within All Lots 4000m² and Under, and All Lots 4001m² and Over to be maintained at under 10cm in height. The Public Utility lot and the 10m Landscape Buffer within the Site will be established in a low fuel state by the Developer. The Public Utility

Description / Justification for Classification:



lot will be managed in this low fuel state for a period of two years, when this land will be ceded to the Crown and vested to the Shire of Augusta Margaret River, with ongoing management being the responsibility of the Shire of Augusta-Margaret River. The 10m Landscape Buffer will be managed in a low fuel state by the developer until individual lots are sold and management will become the responsibility of the individual land owners.

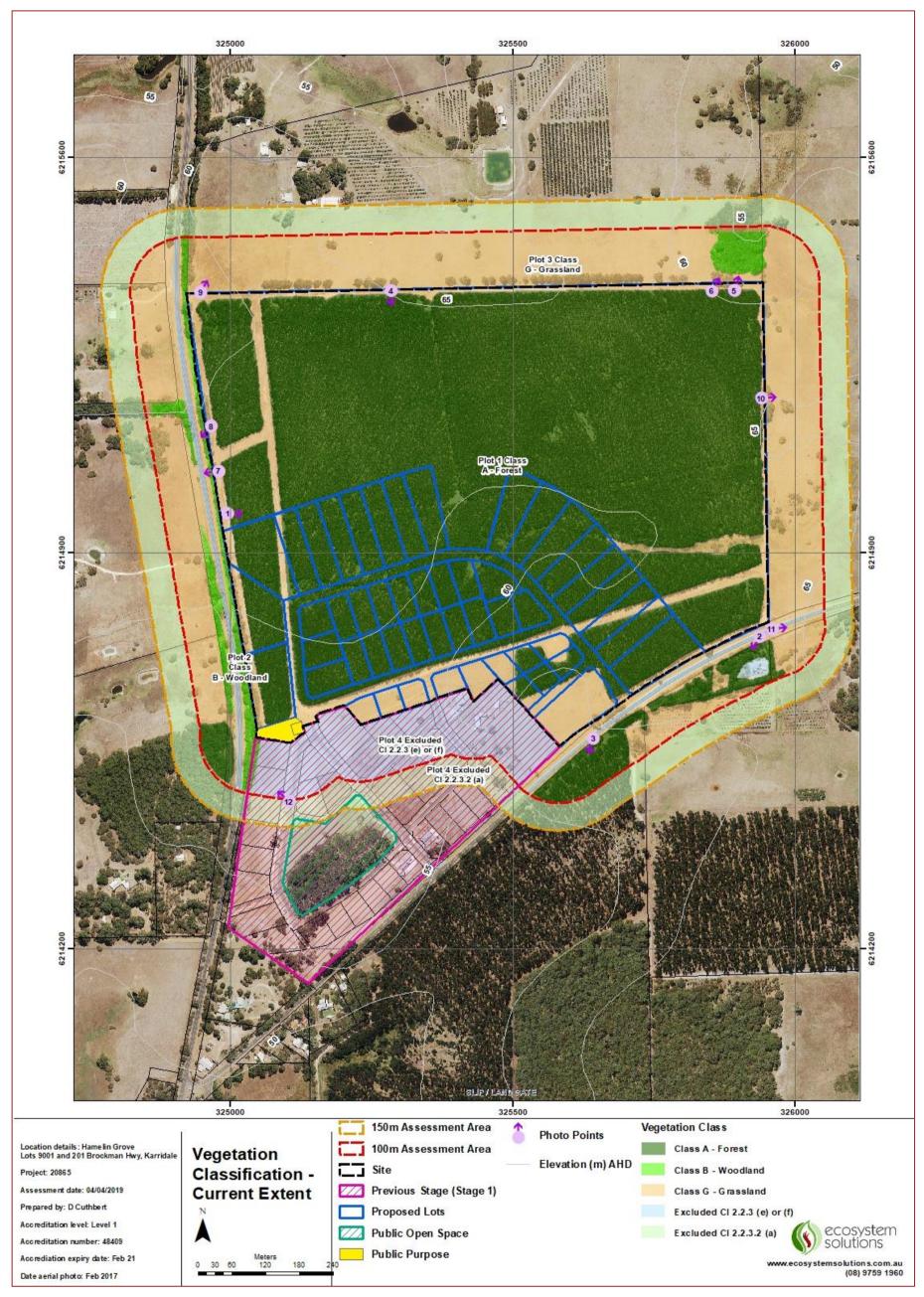


Figure 3 Vegetation Classification - Current Extent

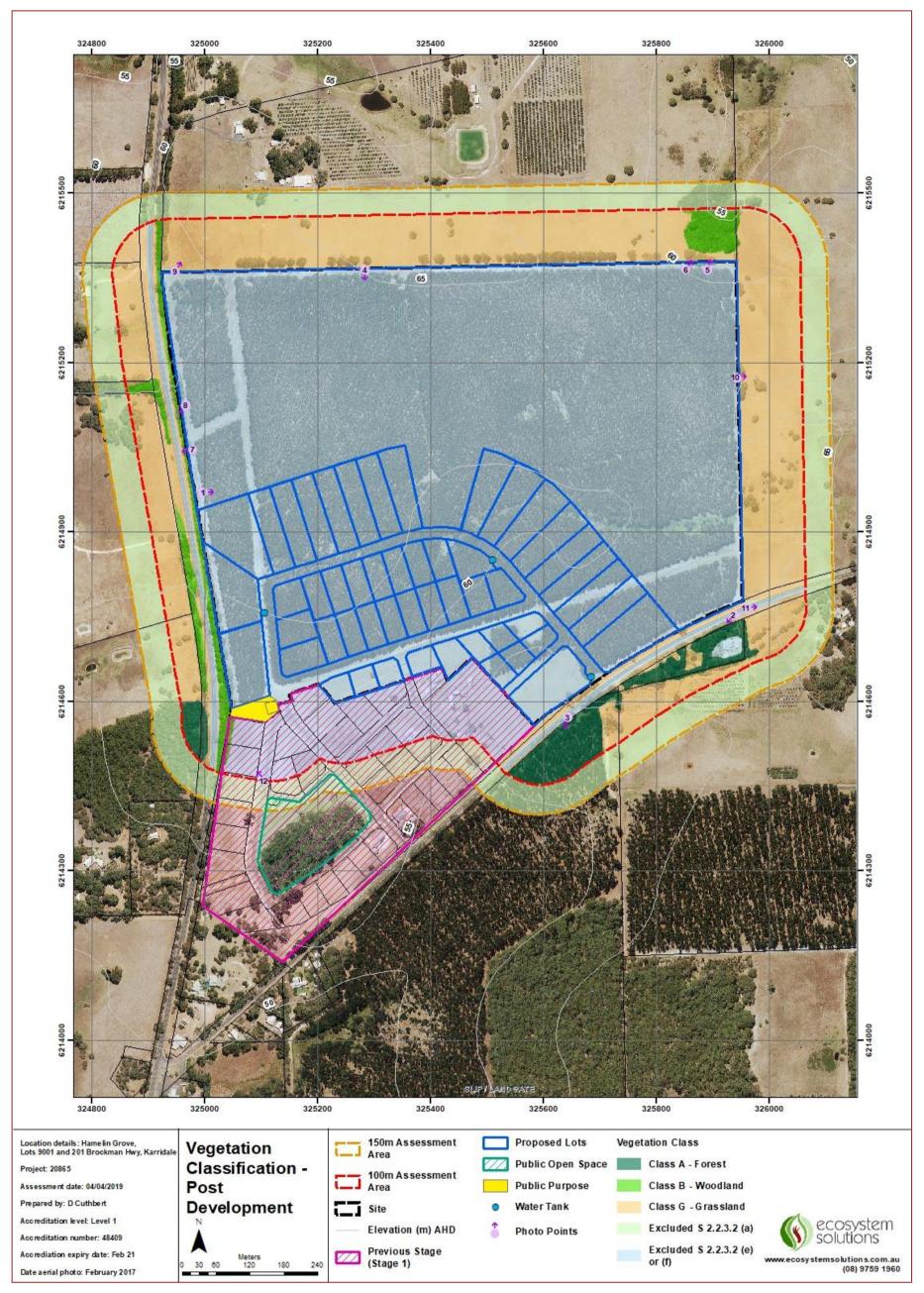


Figure 4 Vegetation Classification - Post Development

Hamelin Grove | Bushfire Management Plan

2.2 Assessment Outputs

The results from the Site assessment are provided in Table 1. The Determined Bushfire Attack Level (highest BAL) for the Site has been determined in accordance with clause 2.5 of AS 3959- 2018 with map provided in Figure 5 with detailed BAL Contour maps, showing the area of residential lots >BAL-29 rating, provided in Figures 6 to 7.

Meth	Method 1 BAL Determination				
Fire	Fire Danger Index - 80 (AS 3959-2018 Table 2.1)				
Plot	Vegetation Classification	Maximum effective Slope Under the Classified Vegetation (degrees)	Required Separation Distance to the Classified Vegetation (metres)	Bushfire Attack Level	
1	Class A - Forest	Downslope >0 to 5 degrees	Min 27 m*	BAL-29	
2	Class B - Woodland	Downslope >0 to 5 degrees	Min 17 m*	BAL-29	
3	Class G Grassland	Downslope >0 to 5 degrees	Min 9 m*	BAL-29	
4	Excluded S 2.2.3.2 (a), (b), (e) & (f)	N/A	N/A	BAL-LOW	
Dete	Determined Bushfire Attack Level BAL-29**				

Table 1Site Assessment Results

* Some lots include a development setback line or building envelope, to ensure no dwelling is constructed in an area over BAL-29.

** A lower BAL rating can be achieved based on an increased separation distance from the classified vegetation, depending on the location of the dwelling within the Lot. A detailed BAL assessment may be required prior to the construction of any dwelling.

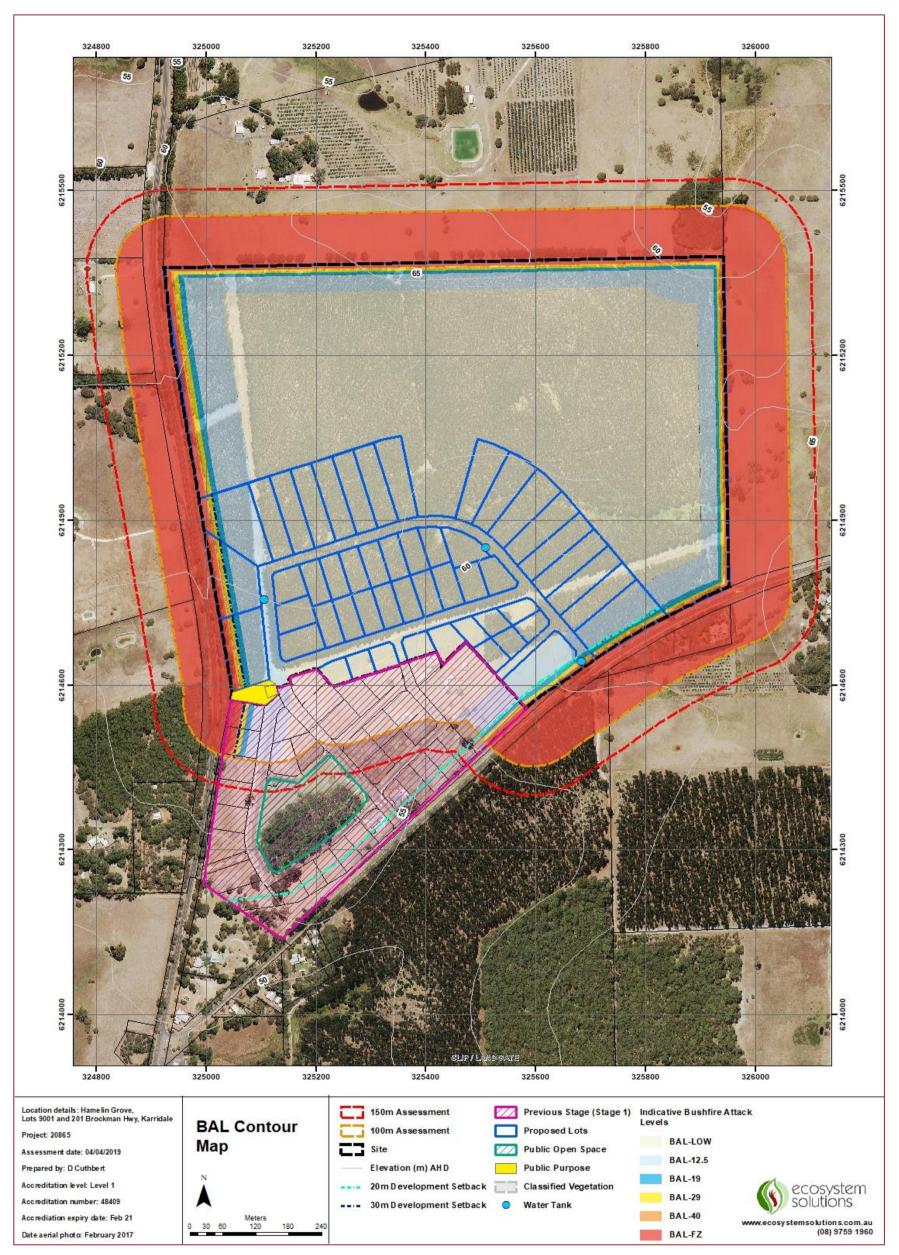


Figure 5 Post Development BAL Contour for Hamelin Grove

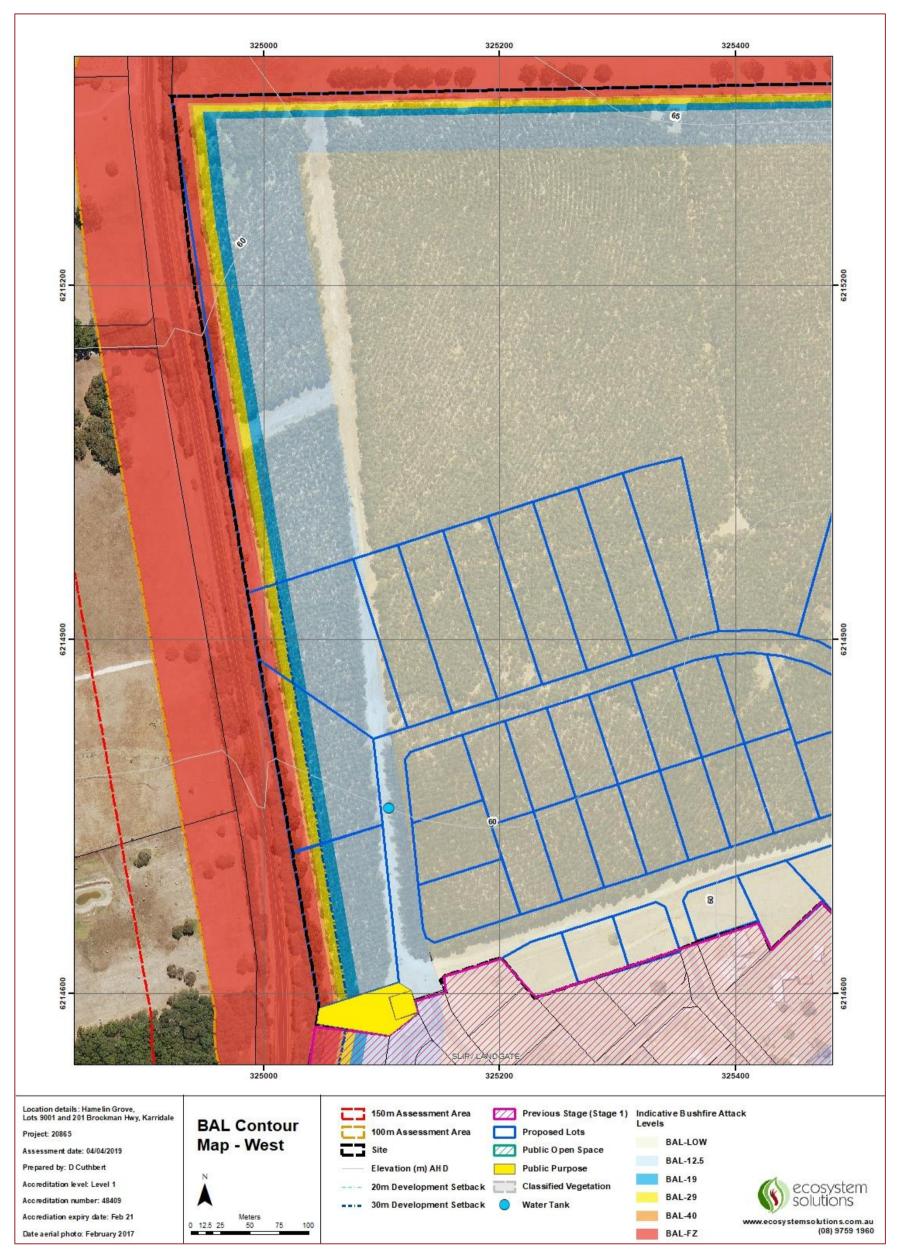


Figure 6 BAL Contour - detailed view west





Figure 7 BAL Contour - detailed view east

3 Environmental Considerations

3.1 Native Vegetation - modification and clearing

Hamelin Grove, Lot 9001 Brockman Highway, Karridale is currently vegetated with a plantation of **Eucalyptus globulus* (Tasmanian Blue Gums), which will be removed as part of the development process, with areas of grassland. There is no naturally occurring remnant vegetation within the Site.

The Site and the surrounding 150m buffer have been assessed for environmental values using a simple desktop review (Table 2). A review of the SLIP data identified a number of wetlands adjacent to the Site, including some that are listed as Environmentally Sensitive Areas. The Protected Matters Search identified that a number of threatened flora species are may occur in the area. There is no remnant native vegetation existing within the Site and no impact is expected to any wetlands or declared rare flora.

Environmental Value	Yes or No	If Yes - describe
Conservation Covenants	No	Not applicable
Bushfire Forever Sites	No	Not applicable
Conservation Category Wetlands and Buffer	Yes	A number of wetlands, including some identified as Environmentally Sensitive Areas exist in proximity to the Site (SLIP 25/07/19).
Threatened Ecological Communities (TECs)	No	Not applicable
Declared Rare Flora (DRF)	Yes	A number of DRF species or species habitat may occur within the area (PMST Report, 25/07/19).
Significant through Local Planning or Biodiversity Strategy	No	Not applicable

Table 2Significant environmental values identified within the Site

3.2 Re-vegetation / Landscape Plans

The 10m wide Landscape Buffer will be established according to the requirements of an APZ in the Guidelines by the developer, allowing exclusion under S 2.2.3.2 (f) of AS 3959-2018. The Landscape Buffer must be managed to these requirements by the developer until individual lots are sold. Management in perpetuity to this level will then become the responsibility of the individual lot owner. Failure to maintain the Landscape Buffer to the standard of an APZ as detailed in the Guidelines will change the BAL rating of lots in proximity to the unmanaged area.

4 Assessment Against the Bushfire Protection Criteria

4.1 Compliance with the Acceptable Solutions for each Element

Bushfire Protection Criteria – Element 1 - Location

Intent: To 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.

Performance Principle P1: The intent may be achieved where the strategic planning proposal, subdivision or 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 applies 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 DFES and the decision-maker.

A1.1 Development location Compliance with this element is A portion of the lot	ots along the
The strategic planning proposal, subdivision and developmentachieved.edges of the site in of BAL-40 and BAL- application is located in an areaapplication is located in an areaboundaries (Figuresthat is or will, on completion, be10). These lots aresubject to either a moderate or low bushfire hazard level, ordevelopment setbal the areas greater tBAL-29 or below.rating not being av construction of any This ensures that n will be constructed over BAL-29.The BAL Contours a show that the remain lots are within area or lower.The entire Site will	include areas L-FZ along their res 5 to 7 and re subject to back lines, with than BAL-29 available for the ny dwelling. no dwelling ed in an area s across the Site mainder of the eas of BAL-29

Bushfire Protection Criteria – Element 1 - Location

maintained by the developer with grassland under 10 cm as per the Shire of Augusta-Margaret River Firebreak Notice and Bushfire Information (*which may be subject to review from time to time*) until they are sold, when this maintenance will become the responsibility of the individual landowner.

Areas for public use and the 10m landscape buffer must also be established in a low fuel state prior to the sale of any lots and maintained in this state in perpetuity.

Bushfire Protection Criteria – Element 2 – Siting and Design

Intent: To ensure that the siting and design of development minimises the level of bushfire impact.

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. That it 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.

Bushfire Protection Criteria – Element 2 – Siting and Design

explanatory notes).

 Management: the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones'. (see Appendix B).

responsibility of the developer. After this period, the land will be ceded to the Crown and vested in the Shire of Augusta Margaret River, with ongoing management in perpetuity in this low fuel state the responsibility of the Shire of Augusta Margaret River. In addition to the requirements of the Guidelines, the Shire of Augusta-Margaret River's Firebreak Notice and Bushfire Information (which may be subject to review from time to time) must be complied with, including maintaining grasses at under 10cm in height.

Bushfire Protection Criteria – Element 3 – Vehicular Access

Intent: To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.

Performance Principle P3: The internal layout, design and construction of public and private vehicular access and egress in the subdivision/ development allow emergency and other vehicles to move through it easily and safely at all times.

Acceptable Solution	Compliance	Assessment Statements
A3.1 Two Access Routes Two different vehicular access routes are provided, both of which connect to the public road network, provide safe access and egress to two different destinations and are available to all residents/the public at all times and under all weather conditions.	Compliance with this element is achieved.	All proposed lots will have two access/egress routes on a public road network. The roads to be constructed during the development process in combination with the roading within the previous stages of development allow for multiple access/egress options for the lots onto Brockman Highway (Figure 1). Brockman Highway can then be taken to the west towards Bussell Highway, giving access to Margaret River to the north and Augusta to the south. Alternatively, Brockman Highway can be taken to the east to access Nannup.
A3.2 Public Road A public road is to meet the requirements in Table 6, Column 1 (Figure 8).	Compliance with this element is achieved.	Public roads will be constructed to meet the requirements of the Guidelines by the Developer (Figure 8). Existing public roads in proximity to the Site are in good condition and meet the technical requirements of the Guidelines.

Bushfire Protection Criteria – Element 3 – Vehicular Access						
A3.3 Cul-de-sac (including a dead-end road)	Not applicable to this Site.	There are no proposed cul-de- sacs within this development.				
A3.4 Battle-axe	Not applicable to this Site.	There are no proposed battle- axe lots within this development.				
A3.5 Private driveway >50m	Compliance with this element is	Any driveway over 50 m will				
 Requirements in Table 6, Column 3 (Figure 8); 	achieved.	comply with the requirements in the Guidelines.				
 Required where a house site is more than 50 m from a public road; 						
 Passing bays: every 200 m wit a minimum length of 20 m and a minimum width of 2 m; 						
• Turn-around areas designed to accommodate type 3.4 fire appliances and to enable then to turn around safely every 500 m (i.e. kerb to kerb 17.5 m) and within 50 m of a house;						
 Any bridges or culverts are able to support a minimum weight capacity of 15 t; and 						
• All-weather surface (i.e. compacted gravel, limestone or sealed).						
A3.6 Emergency Access Way	Not applicable to this Site.					
A3.7 Fire Service Access Routes (perimeter roads)	Not applicable to this Site.					

Bushfire Protection Criteria – Element 3 – Vehicular Access

A3.8 Firebreak Width

Compliance with this element is achieved.

Lots greater than 0.5 ha must have an internal perimeter

firebreak of a minimum width of

3 m or to the level as prescribed

in the local firebreak notice

issued by the local government.

According to the relevant category of the Shire of Augusta Margaret River's Bush Firebreak Notice and Bushfire Information booklet (which may be subject to review from time to time):

- All lots 4,000 m² and under, firebreaks are required around all piles of garden refuse and/or wood stacks,
- All lots 4,001 m² and over, require a minimum 2 m wide trafficable firebreak immediately inside all boundaries on the lot and around all piles of garden refuse and/or wood stacks.

TECHNICAL REQUIREMENTS	1 Public road	2 Cul-de-sac	3 Private driveway	4 Emergency access way	5 Fire service access routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5
Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5
*Refer to E3.2 Public roads: Trafficable surface					

Figure 8 Vehicular access technical requirements (Guidelines for Planning in Bushfire Prone Areas Table 6)

Bushfire Protection Criteria – Element 4 - Water

Intent: To ensure that water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire.

Performance Principle P4: The subdivision, development or land use is provided with a permanent and secure water supply that is sufficient for fire fighting purposes.

Ad	cceptable Solution	Compliance	Assessment Statements
A4.1 Reticulated Areas		Not applicable to this Site.	
A4 W pt	 4.1 Reticulated Areas 4.2 Non-reticulated Areas ater tanks for firefighting urposes with a hydrant or andpipe are provided: Volume: minimum 50,000 L per tank; Ratio of tanks to lots: minimum one tank per 25 lots (or part thereof); Tank location: no more than 2 km to the further most house site within the residential development to allow a 2.4 fire appliance to achieve a 20- minute turnaround time at legal road speeds; Hardstand and turn-around areas suitable for a type 3.4 fire appliance (i.e. kerb to kerb 17.5 m) are provided within 3 m of each water tank; and Water tanks and associated facilities are vested in the relevant local government. 	Not applicable to this Site. Compliance with this element is achieved.	It is proposed to have three strategic water points within the development, of 50,000 L each. The Strategic Water Tanks will be located within areas of BAL- 29 or lower. Every lot will be within 2 km of a strategic water tank. The strategic water tanks will be within the road reserve which is ceded to the crown and vested to the Shire of Augusta- Margaret River. The strategic water tanks will have 80mm female couplings as preferred by the Shire of Augusta-Margaret River, with adequate handstand and turn around area to suit a type 3.4 fire appliance. An example of the water tank and associated hardstand and turn around area is provided in Figure 9. The location of the strategic
			water tanks is illustrated in Figure 10.

Bushfire Protection Criteria – Element 4 - Water

A4.3 Individual lots within non- Not applicable to this Site. reticulated areas (only for 1 additional lot)

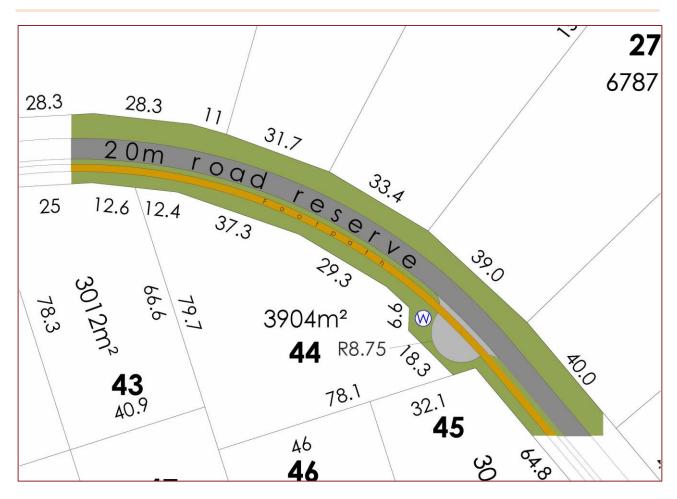


Figure 9 Example of Strategic Water Tank Hardstand and Turn around area

4.2 Performance Based Solutions

The Site assessment was conducted in accordance with AS 3959-2018 Simplified Procedure (Method 1). The Proposal meets all the compliance requirements for the four Bushfire Protection Criteria Elements. There are no performance-based solutions proposed.

4.3 Summary of the Assessment Outcomes

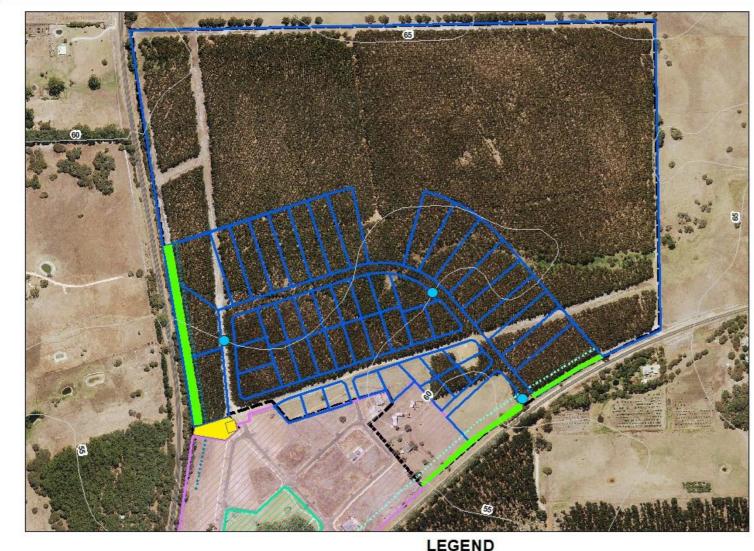
This plan provides acceptable solutions and responses to the performance criteria outlined in the *Guidelines for Planning in Bushfire Prone Areas* (WAPC, Dec 2017).

The layout and design of the development is such that no structure will be required to be exposed to a radiant heat flux in excess of 29kW/m² (BAL-29) provided the management as outlined in this Plan is adopted.

Any class 1, 2, 3 or associated 10a structure that are to be constructed, or additions planned to existing dwellings shall be designed and built to conform with Australian Standards AS 3959-2018:

- BAL-29: sections 3 & 7;
- BAL-19 sections 3 & 6; and
- BAL 12.5 sections 3 & 5.

A summary of the Bushfire Management Strategies to be implemented is provided in Figure 10. An individual BAL assessment may achieve a lower BAL rating, based on the exact location of a dwelling within a lot, or the development of areas adjacent to the Site that are currently vegetated.



www.ecosystemsolutions.com.au

(08) 9759 1960

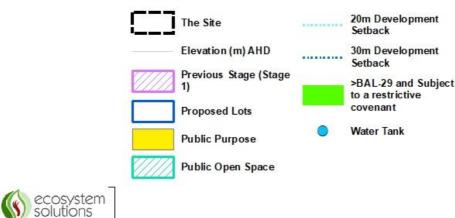
Spatial representation of the proposed risk management measures

PROPERTY / ASSESSMENT DETAILS

Property Address: Hamelin Grove, Lots 9001 & 201 Brockman Hwy, Karridale Project No: 20865 Prepared by: D Cuthbert Accreditation Level: Level 1 Accreditation Number: 48409 Accreditation Expiry Date: 02/21

0 25 50 100 150 200

Meters



NOTES

- The minimum width for the Asset Protection Zone (APZ) for this Site is the distance required to meet the BAL-29 setback.
- Vegetation within the APZ is to comply with Schedule 1 Element 2 of the Guidelines noting that:
- Trees >5m in height are to be setback a minimum distance of 6m from the building with no branches overhanging the roof.
- Shrubs <5m in height are to be setback a minimum distance of 3m from the building, and not planted in clumps greater than 5 sqm
- Grass is to be maintained at less than 100mm in height.

No dwelling is to be constructed in an area with a BAL-40 or BAL-FZ rating. Lots within this development with boundaries subjected to a BAL-40 or BAL-FZ rating due to the adjacent vegetation include a development setback line, ensuring no dwelling will be constructed within areas >BAL-29.

The Developer will establish and maintain all public open space in a low fuel state for a minimum of two years, when these areas will be ceded to the Crown and vested in the Shire of Augusta-Margaret River, who will then be the party responsible for mainaining these areas in a low threat state in perpetuity.

Public Roads will be constructed to the requirements in the Guidelines.

Any driveway 50 m or longer will comply with the requirements of the Guidelines A3.5.

For any lots 4,001sqm and above, firebreaks will be installed and maintained according to the Shire of Augusta-Margaret River's Bush Fire Management Information Booklet.

Strategic water tanks will be installed within the development in areas of BAL-29 or below, to meet the requirements of the Guidelines (A4.2), with three 50,000 L tanks provided, with adequate hardstand and turnaround to suit a type 3.4 fire appliance.

Installation and upkeep of the APZ, compliance with the Shire of Augusta-Margaret River's Bush Fire Information Booket, driveways and construction to BAL standards are the responsibility of the landowner. The measures listed above shall be implemented prior to the occupation of any dwelling within the Site and shall continue to be maintained in perpetuity.



5 Responsibilities for Implementation and Management of the Required Bushfire Measures

The responsibilities for the Developer, Builder, Landowner/Occupier and Local Government are outlined in Table 3, Table 4, Table 5 and Table 6 respectively.

Table 3 Developer Responsibilities

Number	Action	Due	Completed
1	Establish lots to the dimensions and standard stated in this Bushfire Management Plan.	Post planning approval and prior to lot sale	
2	Construct public roads (A3.2) to the dimensions and standard stated in the Bushfire Management Plan.	Post planning approval and prior to lot sale	
3	Install strategic water tanks (A4.2) to the standard stated in the Bushfire Management Plan and vest to the Shire of Augusta-Margaret River.	Post planning approval and prior to lot sale	
4	Provide a copy and obtain endorsement of this Bushfire Management Plan by those with responsibility under this plan including Builders, Landowners/Occupiers and Shire of Augusta-Margaret River	Post planning approval and prior to lot sale	
5	Establish and maintain all public use areas in a low fuel state for two years, when the land will be ceded to the Crown and vested in the Shire of Augusta Margaret River, with maintenance responsibilities in perpetuity of the public open space handed over to the Shire of Augusta- Margaret River	Post planning approval for two year period / handover to Shire of Augusta- Margaret River	

Number	Action	Due	Completed
6	Establish and maintain the 10m Landscape Buffer to the standards of an Asset Protection Zone (Appendix B) and maintain to this level until individual lots are sold and ongoing maintenance becomes the responsibility of the individual lot owner.	Post planning approval and prior to lot sale / sold to individual lot owner	
7	 Where WAPC condition a subdivision application approval with a requirement to place a notification onto the certificate(s) of title and a notice of the notification onto the diagram or plan of survey (deposited plan). This will be done pursuant to Section 165 of the <i>Planning and Development Act 2005</i> ('Hazard etc. affecting land, notating titles as to:') and applies to lots with a determined BAL rating of BAL-12.5 or above. The notification will be required to state: 'This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and may be subject to a Bushfire Management Plan. Additional planning and building requirements may apply to development on this land'. 	Creation of titles and deposited plan	

Table 4Builder Responsibilities

Action	Action	Due	Completed
1	Be aware of the existence of any BMP that refers to the Site	Prior to any building work.	
2	Ensure the building or incidental structure to which a building permit applies is compliant on completion with the bushfire provisions of the Building Code of Australia (BCA) as it applies in WA.	Prior to any building work.	

Number	Action	Due
1	Install and maintain any driveways longer than 50 m in compliance with the Guidelines (A3.5).	Prior to occupancy & ongoing
2	Maintain an Asset Protection Zone (APZ) according to the standard in the Guidelines or according to a detailed BAL assessment.	Ongoing
3	For lots 4,001 m ² and above, install and maintain firebreaks according to the Shire of Augusta-Margaret River's Fire Break Notice and Bushfire Information.	
4	Comply with the relevant local government annual firebreak notice (which may be subject to review from time to time) issued under s33 of the <i>Bush Fires Act 1954</i> .	
5	Ensure that any builders (of future structures on the Lot) are aware of the existence of this Bushfire Management Plan and the responsibilities it contains regarding the application of construction standards corresponding to the determined BAL rating.	
6	Ensure all future buildings the landowner has responsibility for, are designed and constructed in full compliance with: (a) the requirements of the <i>Building Act 2011</i> (WA) and the bushfire provisions of the Building Code of Australia (BCA) as applicable to WA; and (b) with any identified additional requirements established by this BMP or the relevant local government.	
7	Ensure no habitable buildings are constructed in areas above a BAL-29 rating.	
8	Updating the Bushfire Management Plan may be required to ensure that the bushfire risk management measures remain effective. Bushfire plans do not expire and are a 'living document'. Updating is required in certain circumstances, including (but not limited to) if site conditions change, if further details are required at subsequent development stages or to reflect new technologies or methodologies in best practice bushfire risk management ('Guidelines' s4.6.4).	Ongoing

Table 5 Landowner / Occupier Responsibilities

Number	Action	Due
9	Maintain all areas of the 10m Landscape Buffer to the standards of an	Ongoing
	Asset Protection Zone (Appendix A) in perpetuity.	

Table 6 Shire of Augusta-Margaret River Responsibilities

Number	Action	Due
1	Monitor landowner compliance with the annual firebreak notice.	Ongoing
2	Develop and maintain district bushfire fighting services and facilities.	Ongoing
3	Promote education and awareness of bushfire prevention and preparation measures though the community.	Ongoing
4	Administer the requirements of the Bush Fires Act 1954, Planning and Development Act 2005 and the Building Act 2011.	Ongoing
5	Maintain the strategic water tanks and associated area in good working condition.	Ongoing
6	Maintain areas of Public Open Space in a low fuel state in perpetuity.	Two years post planning approval - once responsibility is transferred from Developer

6 References

DFES (2015). Map of Bush Fire Prone Areas. Department of Fire and Emergency Services. [available at www.dfes.wa.gov.au/bushfireproneareas].

FESA, WAPC & Dept of Planning (2010). Planning for Bushfire Protection. Edition 2. May, Government of Western Australia, Perth. WA.

WAPC (V1.3, Dec 2017). Guidelines for Planning in Bushfire Prone Areas. Western Australian Planning Commission, Perth. WA.

WAPC (2015a). State Planning Policy 3.7: Planning in Bushfire Prone Areas (SPP 3.7). Western Australian Planning Commission, Perth. WA.

7 Glossary

AS 3959: Australian Standard 3959 Construction of Buildings in Bushfire-Prone Areas.

Asset Protection Zone (APZ): A low fuel area immediately surrounding a building.

BAL: Bushfire Attack Level (BAL) as set out in the Australian Standard 3959 Construction of Buildings in Bushfire-Prone Areas (AS 3959), as referenced in the Building Code of Australia (as amended).

BAL Assessment: An assessment prepared in a manner and form set out in AS 3959 to determine a BAL. It is strongly recommended that BAL assessments are prepared by accredited Level 1 BAL Assessors, unless otherwise exempted in these Guidelines.

BAL Contour Map: A BAL Contour Map is a scale map of the subject lot/s illustrating the potential radiant heat impact and associated indicative BAL ratings in reference to any classified vegetation remaining within 100 metres of the assessment area after the development is complete. The intent of the BAL contour map is to identify land suitable for development based on the indicative BAL rating. It is strongly recommended that BAL Contour Maps are prepared by an accredited Bushfire Planning Practitioner.

Bushfire: An unplanned fire burning in vegetation. A generic term which includes grass fires, forest fires and scrub fires both with and without a suppression objective.

Bushfire hazard: The potential or existing flammability of vegetation that, in association with topography and slope, when ignited may cause harm to people and/or damage property and/or infrastructure.

Bushfire Hazard Level (BHL) assessment: A BHL assessment provides a measure of the likely intensity of a bushfire and the likely level of a bushfire attack on a Site determined by categorising and mapping land as having a low, moderate or extreme Bushfire Hazard Level in accordance with the methodology set out in the Guidelines. It is strongly recommended that Bushfire Hazard Level assessments are prepared by an accredited Bushfire Planning Practitioner.

Bushfire Management Plan (BMP): A document that sets out short, medium and long term risk management strategies for the life of the development. It is strongly recommended that Bushfire Management Plans are prepared by accredited Bushfire Planning Practitioners in accordance with the requirements set out in the Guidelines on behalf of the landowner/proponent with the assistance of the responsible authority for emergency services where required.

Bushfire Planning Practitioner: A person who holds Level Two or Level Three accreditation under the Western Australian Bushfire Association Framework.

Bushfire prone area: An area that has been designated by the Fire and Emergency Services Commissioner

under s. 18P of the Fire and Emergency Services Act 1998 as an area that is subject, or likely to be subject, to bushfires. Such areas are identified on the Map of Bush Fire Prone Areas and can be found on the Department of Fire and Emergency Services website.

Bushfire Protection Criteria: A performance based system of assessing bushfire risk management measures contained in the Guidelines and applied to all strategic planning proposals, subdivisions and development applications.

Bushfire risk: The chance of a bushfire igniting, spreading and causing damage to people, property and infrastructure.

Bushfire risk management: Means the application of the bushfire protection criteria contained in the Guidelines.

Development application: An application for approval to carry out development or change a land use under either a local planning scheme or region planning scheme. This includes local development plans but excludes application for single houses and ancillary dwellings on a lot or lots less than 1,100m².

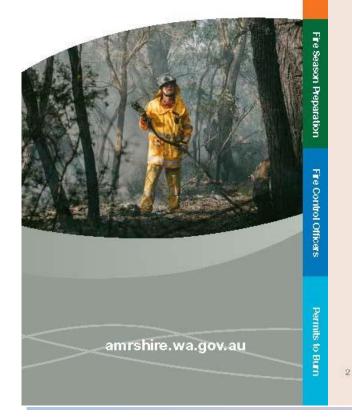
Guidelines: Refers to the Guidelines for Planning in Bushfire Prone Areas (WAPC 2015), as amended.

WAPC: Western Australian Planning Commission.

Appendix A Shire of Augusta-Margaret River **Firebreak Notice and Bushfire** Information booklet



Firebreak Notice and Bushfire Information 2019–2020



Definitions

Firebreak Notice

Important Date:

For the purpose of this notice the following definitions apply:

Asset Protection Zone (APZ) means the area of land within twenty (20) metres from the external walls of any habitable building (or a distance as otherwise stated in your BAL assessment if your property boundary is less than 20 metres from the external walls of a building). The fuel loading (flammable material) in the APZ is to be reduced and maintained to less than two (2) tonnes per heotare, trees must not be closer than two (2) metres to a building (evidently reticulated and maintained, zero fuel garden beds may be acceptable), and trees must not overhang a building within four (4) metres of the external roof.

Bushfire Management Plan means a plan that has been developed and approved by the Shire to reduce and mitigate fire hazards within a subdivision, lot or other area of land within the district.

Driveway / Access Way means the access route from the road to your main dwelling. This should be minimum four (4) metres wide with a minimum four (4) metre vertical clearance to allow a fire appliance to access your property.

Firebreak means an area of land that has been cleared of all trees, bushes, grasses and any other object or thing which may be flammable, leaving a surface of bare mineral earth a minimum of two (2) metres wide, with a four (4) metre high vertical clearance. Firebreaks will not stop fires from spreading, but they may prevent small fires from escaping your property and landscape fires from entering. More importantly, firebreaks provide safer access for yourself and firefighters to conduct fire suppression activities on your land.

Flammable Material means any plant, tree, grass, vegetable, substance, object, thing or material that may or is likely to catch fire and burn.

Plantation means any area of planted pines, eucalypt, hardwood or softwood trees exceeding three (3) hectares in area.

Trafficable means a firm stable surface, unhindered and without obstruction that a 4WD fire appliance is able to travel along from one point to another. A firebreak must not terminate without provision to egress to a safe place or a cleared turn around area of not less than a nineteen (19) metre radius.



Firebreak Notice

Bush Fires Act 1954

The following Notice is hereby given to all owners and/or occupiers of land within the Shire of Augusta Margaret River:

Pursuant to the powers contained in section 33 of the *Bush Fires Act* 1954, you are hereby required and therefore ordered by the local government to carry out fire prevention work in accordance with the requirements of this Notice, on or before 30 November 2019.

All land is to be maintained up to and including 12 May 2020 as specified in this Notice. All previous versions of this document are hereby cancelled. Properties subject to an approved Bushfire Management Plan must comply with the requirements of their Plan.

Rangers will be inspecting properties for compliance from 1 December 2019. Persons who fail to comply with the requirements of this Notice may be issued with an infringement notice (\$250) or prosecuted with a modified penalty (up to \$5,000). The Shire of Augusta Margaret River may carry out the required work on the land at cost to the owner/occupier.



Can We Access Your Property?

DID YOU KNOW?

In order for file appliances to access your property safely, filebreaks should be three (3) metres wide and have at least four (4) metres vertical clearance. File appliances must be able to fit through gates on your property. The average fire appliance is nine (9) metres in length.

DON'T FUEL FIRES

- x Don't have thick vegetation near your home.
- ✔Clear all flammable material from around all structures.
- Store firewood, timber, petrol and kerosene well away from the house.
- ✔Clear all dead leaves out of gutters regularly.
- Remove dead trees and branches which, when burning, could drop on your roof.
- ✓ Rake up leaves, twigs and dead material regularly.
- Burn off dry grass and vegetation at the approved times and in the approved manner or consider using alternative methods to burning.

Up to 1 cubic metre (a 6x4 trailer load) of

uncontaminated green waste can be disposed of at the Davis Road Waste Management Facility and up to 2 cubic metres at the Cowaramup and Kudardup Transfer Stations, at no cost to Shire esidents. The new FOGO bin is emptied weekly and is a great way to dispose of garden waste.

Important Dates

Restricted Burning Period 1 (spring/summer)

Permits Required 9 November to 22 December

Deadline for Prevention Works

Installed on or before 30 November Maintained up to and including 12 May

Prohibited Burning Period

Burning Prohibited 23 December to 14 March

Restricted Burning Period 2 (autumn)

Permits Required 15 March to 12 May

PLEASE NOTE

- These dates can change at short notice due to variable weather conditions so you should always call your area FCO or the Shire Rangers to check prior to lighting up.
- Burning is prohibited on days where the Fire Danger Rating is Very High or above.
- A TOTAL FIRE BAN may be declared by the DFES Commissioner at any time. If, declared a person must not light any fire or undertake any activity that may cause a fire.
- Fire danger ratings change daily. To check the fire danger rating go to www.emergency.wa.gov.au or contact Shire Rangers on 9780 5695.

Fire Season Preparation

All land owners/occupiers must carry out fire prevention work in accordance with the requirements of this Notice on or before 30 November 2019. All land is to be maintained up to and including 12 May 2020.

Firebreaks

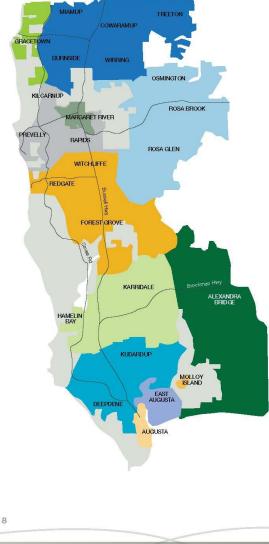
All Lots	 2m wide firebreaks required around		
4000m²	all piles of garden refuse and/or		
and under	wood stacks		
Residential/	 Minimum 2m wide trafficable		
Rural	firebreaks required inside all		
Residential	boundaries 2m wide firebreaks around all piles		
Lots 4001m ²	of garden refuse/wood stacks,		
and over	fuel and fodder		
Rural Lots	 Minimum 2m wide trafficable		
(excluding	firebreaks required within 100		
plantations,	metres of a boundary that abuts		
vineyards,	a road reserve 2m firebreaks around all piles		
orchards and	of garden refuse/wood stacks,		
olive groves)	fuel and fodder		
Plantations	 10m wide mineral earth firebreak required around each cell or block. Minimum 3m must be trafficable 2m firebreaks around all piles of garden refuse/wood stacks, fuel and fodder 		
Vineyards, Orchards and Olive Groves	 5m wide mineral earth firebreak around each cell or block. At least 3 metres must be trafficable 2m wide firebreaks around all piles of garden refuse/wood stacks, fuel and fodder 		

Important Dates

If it is considered impractical to clear firebreaks or to carry out any other works as required by this Notice, you may apply to the Shire of Augusta Margaret River for a VARIATION to the Firebreak Notice. Applications must be completed on the approved form, which is available upon request from the Shire or can be downloaded via the Shire's website at amrshire.wa.gov.au. Applications must be submitted to the Shire of Augusta Margaret River no later than 22 November.

Asset Protection Zone (APZ)	Grass slashed/ mowed to less than 10cm	Driveway/ Access way	Gutters and rooftops free of debris		KILCAFNU
1	1	1	1		PREVELLY
V	Vacant land/cleared blocks only	V	1	Fire Season	FREE
V	Vacant land/cleared blocks only	<i>√</i>	V	Fire Season Preparation	
1	J	~	1	_	
/	V	J	1		
					8

Fire Control Officer Area Map



Hamelin Grove | Bushfire Management Plan

Fire Control Officer Contact Details

Brigade	Fire Control Officer(s)
Alexandra Bridge	Alexandra Bridge Tony Mostert: 0428 461 388
Augusta	Augusta Brendan Jordan: 0477 970 415
Cowaramup	Burnside Tim Garstone: 0428 555 292 Cowaramup Ian Earl: 0418 932 847 Miamup Billy Pascoe: 0405 965 447 Treeton Geoff Jenkins: 0407 778 920 Wirring Greg Tennant: 0487 677 062
East Augusta	East Augusta Peter Brindley: 0439 869 680
Gracetown	Gracetown Peter Delfs: 0427 555 491
Karridale	Hamelin Bay Simon Hanson: 0428 147 001 Karridale Paul Vanzetti: 0447 929 057
Kudardup	Deepdene Scott Hamilton: 0427 778 840 Kudardup Matthew Nield: 0427 772 719
Margaret River	Margaret River Leith Jones: 0417 960 514
Molloy Island	Molloy Island John Matten: 0427 440 620
Rosa Brook	Osmington Keith Scott: 0407 880 877 Rosa Brook Mark Ridge: 0408 945 684 Rosa Glen Andrew Newnham: 0491 313 968
Wallcliffe	Kilcarnup lan Dowling: 0419 969 642 Prevelly Bob Baker: 0438 669 701 Rapids David Kelly: 0428 387 286
Witchcliffe	Forest Grove Larry Brennan: 0419 938 923 Redgate Richard Nash: 0419 951 511 Witchcliffe Diane Holland: 0427 930 735

General Information

BURNING OF GARDEN REFUSE

You may burn one small heap of up to one (1) cubic metre during the spring/summer Restricted Burning Period (up until commencement of the Prohibited Burning Period at midnight on 21 December 2019) without a Permit. It cannot be lit before 6pm and must be fully extinguished by 11pm. A courtesy call to your area FCO is recommended.

A PERMIT IS REQUIRED to burn garden refuse during the autumn Restricted Burning Period from 15 March to 12 May.

WOOD/SOLID FUEL BBQS AND PIZZA OVENS

Use of wood/solid fuel bbqs are prohibited on days where the fire danger rating is VERY HIGH or above. Use of wood/solid fuel pizza ovens are prohibited on days where the fire danger rating is EXTREME or above. Use of all wood/solid fuel bbqs and pizza ovens are prohibited during a TOTAL FIRE BAN.

CAMPFIRES

Fire Control Officers

10

Campfires are NOT permitted;

- on days where the fire danger rating is VERY HIGH or above
- at any time during the PROHIBITED Burning Period
- in a designated campground where the camp ground has prohibited the lighting of fires at any time
- on public land, unless purpose built campfire pits have been provided by the owner of the land and permission to use them has been given.

Campfires are permitted on private property in the RESTRICTED Burning Periods, but cannot be lit before 6pm and must be fully extinguished by 11pm. Consent from the land owner must be given (and proof of consent available if requested by an Authorised Person).

Permits to Burn

A permit to burn is required during the RESTRICTED Burning Periods.

To obtain a Permit, contact your area Fire Control Officer (FCO) by referring to the FCO map in this notice. Where the FCO is unavailable the Chief Bush Fire Control Officer or the Shire Rangers can also issue Permits. Please allow up to 72 hours for your Permit to be issued.

Plan your burn in advance

When contacting the FCO to request a Permit, have the following information ready to provide;

- the size of your burn
- · what you are burning
- the address of the burn
- the name and contact number of the Permit holder (Note: the Permit holder must be the land owner)

You must notify your adjoining land owners 24 hours in advance of your intention to burn.

Prior to burning, you must register your Permit with the Shire, DBCA and DFES. To do this call the numbers on the Permit and have your Permit handy as the operator will need the Permit details.

Failure to: obtain a Permit, comply with all Permit conditions, burn without a Permit, or burn in contravention to any information provided in this Notice, may result in a modified penalty of \$250 and up to \$5,000 should the matter go before the courts.

PLEASE NOTE

A PERMIT TO BURN IS NOW REQUIRED between 15 March – 12 May to burn garden refuse (one small heap up to one (1) cubic metre)

Permits to Burn

Key Contacts

Chief Bush Fire Control Officer 0419 525 843

Deputy Chief Bush Fire Control Officer 0419 628 465

Shire Rangers 9780 5695

DFES Emergency Info Line 13 DFES (133 337) Follow DFES on Twitter and Facebook or listen to ABC Radio South West WA





PO Box 61, Margaret River, Western Australia 6285 T (08) 9780 5255 | F (08) 9757 2512 amrshire@amrshire.wa.gov.au | amrshire.wa.gov.au



Hamelin Grove | Bushfire Management Plan

Appendix B APZ Requirements

Any habitable building eventuating within the Site will be surrounded by an APZ which meets the following requirements:

- a. Width: measured from any external wall or supporting post or column of the proposed building,
 (developable area/building envelope for a subdivision) and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29) in all circumstances;
- b. Location: the APZ should be contained solely within the boundaries of the lot on which the building is situated, except in situations where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, into perpetuity;
- c. Fences: within the APZ are constructed from non-combustible materials (eg. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.
- d. Objects: within 10 metres of a building combustible object must not be located close to vulnerable parts of the building i.e. windows and doors.
- e. Fine Fuel load: combustible dead vegetation matter less then 6mm in thickness reduced to and maintained at an average of two tonnes per hectare.
- f. Trees (>5m in height): trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and/or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy.
- g. Shrubs (0.5m 5m in height): should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated at trees.
- h. Ground covers (<0.5m in height): can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 meters of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.
- i. Grass: should be managed to maintain a height of 100 millimetres or less.