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:	Lot 9003 Bussell Highway				
Suburb:	Karridale	State:	WA	Postcode:	6288
Local government area:	Shire Augusta Margaret Rover				
Description of the planning proposal:	Subdivision into 90 Lots				
BMP / Reference number:	241786	Version:	B	Date of issue:	18/02/2025
Client / Business name:	Hamelin Grove C/- Martin Richards Town Planning & Project Management				

Reason for referral to DFES[1]	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)	☐	✔
Have any of the bushfire protection criteria elements been addressed through the use of an outcomes-based approach?	☐	✔
Strategic planning proposal (including rezoning applications)	☐	✔
Local planning scheme amendment containing supplementary provisions, additional to the deemed provisions for bushfire risk management	☐	✔
Where a bushfire local planning policy, or variation to the acceptable solutions or the APZ is proposed	☐	✔
Where there is a conflict of opinion between the decision maker and proponent	☐	✔
Expert technical advice on bushfire behaviour, emergency management, or other occasions where bushfire technical advice is required to support planning decision-making	☐	✔
Expert technical advice on bushfire matters referred to State Administrative Tribunal (SAT) or Development Assessment Panel (DAP)	☐	✔
Comments on future buildings' compliance with FES Commissioner's operational requirement guidelines	☐	✔
Decision maker discretionary referral, (e.g. renewable energy, hazardous materials, vulnerable land use)	☐	✔

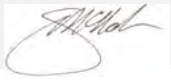
If the development is a special development type as listed above, explain why the proposal is considered to be one of the above listed classifications (E.g. considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

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
Gary McMahon	Level 3	35078	Nov 2025
Company		**Contact No.**	
Ecosystem Solutions Pty Ltd		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  Date 18/02/2025

[1] For more information please refer to DFES Referral to DFES Checklist

ecosystem solutions
PO Box 685
DUNSBOROUGH WA 6281
Ph: +61 8 9759 1960

info@ecosystemsolutions.com.au
www.ecosystemsolutions.com.au

Bushfire Management Plan

Lot 9003 Bussell Highway, Karridale

18 February 2025

Prepared for:

Hamelin Grove

C/- Martin Richards Town Planning & Project Management

Limitations Statement

This report has been prepared in accordance with the Agreement between Ecosystem Solutions Pty Ltd and Hamelin Grove ("Client"). It has been solely prepared for Bushfire Management Plan for the subdivision of Lot 9003 Bussell 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

Gary McMahon
B.Sc. M. Env Mgmt. PG Dip Bushfire Protection. C.EnvP, BPAD Level 3 (35078)

The signatory declares that this Bushfire Management Plan meets the requirements of State Planning Policy 3.7 and the Planning for Bushfire Guidelines (2024) .

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

Site - Lot 9003 Bussell Highway, Karridale

Version	Revision	Purpose	Author	Reviewer	Submitted	
					Form	Date
Report	Rev A	Initial Report	DC (BPAD 48409 - Level 2)	GM (BPAD 35078 - Level 3)	Electronic (email)	13/02/2025
Report	Rev B	Update BAL Contour	DC (BPAD 48409 - Level 2)	GM (BPAD 35078 - Level 3)	Electronic (email)	18/2/2025

Filename: Y:\PROJECTS\241786 Lot 9003 Bussell Hwy, Karridale BMP\Reports\Lot 9003 Bussell Highway, Karridale BMP rev B.docx

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1 Introduction

This Bushfire Management Plan (BMP) has been prepared for Lot 9003 Bussell Highway, Karridale (hereafter referred to as the 'Site') by Ecosystem Solutions Pty Ltd, Dani Cuthbert (Dip BM, Dip TM, BPAD 48409 – Level 2) and Gary McMahon (B.Sc. M. Env Mgmt. PG Dip Bushfire Protection. C.EnvP, BPAD 35078 - Level 3). An assessment of the proposal against the requirements for *State Planning Policy (SPP) 3.7* (Nov 2024) and the *Planning for Bushfire Guidelines* (WAPC, Nov 2024) is included.

The Site is located within the Shire of Augusta-Margaret River. The Site is located within a bushfire prone area, as declared by *State Planning Policy 3.7* (Figure 1), and is currently cleared of native vegetation.

The proposal is for the Site to be subdivided into 90 Lots, with areas of Public Open Space and drainage. The subdivision plan is provided in Figure 2.

The purpose of this BMP is to detail the bushfire management methods and requirements that will be implemented 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 through assessment against the four bushfire protection criteria.

Figure 1 Extract Map of Bushfire Prone Areas for Lot 9003 Bussell Highway, Karridale, within the blue polygon, accessed 3rd February 2025

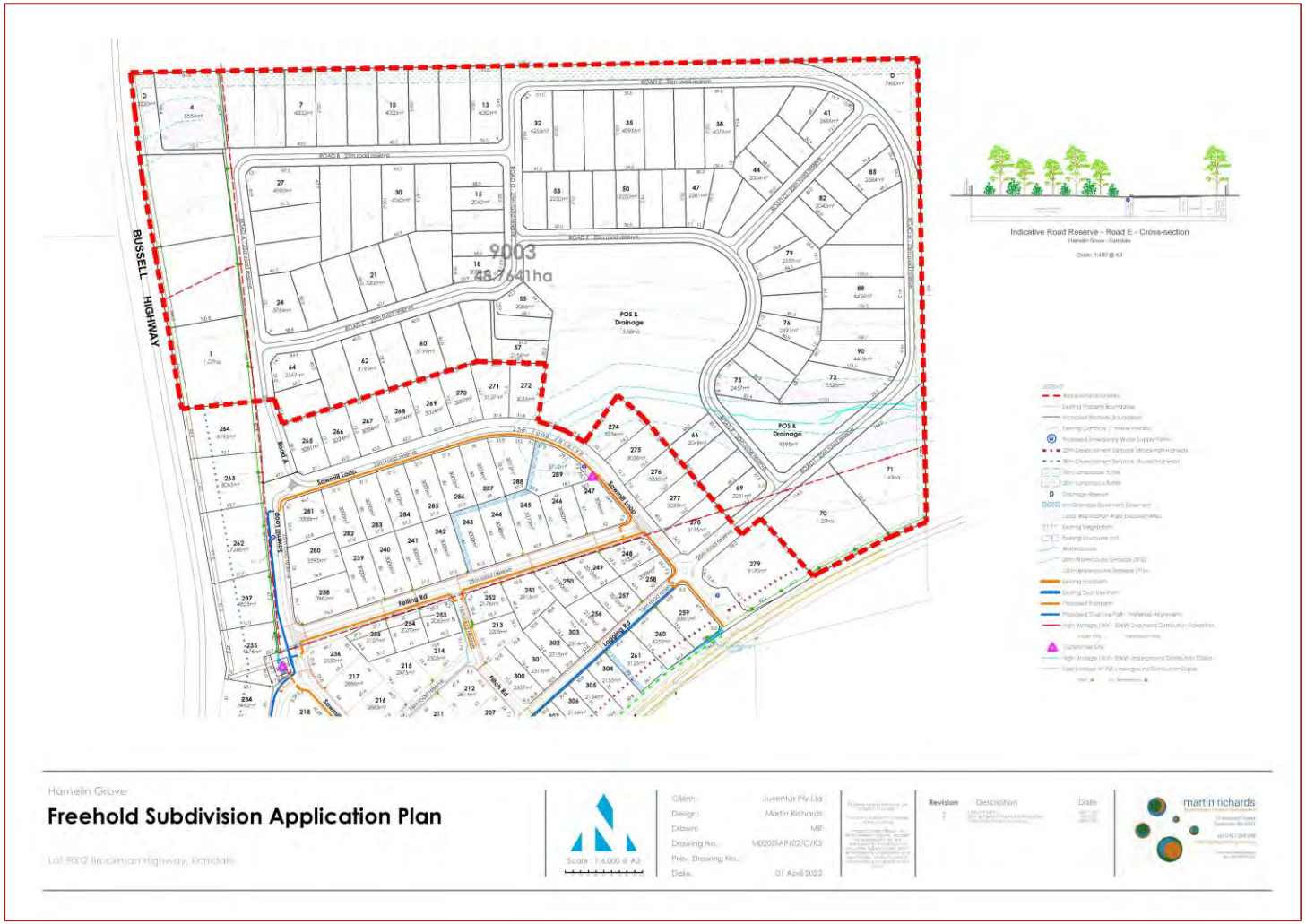

Figure 2 Subdivision Plan for Lot 9003 Bussell Highway, Karridale

2 Environmental Considerations

2.1 Native Vegetation - Modification and Clearing

Lot 9003 Bussell Highway, Karridale was previously a plantation, which has been removed. Since the time of the removal of the plantation there has been some recruitment of Tasmainian Blue Gums and reeds over introduced grasses throughout the Site. This BMP requires all proposed lots to be established and maintained to Asset Protection Zone (APZ) standards by the developer until individual lots are sold, where it becomes to the responsibility of the individual lot owner.

This bushfire assessment assumes that relevant government approvals for any vegetation modification will be achieved prior to the commencement of any clearing.

The Site and the surrounding 150m buffer have been assessed for environmental values using a simple desktop review (Table 1). The Protected Matters Search Tool and public state databases, searched 3rd February 2025, identifies conservation significant flora, fauna, and vegetation with a number of threatened flora and fauna species or species habitat that may occur in the area.

Table 1 Significant environmental values identified within the Site

Environmental Value	Yes or No	If Yes - describe
Conservation Covenants	No	Nil
Bushfire Forever Sites	No	Nil
Conservation Category Wetlands and Buffer	No	Nil
Threatened Ecological Communities (TECs)	Yes	Empodisma peatlands of south western Australia may occur within the area.
Threatened Flora	Yes	A number of Threatened flora species or species habitat may occur within the area.
Threatened Fauna	Yes	A number of threatened fauna species or species habitat are known to occur in the area including: • Western Ringtail Possum (*Pseudocheirus occidentalis* - Critically Endangered); and • Black Cockatoo species (*Calyptorhynchus banksii naso* - Vulnerable, *Zanda baudinii* - Endangered & *Zanda latirostris* - Endangered).
Environmentally Sensitive Area	No	Nil

2.2 Revegetation / Landscape Management Plans

Any revegetation within the Public Open Space and drainage reserves will be subject to an approved landscape management plan to ensure the vegetation post development classification remains accurate and does not increase the BAL ratings for buildings across the Site. Establishment of the Public Open Space in accordance with an approved Landscape Management Plan is the responsibility of the developer for a period of two years, where this area will be ceded to the Crown and vested to the Shire of Augusta Margaret River for ongoing maintenance.

The revegetation of the 10m and 20m landscape buffers will also be subject to a landscape revegetation and management plan, for the purpose of this Bushfire Management Plan, these areas have been classified as Class A Forest, as a worst-case scenario, based on the plantings being spaced 4 to 5m apart with a mixture of trees and shrubs.

3 Bushfire Assessment Results

3.1 Assessment Inputs

A Site inspection was conducted on 6th February 2025 by Dani Cuthbert (BPAD Level 2) and Hayley Drake (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 for the current vegetation and Figure 4 for post development.

Plot	1	Vegetation Classification or Exclusion Clause - *Pre-Development*	Class A Forest Downslope >0 to 5 Degrees
Plot	1	Vegetation Classification or Exclusion Clause - *Post-Development*	Class A Forest Downslope >0 to 5 Degrees
			
Photo ID: 1			Photo ID: 2
			
Photo ID: 3			
Description / Justification for Classification:			Regrowth vegetation of trees up to 30 m high with more than 30% canopy cover at maturity, over an unmanaged understory. The Site is undulating, and some areas of this plot will be Upslope/Flat to proposed lots and Downslope >0 to 5 to others, therefore the entire plot has been classified as Downslope >0 to 5, as a worst-case scenario. The Vegetation Classification - Post Development mapping shows that this area of Class A Forest vegetation will be within the landscape buffer, therefore, will retain its Class A Forest classification post development, as a worst-case scenario. An approved Landscape Management Plan, may change the vegetation classification.

Plot	2	Vegetation Classification or Exclusion Clause - *Pre-Development*	Class A Forest Downslope >0 to 5 Degrees
Plot	2	Vegetation Classification or Exclusion Clause - *Post-Development*	Class A Forest Downslope >0 to 5 Degrees
			
Photo ID: 4			Photo ID: 5
Description / Justification for Classification:			Regrowth vegetation of trees up to 30 m high with more than 30% canopy cover at maturity, over an unmanaged understory. The Site is undulating, and some areas of this plot will be Upslope/Flat to proposed lots and Downslope >0 to 5 to others, therefore the entire plot has been classified as Downslope >0 to 5, as a worst-case scenario. The Vegetation Classification - Post Development mapping shows that this area of Class A Forest vegetation will be within the landscape buffer, therefore, will retain its Class A Forest classification post development, as a worst-case scenario. An approved Landscape Management Plan, may change the vegetation classification.

Plot	3	Vegetation Classification or Exclusion Clause - *Pre-Development*	Class A Forest Downslope >0 to 5 Degrees
Plot	3	Vegetation Classification or Exclusion Clause - *Post-Development*	Class A Forest Downslope >0 to 5 Degrees
			
Photo ID: 6			Photo ID: 7
Description / Justification for Classification:			Trees up to 30 m high with more than 30% canopy, over an unmanaged understory within an adjoining lot. The Site is undulating, and some areas of this plot will be Upslope/Flat to proposed lots and Downslope >0 to 5 to others, therefore the entire plot has been classified as Downslope >0 to 5, as a worst-case scenario. No vegetation modification will occur within this plot.

Plot	4	Vegetation Classification or Exclusion Clause - *Pre-Development*	Class A Forest Downslope >0 to 5 Degrees
Plot	4	Vegetation Classification or Exclusion Clause - *Post-Development*	Class A Forest Downslope >0 to 5 Degrees
			
Photo ID: 8			Photo ID: 9
Description / Justification for Classification:			Trees up to 30 m high with more than 30% canopy, over an unmanaged understory within road reserve and private property. The Site is undulating, and some areas of this plot will be Upslope/Flat to proposed lots and Downslope >0 to 5 to others, therefore the entire plot has been classified as Downslope >0 to 5, as a worst-case scenario. No vegetation modification will occur within this plot.

Plot	5	Vegetation Classification or Exclusion Clause - *Pre-Development*	Class A Forest Downslope >0 to 5 Degrees
Plot	5	Vegetation Classification or Exclusion Clause - *Post-Development*	Class A Forest Downslope >0 to 5 Degrees
			
Photo ID: 10			Photo ID: 11
Description / Justification for Classification:			Trees up to 30 m high with more than 30% canopy, over an unmanaged understory. The Site is undulating, and some areas of this plot will be Upslope/Flat to proposed lots and Downslope >0 to 5 to others, therefore the entire plot has been classified as Downslope >0 to 5, as a worst-case scenario. No vegetation modification will occur to vegetation outside of the Site. The Vegetation Classification - Post Development mapping shows that an area of Class A Forest vegetation within the Site will be within the landscape buffer, therefore, will retain its Class A Forest classification post development, as a worst-case scenario. An approved Landscape Management Plan, may change the vegetation classification.

Plot	6	Vegetation Classification or Exclusion Clause - *Pre-Development*	Class A Forest Downslope >0 to 5 Degrees
Plot	6	Vegetation Classification or Exclusion Clause - *Post-Development*	Class A Forest Downslope >0 to 5 Degrees
			
Photo ID: 12			Photo ID: 13
Description / Justification for Classification:			Trees up to 30 m high with more than 30% canopy, over an unmanaged understory within road reserve and private property. The Site is undulating, and some areas of this plot will be Upslope/Flat to proposed lots and Downslope >0 to 5 to others, therefore the entire plot has been classified as Downslope >0 to 5, as a worst-case scenario. No vegetation modification will occur within this plot.

Plot	7	Vegetation Classification or Exclusion Clause - *Pre-Development*	Class C Shrubland Downslope >0 to 5 Degrees
Plot	7	Vegetation Classification or Exclusion Clause - *Post-Development*	Class C Shrubland Downslope >0 to 5 Degrees / Excluded S 2.2.3.2 (e) or (f)
			
Photo ID: 14			Photo ID: 15
			
Photo ID: 16			Photo ID: 17
Description / Justification for Classification:			Open Shrubland vegetation of reeds up to 1m in height, over a grass understory. The Site is undulating, and some areas of this plot will be Upslope/Flat to proposed lots and Downslope >0 to 5 to others, therefore the entire plot has been classified as Downslope >0 to 5, as a worst-case scenario. Post development this majority of this plot will be excluded under S 2.2.3.2 (e) or (f). Some small areas will be within the proposed public open spaces and drainage areas and have retained their Class C Shrubland classification. A landscape management plan will be required to ensure the vegetation classification within the proposed public open space and drainage is accurate.

Plot	8	Vegetation Classification or Exclusion Clause - *Pre-Development*	Class G Grassland >0 to 5 Degrees
Plot	8	Vegetation Classification or Exclusion Clause - *Post-Development*	Class G Grassland >0 to 5 Degrees or Excluded S 2.2.3.2 (e) or (f)
			
Photo ID: 18			Photo ID: 19
			
Photo ID: 20			Photo ID: 21
Description / Justification for Classification:			Unmanaged grasses. The Site is undulating, and some areas of this plot will be Upslope/Flat to proposed lots and Downslope >0 to 5 degrees to others, therefore the entire plot has been classified as Downslope >0 to 5 degrees, as a worst-case scenario. The Vegetation Classification - Post Development map takes into account the post development firebreak category of the lots, with those being Residential/Rural Residential Lots 4,001m^2 and over and Lots under 4,000m^2, requiring grasses to be maintained at under 10cm in height, therefore these areas are excluded in the post development map. The areas within the neighbouring rural lots remain as Class G - Grassland post development.

Plot	9	Vegetation Classification or Exclusion Clause - *Pre-Development*	Excluded S 2.2.3.2 (a), (e) or (f)
Plot	9	Vegetation Classification or Exclusion Clause - *Post-Development*	Excluded S 2.2.3.2 (a), (e) or (f)

Photo ID: 22

Photo ID: 23

Photo ID: 24

Description / Justification for Classification:	Areas greater than 100m from the Site are excluded under S 2.2.3.2 (a). Non-vegetated areas including bare earth, roads and buildings 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 nature strips are excluded under S 2.2.3.2 (f). The Vegetation Classification - Post Development Map excludes grassland and shrubland within the proposed lots. The developer is responsible for establishing and maintaining the lots to Asset Protection Zone Standards (excluding any revegetation within the Landscape Buffers), including maintaining grasses at under 10cm in height until individual lots are sold, when this will become the responsibility of the individual landowners.

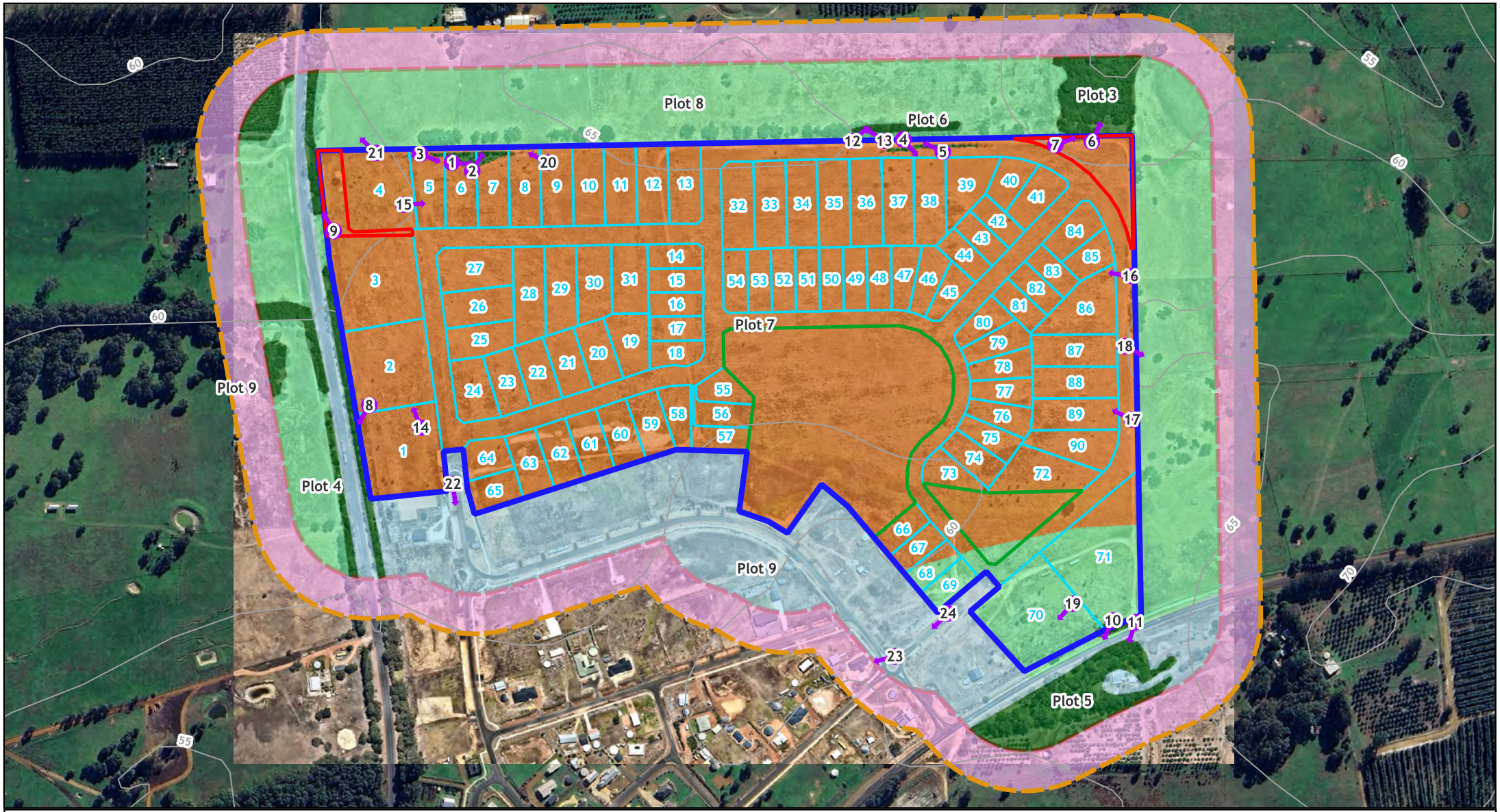

Figure 3: Vegetation Classification - Current Extent

Lot 9003 Bussell Highway, Karridale

Project:	241786
Report:	BMP
Revision:	A
Assessment Date:	06/02/2025
Prepared By:	D. Cuthbert
Accreditation Level:	Level 2
Accreditation Number:	48409
Accreditation Expiry:	Feb 2025
Aerial photo date:	Jan 2025

GDA2020 / MGA zone 50

- 150m Assessment Area
- 100m Assessment Area
- Lot Boundary
- Proposed Lots
- POS
- drainage
- Contours (m AHD)
- Photo Points

Vegetation Classification

- Class A Forest Downslope >0 to 5 degrees
- Class C Shrubland Downslope >0 to 5 degrees
- Class G Grassland Downslope >0 to 5 degrees
- Excluded S 2.2.3.2 (a)
- Excluded S 2.2.3.2 (e) or (f)

0 100 200 m

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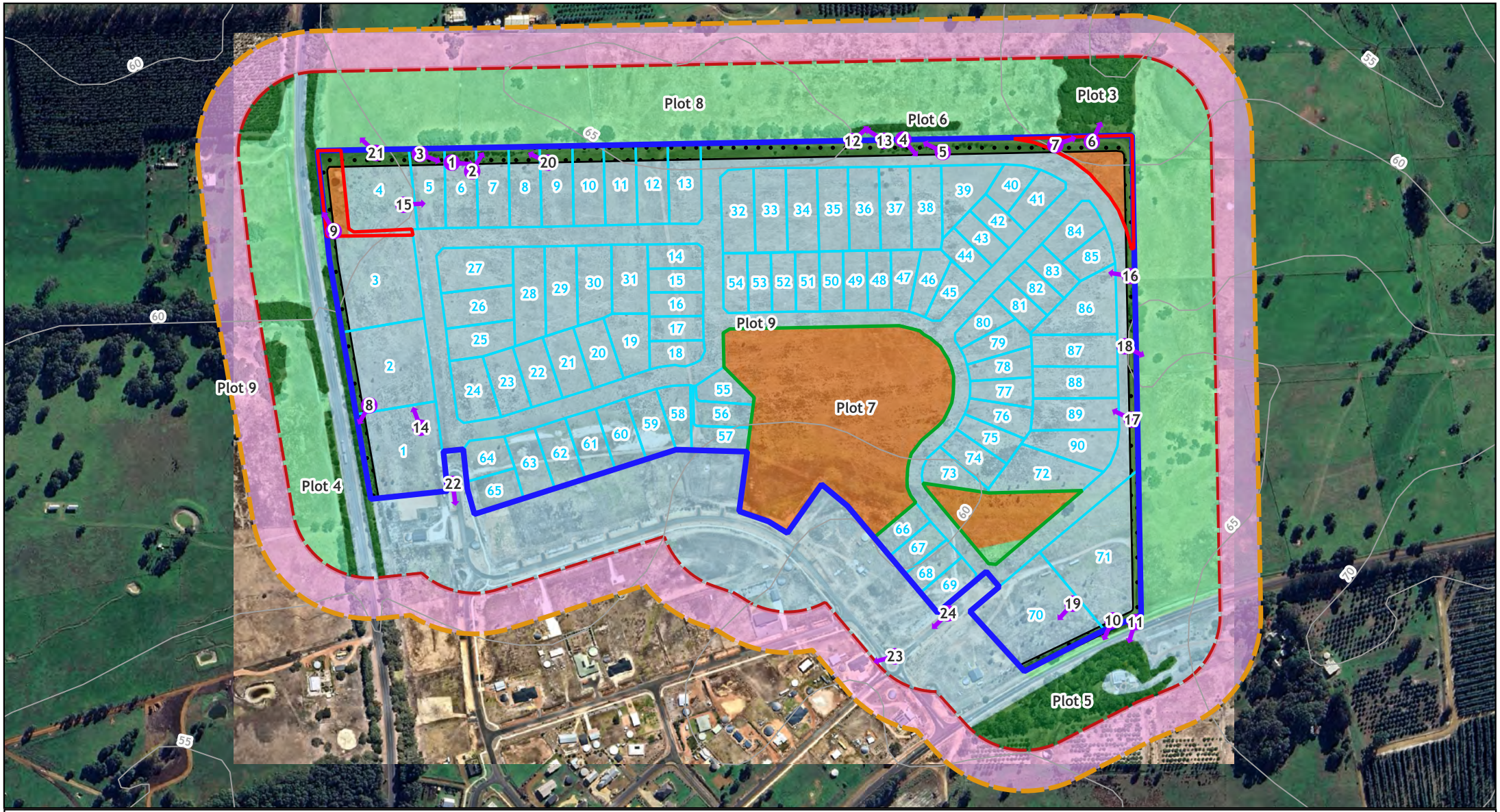

Figure 4: Vegetation Classification - Post Development

Lot 9003 Bussell Highway, Karridale

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Assessment Date:	06/02/2025
Prepared By:	D. Cuthbert
Accreditation Level:	Level 2
Accreditation Number:	48409
Accreditation Expiry:	Feb 2025
Aerial photo date:	Jan 2025

GDA2020 / MGA zone 50

- 150m Assessment Area
- 100m Assessment Area
- Lot Boundary
- Proposed Lots
- POS
- Drainage
- Landscape Buffer
- Photo Points
- Contours (m AHD)

Vegetation Post Development

- Class A Forest Downslope >0 to 5 degrees
- Class C Shrubland Downslope >0 to 5 degrees
- Class G Grassland Downslope >0 to 5 degrees
- Excluded S 2.2.3.2 (a)
- Excluded S 2.2.3.2 (e) or (f)

0 100 200 m

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3.2 Assessment Outputs

The results from the Site assessment are provided in Table 2. 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 based on the Post Development Vegetation (Figure 4) in Figure 5 and detailed BAL Contour map provided in Figure 6.

Table 2 Site Assessment Result

Method 1 BAL Determination					
Fire Danger Index - 80 (AS 3959-2018 Table 2.1)					
Plot	Vegetation Classification	Maximum effective Slope Under the Classified Vegetation (degrees)	Required Distance Classified (metres)	Separation to the Vegetation	Bushfire Attack Level
1	Class A Forest	Downslope >0 to 5	27m*		BAL-29
2	Class A Forest	Downslope >0 to 5	27m*		BAL-29
3	Class A Forest	Downslope >0 to 5	27m*		BAL-29
4	Class A Forest	Downslope >0 to 5	27m*		BAL-29
5	Class A Forest	Downslope >0 to 5	27m*		BAL-29
6	Class A Forest	Downslope >0 to 5	27m*		BAL-29
7	Class C Shrubland	Downslope >0 to 5	15m*		BAL-29
8	Class G Grassland	Downslope >0 to 5	9m*		BAL-29
9	Excluded S 2.2.3.2 (a), (e) & (f)	N/A	N/A		BAL-LOW
Determined Bushfire Attack Level					BAL-29**

* This separation distance must be managed to the standards in the Planning for Bushfire Guidelines as an Asset Protection Zone.

** 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. This determination is found using the worst-case scenario based on the plan. A detailed BAL assessment will be required prior to the construction of a dwelling.

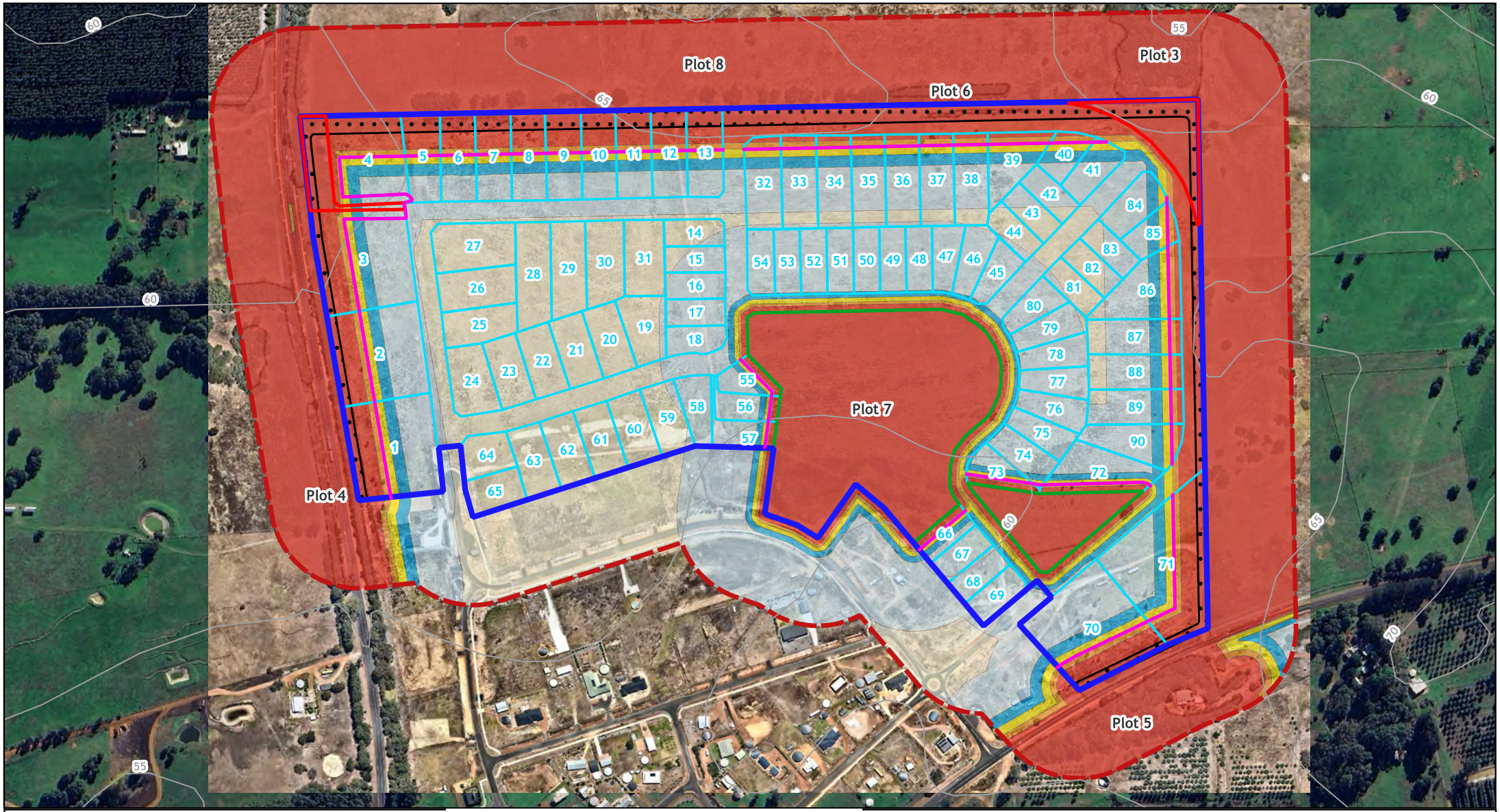

Figure 5: BAL Contour

Lot 9003 Bussell Highway, Karridale

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Revision:	A
Assessment Date:	06/02/2025
Prepared By:	D. Cuthbert
Accreditation Level:	Level 2
Accreditation Number:	48409
Accreditation Expiry:	Feb 2025
Aerial photo date:	Jan 2025

GDA2020 / MGA zone 50

- 150m Assessment Area
- 100m Assessment Area
- Lot Boundary
- Proposed Lots
- POS
- Drainage
- Contours (m AHD)
- Landscape Buffer
- BAL-LOW
- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ
- Classified Vegetation

0 100 200 m

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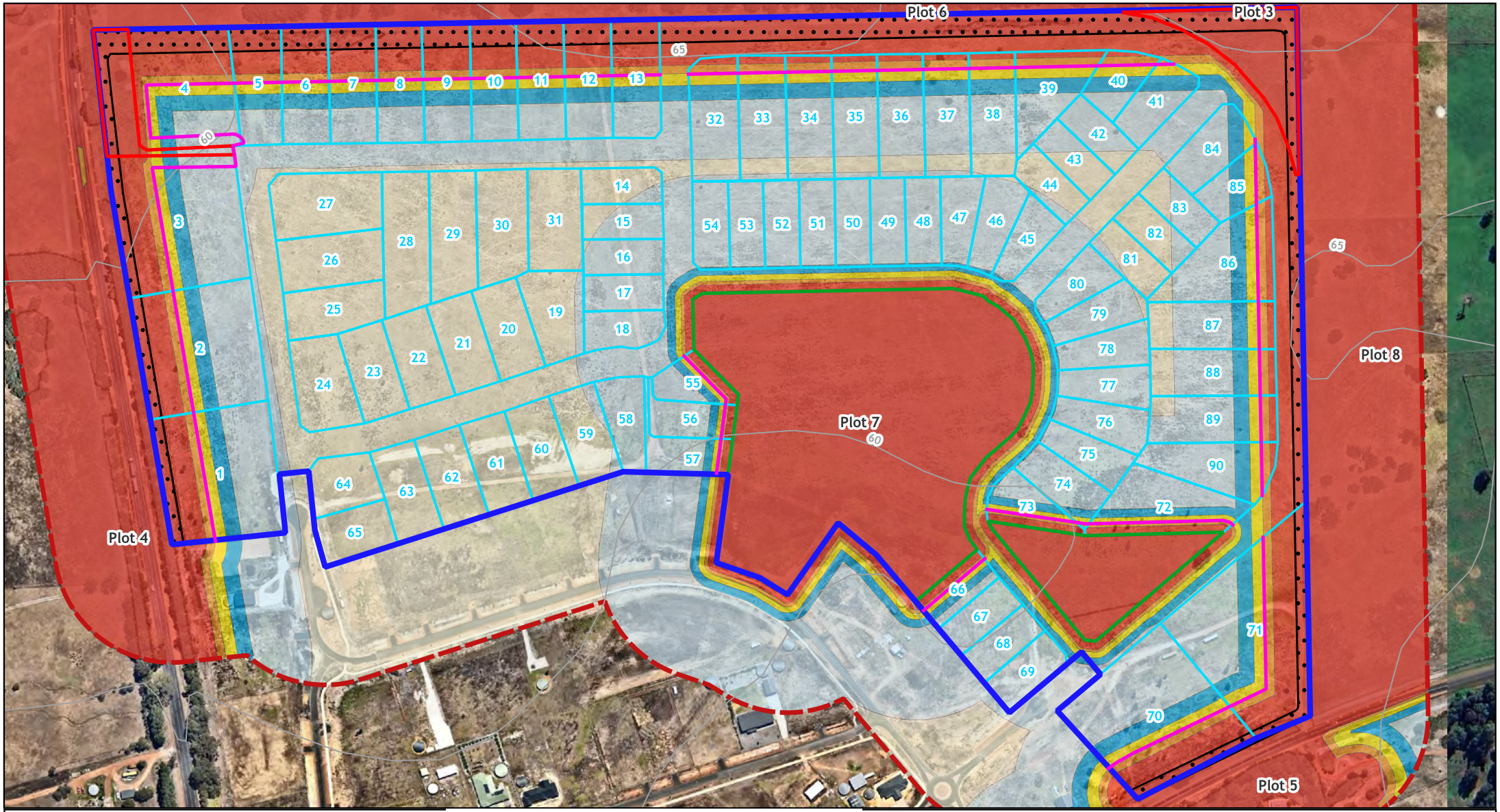

Figure 6: BAL Contour - Detailed View

Lot 9003 Bussell Highway, Karridale

Project:	241786
Report:	BMP
Revision:	A
Assessment Date:	06/02/2025
Prepared By:	D. Cuthbert
Accreditation Level:	Level 2
Accreditation Number:	48409
Accreditation Expiry:	Feb 2025
Aerial photo date:	Jan 2025

GDA2020 / MGA zone 50

- 150m Assessment Area
- 100m Assessment Area
- Lot Boundary
- Proposed Lots
- POS
- Drainage
- Contours (m AHD)
- Landscape Buffer
- BAL-LOW
- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ
- Classified Vegetation

0 100 200 m

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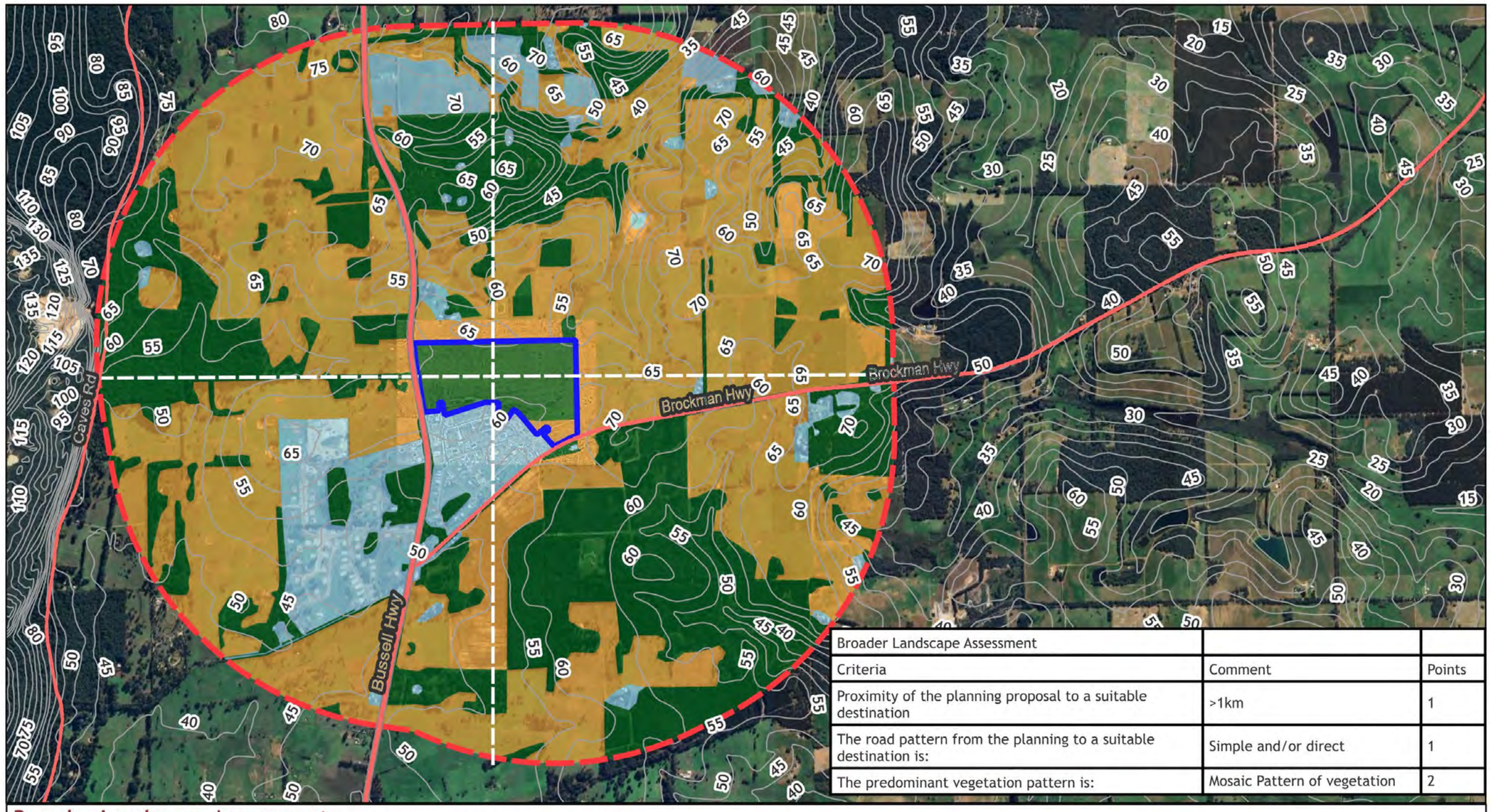
4 Assessment Against the Bushfire Protection Criteria

4.1 Compliance with the Acceptable Solutions for each Element

Bushfire Protection Criteria - Element 1 - Location	
Outcomes: Avoid broader landscapes that present an unacceptable risk to life, property, and infrastructure.	
Acceptable Solution	Assessment Statements
A1.1a Broader Landscape Type A *The subject Site is located in an area that is a Broader Landscape Type A. This location satisfies the policy outcome for Element 1: Broader Location and no additional consideration is required.*	Compliance with the Acceptable Solution is achieved. The Broader Landscape Assessment (Figure 7) determined that the Site is located in an area that is a Broader Landscape Type A. No additional consideration is required.



Broader Landscape Assessment		
Criteria	Comment	Points
Proximity of the planning proposal to a suitable destination	>1km	1
The road pattern from the planning to a suitable destination is:	Simple and/or direct	1
The predominant vegetation pattern is:	Mosaic Pattern of vegetation	2

Broader Landscape Assessment

Lot 9003 Bussell Highway, Karridale

Project:	241786
Report:	BMP
Revision:	A
Assessment Date:	7/02/2025
Prepared By:	D. Cuthbert
Accreditation Level:	Level 2
Accreditation Number:	48409
Accreditation Expiry:	Feb 2025
Aerial photo date:	Jan 2025

GDA2020 / MGA zone 50

Legend

- 2km Assessment Buffer
- Subject Site
- Contours (m AHD)
- Classified Vegetation
- Grassland
- Low Threat Vegetation

0 750 1,500 m

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(08) 9759 1960

Figure 7 Broader Landscape Assessment

Bushfire Protection Criteria - Element 2 - Siting and Design

Outcomes: Ensure siting and design solutions:

- Manage or mitigate the bushfire risk to people, property, and infrastructure; and
- Avoid, or where avoidable, minimise the clearing of native vegetation.

Acceptable Solution	Assessment Statements
A2.1 Siting and design *Ensure that each proposed and existing lot(s) contains a sufficient development Site(s) that can achieve a radiant heat impact not exceeding 29kW/m² (BAL-29).* *A2.2 Asset Protection Zone (APZ)* *Where a development Site cannot be wholly located within an area with a radiant heat impact not exceeding 29 kW/m² (BAL-29) in its pre-development state, an indicative APZ is to be provided and meet the following requirements;* • *Width: the APZ is to be measured from the development Site, and of sufficient size to ensure the radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29) in all circumstances.* • *Location: the APZ should be contained solely within the boundaries of the lot, except in instances where:* • *the vegetation on the adjoining lot(s) is, and will continue to be, low threat as per Clause 2.2.3.2 of AS 3959 or the requirements of Appendix B.2, Table 9 - APZ technical requirements, or an alternative standard in a local planning scheme, on an ongoing basis in perpetuity as agreed upon via a substantiated management agreement between the applicable landowners and the local government; or*	Compliance with the Acceptable Solution is achieved. The BAL Contour for the Site (Figure 5 & 6) shows the areas within the proposed lots where a BAL-29 or lower rating can be achieved. Areas available for the construction of a habitable building within the lots are confined to areas that are BAL-29 or lower rating. There are areas of BAL-40 and BAL-FZ that encroach the proposed lots. A Landscape Management Plan is required to ensure the BAL ratings within the Bushfire Management Plan are accurate. A habitable building setback line is required where BAL-40 or BAL-FZ encroach the proposed lots, to ensure habitable dwellings are located in an area of BAL-29 or lower. Asset Protection Zones surrounding each habitable building that eventuates within the proposed lots will be established and maintained in perpetuity to meet the criteria in the Guidelines (Appendix B) with the following minimum distances required to achieve BAL-29; • 27 m to the Class A Forest Downslope >0 to 5 degrees, • 9 m to the Class G Grassland Downslope >0 to 5 degrees, and • 10 m to the Class C Shrubland Downslope >0 to 5 degrees. All proposed Lots will be established and maintained to APZ standards (excluding the Landscape Buffers) by the developer, including maintaining grasses under 10 cm in height as per the Shire of Augusta Margaret River's Firebreak and Fuel Hazard Reduction Notice (*which may*

• *the adjoining land is, and will remain in perpetuity, non-vegetated such as a sealed or unsealed road, or a water body.* • *Management: the APZ is managed in accordance with the requirements of Appendix B.2, Table 9 - APZ technical requirements, or an alternative standard in a gazetted local planning scheme.*	*be subject to review from time to time)* until they are sold, when ongoing maintenance will become the responsibility of the individual landowners. Establishment and management of the Public Open Space, Drainage Reserves and landscape buffers within Road Reserves will occur in accordance with a Landscape Management Plan for a period of two years by the developer. After this period, the land will be ceded to the Crown and vested to the Shire of Augusta Margaret River, with ongoing management in perpetuity the responsibility of the Shire of Augusta Margaret River. Establishment and management of the Landscape Buffers within the proposed lots will occur in accordance with a Landscape Management Plan by the developer until lots are sold, where the responsibility becomes the individual landowners. The final BAL rating of any dwelling will depend on the housing design, orientation, and location within the Lot. Once the building design has been finalised, a separate BAL Assessment is required to be completed and a certificate from a qualified Bushfire Consultant submitted at the building application stage.
A2.3 Clearing of native vegetation *The structure plan or subdivision avoids, or where unavoidable, minimises the clearing of native vegetation.*	Compliance with the Acceptable Solution is achieved. No modification to native vegetation is proposed as part of this development.

Bushfire Protection Criteria - Element 3 - Vehicular Access	
Outcomes: Ensure the design and capacity of vehicular access and egress provide: • For efficient and effective evacuation to a suitable destination(s) and/or • As a contingency measure for vulnerable land uses, an on-Site shelter, where demonstrated appropriate, as a last resort option.	
Acceptable Solution	Assessment Statements
A3.1 Public Roads *Public roads are to meet the technical requirements in Appendix B.3, Table 10* (Appendix B).	Compliance with the Acceptable Solution is achieved. The developer will construct public roads to meet the requirements of the relevant class of road in the Local Government Guidelines for Subdivisional Developments, Liveable Neighbourhoods, Austroads standards and/or applicable standards for the local government. Existing public roads in proximity to the Site are in good condition.
A3.2 Access Routes *Public road access should be provided in two different directions to two different suitable destinations, with an all-weather surface.*	Compliance with the Acceptable Solution is achieved. All proposed lots will have two access/egress routes from the lot boundary to two suitable destinations. The internal road network will provide two-way access for all lots within the development via a public road network which connects to Brockman Highway, ensuring multiple access routes. The Subdivision Plan, Figure 2, shows access roads which will be used to connect the lots within the development to the public road network and ensures multiple access routes.
A3.3a No-through roads *If the public road access to the subject Site is via a no-through road which cannot be avoided due to the demonstrated Site constraints, the public road access is to be a maximum of 200 metres from the proposed lot(s) boundary to an intersection where two-way access is provided.*	There are no no-through roads proposed as part of this development. If the subdivision is to be staged, the stages are to be designed to ensure all lots within each stage have two access and egress routes via the public road network.
A3.3b No-through road requirements *A no-through road is to meet all the following requirements:*	There are no no-through roads proposed as part of this development.

• *Requirements of a public road (Appendix B, Table 10, Column 2); and* • *Turn around area/head (Appendix B, Figure 30).*	
A3.4 Emergency access way *Where it is demonstrated that A3.2 and A3.3 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 the following requirements:* • *The requirements of Appendix B.3, Table 10, Column 3 (Appendix B);* • *Provides a through connection to a public road;* • *Is no more than 500 metres in length;* • *Connects to a public road network;* • *The proponent obtaining consent from the local government, that it will accept care, control, and management for the access way; and* • *Is signposted and, if gated, gates must open for the whole carriageway width and remain unlocked.*	There are no emergency access ways proposed as part of this development.
A3.5a Perimeter roads *A perimeter road is a public road and is to be provided for greenfield or infill development where 10 or more lots are proposed (including as part of a stages subdivision) with the aim of:* • *Separating areas of permanent classified vegetation under AS 3959 which adjoin the subject Site, from the proposed lot(s); and* • *Removing the need for battle-axe lots that*	Compliance with the Acceptable Solution is achieved. A perimeter road has been provided where practical. Lots in the north and east abut grassland vegetation, where a perimeter road is not required. Lots 1 to 3 and 70 and 71 abut Bussell Highway and Brockman Highway, therefore have frontage to a public road, and a perimeter road is not required in these areas.

back onto areas of classified vegetation. *A perimeter road is to meet the requirements contained in Appendix B.3, Table 10, Column 1* (Appendix B). *A perimeter road may not be required where:* • *The adjoining classified vegetation is Class G Grassland;* • *Lots are zoned for rural living or equivalent;* • *It is demonstrated that it cannot be provided due to Site constraints; or* • *All lots have frontage to an existing public road.*	
A3.5b Fire service access route *Where proposed lots adjoin classifiable vegetation under AS 3959 (excluding Class G Grassland), and a perimeter road is not required in accordance with A3.5a, a fire service access route is to be provided to provide firefighting access, where access is not available to the* classified vegetation. *A fire service access route is to meet the following requirements:* • *Requirements of Appendix B.3, Table 10, Column 4* (Appendix B); • *Be through-routes with no dead-ends;* • *Must be signposted;* • *No further than 500 metres from a public road;* • *The proponent obtaining consent from the local government that it will accept care, control, and management; and* • *If gated, gates must open the whole carriageway width and can be locked by*	Compliance with the Acceptable Solution is achieved. No FSAR are proposed as part of this development.

the local government and/or emergency services, if keys are provided for each gate.	
A3.6 Battle-axe access legs *Where it is demonstrated that a battle-axe access leg cannot be avoided due to Site or design constraints, it can be considered as an acceptable solution.* *There are no battle-axe technical requirements where the point of the battle-axe access leg joins the effective area of the battle-axe lot, is less than 50 metres from a public road in a reticulated water supply area.* *In circumstances where the above acceptable solution is not met, or the battle-axe lot is in a non-reticulated water area, the battle-axe leg is to meet the following requirements:* • *Requirements in Appendix B.3, Table 10, Column 5* (Appendix B); • *Passing bays every 200 metres with a minimum length of 20 metres and a minimum additional carriageway width of two metres (i.e. the combined carriageway width of the passing bay and constructed private driveway to be a minimum six metres).* • *Turn-area area/head* (Appendix B).	Compliance with the Acceptable Solution is achieved. There are 2 battle axe lots proposed (56 & 57) as part of this development, with a maximum length of 50 metres from a public road to the effective area of the lots. To ensure that the battle-axe legs can achieve compliance with the requirements in Appendix B.3, Table 10, Column 5 (Appendix B) of the Guidelines, including a 6m horizontal clearance, a reciprocal right of access easement - private placed on the title of Lots 56 & 57 to allow reciprocal right of access. The access will be maintained compliant with the Guidelines under a Strata agreement between the landowners.

Bushfire Protection Criteria - Element 4 - Water	
Outcomes: Ensure that sufficient water is available and accessible for emergency services, to enable people, property, and infrastructure to be defended from bushfire.	
Acceptable Solution	Assessment Statements
A4.2 Water supply for subdivision applications *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:* • *The provision of a water tank(s) in accordance with the requirements of* Appendix B.4, Table 11 - Water supply dedicated for bushfire fighting; and *Where the provision of a strategic water tank(s) is applicable then the following requirements apply:* • *Land to be ceded free of cost to the Crown for the placement of the tank(s);* • *The proposed reserve where the tank is to be located is identified on the plan of subdivision;* • *Tank capacity, construction, and fittings, provided in accordance with the requirements of Appendix B.4* (Appendix B); *and* • *A strategic water tank is to be located no more than a 10-minute drive from the furthest development Site (at legal road speeds).*	Compliance with the Acceptable Solution is achieved. Four strategic water tanks have been provided by the Developer in previous stages of the subdivision, which comply with the requirements of the *Planning for Bushfire Guidelines,* including a suitable coupling (as required by the Shire of Augusta Margaret River) and hardstand for a type 3.4 fire appliance, with all water tanks and infrastructure vested to the Local Government, free of charge. The four existing water tanks have a combined capacity of 449,842 L dedicated for firefighting. The previous Stages of the subdivision resulted in 87 lots, with this current stage proposing an additional 90 lots, totalling 177 lots. Therefore, the existing water tanks provide more than 50,000L per 25 lots, or part thereof. The location of the water tanks are provided in the Bushfire Management Strategies Map (Figure 8). This location ensures that all lots can be accessed from the water tank within 10 minutes.

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 *Planning for Bushfire Guidelines* (WAPC, Sept 2024).

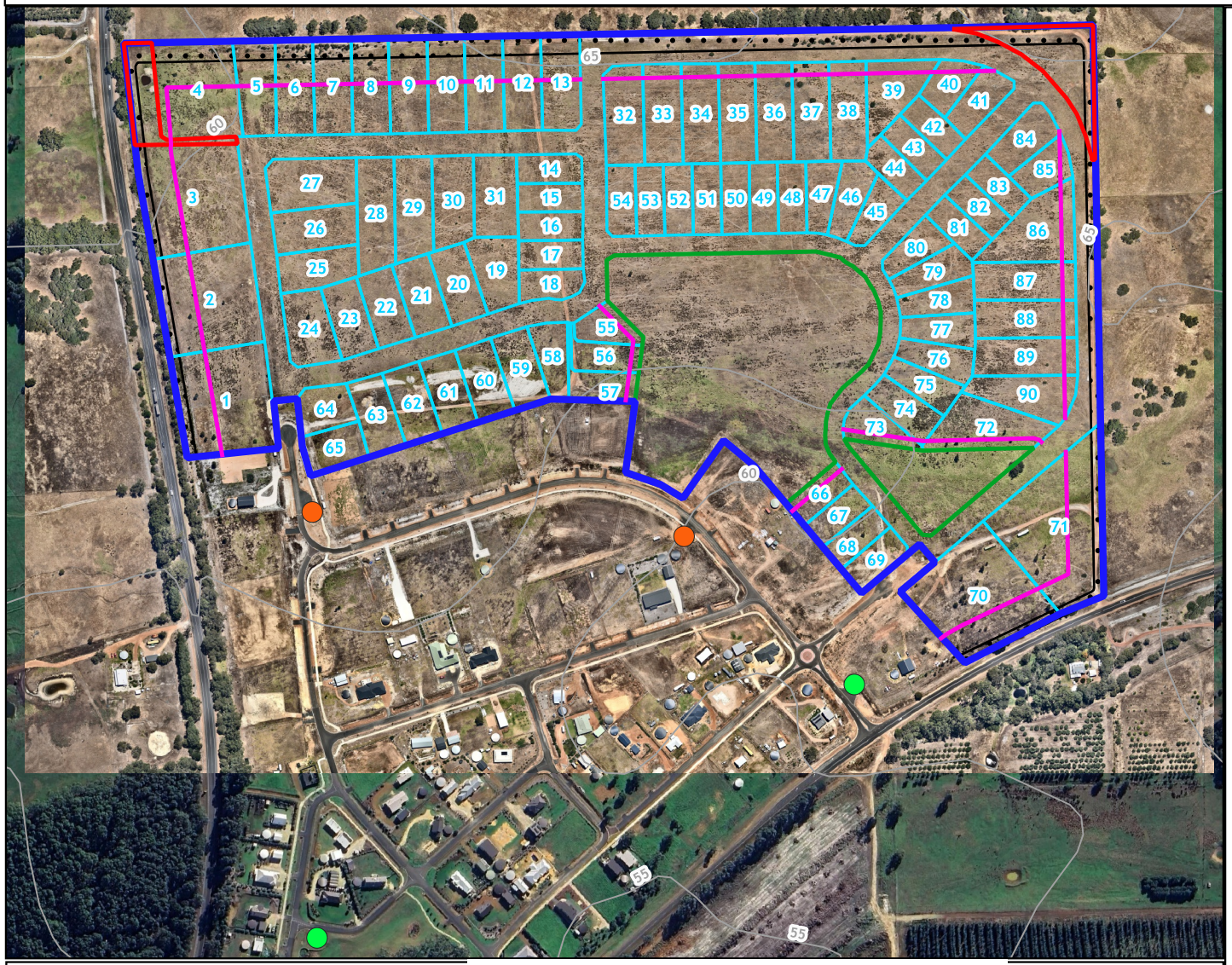
The layout and design of the development is such that no structure will be required to be exposed to a radiant heat flux in excess of 29kW/m^2 (BAL-29) provided the management as outlined in this Plan is adopted.

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 8. An individual BAL assessment may achieve a lower BAL rating, based on the exact location of a dwelling within a lot and classified vegetation.

Spatial representation of the proposed risk management measures



Management Stratagies Map

Lot 9003 Bussell Highway, Karridale

Project:	241786
Report:	BMP
Revision:	A
Assessment Date:	11/02/2025
Prepared By:	D. Cuthbert
Accreditation Level:	Level 2
Accreditation Number:	48409
Accreditation Expiry:	Feb 2025
Aerial photo date:	Jan 2025

GDA2020 / MGA zone 50

Lot Boundary
Proposed Lots
Drainage
POS
Landscape Buffer
Habitable Building Setback Line
Contours (m AHD)
Water Tank
162,921 litres
62,000 Litres

0 100 200 m

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(08) 9759 1960

The Habitable Building Setback Line will ensure that any habitable building that eventuates within a proposed lot will achieve a BAL-29 or lower rating.

All proposed Lots will be established and maintained to APZ standards (excluding the Landscape Buffers) by the developer, including maintaining grasses under 10cm in height as per the Shire of Augusta Margaret River's Firebreak and Fuel Hazard Reduction Notice (which may be subject to review from time to time) until they are sold, when ongoing maintenance will become the responsibility of the individual landowners.

Establishment and management of the Public Open Space, Drainage Reserves and landscape buffers within Road reserves will occur in accordance with a Landscape Management Plan for a period of two years by the developer. After this period, the land will be ceded to the Crown and vested to the Shire of Augusta Margaret River, with ongoing management in perpetuity the responsibility of the Shire of Augusta Margaret River.

Establishment and management of the Landscape Buffers within the proposed Lots will occur in accordance with a Landscape Management Plan by the developer until lots are sold, where the responsibility becomes the individual landowners.

Public Roads will be constructed in accordance with the Guidelines.

A reciprocal right of access easement - private will be placed on the title of Lots 56 & 57.

Four Strategic Water Tanks and associated fittings, vested to the Shire of Augusta Margaret River, have be installed by the developer in previous stages of the development, with a total of 449,842 litres dedicated for fire fighting purposes. These strategic water tanks provide the adequate capacity of water for all existing and proposed lots.

Installation of the Public Roads, vegetation modification and revegetation of landscape buffers, maintenance of lots in accordance with APZ standards, establishment of the reciprocal right of access easement and compliance with an approved Landscape Management Plan is the responsibility of the developer.

Maintenance of the Lots to Asset Protection Zone Standards (excluding the Landscape Buffers) once the land is sold and construction of any dwelling to BAL Standards is the responsibility of the individual landowner.

Maintenance of the Public Open Space and Drainage Reserves will become the responsibility of the Shire of Augusta Margaret River.

5 Responsibilities for Implementation and Management of the Required Bushfire Measures

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

Table 3 Developer Responsibilities

Number	Action	Due	Completed
1	Establish all lots to the dimensions, layout and standard as stated in this Bushfire Management Plan.	Post planning approval, prior to completion and prior to lot sale	☐
2	Construct public roads (A3.1) to the dimensions and standards stated in this Bushfire Management Plan.	Post planning approval, prior to completion and prior to lot sale	☐
3	Design all roads to the standards of Element 3 in accordance with the relevant class of road in the Local Government Guidelines for Subdivisional Development, Liveable Neighbourhoods, Austroad standards and/or any applicable standards for the local government area.	Post planning approval, prior to completion and prior to lot sale	☐
4	Establish and maintain the public open space, drainage reserves and landscape buffers outside of proposed lots, in accordance with a Landscape Management Plan, after a period of two years the land will be ceded to the Crown and vested to the Shire of Augusta Margaret River, with management responsibilities handed over to the Shire of Augusta Margaret River	Post Planning approval and prior to lot sale / until handover to the Shire of Augusta Margaret River	☐

Number	Action	Due	Completed
5	Maintain and maintain all lots (excluding the landscape buffers) in accordance with the Asset Protection Zone Standards, including with grass under 10 cm, year around until the lots are sold, where it becomes the responsibility of the landowners.	Post planning approval and prior to lot sale	☐
6	Establish the landscape buffers within proposed lots in accordance with the Landscape Management Plan until the lots are sold, where it becomes the responsibility of the landowners.	Post planning approval and prior to lot sale	☐
7	Establish a reciprocal right of access easement - private on the title of Lots 56 & 57.	Post planning approval and prior to lot sale	☐
8	Prepare a Local Development Plan with the appropriate Habitable Building Exclusion from the boundaries as detailed in Figure 7 - Bushfire Management Strategies, to ensure any dwelling constructed within the lot is BAL-29 or lower.	Post planning approval and prior to lot sale	☐
9	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	☐
10	Place a notice on the Certificate of Title, advising of the existence of this Bushfire Management Plan and associated maintenance obligations.	Creation of titles and deposited plan	☐

Table 4 Shire of Augusta Margaret River's Responsibilities

Number	Action	Due
1	Maintain areas of Public Open Space, Drainage and Landscape Buffers outside of the proposed lots in accordance with a Landscape Management Plan and this BMP in perpetuity.	Two years post planning approval - once responsibility is transferred from the developer.
2	Maintain water tanks vested to the Local Government in good working order.	Ongoing

Table 5 Landowner Responsibilities

Number	Action	Due
1	Maintain the lot to Asset Protection Zone standards (excluding the landscape buffer) according to the Guidelines or according to a detailed BAL Assessment.	Ongoing
2	Maintain any landscape buffer within the lot in accordance with an approved landscape management plan.	Ongoing

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

Firebreak Notice Requirements and Bushfire Information

2024–25

amrshire.wa.gov.au

Firebreak Notice Requirements

Important Dates

Fire Control Officers

Permits to Burn

Firebreak Notice Requirements

This document contains the requirements from the Firebreak Notice (the Notice) along with other bushfire information for property owners and occupiers.

All land is to be maintained from **30 November 2024** up to and including **12 May 2025** as specified in the Notice.

APPOINTMENTS AND INSPECTIONS

Owners and occupiers who would like an early inspection by appointment, for reasons including biosecurity, locked gates, and dangerous animals, or for explanation on the requirements of the Notice, should contact Ranger Services on (08) 9780 5695 by **1 November 2024**. Where inspections by appointment are not requested, Rangers are appointed as Bush Fire Control Officers with the power to enter land under the *Bush Fires Act 1954* and will be inspecting properties for compliance without further notice from **1 December 2024**.

VARIATIONS

Where compliance with the Notice is not practical due to environmental considerations or site-specific constraints such as topography, water course or steep gradients, owners may apply to the Shire of Augusta Margaret River for a **Variation to the Notice**.

Variations must provide an alternative means of meeting the objectives of the Notice, including bushfire risk mitigation and property access, considering site-specific constraints and advantages and not all properties will be able to accommodate Variations.

Applications must be completed on the approved form, available upon request or downloaded via the Shire's website. Applications for a Variation must be submitted before **1 November 2024** or after **1 May 2025**.

COMPLIANCE

People who do not comply with the Notice or a Variation to the Notice may be issued with a modified penalty of $250 or prosecuted with a 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.

Definitions

For the purpose of the Notice the following definitions apply:

Asset Protection Zone (APZ) means an area of land within 20 metres from the external walls of any habitable building. The fuel loading (flammable material) in the APZ is to be reduced and maintained to less than 2 tonnes per hectare. Trees must not be closer than 2 metres to a building, and trees must not overhang a building within 4 metres of the external roof. **APZ requirements apply to all properties (excluding vacant lots), regardless of size, and must be maintained all year round.**

Bushfire Management Plan (BMP) is a plan prepared specifically for a property in satisfaction of a development approval or subdivision condition. Properties subject to an approved BMP must comply with the requirements of their plan in addition to the requirements of the Notice.

Driveway/Access Way means the access route from a road reserve to a habitable building. This should be a minimum of 4 metres wide up to a maximum of 6 metres wide with a minimum 4 metre vertical clearance to allow emergency vehicles 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 bare surface to a width specified under the table on page 4, and with a 4 metre high vertical clearance.

Flammable Material means accumulated fuel such as dry grass, leaf litter, twigs, branches, trash, dead trees, firewood, stored fuels, that can be easily ignited or is likely to catch fire and burn. It includes any other thing deemed by an authorised officer to be likely to catch fire but excludes living trees, growing bushes, and plants in gardens and/or lawns under cultivation.

Habitable Building means any building people reside in and any other building within 6 metres of that building, but excludes a water tank.

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

Trafficable means a firm, stable surface capable of allowing a 4WD fire appliance to enter, exit and turn any corner (10 metre radius) without reversing.

Summary of Firebreak Notice Requirements

All landowners/occupiers must carry out fire prevention work in accordance with the requirements of the Notice on or before **30 November 2024**. All land is to be maintained up to and including **12 May 2025**.

Please Note:

Asset Protection Zone (APZ) requirements apply to all properties (excluding vacant lots), regardless of size, and must be maintained all year round.

Clearing in excess of the requirements of the Notice or a BMP will be required to comply with the Local Planning Scheme and Clearing Regulations and may require a Permit.

Property Type	Firebreak Requirements	Asset Protection Zone (APZ)	Grass slashed/ mowed to less than 10cm	Driveway/ Access way (excludes vacant blocks)	Gutters and rooftops free of debris
All Lots 4000m² and under	• 2 metre wide firebreaks around all piles of garden refuse and/or wood stacks	✓	✓	✓	✓
Residential/ Rural Residential Lots 4001m² and over	• 3 metre wide trafficable firebreaks within 10 metres of all internal boundaries • 2 metre wide firebreaks around all piles of garden refuse/wood stacks, fuel and fodder	✓	Vacant/ cleared land that is not being actively grazed	✓	✓
Rural Lots (excluding plantations, vineyards, orchards and groves)	• 3 metre wide trafficable firebreak required within 100 metres of an internal boundary that abuts a road reserve • Where land is actively grazed or maintained to less than 10cm, a 2 metre firebreak is required • 2 metre wide firebreaks around all piles of garden refuse/wood stacks, fuel and fodder	✓	Vacant/ cleared land that is not being actively grazed	✓	✓
Plantations	• 10 metre wide internal firebreak around each cell or block - 3 metres must be trafficable • 2 metre wide firebreaks around all piles of garden refuse/wood stacks, fuel and fodder	✓	✓	✓	✓
Vineyards, Orchards and Groves	• 5 metre wide internal firebreak around each cell or block - 3 metres must be trafficable • 2 metre wide firebreaks around all piles of garden refuse/wood stacks, fuel and fodder	✓	✓	✓	✓

Can We Access Your Property?

DID YOU KNOW?

In order for fire appliances to access your property safely, internal firebreaks must be 3 metres wide and have at least 4 metres vertical clearance. Fire appliances must be able to fit through gates on your property. The average fire appliance is 9 metres in length.

DON'T FUEL FIRES

× Don't have thick vegetation near your home.

✓ Clear all flammable material from around all structures.

✓ Store firewood, timber, petrol, kerosene and all flammable liquids 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.

Residents can dispose of up to 2 cubic metres of uncontaminated green waste per visit at the Davis Road Recycling and Waste Management Facility.

For more info visit amrshire.wa.gov.au/greenwaste.

Important Dates

Firebreak Notice Requirements on Private Property to be completed

Firebreaks must be installed on or before 30 November 2024

Firebreaks must be maintained up to and including 12 May 2025

APZs must maintained all year round

RESTRICTED BURNING PERIOD - Spring/Summer

Permits Required
9 November 2024 to 22 December 2024

PROHIBITED BURNING PERIOD

Burning Prohibited
23 December 2024 to 14 March 2025

RESTRICTED BURNING PERIOD - Autumn

Permits Required
15 March 2025 to 12 May 2025

Please note, these dates can change at short notice due to variable weather conditions. Always call your area Fire Control Officer (FCO) or the Shire Rangers to check prior to lighting up.

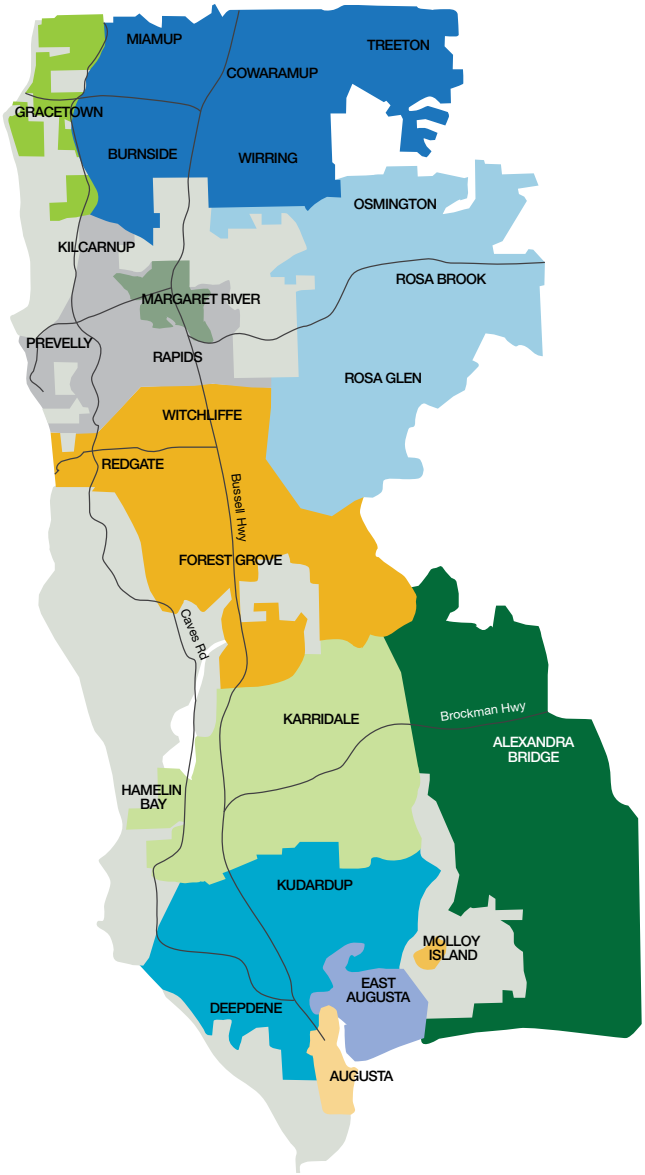
Prohibited Burning
Burning is prohibited on days where the Fire Danger Rating (FDR) is **HIGH** or above. FDRs change daily and can be checked online at emergency.wa.gov.au or contact Shire Rangers on (08) 9780 5695.

Total Fire Ban (TFB)
A TFB may be declared by the DFES Commissioner at any time. If declared, you must not light any fire or undertake any activity that may cause a fire.

Harvest and Vehicle Movement Ban (HVMB)
A HVMB may be declared by the Shire separately, or in conjunction with a TFB, at any time. If declared, the use of engines, vehicles, plant or machinery are prohibited at particular times of the day.

Register for HVMB SMS Notifications
To register, please provide your first name, surname and mobile phone number via the form online at amrshire.wa.gov.au/fire-bans

Fire Control Officer Area Map



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 776 920 **Wirring** Ryan Leenman: 0415 045 877
East Augusta	**East Augusta** Frank Bartoll: 0458 582 350
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** Garth Baxter: 0407 755 253
Molloy Island	**Molloy Island** Peter Nash: 0428 955 633
Rosa Brook	**Osmington** Shaun Palmer: 0448 979 041 **Rosa Brook** Mark Ridge: 0408 945 684 **Rosa Glen** Andrew Newnham: 0491 313 968
Wallcliffe	**Kilcarnup** Mark Boyd: 0418 810 327 **Prevelly** Jenny Colquhoun: 0458 231 272 **Rapids** David Kelly: 0428 387 286
Witchcliffe	**Forest Grove** Matt Holland: 0438 005 615 **Redgate** Richard Nash: 0419 951 511 **Witchcliffe** Diane Holland: 0427 930 735

Important Information on Lighting Fires

BURNING OF GARDEN REFUSE

During the **Spring/Summer Restricted Burning Period** (see page 7) you may burn one small pile up to 1 cubic metre of garden refuse without a Permit, however it can only be lit between **6pm and 11pm** and must be fully extinguished before midnight on the same day. A courtesy call to your area Fire Control Officer (FCO) is also recommended.

During the **Autumn Restricted Burning Period** (see page 7), a Permit is required to burn all garden refuse at all times.

Burning of garden refuse is NOT permitted:

- at any time during the PROHIBITED Burning Period,
- on days where the Fire Danger Rating is HIGH or above,
- during a Total Fire Ban (TFB).

The following precautions MUST be taken before burning garden refuse:

- there shall be no inflammable material within 5 metres of the fire,
- the fire must be attended at all times and fully extinguished before leaving it.

Failure to comply may result in a penalty up to $3,000.

CAMPFIRES, FIREPITS,WOOD/SOLID FUEL BBQs & PIZZA OVENS

Fires for the purposes of camping or cooking, such as campfires, firepits, wood/solid fuel BBQs and pizza ovens, are NOT permitted:

- at any time during the PROHIBITED Burning Period,
- on days where the Fire Danger Rating is HIGH or above,
- during a Total Fire Ban (TFB),
- on Shire reserves unless in a designated area.

The following precautions MUST be taken before lighting up:

- the fire shall not be lit within 3 metres of a log or stump,
- the fire must have a radius of at least 3 metres from its centre which is cleared of all bush and any other inflammable material,
- the fire must be attended at all times and fully extingished before leaving it.

Failure to comply may result in a penalty up to $3,000.

You MUST check the Burning Period dates and the Fire Danger Rating (FDR) before lighting up. The FDR changes regularly and the Important Dates listed on page 7 can also change. For the current Fire Danger Rating visit www.emergency.wa.gov.au

Permits to Burn

A Permit to Burn (Permit to Set Fire to the Bush) is required during the RESTRICTED Burning Periods.

To obtain a Permit, contact your area FCO by referring to the FCO map and list on pages 8 and 9 of this booklet. 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 an FCO to attend your property to assess your Permit application.**

When contacting the FCO to request a Permit, please 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.

You MUST notify your adjoining landowners of your intention to burn in accordance with Regulation 15B (3) on the back of your Permit.

Prior to burning, you MUST register your Permit with the Shire, DFES and DBCA. To do this call the numbers on the Permit and have your Permit handy as the operator will need the Permit details. If you leave a message, please state the **Permit number, property details, Permit holders name, phone number** and **time/date** of intention to burn.

Failure to;

- obtain a Permit,
- comply with all Permit conditions, or
- burn in contravention to any information provided in the *Bush Fires Act 1954*,

may result in a penalty up to $10,000.

BE PREPARED!

The preparedness of your property may make all the difference between minor damage and devastation.

For advice on preparing your property for the fire season, please call your local Bushfire Ready Facilitator Gordon Temby (North) on 0419 954 658 or Shire Rangers on (08) 9780 5695.

Key Contacts

FIREBREAKS, INSPECTIONS AND VARIATIONS

Shire Rangers
(08) 9780 5695

BURNING AND PERMITS

Fire Control Officers
See page 9 for contact details

OTHER CONTACTS

Chief Bush Fire Control Officer
0419 525 843

Deputy Chief Bush Fire Control Officer
0419 628 465

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

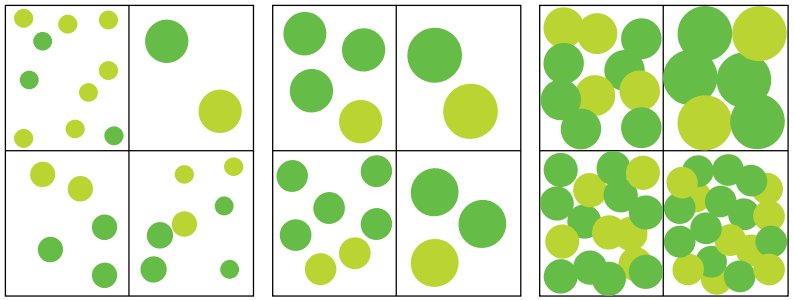
DIAL 000

TO REPORT ALL FIRES OR LIFE THREATENING EMERGENCIES

PO Box 61, Margaret River, Western Australia 6285
T (08) 9780 5695 | F (08) 9757 2512
amrshire@amrshire.wa.gov.au | **amrshire.wa.gov.au**

Appendix B Technical Guidelines from the Planning for Bushfire Guidelines

Table 9: Asset Protection Zone (APZ) technical requirements

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 less than 6 mm in thickness)	• Should be managed and removed on a regular basis to be maintained as low threat vegetation • Should be maintained at less than two tonnes per hectare (on average) • Mulches should be non-combustible such as stone, gravel, shells, rock or crushed mineral earth or wood mulch more than five millimetres in thickness.
Trees* (more than 6 m 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 less than 15 per cent of the total APZ area • Tree canopies at maturity should be at least 5 m apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided the total canopy cover within the APZ does not exceed 15 per cent and is not connected to the tree canopy outside the APZ. Tree canopy cover – ranging from 15 to 70 per cent at maturity  15% 30% 70%

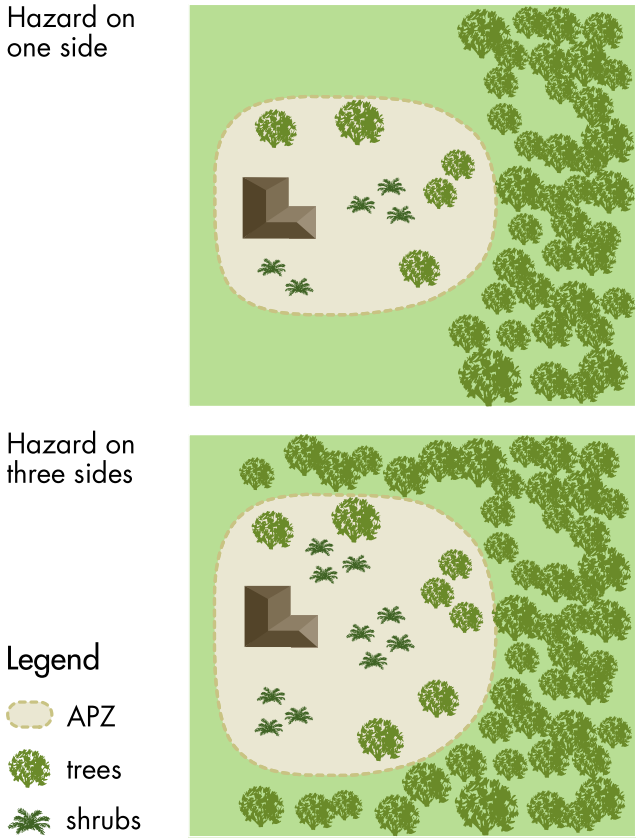
OBJECT	REQUIREMENT
Shrub* and scrub* (0.5 m to 6 m in height). Shrub and scrub more than 6 m in height are to be treated as trees.	• Should not be located under trees or within three metres of buildings • Should not be planted in clumps more than five square metres in area • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground cover*(less than 0.5 m in height. Ground cover more than 0.5 m in height is to be treated as shrub)	• 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 more than 100 mm in height.
Grass	• Grass should be maintained at a height of 100 mm 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 cover, grass and non- combustible mulches as prescribed above.
Liquid petroleum gas cylinders	• Should be located on the side of a building farthest 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.

Notes:
** Plant flammability, landscaping design and maintenance should be considered – refer to following explanatory notes*

Fine fuel load is the combustible, dead or dry vegetation matter on the ground, near ground, or elevated. Fine fuel includes grass, leaves, bark and twigs less than six millimetres in diameter that ignite readily and are burnt rapidly when dry.

Fine fuel should be maintained at less than 2t/ha. 100gm/m² equates to 1t/ha. To estimate a fuel load (in t/ha), collect the dry fine fuel from a representative one square meter and weigh (in grams using kitchen scales) and multiply the weight by 0.01.

Figure 25: Design of an Asset Protection Zone



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.

B.2.4 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, which 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 can absorb more of the heat of the approaching bushfire without burning, compared to more flammable plants.
- **Fire wise –** plants that have been identified and selected based on their low flammability properties and linked to maintenance advice and planting location within a garden.

Although not a requirement of the 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 threatened 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
- will not become a weed in the area.

B.3: VEHICULAR ACCESS

State Planning Policy outcome for Element 3: Vehicular access

Ensure the design and capacity of vehicular access and egress provide:

- **for efficient and effective evacuation to a suitable destination(s) and/or**
- **as a contingency measure for vulnerable tourism land uses, an on-site shelter, where demonstrated appropriate, as a last resort option.**

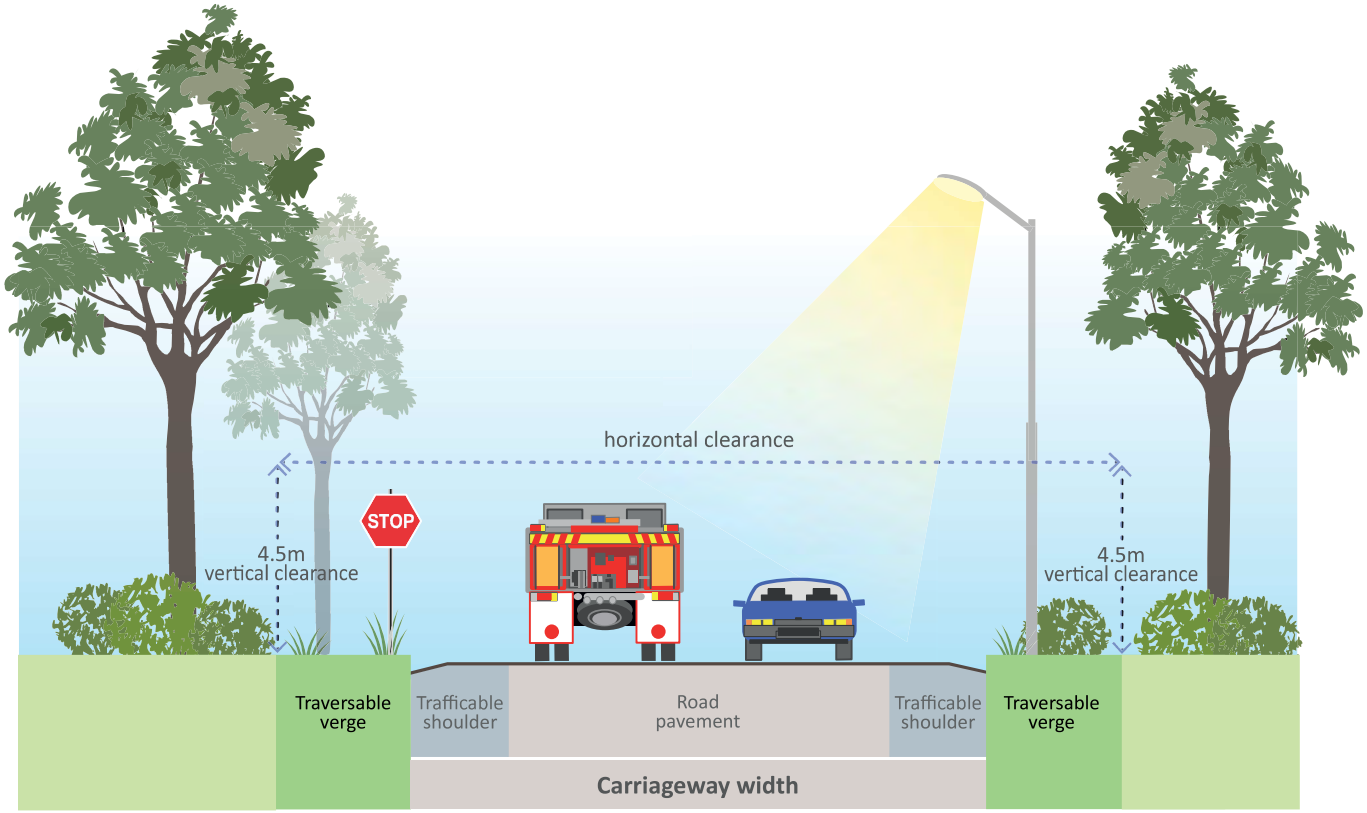
B.3.1 PUBLIC ROADS

The Guidelines do not prescribe values for the carriageway width or the horizontal clearance for public roads (except for perimeter roads). Public roads should be in accordance with the class of road as specified in the Public Works Engineering Australasia (IPWEA) subdivision guidelines, Liveable Neighbourhoods, Austroads Standards, any applicable or relevant Main Roads standards, supplements, policies and any applicable or relevant local government standards or policies.

However, it is important that public roads (and other forms of access) in bushfire prone areas, allow for emergency services vehicles to stop and operate on the side of the public road, specifically where the public road traverses large areas of classified vegetation.

It is, therefore, recommended that public roads achieve a minimum six metres horizontal clearance. Perimeter roads require additional width.

Figure 26: Area encompassing horizontal clearance and vertical clearance



Horizontal clearance: **The carriageway width (including the road pavement and trafficable shoulder) and traversable verge that provides for the movement and parking of vehicles and area required by emergency services to operate. Infrastructure and vegetation within the traversable verge should be frangible, however, non-frangible items can occur providing they do not restrict vehicular movement in the event of an emergency.**

Table 10: Vehicular access technical requirements

	1		2		3		4		5	
TECHNICAL REQUIREMENTS	**PERIMETER ROADS**		**PUBLIC ROADS**		**EMERGENCY ACCESS WAY[3]**		**FIRE SERVICE ACCESS ROUTE[3]**		**BATTLE-AXE & PRIVATE DRIVEWAYS[1]**	
MAP OF BUSH FIRE PRONE AREAS DESIGNATION	**Area 2**	**Area 1**	**Area 2**	**Area 1**	**Area 2**	**Area 1**	**Area 2**	**Area 1**	**Area 2**	**Area 1**
Minimum horizontal clearance (metres)	12	8	See note 5		10	6	10	6	6	
Minimum vertical clearance (metres)	4.5									
Minimum weight capacity (tonnes)	15									
Maximum grade unsealed road[2]	See note 5		See note 5		1:10 (10% or 6°)					
Maximum grade sealed road[2,4]					1:7 (14.3% or 8°)					
Maximum average grade sealed road					1:10 (10% or 6°)					
Minimum inner radius of road curves (metres)					8.5					

Notes:

[1] Driveways and battle-axe legs to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision where not required to comply with the widths in this Appendix or the Guidelines.

[2] Dips must have no more than a 1 in 8 (12.5% - 7.1 degrees) entry and exit angle.

[3] To have crossfalls between 3 per cent and 6 per cent.

[4] For sealed roads only the maximum grade of no more than 1 in 5 (20 per cent) (11.3 degrees) for no more than 50 metres is permissible, except for short constrictions to 3.5 metres for no more than 30 metres in length where an obstruction cannot be reasonably avoided or removed.

[5] As outlined in the Institute of **Public Works Engineering Australasia (IPWEA) subdivision guidelines**, **Liveable Neighbourhoods**, **Austroads Standards** Main Roads standard, supplement, policy or guideline and/or any applicable or relevant local government standard or policy.

Where local or state government roads are proposed to be widened or modified by the proponent, as part of the structure planning process or at the subdivision stage, approval is required from the relevant government authority.

B.3.2 ACCESS TO A SUITABLE DESTINATION(S)

Public vehicular access in at least two different directions to at least two different suitable destinations should always be the goal within bushfire prone areas. The more options available for evacuation and for emergency services to respond to the bushfire, the better the bushfire resilience of a development and/or a community.

A suitable destination is likely to be an urban area, townsite or similar. This also includes any evacuation centre, dedicated by the local government, for use during a bushfire event.

Where a planning proposal, such as a structure plan or subdivision, proposes a large number of lots, or where the structure plan or subdivision adjoins an urban area or townsite, this could potentially result in land that is more than 100 metres from classified vegetation (BAL-LOW). In this instance, an argument could be made that the suitable destination is within the subject site or within the adjoining urban area or townsite. For example, where coastal communities are limited to one public road servicing the community, there may be an existing managed area large enough to provide an area suitable for people to locate to before, during and after a bushfire event.

There is no prescribed distance to a suitable destination as it is assumed that in the event of a bushfire, a person would travel any necessary distance to evacuate.

A suitable destination should not be confused with an on-site shelter provided for tourism land uses. On-site shelters are a last resort option, purpose built and designed, and are supported in limited circumstances to facilitate tourism within remote and/or heavily vegetated areas.

On-site shelters are not supported for residential land-uses.

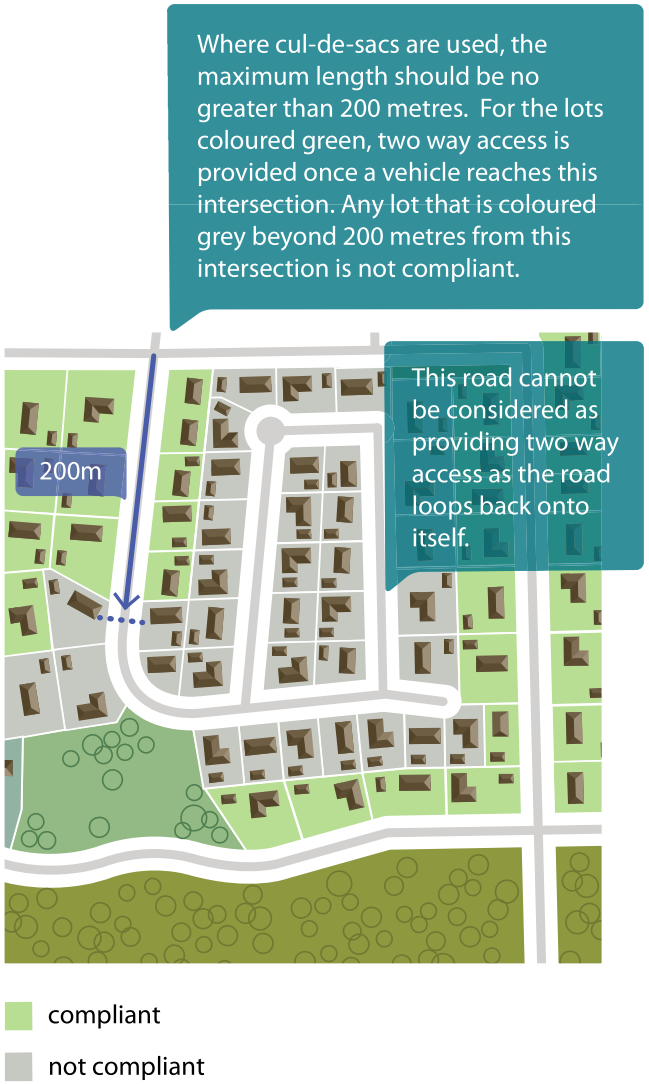
Suitable destination: An area that is not designated as bushfire prone on the *Map of Bush Fire Prone Areas* or is greater than 100 metres from classified vegetation or 50 metres from Class G Grassland, as per AS 3959, and can provide protection during and after a bushfire event.

A suitable destination is located within an urban area, townsite or similar. This also includes any evacuation centre, dedicated by the local government, for use during a bushfire event.

B.3.3 NO-THROUGH ROADS

No-through roads reduce the legibility of a road network and options available for access and egress in the event of a bushfire emergency. The inclusion of new no-through roads within subdivision or structure plan designs, in the first instance, should be avoided in bushfire prone areas.

Figure 27: Example of compliant and non-compliant two-way access



However, where it is demonstrated, to the satisfaction of the decision-maker that a no-through road cannot be avoided due to site or design characteristics, the inclusion of a new no-through road is to be treated as an acceptable solution, if it satisfies the prescribed maximum road length. Where this is not demonstrated, a decision-maker is able to request a redesign to remove the no-through road.

The acceptable solution for no-through roads in areas shown as Area 2 on the *Map of Bush Fire Prone Areas* includes a maximum of 200 metres from the lot(s) boundary to an intersection where two-way access is provided (**Figure 28**). There is no prescribed maximum length for no-through roads in areas shown as Area 1 (Urban) on the *Map of Bush Fire Prone Areas*.

B3.3.1 Outcomes-based approach – no-through roads

It becomes more challenging to comply with the acceptable solutions where the proposal includes existing no-through roads that exceed 200 metres. The 200 metres is a nationally accepted standard and support for development on existing no-through roads longer than the prescribed 200 metres, particularly within vegetation classified as Forest, should be considered carefully. They should be the exception to the rule where it is demonstrated through an outcomes-based approach that the hazards and the road network within the broader landscape are such that, in the event of a bushfire, evacuation to a suitable destination is possible.

An outcomes-based approach should demonstrate the increase in length, and/or the proposed additional lots, on an existing non-compliant no-through road and should consider:

- the broader landscape
- size and scale of the development
- whether the no-through road travels away from the source of the bushfire hazard
- evacuation in the event of a bushfire scenario
- the vegetation within and adjoining the road reserve
- legibility of the broader road network
- whether the no-through road is straight and provides a line of sight
- any improvements to the bushfire resilience of the area, including improvements to the existing road network
- the precedent within the broader area that would be set by supporting development on a non-compliant no-through road.

Figure 28: Demonstration of a lot achieving two-way access within 200 metres

B.3.4 EMERGENCY ACCESS WAY

An emergency access way is not a preferred alternative to public road access. It should be considered acceptable only where it has been demonstrated that public road access cannot be achieved due to site characteristics or environmental values; and that it will provide for the safety and performance needs of emergency services and the community.

The principal function of the emergency access way is to provide a contingency (second) public evacuation route and simultaneously provide access for emergency services in the event of a bushfire. Where an emergency access way traverses classified vegetation, it performs the secondary function of providing access for emergency services to the hazard (vegetation).

Figure 29: Example of a site on a no-through road greater than 200 metres but within 200 metres of BAL-LOW

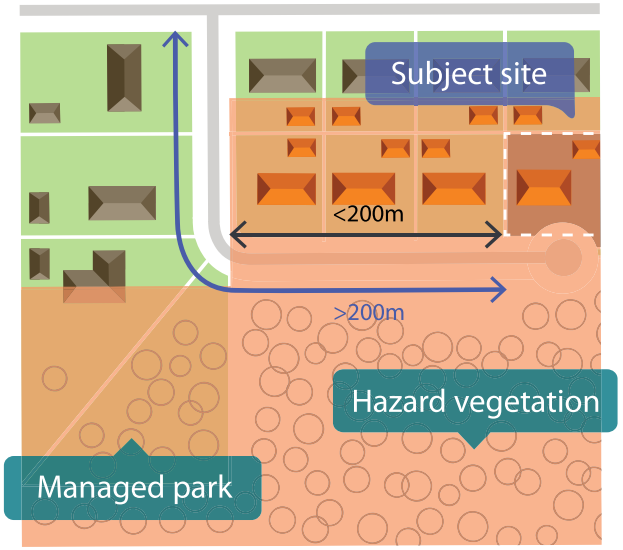
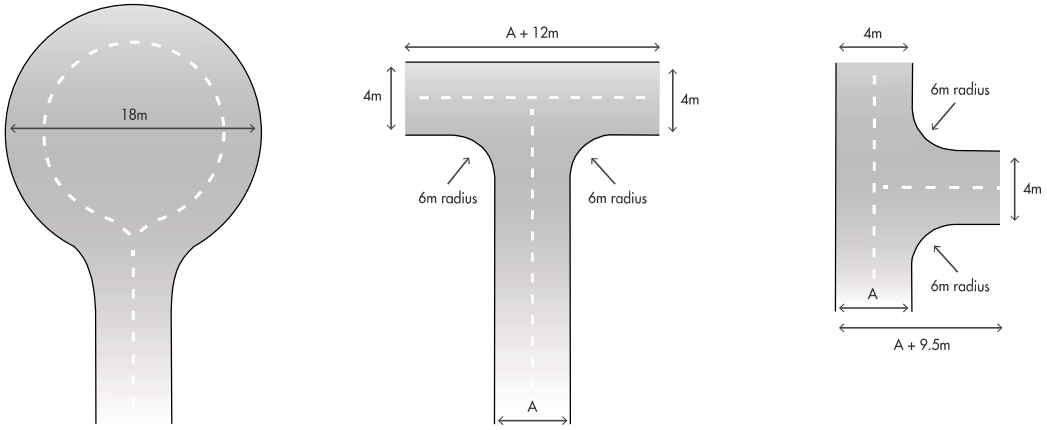


Figure 30: Design requirements for a turn-around area



Where the emergency access way is located within an area shown as Area 2 on the *Map of Bush Fire Prone Areas*, a horizontal clearance of 10 metres should be provided. The 10 metres is to provide access for emergency services to any classified vegetation, including grassland, adjoining the easement (**Figure 31**).

A six metre horizontal clearance should be provided within an area shown as Area 1 (Urban) on the *Map of Bush Fire Prone Areas*.

Emergency access ways should connect to a public road. An emergency access way should not exceed 500 metres in length as there are often issues of legibility and safety. Emergency access ways are generally not part of the formal road network and many are not identified on various online or other mapping platforms, which may limit emergency services and/or the community finding their way through the network in an emergency.

B.3.4.1 Outcomes-based approach emergency access way (width and/or length)

An outcomes-based approach may be used to demonstrate to the satisfaction of the decision-maker that a reduction in the width and/or an extension of the length of the emergency access way provides for the efficient and effective evacuation to a suitable destination(s).

Figure 32 and **Figure 33** are examples where the width of an emergency access way could potentially be reduced. **Figure 32** depicts classified vegetation on one side of the easement and **Figure 33** depicts an easement with lots on either side. An outcomes-based approach could be used to demonstrate that the reduced width satisfies the policy outcome and policy measure 7.5 of SPP 3.7.

Figure 31: Example of a 10 metre wide emergency access way

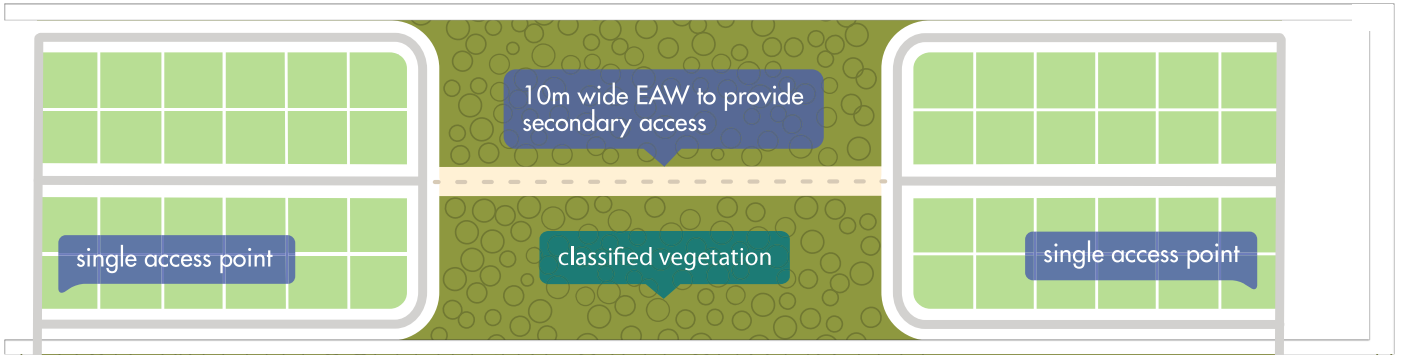
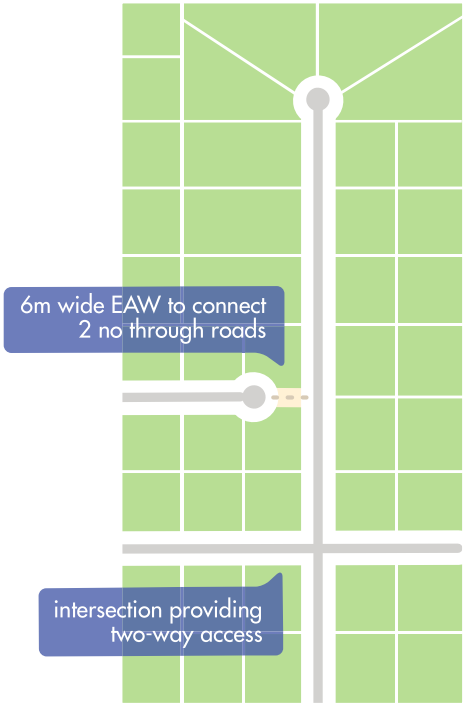


Figure 32: Example of a reduced emergency access way

Figure 33: Example of a 6 metre wide emergency access way



B.3.4.2 Permanent public emergency access way

A public emergency access way can be provided as either a public easement in gross or a right-of-way.

In both approaches, the care, control and management of the emergency access way should be the responsibility of the local government as the grantee of the easement or management body of the right-of-way (ceded to the Crown).

If the emergency access way is provided as an easement, it should be provided as a public easement in gross under sections 195 and 196 of the *Land Administration Act 1997* in favour of the local government and/or public authority, to ensure accessibility by fire emergency services and the public at all times. If the emergency access way traverses an adjoining private lot(s), support will be necessary from the adjoining lot owner(s).

To be provided as a right-of-way, the emergency access way should be vested as such in the Crown under section 152 of the *Planning and Development Act 2005*. Such land should be ceded free of cost and without any payment or compensation by the Crown.

The proponent should obtain written consent from the local government that it will accept care, control and management of the easement or right-of-way.

This should be provided to the decision-maker prior to granting planning approval. Consultation with the Department of Planning, Lands and Heritage (Land Use Management division) should also be undertaken if the land is to be ceded to the Crown.

If gates are used to control traffic flow during non-emergency periods, these will be managed by the local government and should not be locked. They should be double gates wide enough to access the whole carriageway width and accommodate type 3.4 fire appliances with the design and construction to be approved by the relevant local government.

B.3.4.3 Right-of-carriageway emergency access way

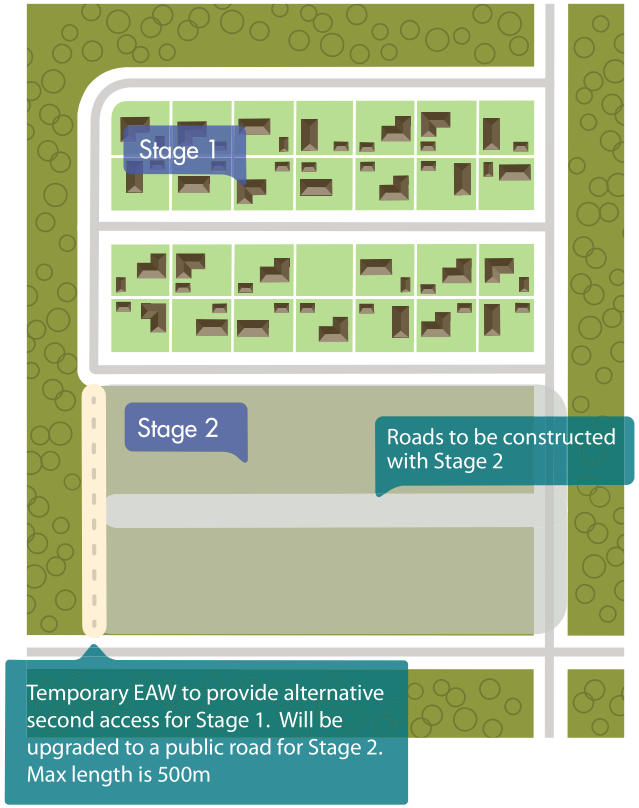
There may be instances where a proposed development is limited to secondary access through the adjoining lot(s). A right-of-carriageway easement can be provided under section 195 of the *Land Administration Act 1997*, which restricts the use of the emergency access way to the lot owner(s) and emergency services and is not available to the public.

Written support is required from the adjoining lot owner(s). Approval for the use of these types of right-of-carriageway is on a case-by-case basis and at the discretion of the decision-maker. The easement is to be granted to the local government and its management should be agreed to by all parties and included within the deed. If gated, the easement area can be locked to restrict day-to-day vehicular access.

B.3.4.4 Temporary emergency access way

A temporary emergency access way may be proposed to facilitate the staging arrangements of a subdivision. The provision of two public roads may not be possible or feasible in the first stage of the subdivision and an emergency access way can be provided as an interim access route, until the second public road is constructed in the subsequent stage of the subdivision (**Figure 34**).

Figure 34: Example of where an emergency access way may be provided



B.3.4.5 Restricted public emergency access way

Emergency access ways should not be gated, or where they are gated should not be locked. However, there may be instances where the local government or Main Roads Western Australia will request that the gate be locked and public vehicular access restricted, except during an emergency. This is usually due to concern regarding the additional vehicular movements onto an existing local or state road. If the emergency access way is locked to restrict access, a common key system should be used. Keys should be available to emergency services and designated fire officers within the local government area and/or surrounding district.

In this scenario, the emergency access way can be provided as an easement under section 195 of the *Land Administration Act 1997*, as public access in the event of a bushfire emergency, or vested in the Crown as a reserve under section 152 of the *Planning and Development Act 2005*. Where vested, such land is to be ceded free of cost without any payment or compensation by the Crown.

The proponent should obtain written consent from the local government accepting care, control and management of the proposed easement or reserve and agree to the terms of the Management Order Conditions (if applicable); this should be provided to the decision-maker prior to granting development approval.

The reserve should be for a public purpose specified in the condition related to the subdivision, for example, for emergency access only or for emergency access and recreation. A reserve for emergency access and recreation optimises the land-use by providing vehicular access in the event of a bushfire emergency and daily access by the public (on foot) as a recreation link. Appropriate signage can ensure the public is aware of the purpose of the reserve.

B.3.5 PERIMETER ROADS

Hazard separation should be provided in the form of a perimeter road where a strategic planning proposal or subdivision application includes the creation of 10 or more lots adjacent to each other, which adjoin classified vegetation under AS 3959 with the exception of Class G Grassland, as part of a greenfield development or large urban infill site.

The creation of 10 or more lots includes cumulative subdivision applications where the subdivision application may be part of a staged subdivision.

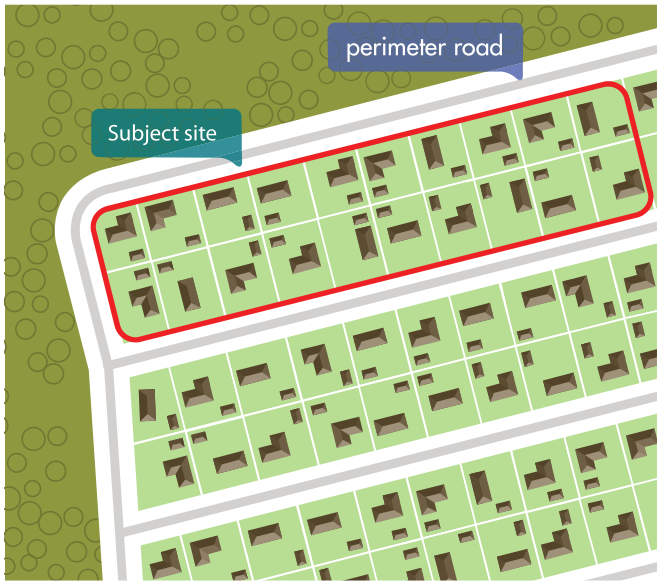
As the road is likely to function as a key neighbourhood distributor or similar, it is important to provide additional width to allow emergency services vehicles to stop and operate on the side of the perimeter road, whilst simultaneously providing for community evacuation. This is reflected in **Table 10**, Column 1 requirements.

When designing a strategic planning proposal and/or subdivision, there are many benefits in creating a large setback between classified vegetation and proposed lots with a perimeter road and orientating habitable buildings to front rather than back onto areas of vegetation.

They include:

- passive surveillance
- defendable space for firefighting and emergency management purposes
- reducing the radiant heat that may impact a habitable building in a bushfire event
- reducing the need for battle-axe lots
- unconstrained public access/egress for the community in the event of a bushfire.

Figure 35: Example of a perimeter road



In developments where no perimeter road exists, property defence in a bushfire event is difficult and can be impossible. Where proposed lots have frontage to an existing public road and abut the hazard at the rear or side, it may be an undesirable planning outcome to create lots that front the existing public road and back onto a perimeter road. In this instance, consideration should be given to a fire service access route.

B.3.6 FIRE SERVICE ACCESS ROUTE

Where a planning proposal adjoins classified vegetation (excluding Class G Grassland) and where a perimeter road is not appropriate and/or not required, there may be a need to provide access for emergency services vehicles to classified vegetation for firefighting and fire management purposes.

This route is not intended to provide residents and the public with emergency egress and, therefore, is not a suitable second access or substitute for a public road.

Where the fire service access route is within an area shown as Area 2 on the *Map of Bush Fire Prone Areas*, a minimum horizontal clearance of 10 metres should be provided to allow access for emergency services to any classified vegetation adjoining the fire service access route. A minimum six metres horizontal clearance should be provided where the area is shown as Area 1 on the *Map of Bush Fire Prone Areas*.

A fire service access route can be provided as either an easement in gross over private or Crown land or ceded to the Crown as a reserve. In both approaches, the management of the fire service access route is by the local government as the grantee of the easement or management body of the reserve. Determining which approach to take depends on the intended tenure of the fire service access route, which is explained below. The proponent should obtain written consent from the local government that it will accept care, control and management of the easement or reserve and agree to the terms of the Management Order Conditions (if applicable). This should be provided to the decision-maker prior to granting approval. The approach taken is at the discretion of the decision-maker and/or the local government. Consultation with Land Use Management Division of the Department of Planning, Lands and Heritage should also be considered if the land is to be ceded to the Crown or if the local government is uncertain of which approach to take.

Where gates are used, they should be double gates wide enough when open to allow vehicles to access the whole carriageway width and accommodate type 3.4 fire appliances. The design and construction are to be approved by the relevant local government.

Gates on fire service access routes may be locked to restrict access provided a common key system is used. Keys are to be available to emergency services and designated fire officers within the local government area and/or surrounding district. Gates should be installed where fences intersect or cross over with fire service access routes. If an easement in gross is proposed, such arrangements for gates should be included in the deed of easement and be agreed to by the local government.

B.3.6.1 Fire service access route to remain in private ownership of multiple landowners

Where a fire service access route will traverse multiple private lots intended to remain in multiple private ownership, it should be provided as an easement in gross under section 195 of the *Land Administration Act 1997*, to ensure accessibility for fire emergency services and not for use by the public. The easement is to be granted to the local government and/or public authority for firefighting and emergency management purposes.

B.3.6.2 Fire service access route to be created under State ownership

Where a fire service access route is proposed to traverse multiple private lots but the decision-maker and/or local government prefer for it in a single parcel for management purposes, the route can be vested in the Crown under section 152 of the *Planning and Development Act 2005* as a reserve. Such land is to be ceded free of cost without any payment or compensation by the Crown. The reserve should be for a public purpose specified in the condition related to the subdivision, for example, for vehicular access for emergency services and the local government only, or for vehicular access for emergency services and the local government and recreation. A reserve for emergency services access and recreation optimises the land-use by providing vehicular access for emergency services and daily access by the public (on foot) as a recreation link.

Appropriate signage will ensure the public is aware of the purpose of the reserve. The approach taken is at the discretion of the decision-maker and/or local government.

Figure 36: Example of a fire service access route (FSAR)

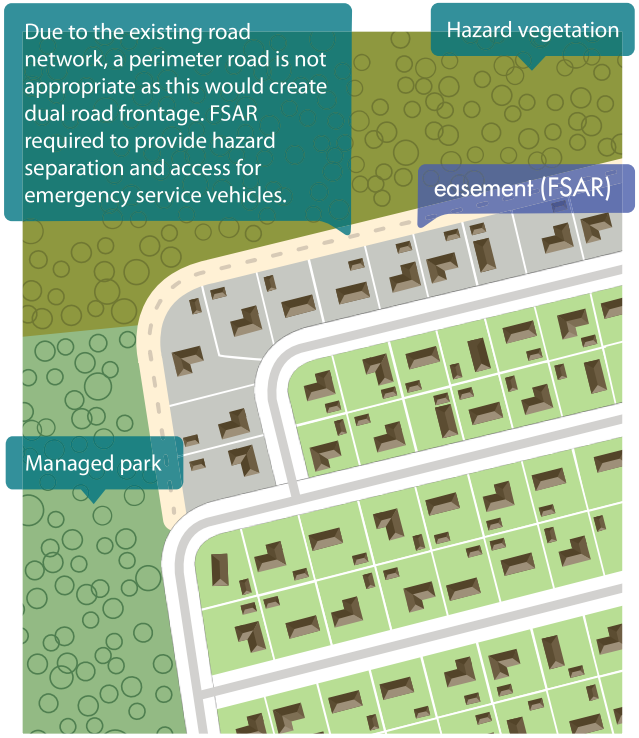
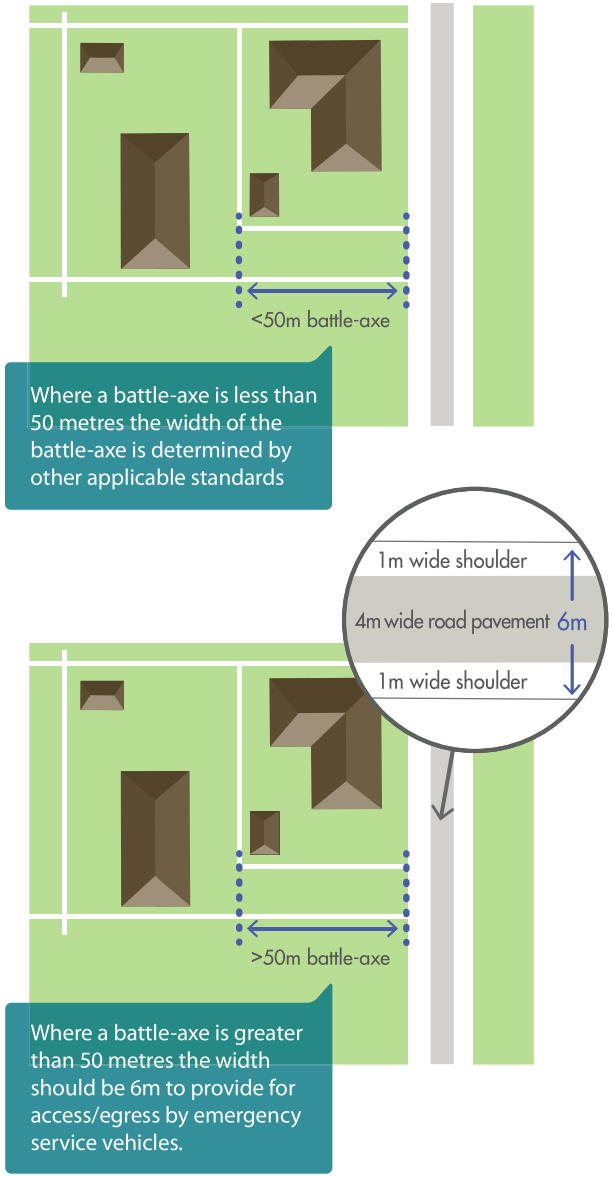


Figure 37: Battle-axe design requirements



3.7 BATTLE-AXE ACCESS LEG

In bushfire prone areas, lots with battle-axe access legs should be avoided because they:

- do not enable the habitable building to be located close to a public road where it is visible to emergency services
- result in longer than necessary access routes for evacuation and the response by emergency services
- may be blocked by falling trees or debris
- may not provide certainty for emergency services regarding the width, length and ability to turn around emergency services vehicles
- In some instances, battle-axe access legs may be appropriate to overcome specific site or design constraints created by the existing road network or lot layout
- The BMP should provide justification for proposed battle- axe access leg(s) and the decision-maker should determine whether the justification is valid
- Where the use of battle-axe access legs is considered appropriate, the measurement should be from the edge of the public road to where the access leg joins the effective area of the battle-axe lot. Effective lot area means that part of the battle-axe lot that is capable of development and excludes the access leg and associated truncations for vehicle maneuverability
- The battle-axe lot should allow safe access and egress for type 3.4 fire appliances to attend the future development site.

B.3.8 PRIVATE DRIVEWAYS

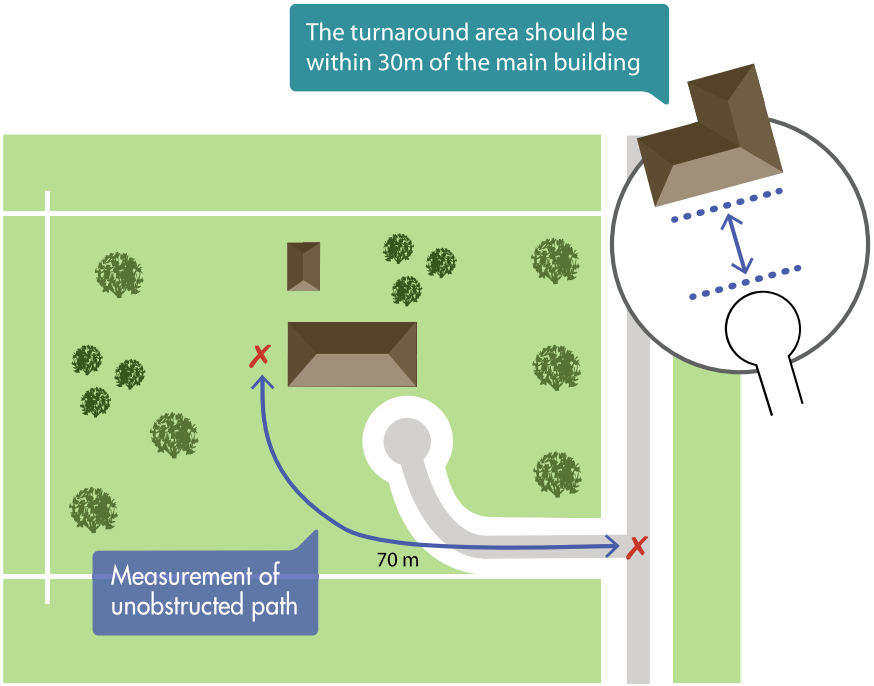
Emergency services vehicles typically operate from the street frontage in areas serviced by reticulated water and where the distance from the public road to the farthest part of the habitable building is no greater than 70 metres.

In the event the habitable building cannot be reached by hose reel from the public road, emergency services vehicles will need to gain access via the driveway to the property. Emergency services vehicles will also need to gain access to the property where access to water is provided by onsite water tanks. In these situations, the driveway and battle-axe access leg (if applicable) will need to be wide enough for access by an emergency services vehicle and a vehicle to evacuate.

It is acceptable for a private driveway to have a carriageway width of four metres with a traversable verge of one metre on either side of the carriageway.

Turn-around areas (**Figure 38**) should be available for conventional two-wheel drive vehicles and type 3.4 fire appliances and should be located within 30 metres of habitable buildings. Circular and loop driveway design may also be considered.

Figure 38: Design requirements for a private driveway where required



B.4: WATER SUPPLY

State Planning Policy outcome for Element 4: Water Supply

Ensure that sufficient water is available and accessible for emergency services use, to enable people, property and infrastructure to be defended from bushfire.

B.4.1 CONSTRUCTION AND DESIGN

An above-ground tank and associated stand should be constructed of non-combustible material.

Below-ground tanks should have a 200 millimetres diameter access hole to allow tankers or emergency services vehicles to refill direct from the tank, with the outlet location clearly marked on the surface.

Above and below ground tanks 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.

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

B.4.1.1 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 hazard and be in accordance with the applicable section below, unless otherwise specified by the local government.

B.4.1.2 Fittings for above-ground water tanks:

- Commercial land uses: 125 millimetres Storz fitting; or
- Strategic water tanks: 50 millimetres or 100 millimetres (where applicable and adapters are available) male camlock coupling with full flow valve; or
- Standalone water tanks: 50 millimetres male camlock coupling with full flow valve; or
- Combined water tanks: 50 millimetres 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.

B.4.1.3 Remote outlets

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

B.4.2 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.

The combination of drinking water and water for firefighting purposes is not recommended, 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.

Combining drinking water and water for firefighting purposes is contrary to provisions within clause 4.2.3 of AS/NZS 3500.1:2021.

B.4.3 INDEPENDENT WATER AND POWER SUPPLY

Bushfires can directly impact a water service provider's equipment or pipes. As such, a reticulated water supply may not be reliable due to a reduction in water pressure or loss of supply. Where development is in an area shown as Area 2 on the *Map of Bush Fire Prone Areas* and/or where the local government area has known issues with water supply or pressure, it is recommended that the landowner consider providing a water tank in accordance with **Table 11**, Water supply dedicated for bushfire firefighting purposes.

In non-reticulated water supply areas, it is recommended that any pumping equipment be powered by means other than the electricity network. The pumping equipment could be a diesel or petrol-powered pump, or an electric pump if there is an onsite generator or backup power supply independent of the electricity network grid.

It is recommended that combustion pumps should be a minimum five hp or three kW diesel or petrol-powered pump and should be shielded against bushfire attack.

Where an electric pump is used, a backup power supply independent of the electricity network grid should be provided. A 3.7 kW/12k W/h sized battery (14.8 kW/h reserved solely for bushfire will power a 3.7 kW system for four hours) with blackout protection or a generator should be provided.

Table 11: Water supply dedicated for bushfire firefighting purposes

SECTIONS FROM THE PLANNING FOR BUSHFIRE GUIDELINES					
SECTION 5[2] STRUCTURE PLANS AND SUBDIVISION APPLICATIONS		**SECTION 6[2] DEVELOPMENT – RESIDENTIAL**	**SECTION 7[2] DEVELOPMENT – COMMERCIAL & INDUSTRIAL**	**SECTION 8[2] – DEVELOPMENT – VULNERABLE LAND USES**	
One additional lot	10,000 litre water tank per lot	10,000 litre water tank per habitable building	For each habitable building - 10,000 litre per 1,500 m^2 of floor space up to 50,000 litre. Provided in a water tank	Camping ground	At the discretion of the local government
Three to 24 lots	10,000 litre water tank per lot[1] **or** 50,000 litre strategic water tank				
25 lots or more	50,000 litre per 25 lots or part thereof, provided as a strategic water tank(s) **and/or** 10,000 litre water tank per lot			Other vulnerable land uses	For each habitable building - 10,000 litre per 500 m^2 of floor space up to 50,000 litre. Provided in a water tank

Notes:

[1] Evidence that the identified water supply amounts in either column denoted is to be provided at the relevant planning stage.

[2] where more than one habitable building is proposed, strategic water tanks are to be provided in accordance with Section 5 requirements and at the discretion of the Local Government.

B.4.4 STRATEGIC WATER SUPPLIES

Many local governments have a well-developed network of strategic water tanks for firefighting within their local government area. Given this, it is at the discretion of the local government to determine if the water supply within a locality is sufficient to cater for an increasing population when a subdivision is proposed. Local governments are encouraged to work with local emergency services to ensure the water supply needs for firefighting are understood.

Where a structure plan or subdivision proposes to create more than three but fewer than 24 lots, it is at the discretion of the local government whether it requires a strategic water tank or for each lot to be provided with a 10,000-litre tank.

A strategic water tank should preferably be located no more than 10 minutes from the farthest development site (20 minute turnaround time at a maximum). The turnaround time is the time it takes an emergency services vehicle to travel at legal road speeds from a lot to the water supply and back to the lot. Where a strategic water tank has been provided at the subdivision stage, the local government should consider whether the tank has the capacity to serve applications for development approval.

A landowner should enquire with their local government to determine whether a private water tank on their lot will be required.

When there is fragmented ownership of a structure plan area, or when staging of a subdivision is to occur and the local government has determined that a strategic water tank is required, then the first stage should include arrangements for the installation of a strategic water tank and the identification of land to be ceded. This should occur free of cost, without any payment or compensation by the Crown, as a Crown reserve for 'strategic water supply for firefighting purposes' (if applicable). Where local planning scheme provisions provide for developer contributions for public infrastructure and the local government is supportive, then a cash-in-lieu arrangement may be established for the provision of a strategic water tank.

B.4.5 LOCATION OF WATER TANKS AND HYDRANTS

Surrounding vegetation should be considered when locating a water tank. Avoid locations where the tank will be situated underneath existing vegetation or where vegetation will grow against or overhang the tank, (**Figure 39**). Where a tank is on the bushfire hazard side of a building, sufficient shielding for the protection of firefighters should be provided. In addition to the tank location, the fitting should be positioned and/or shielded from the bushfire hazard to allow access by emergency services.

In areas serviced by reticulated water, where the distance from the public road to the farthest part of the habitable building is greater than 70 metres, emergency services vehicles will need to gain access within the property and be provided with a water supply for firefighting purposes. This is because access to reticulated water (fire hydrants) is not possible further than 70 metres, due to the length of the hose reel.

B.4.6 OUTCOMES BASED APPROACH

A dam, river or other source may be considered a firefighting water source for emergency services if it complies with **DFES guidelines for acceptable sources of water**, and it can be demonstrated that the water level will be maintained above the top of the highest fire brigade suction point.

Approval for the use of these types of water supplies is on a case-by-case basis and at the discretion of the decision-maker, in consultation with emergency services and local government.

Figure 39: A good and bad example of landscaping around a water tank