



# BUSHFIRE MANAGEMENT PLAN

Two Rocks Town Centre Subdivision

Lot 1000 (No. 8) Lisford Avenue and Lot 9702 (No. 10)  
Enterprise Avenue, Two Rocks WA 6037

Date: 16 June 2022

Ref: 20-518

# Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address:

Site visit: Yes  No

Date of site visit (if applicable): Day  Month  Year

Report author or reviewer:

WA BPAD accreditation level (please circle):

Not accredited  Level 1 BAL assessor  Level 2 practitioner  Level 3 practitioner

If accredited please provide the following.

BPAD accreditation number:  Accreditation expiry: Month  Year

Bushfire management plan version number:

Bushfire management plan date: Day  Month  Year

Client/business name:

	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 a performance principle (tick no if only acceptable solutions have been used to address all of the bushfire protection criteria elements)?		

Is the proposal any of the following (see <a href="#">SPP 3.7 for definitions</a> )?	Yes	No
Unavoidable development (in BAL-40 or BAL-FZ)		
Strategic planning proposal (including rezoning applications)		
High risk land-use		
Vulnerable land-use		

None of the above

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

Why has it been given one of the above listed classifications (E.g. Considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

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

Signature of report author or reviewer



Date

Document ID: 20-518

Issue	Date	Status	Prepared by Name
1	13/06/22	Draft – Client Review	Dylan Wray – BPAD 44656
2	16/06/22	FINAL – For Lodgement	Dylan Wray – BPAD 44656

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# 1. Proposal Details

## 1.1 Background

This Bushfire Management Plan (BMP) has been prepared on behalf of Fini Group Pty Ltd, the landowners of Lot 1000 (No. 8) Lisford Avenue and Lot 9702 (No. 10) Enterprise Avenue, Two Rocks (the subject site).

This BMP has been prepared in accordance with State *Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (the Guidelines) to accompany the Application for Subdivision Approval to the Western Australian Planning Commission (WAPC).

## 1.2 Purpose

The aim of this BMP is to assess bushfire hazards within the subject site and surrounding areas to ensure the threat posed by any identified hazards can be appropriately managed and mitigated. This document provides an assessment of the general bushfire management strategies to be considered as part of the proposed subdivision, including:

- Site assessment including vegetation classification, slope analysis and separation distances within the 150m assessment area and consideration of bushfire hazards that will exist post subdivision;
- Assessment of the proposed subdivision against the bushfire protection criteria of the Guidelines;
- Recommended mitigation measures to reduce the risk of bushfire from within the subject site; and
- Recommended roles and responsibilities associated with implementing the requirements of this BMP.

## 1.3 Proposal Description

The subject site consists of two freehold lots bound by Lisford Avenue to the east, Marcon Street to the south, Jordan Street to the west and Azzurra Street to the north. The subject site is currently vacant however portions have been cleared in preparation for a recently approved commercial development.

The proposed subdivision involves the creation of mixed use and commercial lots in alignment with the Two Rocks Town Centre Activity Structure Plan.

*Refer Figure 1 – Plan of Subdivision*

## 1.4 Map of Bushfire prone Areas

The entire subject site is designated as bushfire prone due to the proximity of unmanaged bushfire prone vegetation within the area and along the foreshore reserve.

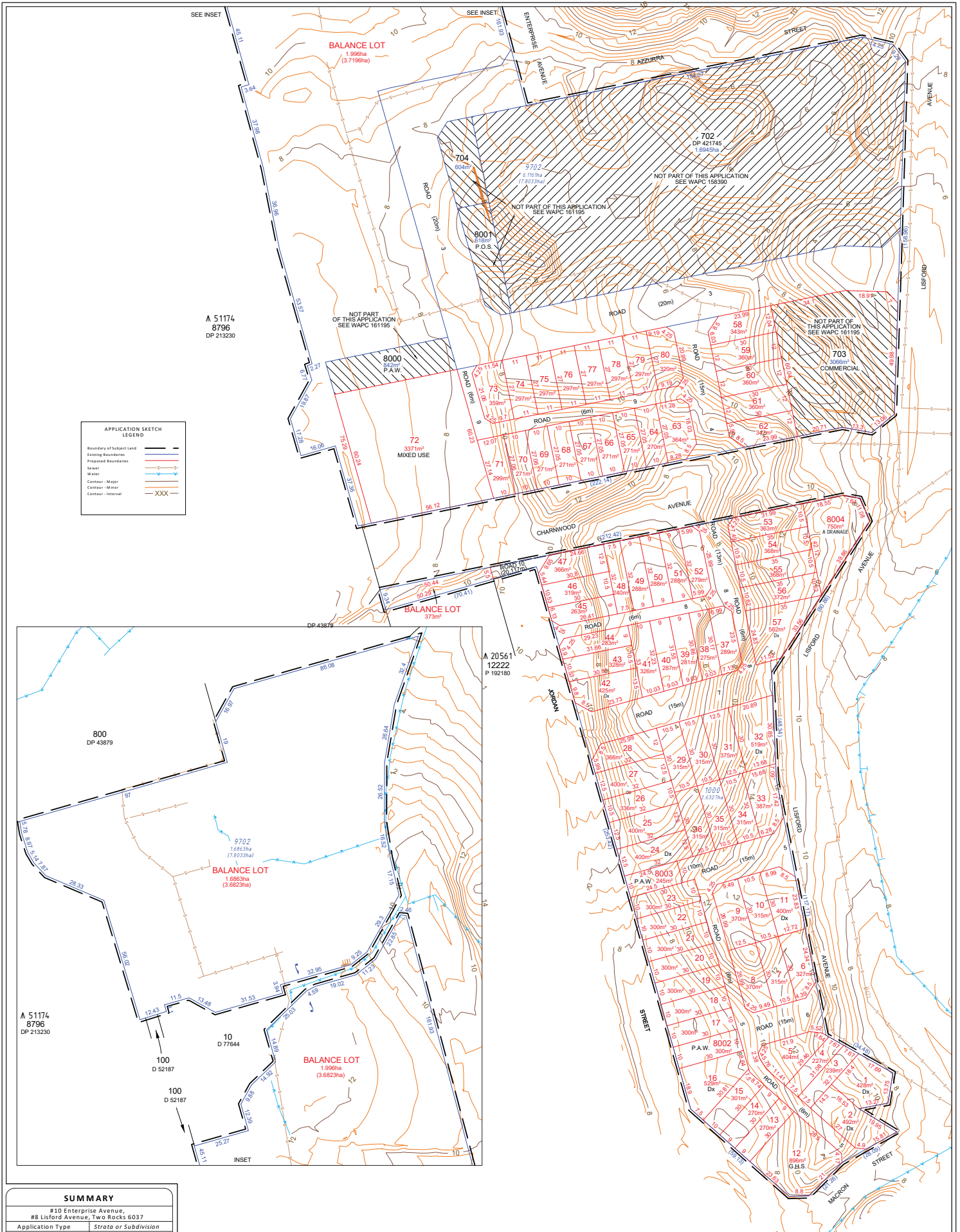
The preparation of a BMP is required given the proposed subdivision will result in the intensification of lots in a designated bushfire prone area.

*Refer Figure 2 – Map of Bush Fire Prone Areas*

## 1.5 Previous Assessments

Bushfire Prone Planning prepared a BMP to support the commercial development on the north-east portion of Lot 9702 (No. 10) Enterprise Avenue, Two Rocks. The assessment area of the previous BMP overlaps the assessment area of this BMP.

This BMP has not relied on the assessment outcomes of the previous BMP however has been cross checked to ensure consistency with the assessment inputs.



**APPLICATION SKETCH LEGEND**

Boundary of Subject Land	---
Existing Boundaries	---
Proposed Boundaries	---
Water	---
Contour - Major	---
Contour - Minor	---
Contour - Interval	XXX

**SUMMARY**

#10 Enterprise Avenue, #8 Lisford Avenue, Two Rocks 6037	
Application Type	Strata or Subdivision
Parent Lot A	1000
Parent Graphic	P 10133
Certificate of Title	Volume 2020 Folio 886
Total Area	2.6327ha
Parent Lot B	9702
Parent Graphic	DP 402964
Certificate of Title	Volume 2948 Folio 663
Total Area	7.8033ha
Local Authority	City of Wanneroo
TPS	Urban
Zoning	N/A
Original No. of Lots	2
Proposed No. of Lots	80

This plan, which was prepared by MNG for BLUEPORT DEVELOPMENT, shows the proposed subdivision of lots 1000 & 9702 and is intended to accompany an application to the Western Australia Planning Commission (WAPC) for approval to subdivide. All information relating to the subdivision, including lot dimensions and areas are subject to approval by the WAPC, the Local Authority and other servicing authorities having an interest in the land. Existing boundaries shown herein are a graphical representation only, they have been extracted from Landgate's Spatial Cadastral Database, which is only a model of the cadastre, and has not been re-established by survey. MNG does not guarantee position unless stated otherwise. Existing easements, encumbrances and interests are not necessarily depicted on the plan and a current title search is recommended to check this information prior to sale and development of proposed lots.

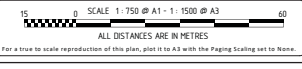
The use of this plan for other than the purpose for which it is commissioned is strictly prohibited. In particular, the information shown on the plan is not relied upon for financial dealings involving the land either in the whole or in the part.

The contents of this plan are current and correct as of the date stated within the subject panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plan's currency by contacting the McMillen Nolan Group. Contours are compiled from MNG Survey Data and Landgate SUP Data and are subject to change without notice. This plan is not to be distributed without this note, which is an integral part of the plan.



**PROPOSED SUBDIVISION**  
**LOTS 1000 & 9702**  
 #10 Enterprise Avenue, #8 Lisford Avenue, Two Rocks 6037

CLIENT: **BLUEPORT DEVELOPMENT**



FILES  
 mapCDD - Plan 021  
 Control Register - 98401  
 File Name - 98401sp-021a.dgn






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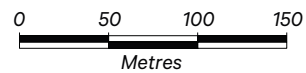
Project Mgr	Nigel J. SIMPSON	Date	PC694
<b>98401 - 021 - A</b>		Sheet	1 of 1





**Legend**

-  Subject Site
-  Proposed Lots
-  Bushfire Prone Area



**Scale 1:3000 @ A3**



Staff: DW Date: 13/06/2022 File: 20-518

**Figure 2 - Map of Bushfire Prone Areas**

**Two Rocks Town Centre Subdivision**

**Lot 1000 (No. 8) Lisford Avenue & Lot 9702 (No. 10) Enterprise Avenue**

Assessment Date: 02 June 2022

Accreditation Details: BPAD 44656 (Level 2)

**element.**

## 2. Environmental Considerations

### 2.1 Native Vegetation – Modification and Clearing

Policy Objective 5.4 of SPP 3.7 recognises the need to consider bushfire risk measures alongside environmental, biodiversity and conservation values. This BMP considers the environmental values specific to the subject site that may require consideration through either protection, retention, or revegetation.

A review of publicly available data has been undertaken in Table 1.

Table 1 – Summary of Potential Environmental Considerations

Environmental Features	Dataset	Applicable to site?	Comments
Conservation Category Wetland and Buffer	DBCA-019	No	N/A
RAMSAR Wetlands	DBCA-010	No	N/A
Threatened and Priority Flora	DBCA-036	No	N/A
Threatened Ecological Communities	DBCA-038	No	N/A
Bush Forever Areas	DOP-071	No	Bush Forever Area 397 is mapped adjacent to the subject site which will continue to pose a bushfire threat.
Clearing Regulations – Environmentally Sensitive Areas	DWER-046	No	N/A
Swan Bioplan Regionally Significant Natural Areas	DWER-070	No	N/A
Native Vegetation Extent	DPIRD-005	Yes	The subject site is mapped as containing native vegetation which will require clearing as part of the subdivision.

In addition to the above, the Two Rocks Town Centre Activity Structure Plan identifies the site as being covered in typical near shore coastal shrubs and grasses which are largely degraded. As such, the bushfire protection measures of this BMP assume that the subject site can be cleared.

Clearing of vegetation will only be undertaken to facilitate the subdivision and to ensure compliance with this BMP. All vegetation on surrounding properties will be retained to ensure no adverse impact on any environmental values applicable to the locality.

It is advised that the landowner seek further advice to confirm whether a clearing permit will be required from the Department of Water and Environmental Regulation.

### 2.2 Revegetation/ Landscape Plans

The proposed subdivision includes public open spaces and drainage reserves which may include landscaping, retained vegetation and/or revegetation. The following shall apply to these lots:

- Proposed landscaping shall meet the definition of low threat vegetation, in accordance with Clause 2.2.3.2 of *AS 3959 Construction of buildings in bushfire prone areas (AS 3959)*; and
- Retained vegetation or revegetation shall comply with the Standards for Asset Protection Zones.

## 3. Bushfire Assessment Results

### 3.1 Assessment Inputs

The assessment methodology has been undertaken in accordance with SPP 3.7, the Guidelines and AS 3959. The assessment has been based on the following post development assumptions:

- Vegetation on the subject site will be cleared as part of the subdivision works and managed in a low threat state, in perpetuity;
- Proposed road reserves, public accessways and drainage reserves will be managed in a low fuel state, in perpetuity;
- All classified vegetation contained on surrounding lots and reserves has been assumed to remain unmanaged and will therefore remain a bushfire risk post development; and
- Excluded vegetation in the existing road reserves adjoining the subject site will be managed in a low threat state, in perpetuity; and
- Excluded vegetation contained on surrounding lots has been assumed to remain managed which is a continuation of existing management regimes.

#### 3.1.1 Vegetation Classifications

A site visit was undertaken on the 02<sup>nd</sup> June 2022 by a Level 2 BPAD Practitioner with all vegetation within the assessment area classified in accordance with Table 2.3 of AS 3959 and *the Visual Guide for Bushfire Risk Assessment in Western Australia* (WAPC 2016).

The classified vegetation has been summarised in Table 2 with photographic evidence provided in Appendix 1.

*Refer Appendix 1 – Vegetation Assessment*

#### 3.1.2 Effective Slope

The assessment area has a downward slope towards the coast with a change in elevation of approximately 20m over the assessment area.

Slope analysis is based on site observations with a rangefinder, cross checked with available contour data over the assessment area.

#### 3.1.3 Summary of Inputs

The assessment inputs have been visually represented in Figure 3.

*Refer Figure 3 – Vegetation and Slope Analysis*

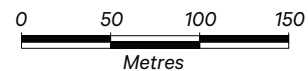


### Legend

- Subject Site
- Proposed Lots
- Assessment Area (100m)
- Assessment Buffer (150m)
- Vegetation Extents
- Contours (1m)
- Photo Point

### AS 3959 Classifications

- Class C Shrubland
- Class D Scrub
- Class G Grassland
- Excluded - Clause 2.2.3.2 (a & e)



Scale 1:3000 @ A3



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## Figure 3 - Vegetation and Slope Analysis (Post Development)

### Two Rocks Town Centre Subdivision

Lot 1000 (No. 8) Lisford Avenue & Lot 9702 (No. 10) Enterprise Avenue

Assessment Date: 02 June 2022

Accreditation Details: BPAD 44656 (Level 2)

**element.**

Table 2 – Assessment Summary

Plot	Vegetation Classification	Effective Slope	Comments
Plot 1	Class G Grassland	Flat / Upslope	Vacant private properties with unmanaged grassy regrowth.
Plot 2	Class G Grassland	Downslope 0-5°	Coastal sedges and grasses contained within the adjacent foreshore reserve.
Plot 3	Class C Shrubland	Flat / Upslope	Vacant private properties with small shrubs less than 2m in height.
Plot 4	Class C Shrubland	Downslope 0-5°	Coastal shrubs and small trees contained within the adjacent foreshore reserve and on surrounding private properties. The vegetation is less than 2m in height with foliage cover greater than 30% and grassy understorey.
Plot 5	Class C Shrubland	Downslope 5-10°	
Plot 6	Class D Scrub	Flat / Upslope	Coastal shrubs and small trees contained within the adjacent foreshore reserve and on surrounding private properties. The vegetation is greater than 2m in height with less than 30% foliage cover and grassy understorey.
Plot 7	Class D Scrub	Downslope 0-5°	
Plot 8	Excluded – Clause 2.2.3.2 (a)	N/A	Vegetation more than 100m from the proposed subdivision.
Plot 9	Excluded – Clause 2.2.3.2 (f)	N/A	Non-vegetated areas including roads, driveways buildings, construction sites and water bodies.
Plot 10	Excluded – Clause 2.2.3.2 (f)	N/A	Low threat vegetation consisting of reticulated lawns and gardens.
Plot 11	Excluded – Clause 2.2.3.2	N/A	The subject site containing coastal shrubs and grasses which will be cleared as part of the subdivision works.

The classified vegetation and effective slope in Table 2 has been used to determine the radiant heat impact on the proposed subdivision through the determination of the Bushfire Attack Level (BAL) in accordance with AS 3959. Table 3 provides an extract of the applicable separation distances from Table 2.5 of AS 3959.

Table 3 – Vegetation Separation Distances (Table 2.5 of AS 3959)

Plot	Vegetation Classification	Effective Slope	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5	BAL-LOW
Plot 1	Class G Grassland	Flat / Upslope	<6	6-<8	8-<12	12-<17	17-<50	>50
Plot 2	Class G Grassland	Downslope 0-5°	<7	7-<9	9-<14	14-<20	20-<50	>50
Plot 3	Class C Shrubland	Flat / Upslope	<7	7-<9	9-<13	13-<19	19-<100	>100
Plot 4	Class C Shrubland	Downslope 0-5°	<7	7-<10	10-<15	15-<22	22-<100	>100
Plot 5	Class C Shrubland	Downslope 5-10°	<8	8-<11	11-<17	17-<25	25-<100	>100
Plot 6	Class D Scrub	Flat / Upslope	<10	10-<13	13-<19	19-<27	27-<100	>100
Plot 7	Class D Scrub	Downslope 0-5°	<11	11-<15	15-<22	22-<31	31-<100	>100

## 3.2 Assessment Outputs

The BAL Contour Map in Figure 4 has been prepared for the assessment area based on:

- The vegetation classifications and slope analysis in Table 2;
- AS 3959 separation distances in Table 3;
- The entire subject site being cleared and/or managed in a low fuel state; and
- The existing road reserves adjoining the subject site managed in a low fuel state.

The BAL Contour Map indicates that future habitable buildings will be subject to a radiant heat exposure of BAL-29 and below.

*Refer Figure 4 – BAL Contour Map*



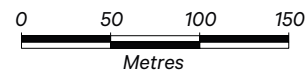
Plot	Classification	Slope
Plot 1	Class G Grassland	Flat / Upslope
Plot 2	Class G Grassland	Downslope >0 to 5°
Plot 3	Class C Shrubland	Flat / Upslope
Plot 4	Class C Shrubland	Downslope >0 to 5°
Plot 5	Class C Shrubland	Downslope >5 to 10°
Plot 6	Class D Scrub	Flat / Upslope

### Legend

- Subject Site
- Proposed Lots
- Assessment Area (100m)
- Assessment Buffer (150m)
- Vegetation Extents

### BAL Contours

- BAL-FZ
- BAL-40
- BAL-29
- BAL-19
- BAL-12.5
- BAL-LOW



Scale 1:3000 @ A3



Staff: DW Date: 16/06/2022 File: 20-518

## Figure 4 - BAL Contour Map (Post Development)

Two Rocks Town Centre Subdivision

Lot 1000 (No. 8) Lisford Avenue & Lot 9702 (No. 10) Enterprise Avenue

Assessment Date: 02 June 2022

Accreditation Details: BPAD 44656 (Level 2)

**element.**

## 4. Identification of Bushfire Hazard Issues

### 4.1 Key Issues

SPP 3.7 and AS 3959 aim to minimise the likelihood of radiant heat damage to habitable buildings at FDI 80. However, these requirements cannot guarantee that damage will not occur from bushfires or that the land use intensification will not increase the likelihood and risk of bushfire ignition.

From a bushfire hazard management and safety perspective, the key issues that are likely to require management and additional consideration include:

- The potential for revegetation in the public open spaces, drainage reserves and/or road reserves which could result in additional bushfire fuels. These areas have been assumed to be managed in a low fuel state however if management is not possible, a modified bushfire management response would be required.
- Ensuring there is sufficient capacity, flow and pressure within the existing water main to service the proposed subdivision. If reticulated water is unavailable, this BMP will need to be revised to consider an alternative approach for the supply of water for firefighting purposes.

It is acknowledged that the bushfire risk to the proposed subdivision posed by the identified bushfire hazards can be managed through standard application of the acceptable solutions of the bushfire protection criteria, as detailed in Section 5.1.

Additional bushfire mitigation measures have been recommended in response to the issues identified above to further improve the site response and resilience to a bushfire, as detailed in Section 5.2.



## 5. Bushfire Protection Criteria

### 5.1 Compliance Table

This BMP provides an outline of the mitigation strategies that will ensure the subdivision meets the bushfire protection criteria of the Guidelines. The bushfire protection criteria addressed as part of this BMP include:

- Element 1 – Location of the development;
- Element 2 – Siting and design of the development;
- Element 3 – Vehicle access; and
- Element 4 – Water supply.

The proposed subdivision meets the intent of the bushfire protection criteria of the Guidelines through compliance with the acceptable solutions, as detailed in Table 4.

Table 4 – Bushfire Protection Criteria

Bushfire Protection Criteria	Acceptable Solution	Compliance Comments
Element 1: Location	<p><u>A1.1 Development Location</u></p> <p>The strategic planning proposal, subdivision and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL-29 or below.</p>	<p>Compliant</p> <p>Upon completion of the subdivision, the proposed lots will have compliant setbacks to permanent vegetation to ensure future habitable buildings achieve BAL-29 or below.</p>
Element 2: Siting and Design	<p><u>A2.1 Asset Protection Zone (APZ)</u></p> <p>Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:</p> <ul style="list-style-type: none"> <li>Width: Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m. (BAL-29) in all circumstances.</li> <li>Location: the APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity.</li> <li>Management: the APZ is managed in accordance with the requirements of Standards for Asset Protection Zones, as detailed in Appendix 2.</li> </ul>	<p>Not Applicable</p> <p>Upon completion of the subdivision, the proposed lots will have compliant setbacks to permanent vegetation to ensure future habitable buildings achieve BAL-29 or below. As such, an APZ is not required in accordance with Explanatory Note E2 of the Guidelines.</p> <p>However, the Standards for Asset Protection Zones have been utilised to ensure retained vegetation or revegetation of the public open spaces and drainage reserves are managed in a low fuel state and do not alter the assessment outcomes of this BMP.</p>
Element 3: Vehicular Access	<p><u>A3.1 Public Road</u></p> <p>The minimum requirements under this acceptable solution are applicable to all proposed and existing public roads.</p> <p>Public roads are to meet the minimum technical requirements in Appendix 3.</p> <p>The trafficable width is to be 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.</p>	<p>Compliant</p> <p>The existing and proposed public road network complies as follows:</p> <ul style="list-style-type: none"> <li>Trafficable width, grades and layout in accordance with the Liveable Neighbourhoods / Local Government Guidelines for Subdivisional Development.</li> <li>Minimum vertical clearance of 4.5m.</li> <li>Minimum weight capacity of 15 tonnes.</li> </ul>

Bushfire Protection Criteria	Acceptable Solution	Compliance Comments
<p>Element 3: Vehicular Access</p>	<p><u>A3.2a Multiple Access Routes</u></p> <p>Public road access is to be provided in two different directions to at least two different suitable destinations with an all-weather surface (two-way access).</p> <p>If the public road access to the subject site is via a no-through road which cannot be avoided due to demonstrated site constraints, the road access is to be a maximum of 200 metres from the subject lot(s) boundary to an intersection where two-way access is provided.</p> <p>The no-through road may exceed 200 metres if it is demonstrated that an alternative access, including an emergency access way, cannot be provided due to site constraints and the following requirements are met:</p> <ul style="list-style-type: none"> <li>• The no-through road travels towards a suitable destination; and</li> <li>• The balance of the no-through road, that is greater than 200 metres from the subject site, is wholly within BAL-LOW, or is within a residential built-out area.</li> </ul>	<p>Compliant</p> <p>The proposed subdivision is accessible from multiple public roads which lead to different suitable destinations, including:</p> <ul style="list-style-type: none"> <li>• Two Rocks Road south which provides unrestricted access to Yanchep.</li> <li>• Lisford Avenue north which provides unrestricted access to Indian Ocean Drive.</li> <li>• Jordan Street north which provides unrestricted access to Australis Drive and the Two Rocks Town Centre.</li> </ul> <p>In addition, every proposed lot has access in two directions with all proposed roads being through roads.</p>
	<p><u>A3.2b Emergency Access Way (EAW)</u></p> <p>Where it is demonstrated that A3.2a cannot be achieved due to site constraints, or where an alternative design option does not exist, an emergency access way can be considered as an acceptable solution.</p> <p>An emergency access way is to meet all the following requirements:</p> <ul style="list-style-type: none"> <li>• Requirements in Appendix 3;</li> <li>• Provides a through connection to a public road;</li> <li>• Be no more than 500 metres in length; and</li> <li>• Must be signposted and if gated, gates must open the whole trafficable width and remain unlocked.</li> </ul>	<p>Not Applicable</p> <p>The proposal does not result in the creation of an EAW.</p>

Bushfire Protection Criteria	Acceptable Solution	Compliance Comments
<p>Element 3: Vehicular Access</p>	<p><b>A3.3 Through Roads</b></p> <p>All public roads should be through-roads. No-through roads should be avoided and should only be considered as an acceptable solution where:</p> <ul style="list-style-type: none"> <li>It is demonstrated that no alternative road layout exists due to site constraints; and</li> <li>The no-through road is a maximum length of 200 metres to an intersection providing two-way access, unless it satisfies the exemption provisions in A3.2a above.</li> </ul> <p>A no-through road is to meet all the following requirements:</p> <ul style="list-style-type: none"> <li>Requirements of a public road as detailed in Appendix 3; and</li> <li>Turn-around areas.</li> </ul>	<p>Complaint</p> <p>All proposed public roads are through roads. The proposed subdivision does not include non-through roads.</p>
	<p><b>A3.4a Perimeter Roads</b></p> <p>A perimeter road is a public road and should be provided for greenfield or infill development where 10 or more lots are being proposed (including as part of a staged subdivision) with the aim of:</p> <ul style="list-style-type: none"> <li>Separating areas of classified vegetation under AS 3959, which adjoin the subject site, from the proposed lot(s); and</li> <li>Removing the need for battle-axe lots that back onto areas of classified vegetation.</li> </ul> <p>A perimeter road is to meet the requirements contained in Appendix 3.</p> <p>A perimeter road may not be required where:</p> <ul style="list-style-type: none"> <li>The adjoining classified vegetation is Class G Grassland;</li> <li>Lots are zoned for rural living or equivalent;</li> <li>It is demonstrated that it cannot be provided due to site constraints; or</li> <li>All lots have frontage to an existing public road.</li> </ul>	<p>Not Applicable</p> <p>The proposal does not result in the creation of a perimeter road.</p>

Bushfire Protection Criteria	Acceptable Solution	Compliance Comments
<p>Element 3: Vehicular Access</p>	<p><u>A3.4b Fire Service Access Routes (FSAR)</u></p> <p>Where proposed lots adjoin classified vegetation under AS 3959, and a perimeter road is not required in accordance with A3.4a, a fire service access route can be considered as an acceptable solution to provide firefighter access, where access is not available, to the classified vegetation.</p> <p>A fire service access route is to meet all the following requirements:</p> <ul style="list-style-type: none"> <li>• Requirements in Appendix 3;</li> <li>• Be through-routes with no dead-ends;</li> <li>• Linked to the internal road system at regular intervals, every 500 metres;</li> <li>• Must be signposted;</li> <li>• No further than 500 metres from a public road;</li> <li>• If gated, gates must open the required horizontal clearance and can be locked by the local government and/or emergency services, if keys are provided for each gate; and</li> <li>• Turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres.</li> </ul>	<p>Not Applicable</p> <p>The proposal does not result in the creation of an FSAR.</p>
	<p><u>A3.5 Battle-Axe Access Legs</u></p> <p>Where it is demonstrated that a battle-axe cannot be avoided due to site constraints, it can be considered as an acceptable solution.</p> <p>There are no battle-axe technical requirements where the point the battle-axe access leg joins the effective area of the lot, is less than 50 metres from a public road in a reticulated area.</p> <p>In circumstances where the above condition is not met, or the battle-axe is in a non-reticulated water area, the battle-axe is to meet all the following requirements:</p> <ul style="list-style-type: none"> <li>• Requirements in Appendix 3; and</li> <li>• Passing bays every 200 metres with a minimum length of 20 metres and a minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres).</li> </ul>	<p>Not Applicable</p> <p>The proposal does not result in the creation of a battle-axe lot.</p>

Bushfire Protection Criteria	Acceptable Solution	Compliance Comments
<p>Element 3: Vehicular Access</p>	<p><u>A3.6 Private Driveways</u></p> <p>There are no private driveway technical requirements where the private driveway is:</p> <ul style="list-style-type: none"> <li>• Within a lot serviced by reticulated water;</li> <li>• No greater than 70 metres in length between the most distant external part of the development site and the public road measured as a hose lay; and</li> <li>• Accessed by a public road where the road speed limit is not greater than 70 km/h.</li> </ul> <p>In circumstances where all of the above conditions are not met, or the private driveway is in a non-reticulated water area, the private driveway is to meet all the following require:</p> <ul style="list-style-type: none"> <li>• Requirements in Appendix 3;</li> <li>• Passing bays every 200 metres with a minimum length of 20 metres and a minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres); and</li> <li>• Turn-around areas within 30 metres of the habitable building.</li> </ul>	<p>Not Applicable</p> <p>The technical requirements for driveways do not apply to the proposed lots given the subject site is serviced by reticulated water, the lots are not greater than 70m in length and the speed limit is less than 70km/h.</p>
<p>Element 4: Water</p>	<p><u>A4.1 Identification of Future Water Supply</u></p> <p>Evidence that a reticulated or sufficient non-reticulated water supply for bushfire fighting can be provided at the subdivision and/or development application stage, in accordance with the specifications of the relevant water supply authority or the requirements detailed in Appendix 4.</p> <p>Where the provision of a strategic water tank(s) is required a suitable area within a road reserve or a dedicated lot the location should be identified, should be identified on the structure plan, to the satisfaction of the local government.</p>	<p>Compliant</p> <p>The subject site has access to a reticulated water supply.</p> <p>The proposed subdivision will include water infrastructure servicing each lot with street hydrants provided in accordance with the Water Corporations technical specifications (Design Standard 63 Water Reticulation Standards).</p>

Bushfire Protection Criteria	Acceptable Solution	Compliance Comments
Element 4: Water	<p><u>A4.2 Provision of Water for Firefighting Purposes</u></p> <p>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:</p> <ul style="list-style-type: none"> <li>• The provision of a water tank(s), in accordance with the requirements of Appendix 4; and</li> <li>• Where the provision of a strategic water tank(s) is applicable, then the following requirements apply:               <ul style="list-style-type: none"> <li>o Land to be ceded free of cost to the local government for the placement of the tank(s);</li> <li>o The lot or road reserve where the tank is to be located is identified on the plan of subdivision;</li> <li>o Tank capacity, construction, and fittings, provided in accordance with the requirements of Schedule 2; and</li> <li>o A strategic water tank is to be located no more than 10 minutes from the subject site (at legal road speeds).</li> </ul> </li> </ul> <p>Where a subdivision includes an existing habitable building(s) that is to be retained, a water supply should be provided to this existing habitable building(s), in accordance with the requirements listed above.</p>	<p>Compliant</p> <p>Street hydrants are to be provided in accordance with the Water Corporations technical specifications (Design Standard 63 Water Reticulation Standards).</p>

## 5.2 Additional Management Strategies

The following additional bushfire management strategies have been recommended to inform ongoing planning stages and increase the level of bushfire risk mitigation and resilience across the subject site. The responsibilities and timeframes for the below recommendations are provided in Section 6.

*Refer Figure 5 – Spatial Representation of the Bushfire Management Strategies*

### 5.2.1 Notification on Title

Future landowners should be made aware that the lot is bushfire prone and subject to this BMP. It is recommended that a notification pursuant to Section 165 of the *Planning and Development Act 2005* be placed on the certificate of title for each lot advising of the existence of a hazard or other factor. Notice of this notification is to be included on the diagram or plan of survey (deposited plan).

The notification shall state the following:

*"This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and is subject to a Bushfire Management Plan. Additional planning and building requirements may apply to development on this land."*

### 5.2.2 Future Development

This BMP provides bushfire management and mitigation provisions relevant to the subdivision stage of the development. The development application for the future habitable buildings can rely on the assessment outcomes of this BMP or can be accompanied by a separate BAL Assessment.

### 5.2.3 Construction Standards

Class 1 buildings and associated Class 10a buildings and decks are required to comply with the applicable bushfire construction requirements of the *National Construction Code (NCC)*. This includes compliance with either AS 3959, the NASH Standard or a performance-based solution.

In addition, the Australian Building Codes Board (ABCB) is considering changes to the NCC to require Class 9 buildings to comply with bushfire requirements. Landowners should be made aware that there may be additional construction requirements for Class 9 buildings.

### 5.2.4 Fuel Management

The proposed lots do not require an Asset Protection Zone (APZ) given compliant setbacks to permanent bushfire hazards will be achieved once the subject site has been cleared. Future habitable buildings will be subject to BAL-29 and below upon completion of the subdivision.

However, to ensure the assessment outputs of this BMP remain unchanged, any retained vegetation or revegetation of the subject site, including public open spaces and drainage reserves, shall comply with the Standards for Asset Protection Zones.

*Refer Appendix 2 – Standards for Asset Protection Zones*

### 5.2.5 Landscaping

Landscaping on both private and public properties shall be designed and managed to comply with Clause 2.2.3.2 (f) of AS 3959. Low threat vegetation includes *"grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses, maintained public reserves and parklands, sporting fields, orchards, banana plantations, market gardens and other non-curing crops, cultivated gardens, commercial nurseries, nature strips and windbreaks."*

Management may include regular clearing of vegetation, removal of weeds, removal of dead plant material, tree pruning and mowing of grass to reduce the fuel load surrounding any future development. Low fuel state means there is insufficient fuel available to significantly increase the severity of a bushfire attack.



### 5.2.6 Water Supply

Prior to issuance of titles, each lot shall be connected to a reticulated water supply. The developer will be responsible for liaising with the Water Corporation to ensure there is capacity in the existing water main to accommodate the proposed subdivision.

The proposed water infrastructure shall comply with the Water Corporation Design Standard 63 Water Reticulation Standards, including the provision of street hydrants and road markings.

If reticulated water is unavailable, water tanks for firefighting purposes will be required in accordance with Schedule 2 of the Guidelines.

*Refer Appendix 4 – Water Technical Requirements*

### 5.2.7 Firebreak and Fuel Reduction Notice

The City's Firebreak Notice provides a structure for managing bushfire throughout the local government. The Firebreak Notice is issued under Section 33 of the *Bush Fires Act 1954* which authorises the Local Government to enforce bushfire preparation works such as fuel reduction and firebreaks.

Landowners will be responsible for ensuring ongoing compliance with the Firebreak Notice. If it is not practically possible to comply with the provisions of the Firebreak Notice, the landowner can seek approval from the City for alternative methods of fire prevention.

*Refer Appendix 5 – City of Wanneroo Firebreak Notice*

### 5.2.8 Public Education and Preparedness

The City provides fire and emergency advice to landowners which is available on their website.

<https://www.wanneroo.wa.gov.au/fireandemergencymanagement>

Additional information and resources can also be sourced from the Department of Fire and Emergency Services (DFES) website. This includes educational programs and safety guidelines to assist landowners with preparing for and surviving bushfire events.

In the event of a bushfire, specific advice and recommendations will be given to landowners from DFES, emergency services personnel and/ or the City.

### 5.2.9 My Bushfire Plan

The Department of Fire and Emergency Services (DFES) have prepared a useful tool to help landowners and occupants prepare for bushfires (<https://mybushfireplan.wa.gov.au/>). The My Bushfire Plan app will ensure landowners and occupant are prepared to either leave early or stay and defend. Leaving early should always be the preferred option when there is the threat of a bushfire.

Landowners and occupants are encouraged to prepare a bushfire plan to assist with decision making during a bushfire emergency, including pre-determined evacuation routes.

## Requirements

- 1 All habitable buildings shall be located in an area assessed as BAL-29 or below, as detailed in Figure 4.
- 2 Vegetation within POS and drainage reserve shall be managed in accordance with the Standards for Asset Protection Zones. The POS and drainage reserve shall be managed by the City of Wanneroo, in perpetuity.
- 3 Vegetation within the road reserves (existing and proposed) shall be managed in a low fuel state, in accordance with Clause 2.2.3.2 of AS 3959. The road reserves shall be managed by the City of Wanneroo, in perpetuity.
- 4 Proposed public roads shall comply with the minimum requirements of Local Government Guidelines for Subdivisional Development and/or Liveable Neighbourhoods.
- 5 The proposed lots shall be connected to reticulated water supply with street hydrants provided in accordance with Water Corporations technical requirements.

## Notes

- Proposed Class 1 buildings and associated class 10a buildings or decks shall comply with the bushfire construction requirements of the NCC.
- A notification pursuant to Section 165 of the Planning and Development Act 2005 shall be registered on each Certificate of Title.
- The proposed lots shall comply with the City of Wanneroo Firebreak Notice, including annual fuel reduction to ensure grasses are maintained at a height no more than 50mm.
- Vegetation on surrounding properties and within the foreshore reserve will continue to pose a bushfire threat post development. The proposed lots shall be subject to ongoing management regimes to ensure compliant separation to the permanent bushfire hazards.



## Legend

Subject Site	Proposed Public Roads	Water Main
Proposed Lots	Existing Public Roads	Street Hydrant
Public Open Space (POS)	Proposed Road Reserve	Bush Forever Area 397
Drainage Reserve	Managed Road Reserve	Bushfire Hazards

0 50 100  
Metres

Scale 1:2000 @ A3



Staff: DW Date: 16/06/2022 File: 20-518

## Figure 5 - Spatial Representation of the Bushfire Management Strategies Two Rocks Town Centre Subdivision

Lot 1000 (No. 8) Lisford Avenue & Lot 9702 (No. 10) Enterprise Avenue

Assessment Date: 02 June 2022

Accreditation Details: BPAD 44656 (Level 2)

**element.**

## 6. Responsibilities

### 6.1 Implementation

Table 5 – Implementation Actions – Subdivision Clearance (Landowner / Developer)

No.	Implementation Actions
1	Notifications registered on the certificate of title for each lot pursuant to Section 165 of the <i>Planning and Development Act 2005</i> .
2	Notice of notification to be included on the diagram or plan of survey (deposited plan).

Table 6 – Implementation Actions – Prior to Titles (Landowner / Developer)

No.	Implementation Actions
1	Ensure the subject site is cleared of all unmanaged vegetation.
2	Ensure public roads are constructed in accordance with the subdivision approval.
3	Ensure each lot is connected to a reticulated water supply and street hydrants are established.
4	Ensure retained vegetation or revegetation within public open space and drainage reserves comply with the Standards for Asset Protection Zones.
5	Ensure proposed landscaping within public open spaces meet the definition of low threat vegetation, in accordance with AS 3959.

### 6.2 Management

Table 7 – Ongoing Management Actions (Future Landowners)

No.	Management Actions
1	Maintain landscaping as low threat vegetation, in accordance with AS 3959.
2	Ensure Class 1 building and associated Class 10a buildings and decks comply with the bushfire construction requirements of the NCC.
3	Ensure ongoing compliance with the City's Firebreak Notice, where practically possible. If required, obtain approval from the City to vary the provisions of the Firebreak Notice.

Table 8 – Ongoing Management Actions (City of Wanneroo)

No.	Management Actions
1	Monitor landowner compliance with this BMP and any relevant conditions of the subdivision approval.
2	Ongoing management of public road reserves, public open spaces and drainage reserves in a low fuel state, in accordance with AS 3959 or the Standards for Asset Protection Zones.
3	Maintain public roads to the minimum standards and ensure public access to the subject site is always available.
4	Ensure development applications and building permit applications are compliant with the relevant building and land use planning provisions.
5	Enforce compliance with the City's Firebreak Notice enforced under Section 33 of the Bush Fires Act 1954.

## 7. References

City of Wanneroo, Firebreak Notice 2021-2022, accessed May 2022, <https://www.wanneroo.wa.gov.au/downloads/file/3465/>

Office of Bushfire Risk Management (OBRM) Map of Bush Fire Prone Areas, accessed May 2022, <https://maps.slip.wa.gov.au/landgate/bushfireprone/>

Standards Australia. AS 3959: 2018 Construction of buildings in bushfire-prone areas. Australian Standard published 14 November 2018.




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

Western Australian Planning Commission (WAPC, 2016) Visual guide for bushfire risk assessment in Western Australia. Western Australian Planning Commission.




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

## 8. Appendices




# APPENDIX 1 – VEGETATION ASSESSMENT

<p>Plot: 1</p>	<p>Classification: Class G Grassland (Flat / Upslope)</p>
<p>Photo ID: 01</p> <p>Vacant private properties with unmanaged grassy regrowth.</p>	
<p>Photo ID: 02</p> <p>Vacant private properties with unmanaged grassy regrowth.</p>	
<p>Plot: 2</p>	<p>Classification: Class G Grassland (Downslope 0 to 5°)</p>
<p>Photo ID: 03</p> <p>Coastal grasses contained within the adjacent foreshore reserve.</p>	

## APPENDIX 1 – VEGETATION ASSESSMENT




<p>Photo ID: 04</p> <p>Coastal sedges contained within the adjacent foreshore reserve.</p>	 <p>31°30.018'S, 115°35.156'E</p> <p>Jordan St, Two Rocks WA 6007, AU - 02-Jun-22 10:02:07</p>
<p>Photo ID: 05</p> <p>Coastal sedges contained within the adjacent foreshore reserve.</p>	 <p>31°30.024'S, 115°35.144'E</p> <p>Jordan St, Two Rocks WA 6007, AU - 02-Jun-22 10:02:26</p>
<p>Plot: 3</p> <p>Photo ID: 06</p> <p>Coastal shrubs contained on vacant private properties.</p> <p>The vegetation is less than 2m in height with foliage cover greater than 30% and grassy understorey.</p>	<p>Classification: Class C Shrubland (Flat / Upslope)</p>  <p>31°30.027'S, 115°35.259'E</p> <p>11 Linstead Ave, Two Rocks WA 6007, AU - 02-Jun-22 09:46:27</p>

## APPENDIX 1 – VEGETATION ASSESSMENT

<p>Photo ID: 07</p> <p>Coastal shrubs and small trees contained within the adjacent foreshore reserve.</p> <p>The vegetation is less than 2m in height with foliage cover greater than 30% and grassy understorey.</p>	 <p>WG984 31°30.073'S, 115°35.281'E</p> <p>10 Maroon St, Two Rocks WA 6007, AU on 02-Jun-22 09:43:27</p>
<p>Plot: 4</p>	<p>Classification: Class C Shrubland (Downslope 0 to 5°)</p>
<p>Photo ID: 08</p> <p>Coastal shrubs and small trees contained within the adjacent foreshore reserve.</p> <p>The vegetation is less than 2m in height with foliage cover greater than 30% and grassy understorey.</p>	 <p>WG984 31°29.992'S, 115°35.075'E</p> <p>Australia Dr, Two Rocks WA 6007, AU on 02-Jun-22 10:38:46</p>
<p>Photo ID: 09</p> <p>Coastal shrubs and small trees contained within the adjacent foreshore reserve.</p> <p>The vegetation is less than 2m in height with foliage cover greater than 30% and grassy understorey.</p>	 <p>WG984 31°30.114'S, 115°35.195'E</p> <p>11 Maroon St, Two Rocks WA 6007, AU on 02-Jun-22 09:40:56</p>




## APPENDIX 1 – VEGETATION ASSESSMENT

<p>Plot: 4</p>	<p>Classification: Class C Shrubland (Downslope 0 to 5°)</p>
<p>Photo ID: 10</p> <p>Coastal shrubs and small trees contained within the adjacent foreshore reserve.</p> <p>The vegetation is less than 2m in height with foliage cover greater than 30% and grassy understorey.</p>	 <p>31°30.125'S, 115°35.179'E</p> <p>© Maroon St, Two Rocks WA 6007, AU   02-Jun-22 09:40:26</p>
<p>Plot: 5</p>	<p>Classification: Class C Shrubland (Downslope 5 to 10°)</p>
<p>Photo ID: 11</p> <p>Coastal shrubs and small trees contained within the adjacent foreshore reserve.</p> <p>The vegetation is less than 2m in height with foliage cover greater than 30% and grassy understorey.</p>	 <p>31°30.148'S, 115°35.213'E</p> <p>© Maroon St, Two Rocks WA 6007, AU   02-Jun-22 09:30:54</p>
<p>Photo ID: 12</p>	<p>Classification: Class C Shrubland (Downslope 5 to 10°)</p>
<p>Coastal shrubs and small trees contained within the adjacent foreshore reserve.</p> <p>The vegetation is less than 2m in height with foliage cover greater than 30% and grassy understorey.</p>	 <p>31°30.135'S, 115°35.217'E</p> <p>© Maroon St, Two Rocks WA 6007, AU   02-Jun-22 09:30:29</p>




# APPENDIX 1 – VEGETATION ASSESSMENT

<p>Plot: 6</p>	<p>Classification: Class D Scrub (Downslope 0 to 5°)</p>
<p>Photo ID: 13</p> <p>Large shrubs contained within the adjacent foreshore reserve.</p> <p>The vegetation is greater than 2m in height with less than 30% foliage cover and grassy understorey.</p>	
<p>Plot: 7</p>	<p>Excluded (Clause 2.2.3.2): More than 100m</p>
<p>Photo ID: 14</p> <p>Large shrubs more than 100m from the subject site.</p> <p>This area has been excluded in accordance with Clause 2.2.3.2 (a) of AS3959.</p>	
<p>Photo ID: 15</p> <p>Large shrubs more than 100m from the subject site.</p> <p>This area has been excluded in accordance with Clause 2.2.3.2 (a) of AS3959.</p>	

# APPENDIX 1 – VEGETATION ASSESSMENT

Plot: 8	Excluded (Clause 2.2.3.2): Non-Vegetated
<p>Photo ID: 16</p> <p>Non-vegetated carpark and road.</p> <p>This area has been excluded in accordance with Clause 2.2.3.2 (e) of AS3959.</p>	
<p>Photo ID: 17</p> <p>Non-vegetated construction site.</p> <p>This area has been excluded in accordance with Clause 2.2.3.2 (e) of AS3959.</p>	
<p>Photo ID: 18</p> <p>Non-vegetated beach.</p> <p>This area has been excluded in accordance with Clause 2.2.3.2 (e) of AS3959.</p>	

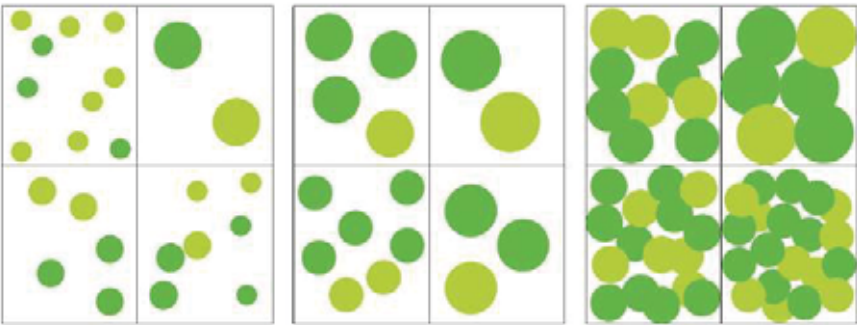
# APPENDIX 1 – VEGETATION ASSESSMENT

<p>Plot: 8</p>	<p>Excluded (Clause 2.2.3.2): Non-Vegetated</p>
<p>Photo ID: 19</p> <p>Non-vegetated public road with managed road reserve.</p> <p>This area has been excluded in accordance with Clause 2.2.3.2 (e) &amp; (f) of AS3959.</p>	
<p>Plot: 9</p>	<p>Excluded (Clause 2.2.3.2): Low Threat Vegetation</p>
<p>Photo ID: 20</p> <p>Public playground managed in a low fuel state.</p> <p>This area has been excluded in accordance with Clause 2.2.3.2 (f) of AS3959.</p>	
<p>Photo ID: 21</p> <p>Road reserve with grassy regrowth less than 100mm in height.</p> <p>This area has been excluded in accordance with Clause 2.2.3.2 (f) of AS3959.</p>	

# APPENDIX 1 – VEGETATION ASSESSMENT

<p>Photo ID: 22</p> <p>Public playing fields managed in a low fuel state.</p> <p>This area has been excluded in accordance with Clause 2.2.3.2 (f) of AS3959.</p>	
<p>Plot: 10 Excluded (Clause 2.2.3.2): Subject Site (to be cleared)</p>	
<p>Photo ID: 23</p> <p>The subject site containing coastal shrubs and grasses which will be cleared as part of the subdivision works.</p> <p>The subject site has been excluded based on its post development condition.</p>	
<p>Photo ID: 24</p> <p>The subject site containing coastal shrubs and grasses which will be cleared as part of the subdivision works.</p> <p>The subject site has been excluded based on its post development condition.</p>	

## APPENDIX 2 – STANDARD FOR ASSET PROTECTION ZONE

Object	APZ Requirements
Fences within the APZ	<ul style="list-style-type: none"> <li>Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).</li> </ul>
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> <li>Should be managed and removed on a regular basis to maintain a low threat state.</li> <li>Should be maintained at &lt;2 tonnes per hectare (on average).</li> <li>Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch &gt;6 millimetres in thickness.</li> </ul>
Trees (>6 metres in height)	<ul style="list-style-type: none"> <li>Trunks at maturity should be a minimum distance of six metres from all elevations of the building.</li> <li>Branches at maturity should not touch or overhang a building or powerline.</li> <li>Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation.</li> <li>Canopy cover within the APZ should be &lt;15 per cent of the total APZ area, as detailed below.</li> <li>Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ.</li> </ul> <div style="text-align: center; margin-top: 10px;">  <p>The diagram shows three sets of four square panels each, representing different canopy cover levels. The first set, labeled '15%', shows sparse, widely spaced green circles of varying sizes. The second set, labeled '30%', shows a moderate density of green circles. The third set, labeled '70%', shows a very dense, overlapping cluster of green circles, representing a continuous canopy.</p> </div>
Shrub and scrub (0.5 metres to six metres in height).  Shrub and scrub >6 metres in height are to be treated as trees.	<ul style="list-style-type: none"> <li>Should not be located under trees or within three metres of buildings.</li> <li>Should not be planted in clumps &gt;5 square metres in area.</li> <li>Clumps should be separated from each other and any exposed window or door by at least 10 metres.</li> </ul>
Ground covers (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul style="list-style-type: none"> <li>Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above.</li> <li>Can be located within two metres of a structure, but three metres from windows or doors if &gt;100 millimetres in height.</li> </ul>
Grass	<ul style="list-style-type: none"> <li>Grass should be maintained at a height of 100 millimetres or less, at all times.</li> <li>Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.</li> </ul>
Defendable space	<ul style="list-style-type: none"> <li>Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.</li> </ul>
LP Gas Cylinders	<ul style="list-style-type: none"> <li>Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building.</li> <li>The pressure relief valve should point away from the house.</li> <li>No flammable material within six metres from the front of the valve.</li> <li>Must sit on a firm, level and non-combustible base and be secured to a solid structure.</li> </ul>

Note: Plant flammability, landscaping design and maintenance should be considered – Refer to explanatory notes of the Guidelines.

APPENDIX 3 – VEHICULAR ACCESS TECHNICAL REQUIREMENTS

TECHNICAL REQUIREMENTS	1. Public Road	2. Emergency Access Way	3. Fire Service Access Rout	4. Battle-Axe and Private Driveways
Minimum trafficable surface	In accordance with A3.1	6m	6m	4m
Horizontal clearance	N/A	6m	6m	6m
Vertical clearance	4.5m			
Minimum weight capacity	15 tonnes			
Maximum grade unsealed road	As per the Subdivision Guidelines.	1:10 (10%)		
Maximum grade sealed road		1:7 (14.3%)		
Maximum average grade sealed road		1:10 (10%)		
Minimum inner radius of road curves		8.5m		



Example of a Public Road

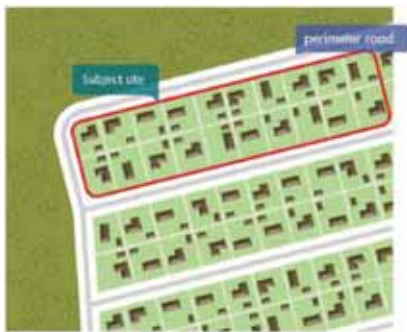


Example of Emergency Access Way



Example of Fire Service Access Way

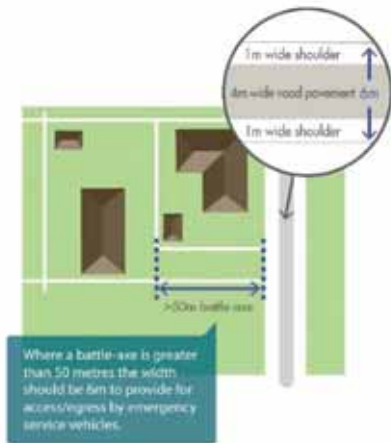
APPENDIX 3 – VEHICULAR ACCESS TECHNICAL REQUIREMENTS



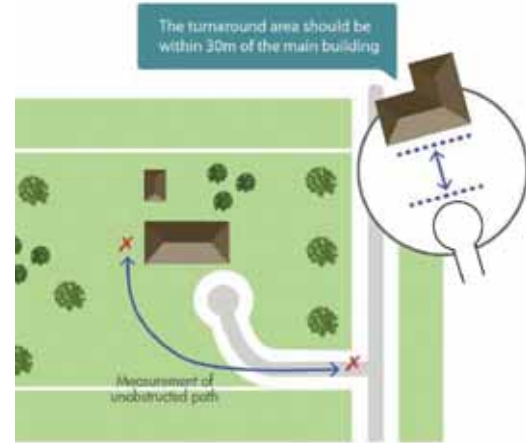
Example of a Perimeter Road



Example of a Cul-de-sac



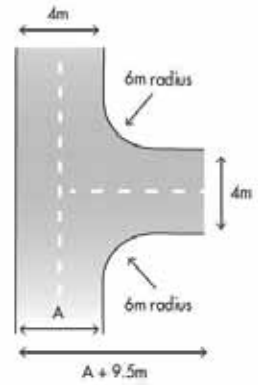
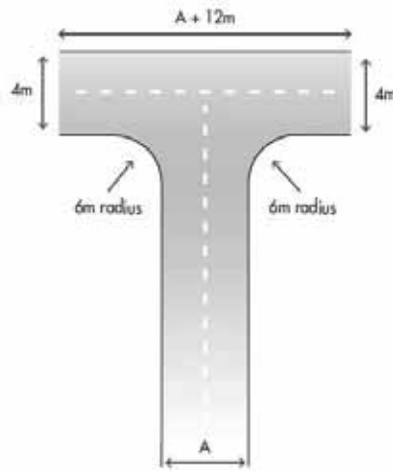
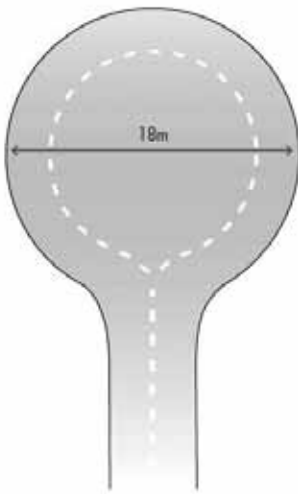
Example of a Battle-Axe Access Leg



Example of a Private Driveway



APPENDIX 3 – VEHICULAR ACCESS TECHNICAL REQUIREMENTS



Example of Turn Around Areas

## APPENDIX 4 – WATER TECHNICAL REQUIREMENTS

### Water Supply Requirements:

Water dedicated for firefighting should be provided in accordance with the below table and be in addition to water required for drinking purposes.

Planning Application Type	Non-Reticulated Areas
Development Application	10,000L per habitable building
Structure Plan / Subdivision: Creation of 1 additional lot	10,000L per lot
Structure Plan / Subdivision: Creation of 3 to 24 lots	10,000L tank per lot or 50,000L strategic water tank
Structure Plan / Subdivision: Creation of 25 lots or more	50,000L per 25 lots or part thereof provided as a strategic water tank(s) or 10,000L tank per lot.

### Construction and Design:

- An above-ground tank and associated stand should be constructed of non-combustible material. The tank may need to comply with AS/NZS 3500.1:2018.
- Below ground tanks should have a 200mm diameter access hole to allow tankers or emergency service vehicles to refill direct from the tank, with the outlet location clearly marked at the surface. The tank may need to comply with AS/NZS 3500.1:2018. An inspection opening may double as the access hole provided that the inspection opening meets the requirements of AS/NZS 3500.1:2018. If the tank is required under the BCA as part of fire hydrant installation, then the tank will also need to comply with AS 2419.
- Where an outlet for an emergency service vehicle is provided, then an unobstructed, hardened ground surface is to be supplied within four metres of any water supply.

### Pipes and Fittings:

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

### Fitting for Above-Ground Water Tanks:

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

### Remote Outlets:

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



Example of good and bad landscaping around a water tank

## APPENDIX 4 – WATER TECHNICAL REQUIREMENTS

### Hydrant Requirements (Water Corp Design Standard 63)

Hydrants shall be screw-down hydrant with built-in isolation valve and installed only on DN100 or larger pipes. Hydrants shall be located:

- so that the maximum distance between a hydrant and the rear of a building envelope, (or in the absence of a building envelope the rear of the lot) shall be 120m and the hydrants shall be no more than 200m apart;
- a maximum of 100m spacing in Industrial and Commercial areas;
- hydrant spacing in rural residential areas where minimum site areas per dwelling is 10,000m<sup>2</sup> (1ha), a maximum 400m hydrant spacing be applied. If area is further subdivided to land parcels less than 1ha, then the residential standard (200m) is to be applied;
- centrally along the frontage of a lot to avoid being under driveways;
- where appropriate at the truncation of road junctions or intersections so that they can serve more than one street and can be readily located;
- on both sides of the major roads at staggered intervals where there are mains on both sides of the road;
- at major intersections on dual multi-lane roads, where two hydrants are to be sited on diagonally opposite corners;
- hydrants should be located at least 20m from traffic calming devices i.e. median slow points or chokers, chicanes, mini traffic circles, and intersection 'pop-outs' to ensure traffic is not impeded;
- in a position not less than 10m from any high voltage main electrical distribution equipment such as transformers and distribution boards (AS 2419.1-2005).
- hydrants with washout bends shall be used only in cul-de-sac situations.

# IMPORTANT FIRE MITIGATION NOTICE

**FIRE MITIGATION MEASURES MUST BE IN PLACE BY  
1 NOVEMBER AND MAINTAINED UNTIL 30 APRIL EACH YEAR.**

This is a requirement under the Bush Fires Act 1954 Section 33.

Failure to comply with this Notice may incur penalties of up to \$5,000 and the works required by this Notice will be carried out at the expense of the owner/occupier.

## **FIRE MANAGEMENT REQUIREMENTS FOR LAND LESS THAN 4000sqm**

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

## **FIRE MANAGEMENT REQUIREMENTS FOR LAND GREATER THAN 4000sqm**

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

## ALL VACANT LAND **GREATER THAN 4000sqm**

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

## Frequently Asked Questions

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

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

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

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

### Do I need a Bushfire Survival Plan?

If you live in, on or near bushland, you are at risk from a bushfire and developing a bushfire survival plan is critical. Visit the Department of Fire and Emergency Services website for information on how to develop a plan for your property [dfes.wa.gov.au](https://dfes.wa.gov.au)

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

All properties are required to be compliant by 1 November. If you think your neighbour's property does not comply with the requirements as outlined in this Notice, please contact the Community Safety and Emergency Management team on 9405 5297.

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

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

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

If it is considered impracticable for any reason to implement any of the requirements of this Notice, an application for a firebreak variation must be made to the City of Wanneroo by no later than 18 October of each year. If permission is not granted, the requirements of this Notice must be complied with.

Visit the City's website [wanneroo.wa.gov.au/firebreakvariation](https://wanneroo.wa.gov.au/firebreakvariation) to apply for a variation.

### Where can I learn more about this Notice and bushfire management?

Visit the City's website [wanneroo.wa.gov.au/fireinformation](https://wanneroo.wa.gov.au/fireinformation) to learn more.

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