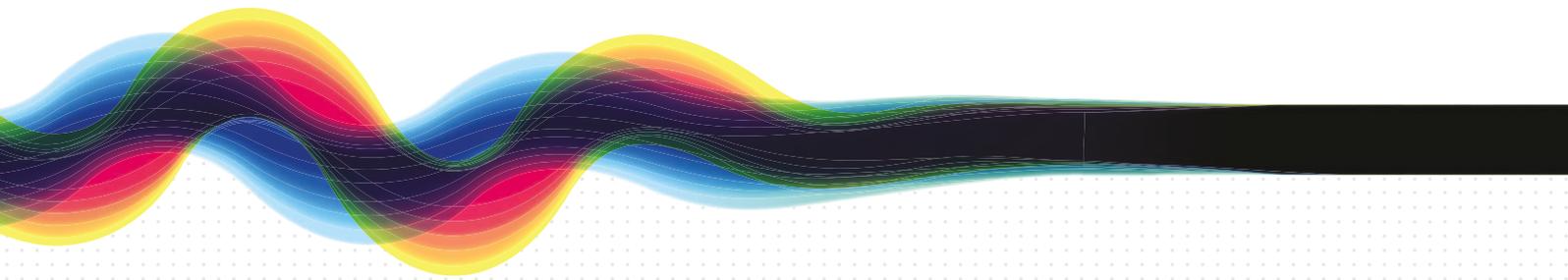


# Lot 9001 Winyama Road, Baynton

## Proposed Amendment to the Baynton West Development Plan

October 2020 | 19-074

Prepared for DevelopmentWA



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Document ID: /Volumes/Graphics/2019/19-074 Baynton West, Lot 9001 Winyama Road/19-074 Baynton Draft Structure Plan Amendment.docx/  
Baynton Draft Structure Plan Amendment OCT20.indd

Issue	Date	Status	Prepared by	Approved by
1	24.04.20	DRAFT	George Ashton	Matt Raymond
2	01.05.20	FINAL	George Ashton	Matt Raymond
3	12.10.20	FINAL V.2	George Ashton	Matt Raymond

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## ENDORSEMENT PAGE

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IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

08 April 2008

In accordance with Schedule 2, Part 4, Clause 28 (2) and refer to Part 1, 2. (b) of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

Date of Expiry: 19 October 2025

## TABLE OF AMENDMENTS

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Amendment No.	WAPC Endorsed Date
Original	09 April 2008
1	17 November 2011
2	10 December 2013
3	15 October 2020



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# 1. Introduction

This report has been prepared by **element**, on behalf of DevelopmentWA, to request an amendment to the existing Baynton West Development Plan (the Development Plan) as it relates to Lot 9001 Winyama Road, Baynton (the subject site). The Development Plan operates as a Structure Plan under Part 4 of the Deemed Provisions contained within the *Planning and Development (Local Planning Schemes) Regulations 2015*, and is the primary document guiding future land use and development outcomes in the Baynton West region. Specifically, this application seeks to amend the existing Development Plan by:

- Replacing the current 'Special Use' zoning that applies to the subject site with a 'Residential' zoning at a density of R15; and
- Including the proposed internal road network within the subject site, and a portion of new public road reserve over the existing drainage reserve to the north of the subject site at Lot Lot 364 Marniyarra Loop, which will operate as a secondary vehicle access point for the purpose of compliance with the Western Australian Planning Commission's (WAPC) Guidelines for Planning in Bushfire Prone Areas.

The above amendments are consistent with the application that has recently been submitted to the WAPC for the Stage 1 subdivision of the subject site, which seeks to deliver a total of 12 residential lots at a density equivalent to R15, and will also support the future Stage 2 subdivision of the balance of Lot 9001 for residential purposes.

*Refer to Figure 1 – Amended Development Plan*

The following report has been prepared to provide an overview of the subject site and the proposed amendment to the existing Development Plan, and an analysis of the consistency of the proposal with relevant planning requirements. This report should be read in conjunction with the original Development Plan report from 2008 and the amended Development Plan report from 2011.

## 1.1 Approvals Required

In accordance with the process set out under Part 4 of the Deemed Provisions contained within the *Planning and Development (Local Planning Schemes) Regulations 2015*, the proposed amendment to the existing Development Plan requires the approval of the WAPC, on the advice of the City of Karratha (the City).



# Amended Development Plan

Dampier Road, Baynton West, Karratha

Date: 13 Oct 2020 Scale: 15000@ A3 1:2500 @ A1 File: 19-074 ST-1 Staff: MR GA GW Checked: GA

**element.**

Level 18, 191 St Georges Terrace, Perth Western Australia 6000.  
 PO Box 3375 Cloisters Square, Perth Western Australia 6850.  
 T. +61 8 9289 8300 | E. hello@elementwa.com.au elementwa.com.au

Figure 1. Amended Development Plan

## 2. Subject Site

### 2.1 Site Description

This Development Plan amendment application relates to Lot 9001 Winyama Road, Baynton, which is located within the City of Karratha municipality.

*Refer to Figure 2 – Location Plan*

Lot 9001 is largely vacant and cleared of vegetation, as shown in Figure 2 (below). There is some existing road infrastructure constructed on Lot 9001, which relates to a previous subdivision approval issued for the site. This existing road infrastructure will be modified, and portions removed, to accommodate the future subdivision of the site, with an application for the first stage of the subdivision of the site having been lodged with the WAPC in March 2020.

*Refer to Figure 3 – Aerial Plan*

The Certificate of Title details for the subject site and the adjoining Lot 364 Marniyarra Loop are summarised in Table 1 (below). Copies of the Certificates of Title are enclosed at Appendix A.

**Table 1 – Certificate of Title Details**

Lot	Survey	Area	Volume/Folio	Registered Proprietor
9001	DP71830	3.9072ha	2781/895	Western Australian Land Authority
364	DP61450	0.3677ha	LR3156/683	State of Western Australia

Lot 364 forms part of Crown Reserve 50192, for the purpose of drainage. The Department of Planning, Lands and Heritage (DPLH) is listed as the Responsible Agency for Reserve 50192, with a Management Order in favour of the City.

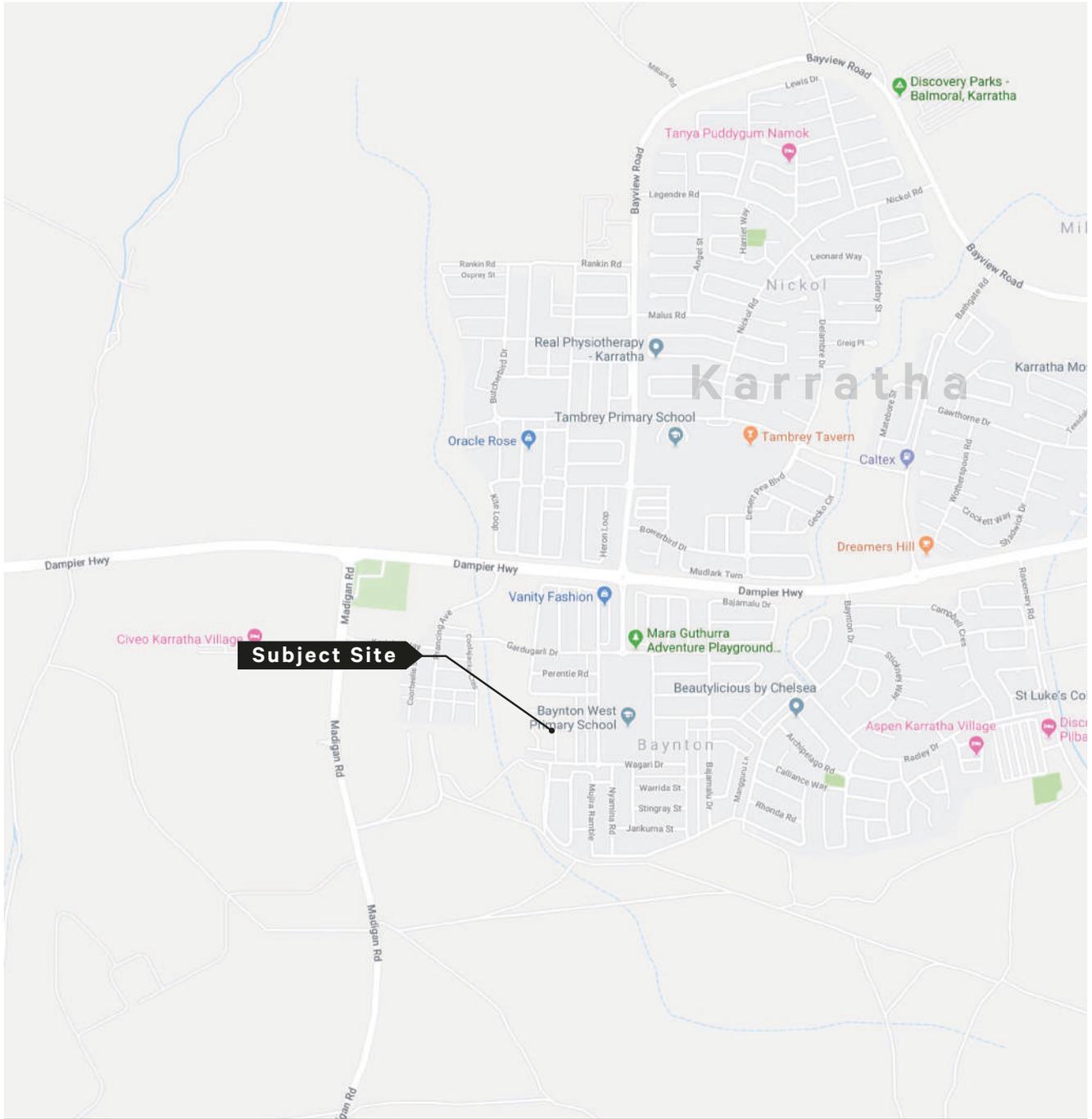
### 2.2 Surrounding Context

The Baynton West Development Plan can be described as covering an area of 96.3 hectares generally bounded by Dampier Road to the north, Baynton Drive to the east, Mujira Ramble to the south, and vacant Crown land to the west.

The subject site is located on the western periphery of the existing Development Plan area, which comprises predominantly single residential development at residential densities of between R12.5 and R40.

The subject site is surrounded by existing residential development to the north, east and south, and vacant crown land to the west.

Baynton West Primary School, Baynton West Park and the Karratha Early Learning Centre are also located to the east of the site, within a 500 metre walkable catchment. Further to the east are the Tambrey Village Shopping Centre, St Luke's Secondary College, Karratha Senior High School and the Karratha Leisureplex.



source: googlemaps

Figure 2. Location Plan



 Subject Site

  
source: nearmaps

Figure 3. Aerial Plan

## 2.3 Environmental and Heritage Considerations

### 2.3.1 Bushfire Risk

A desktop search of the Department of Fire and Emergency Services (DFES) State Map of Bushfire Prone Areas indicates that a portion of the subject site is designated as bushfire prone, as shown in Figure 4 (below).

*Refer to Figure 4 - Extract of DFES State Map of Bushfire Prone Areas*

Accordingly, this report is accompanied by a Bushfire Management Plan (BMP) prepared by Eco Logical Australia, which considers the suitability of the site for residential development. A copy of the BMP is enclosed at Appendix B.

### 2.3.2 Acid Sulphate Soils Risk

Department of Water and Environmental Regulation (DWER) mapping indicates that a portion of the subject site is identified as having a moderate to low risk of acid sulphate soils occurring within 3 metres of the natural soil surface, as shown in Figure 5 (below).

*Refer to Figure 5 - Acid Sulphate Soils Risk Mapping*

### 2.3.3 Contaminated Sites

A desktop search of DWER's Contaminated Sites Database indicates that the subject site is not a registered contaminated site.

### 2.3.4 Heritage

A desktop search of the Aboriginal Heritage Inquiry System (AHIS) indicates that the subject site is not affected by any registered Aboriginal heritage sites.

Similarly, the subject site does not contain any places of identified European heritage significance.



Figure 4. Extract of DFES State Map of Bushfire Prone Areas

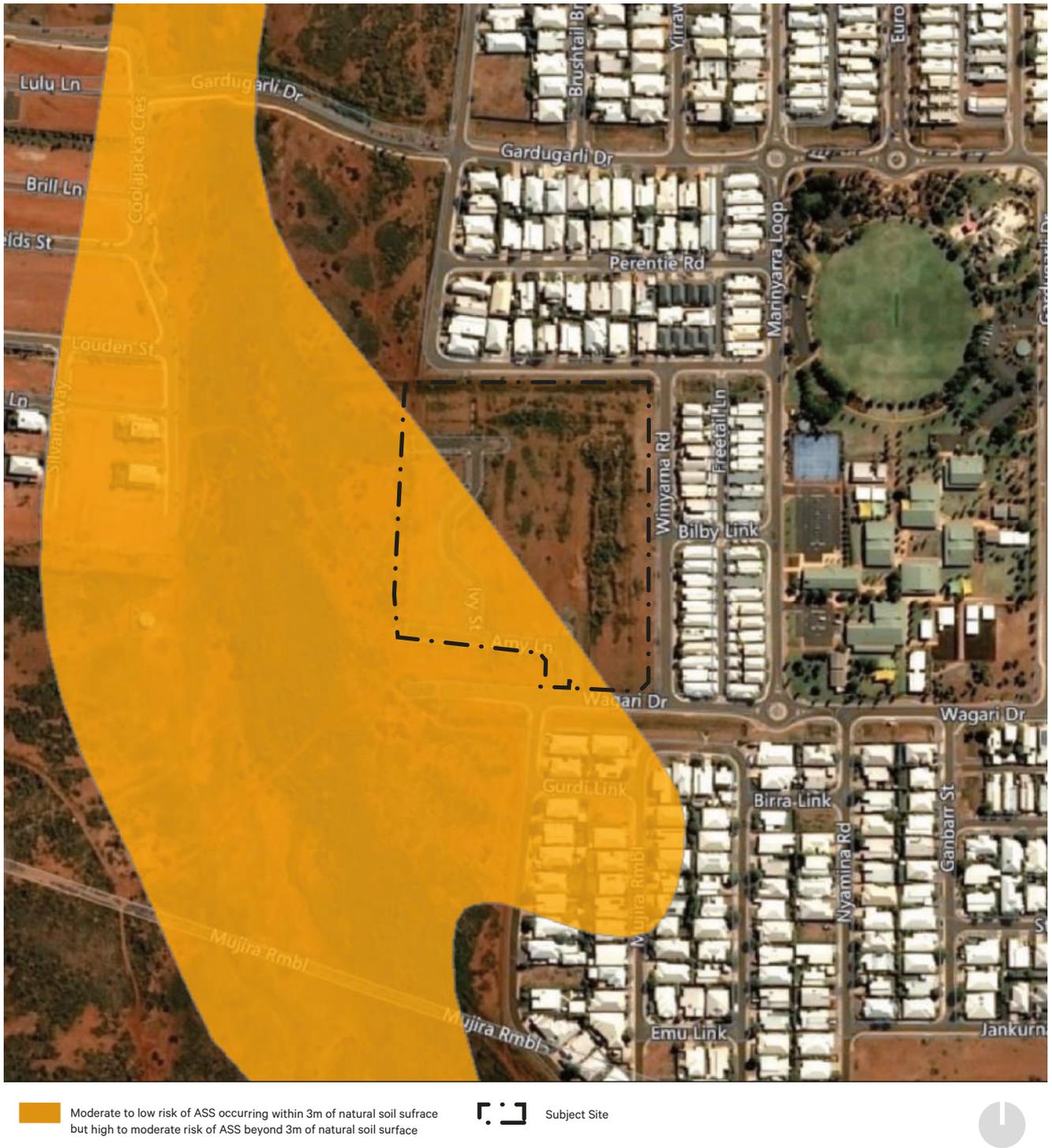


Figure 5. Acid Sulphate Soils Risk Mapping

### 3. Existing Development Plan

The existing Baynton West Development Plan was initially prepared in 2008 and subsequently amended in 2011. The Development Plan operates as a Structure Plan under Part 4 of the Deemed Provisions contained within the *Planning and Development (Local Planning Schemes) Regulations 2015*, and is the primary document guiding future land use and development outcomes in the Baynton West region.

The primary purpose of the Development Plan is to facilitate the subdivision and development of the Baynton West area for residential purposes, with the majority of the Development Plan area identified for residential development at densities of between R12.5 and R40.

Pursuant to the existing Development Plan, the subject site is currently identified as 'Special Use' and allocated a residential density code of R60. The Special Use zoning that applies to the subject site was originally intended to facilitate a range of housing types (including townhouses, apartments and grouped dwellings) at the R60 density, specifically to accommodate resource industry and government staff. The objectives for this Special Use zone under the existing Development Plan are as follows:

- *Minimising crossovers onto the key east-west neighbourhood road and maximising shared access arrangements to all surrounding roads to minimise the potential for traffic conflict;*
- *Maximising future development frontages to the surrounding public roads and drainage areas to encourage passive surveillance of the public domain from habitable rooms and assisting in creating an attractive streetscape;*
- *Appropriately maximising the use of the site area to achieve a mix of housing density across the site in accordance with the R60 density code requirements and other objectives for the site;*
- *Encouraging dwelling orientation and dwelling type that will best suit the local climate and local breezes;*
- *Encouraging both visual and pedestrian connections through the site for the benefit of future residents of the development and the broader locality;*
- *Ensuring the orientation, built form, road and pedestrian networks and landscaping are appropriately designed to achieve integration with surrounding land uses and residential lots.*



## 4. Proposed Development Plan Amendment

### 4.1 Overview of Requested Amendments

The requested amendments to the Baynton West Development Plan relate primarily to the zoning applicable to Lot 9001 Winyama Road, Baynton, and seeks to replace the current 'Special Use' zoning with a 'Residential R15' zoning.

The requested amendments also reflect the proposed internal road network within the subject site. This includes the intent to construct a new public road over the existing drainage reserve to the north of the subject site at Lot 364 Marniyarra Loop, to operate as a secondary vehicle access point for the purpose of compliance with the WAPC's Guidelines for Planning in Bushfire Prone Areas.

*Refer to Figure 1 – Amended Development Plan*

As there is no demand for resource industry and government staff accommodation in the locality, as envisaged under the original Development Plan, the aforementioned amendments to the Development Plan are intended to facilitate the delivery of a residential product that aligns with current market demand for larger residential lots in the locality.

The remainder of the Development Plan shall be retained in its approved state, with the majority of the Development Plan area having already been subject to subdivision and development for residential purposes.

### 4.2 Land Use

As noted above, the proposal seeks to facilitate the development of the subject site for residential purposes, which remains fundamentally consistent with the intent of the Development Plan to further the continued development of the Baynton West area as a predominantly residential suburb.

The resultant land use allocation across the entire Baynton West Development Plan area following inclusion of the requested amendment is summarised in Table 2 below.

**Table 2 – Land Use Summary**

Land Use	Area
Baynton West Development Plan Area	96.3 ha
Subject Site Area	3.90 ha
Residential R12.5	2.01 ha
Residential R15	3.91 ha
Residential R17.5	31.74 ha
Residential R30	10.78 ha
Residential R40	2.71 ha
Residential R40/80	0.92 ha
Special Use Site	0.28 ha
Primary School Site	4.50 ha

Land Use	Area
Community Purpose Site	0.85 ha
Drainage Reserves	8.55 ha
Public Open Space	7.15 ha
<b>Total Subvisible Area</b>	<b>83.25 ha</b>

The requested amendment to the Development Plan will facilitate the development of approximately 38 single residential lots at the R15 density, with 12 of these lots to be delivered as part of the Stage 1 subdivision that has been lodged with the WAPC. This is consistent with current market demand for larger residential lots in the locality and represents a logical extension of surrounding residential development in the Baynton West area. The provision of large lot sizes, direct road access and proximity to a range of commercial, educational, medical and recreational facilities will also provide a high level of amenity for future residents.

The balance of Lot 9001 will be given over to the provision of new public road reserves to service the proposed residential lots in an efficient manner, as shown on the amended Development Plan map at Figure 1. Access to the proposed internal road network will be available from Wagari Drive to the south and Marniyarra Loop to the north, via the new public road reserve proposed on Lot 364 Marniyarra Loop.

With respect to the provision of public open space (POS), this has been dealt with holistically through the existing Development Plan and therefore no additional POS is proposed to be provided as part of the future subdivision of the subject site.

### 4.3 Access

The amended Development Plan retains all existing road connections within the existing Development Plan, which have already been constructed as part of the subdivision and development of the surrounding area. Accordingly, the only proposed change to the existing road network is the inclusion of the proposed internal road network within the subject site, and a section of additional public road reserve over Lot 364 Marniyarra Loop, connecting the proposed internal road network within the subject site to Marniyarra Loop to the north.

The proposed internal road network within the subject site presents as a logical extension of the existing road network in the immediate locality of the subject site and will enable:

- The minimisation of crossovers to existing east-west neighbourhood roads to the north and south of the subject site, as envisaged under the existing Development Plan; and
- The provision of appropriate pedestrian connections through the site for the benefit of future residents and the broader locality.

The provision of a secondary access point over Lot 364 Marniyarra Loop is also necessary to achieve compliance with the WAPC's Guidelines for Planning in Bushfire Prone Areas, which requires the provision of two access and egress points for sites located within bushfire prone areas under the DFES State Map of Bushfire Prone Areas.

### 4.4 Servicing

All residential lots will be serviced with water, power, sewer, drainage and telecommunications, as extensions of the existing infrastructure in surrounding residential areas, in the same manner as envisaged under the existing Development Plan.

The suitability of the land for residential development has also been considered holistically as part of the adoption of the original Development Plan.

It is also noted that the requested amendment to the Development Plan envisages a lower density of development than the existing Development Plan. Therefore, the proposal will not place any additional pressure on servicing infrastructure in the locality that is over and above what is envisaged under the existing Development Plan.

## 5. Planning Context

The following sections provide an analysis of the consistency of the proposed amendment to the Development Plan with the key statutory and strategic planning documents applicable to the Development Plan area.

### 5.1 Pilbara Planning and Infrastructure Framework (2012)

The Pilbara Planning and Infrastructure Framework (the Framework) sets out the strategic direction for the future development of the Pilbara region over the next 25 years.

Karratha is identified as one of the two primary cities in the region, which will form key regional focal points that provide a range of regional centre facilities and services to surrounding towns, and support significant population growth.

More specifically, the Framework identifies the subject site as a suitable area for new residential development to assist in meeting the identified growth targets under the Framework. As such, the proposal to reclassify the subject site under the existing Development Plan from 'Special Use' to 'Residential' is entirely consistent with the strategic direction established under the Framework.

### 5.2 City of Karratha Draft Local Planning Strategy (2015)

The City of Karratha draft Local Planning Strategy (the draft Strategy) has been prepared to guide and facilitate the long-term growth and development of the entire local government area including the towns of Dampier, Karratha, Roebourne, Wickham, Point Samson and Cossack.

Pursuant to the draft Strategy, Karratha is identified as the primary focal point for population growth within the City, with an anticipated total of 5,728 additional dwellings being required to accommodate forecast population growth to 2031. As part of this residential growth objective, Baynton West (inclusive of the subject site) is identified as a key Urban Expansion Area that is earmarked for future residential development and is intended to cater for 1,010 additional dwellings by 2031.

The draft Strategy also advocates for the provision of additional housing choice in the locality to cater for a diverse range of lifestyles, as part of a broader objective to promote the City of Karratha as Australia's most liveable regional city.

In accordance with the above, the requested amendment to the Development Plan is observed to be consistent with the provisions of the draft Strategy, on the basis that the proposal:

- Will facilitate the subdivision and development of the subject site for residential purposes, in accordance with the identified strategic land use direction for the Baynton West area;
- Will assist in meeting the identified dwelling targets for the Baynton West area and the township of Karratha as a whole; and
- Will contribute to the provision of a diverse range of residential accommodation in the region through the provision of a larger lot product that aligns with current market demand in the locality and provides a point of difference to the surrounding residential areas, which typically exhibit maximum single residential lot sizes of approximately 600m<sup>2</sup>.

### 5.3 City of Karratha Local Planning Scheme No. 8

The City of Karratha Local Planning Scheme No. 8 (LPS8) is the primary statutory document guiding land use and development within the City.

Pursuant to LPS8, the subject site is zoned 'Urban Development' and is located within the Karratha Precinct, and within an identified Structure Plan Area (Development Area 9).

*Refer to Figure 6 - Extract of LPS8*

Under LPS8, the development and use of land in the Urban Development zone is to be in accordance with an approved structure plan prepared in accordance with Part 4 of the Deemed Provisions contained within the *Planning and Development (Local Planning Schemes) Regulations 2015*. This is reiterated in Appendix 5 of LPS8, which indicates that development within Development Area 9 is to be in accordance with an approved structure plan that guides subdivision, land use and development outcomes, with the existing Development Plan having been adopted to satisfy the requirement for a structure plan prior to subdivision and development.

Appendix 5 of LPS8 also notes that the primary focus for Development Area 9 is the provision of new residential uses, which is reiterated in the existing Development Plan. As such, the proposal to reclassify the subject site from 'Special Use' to 'Residential' is entirely consistent with the stated land use intent for Development Area 9.

Furthermore, the proposed amendment to the existing Development Plan is observed to be consistent with the general objectives applicable to development within the Karratha Precinct, which include an intent to facilitate residential development that caters for a range of lifestyles and reflects the needs of a broadening population base.

### 5.4 Lot 365 Wagari Drive, Baynton West Detailed Area Plan

In addition to the existing Development Plan, a Detailed Area Plan (DAP) for the subject site was adopted by the City in July 2011. The DAP sets out a range of development provisions pertaining to future residential development on the subject site, including provisions relating to setbacks, open space, building height, fencing, landscaping and the like.

However, the existing DAP is based on the Special Use R60 designation under the Baynton West Development Plan and was aimed at facilitating a mix of single, grouped and multiple dwelling development at the R60 density. Noting that this application seeks to apply a lower density residential across the subject site, to respond to market demand in the locality, it is intended that the existing DAP will be revoked.

### 5.5 State Planning Policy 3.7 – Planning in Bushfire Prone Areas

As noted previously, a portion of the subject site is identified as being within a bushfire prone area under the DFES State Map of Bushfire Prone Areas, which will trigger the application of the requirements under State Planning Policy 3.7 – Planning in Bushfire Prone Areas (SPP3.7) and the associated WAPC Guidelines for Planning in Bushfire Prone Areas (the Guidelines) at the subdivision stage.

Accordingly, this report is supported by a Bushfire Management Plan (BMP) prepared by Eco Logical Australia, a copy of which is enclosed at Appendix B.

The BMP is based on an indicative subdivision layout and identifies that all of the indicative residential lots will be subject to a BAL rating of BAL-19 or lower, with the majority subject to a BAL-12.5 rating. The rating for those lots identified as BAL-19 can also be readily reduced to BAL-12.5 through the provision of appropriate building setbacks.

*Refer to Figure 7 - BAL Contour Map*

Based on the above BAL ratings, the BMP contains a preliminary assessment against the Bushfire Protection Criteria contained within the Guidelines and concludes that the indicative subdivision layout is fully compliant with the relevant acceptable solutions, subject to the inclusion of a secondary vehicle access route to Marniyarra Loop via the provision of a new public road reserve on Lot 364 Marniyarra Loop.

In accordance with the above, the BMP identifies that the future subdivision of the site will appropriately address the identified bushfire risk to the site, and is consistent with the aims and objectives of SPP 3.7, and the associated Guidelines.

For further details, please refer to the accompanying BMP at Appendix B.

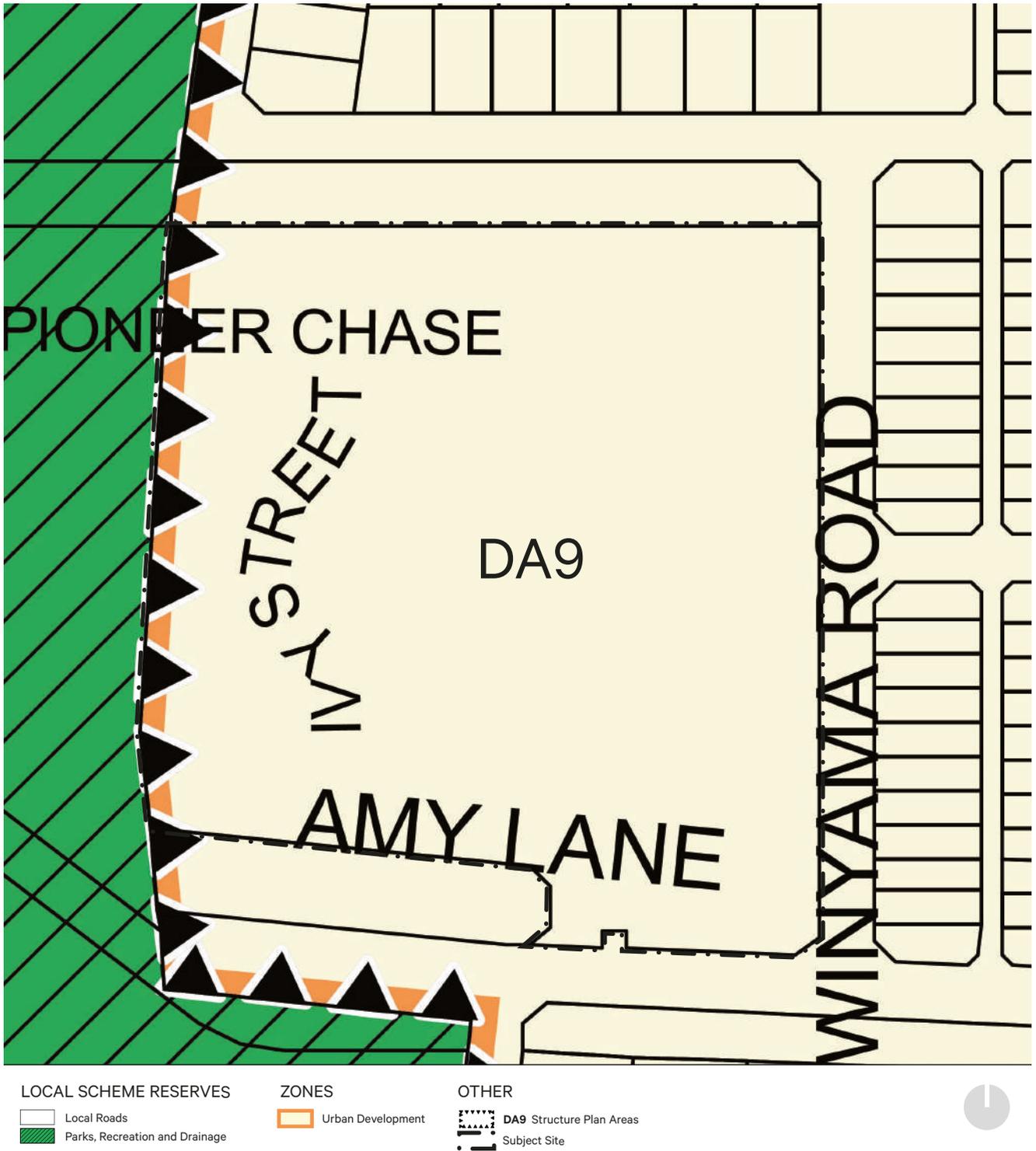
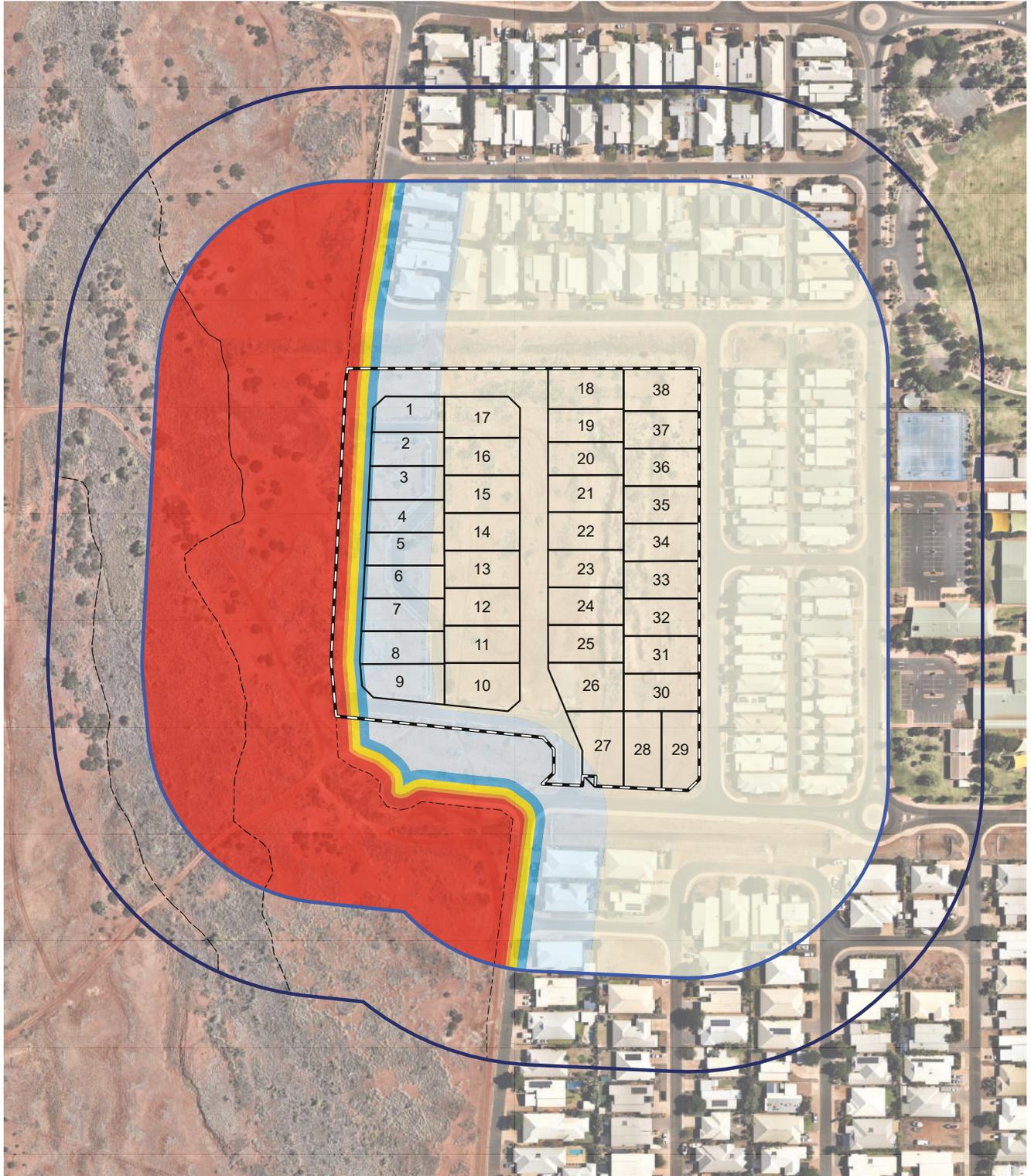


Figure 6. Extract of DFES State Map of Bushfire Prone Areas

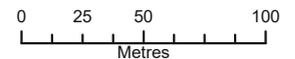


**Legend**

- Subject site
- 100m Assessment Area
- 150m Assessment Area
- Lot Boundary
- Bushfire Hazard Interface

**Bushfire attack level (BAL)**

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



Datum/Projection:  
GDA 1994 MGA Zone 50

Figure 7. BAL Contour Map

## 6. Conclusion

This report has been prepared by **element**, on behalf of DevelopmentWA, to request an amendment to the Baynton West Development Plan (the Development Plan) in relation to Lot 9001 Winyama Road, Baynton, which will:

- Replace the current 'Special Use' zoning that applies to the subject site with a 'Residential' zoning at a density of R15; and
- Including the proposed internal road network within the subject site, and a portion of new public road reserve over the existing drainage reserve to the north of the subject site at Lot Lot 364 Marniyarra Loop.

The proposed amendments are reflective of the purpose and intent of the existing Development Plan as a whole, and the Stage 1 subdivision application that has been lodged for the site. As there is no demand for resource industry and government staff accommodation in the locality, the proposal seeks to facilitate the provision of a residential product that aligns with current market demand for larger residential lots in the locality, which remains fundamentally consistent with the intent of furthering the continued development of the Baynton West area for residential purposes.

This report has demonstrated that the proposed amendment to the Development Plan is consistent with the high level statutory and strategic planning framework applicable to the subject site at both a State and local level, and the proposed Residential zoning represents a logical extension of surrounding land uses. As such, the proposal is observed to be consistent with the principles of orderly and proper planning, and therefore warrants approval.

The existing Development Plan appropriately considers the suitability of the site for residential development and all required utility service connections, including water, sewer, power and telecommunications, are also available to the subject site, as extensions of the existing infrastructure in adjacent residential areas. This ensures that the site is capable of accommodating residential development of the type envisaged under the proposed amendment to the Development Plan.

The requested amendment will help facilitate additional housing opportunities in the emerging Baynton West community, in area that is well serviced by commercial, recreational, educational and community facilities.

In accordance with the above, we respectfully request the City's support for the proposed amendment to the existing Development Plan, and the approval of the WAPC.



## 7. Appendix A

### Certificates of Title



WESTERN



AUSTRALIA

REGISTER NUMBER <b>9001/DP71830</b>	
DUPLICATE EDITION <b>1</b>	DATE DUPLICATE ISSUED <b>1/12/2011</b>

**RECORD OF CERTIFICATE OF TITLE**  
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME **2781** FOLIO **895**

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.



REGISTRAR OF TITLES

**LAND DESCRIPTION:**

LOT 9001 ON DEPOSITED PLAN 71830

**REGISTERED PROPRIETOR:**  
(FIRST SCHEDULE)

WESTERN AUSTRALIAN LAND AUTHORITY OF LEVEL 3, 40 THE ESPLANADE, PERTH  
(AF L773463 ) REGISTERED 30/11/2011

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**  
(SECOND SCHEDULE)

- EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR SEWERAGE PURPOSES TO WATER CORPORATION - SEE DEPOSITED PLAN 71830 AS CREATED ON DEPOSITED PLAN 61450.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.  
\* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.  
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

**STATEMENTS:**

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: DP71830  
 PREVIOUS TITLE: 2716-848  
 PROPERTY STREET ADDRESS: LOT 9001 WINYAMA RD, BAYNTON.  
 LOCAL GOVERNMENT AUTHORITY: CITY OF KARRATHA  
 RESPONSIBLE AGENCY: WESTERN AUSTRALIAN LAND AUTHORITY

NOTE 1: L942612 DEPOSITED PLAN 73695 LODGED.







## 8. Appendix B

### Bushfire Management Plan





Bushfire Management Plan  
Subdivision: Stage 1 Lot 9001 Winyama Road,  
Baynton

---

**DevelopmentWA**

---

## DOCUMENT TRACKING

<b>Project Name</b>	Bushfire Management Plan Subdivision: Lot 9001 Winyama Rd, Baynton
<b>Project Number</b>	19PER-14443
<b>Project Manager</b>	James Leonard
<b>Prepared by</b>	James Leonard
<b>Reviewed by</b>	Daniel Panickar (BPAD37802-L2)
<b>Approved by</b>	Daniel Panickar (BPAD37802-L2 )
<b>Status</b>	<b>Draft</b>
<b>Version Number</b>	<b>v2</b>
<b>Last saved on</b>	<b>24 March 2020</b>

This report should be cited as 'Eco Logical Australia 2019. *Bushfire Management Plan: Subdivision: Stage 1 Lot 9001 Winyama Road, Baynton* . Prepared for Development WA.'

## ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from Element and DevelopmentWA.

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Template 2.8.1

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# 1. Introduction

## 1.1 Proposal details

Eco Logical Australia (ELA) was commissioned by Element on behalf of DevelopmentWA to prepare a Bushfire Management Plan (BMP) to support a subdivision application being prepared for Lot 9001 Winyama Road, Baynton (hereafter referred to as the subject site, Figure 1 and Figure 2). ELA understand that Lot 9001 is to be subdivided into 12 Residential Lots and one balance lot. The subdivision will be undertaken in a two staged approach. Stage 1 is the subdivision of the 12 Residential lots and the remaining Balance Lot. Stage 2 will be the future subdivision of the balance lot. This BMP is only addressing the requirements of the Stage 1 subdivision.

The subject site is within a designated bushfire prone area as per the *Western Australia State Map of Bush Fire Prone Areas* (DFES 2019; Figure 3), which triggers bushfire planning requirements under *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP 3.7; WAPC 2015) and reporting to accompany submission of the subdivision application in accordance with the associated *Guidelines for Planning in Bushfire Prone Areas v 1.3* (the Guidelines; WAPC 2017).

This assessment has been prepared by ELA Bushfire Consultant James Leonard with quality assurance undertaken by Senior Bushfire Consultant, Daniel Panickar (FPAA BPAD Level 3 Certified Practitioner No. BPAD37802-L3).

An initial assessment of the site was undertaken by Element and DevelopmentWA, with direction from ELA on the 13<sup>th</sup> of January 2020. A subsequent on-site assessment was undertaken by ELA on the 26<sup>th</sup> of February 2020.

## 1.2 Purpose and application of the plan

The primary purpose of this BMP is to act as a technical supporting document to inform planning assessment. This BMP is also designed to provide guidance on how to plan for and manage the bushfire risk to the subject site through implementation of a range of bushfire management measures in accordance with the Guidelines.

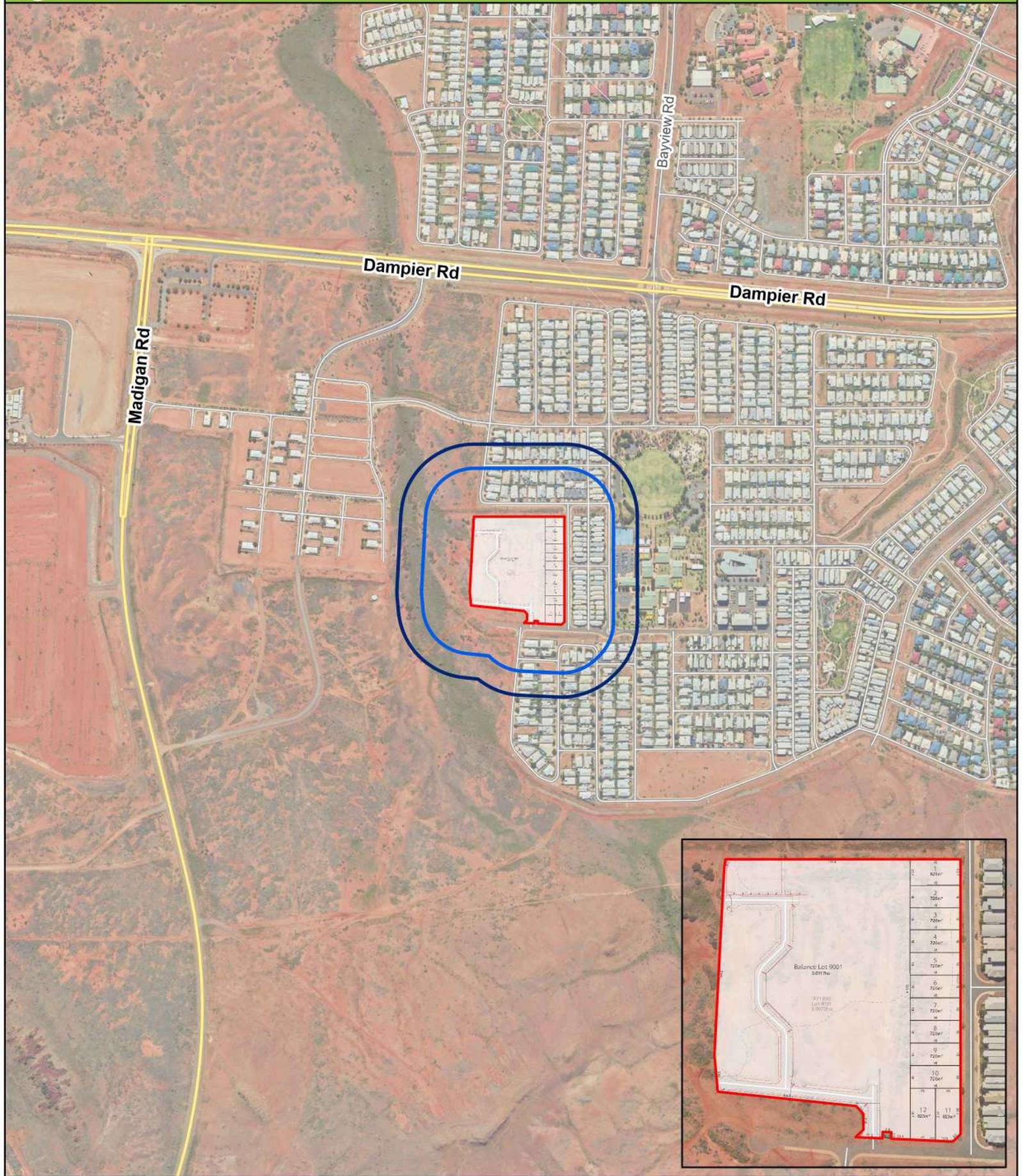
## 1.3 Environmental considerations

Some bushfire prone areas also have high biodiversity values. SPP 3.7 policy objective 5.4 recognises the need to consider bushfire risk management measures alongside environmental, biodiversity and conservation values.

The subject site has been historically cleared of native vegetation to facilitate development. ELA is not aware of any requirements for any environmental approvals for the development to proceed.

No revegetation is proposed within the development, however if this changes, it will be addressed in future BMPs.

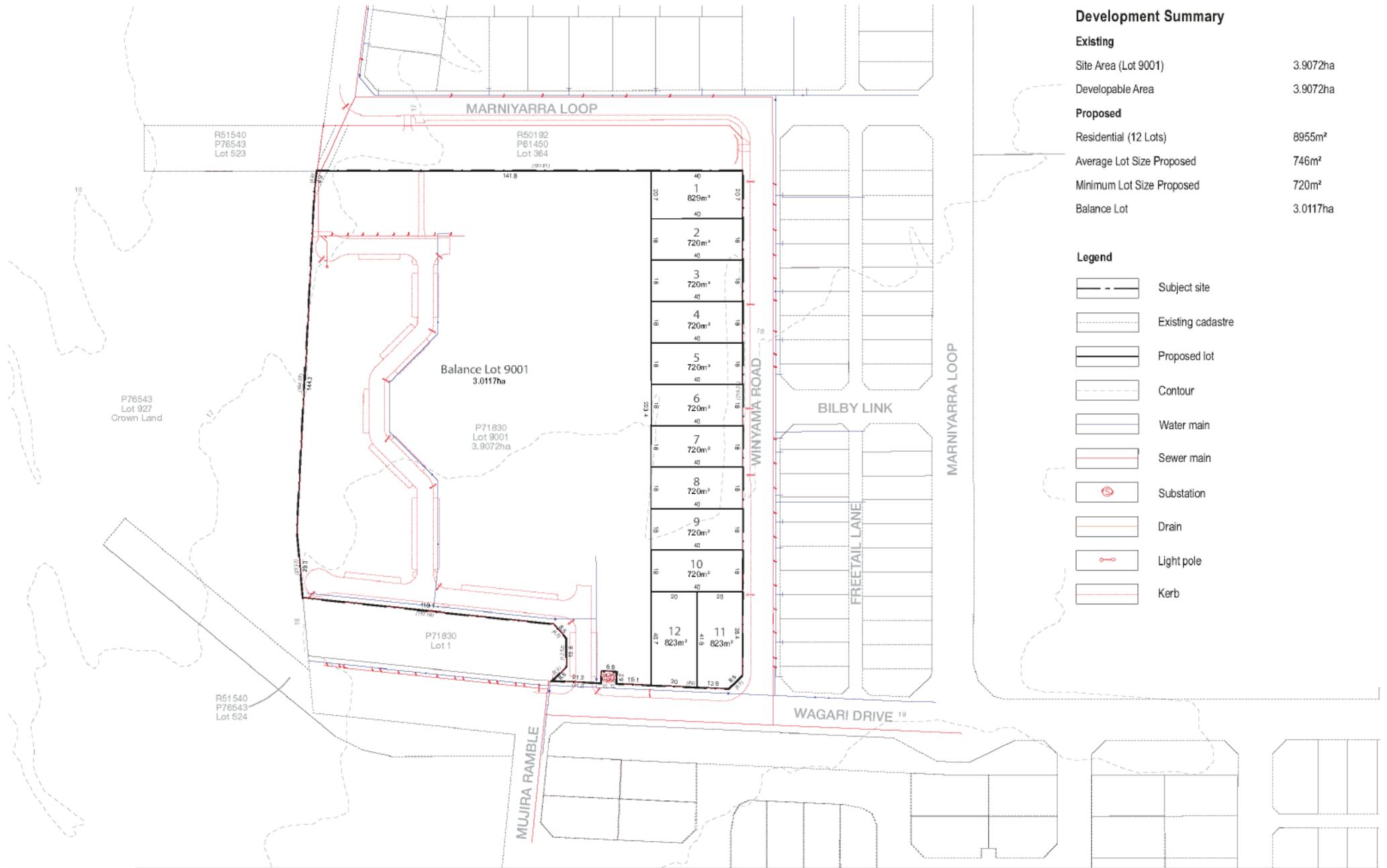
**Figure 1: Site Overview**



- Legend**
- Subject site
  - 100m Assessment Area
  - 150m Assessment Area

0 75 150 300  
Metres  
Datum/Projection: GDA 1994 MGA Zone 50

**Figure 2: Proposed Subdivision**



**Development Summary**

<b>Existing</b>	
Site Area (Lot 9001)	3.9072ha
Developable Area	3.9072ha
<b>Proposed</b>	
Residential (12 Lots)	8955m²
Average Lot Size Proposed	746m²
Minimum Lot Size Proposed	720m²
Balance Lot	3.0117ha

- Legend**
-  Subject site
  -  Existing cadastre
  -  Proposed lot
  -  Contour
  -  Water main
  -  Sewer main
  -  Substation
  -  Drain
  -  Light pole
  -  Kerb

Proposed Subdivision  
Lot 9001 Winyama Road, Baynton

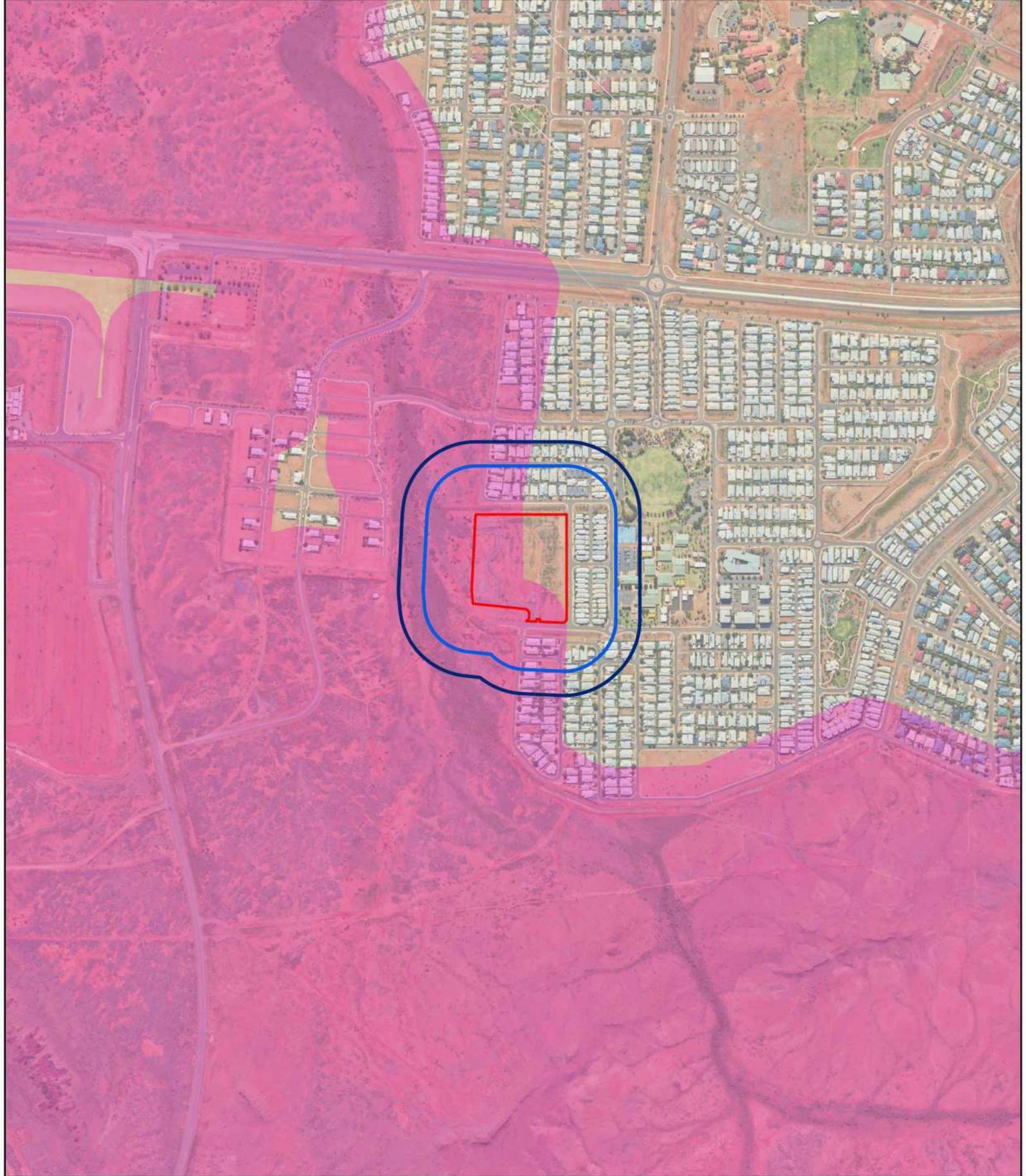
Date: 17 March 2020 Scale: 1:1500 © A3 File: 19-074 SU1

Staff: MR GA Checked: MR



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**Figure 3: Bushfire Prone Areas**



- Legend**
- Subject site
  - 100m Assessment Area
  - 150m Assessment Area
  - Bushfire Prone Mapping (DFES 2019)

0 75 150 300  
Metres  
Datum/Projection:  
GDA 1994 MGA Zone 50



**eco**  
**logical**  
AUSTRALIA  
A TETRA TECH COMPANY

## 2. Bushfire assessment results

### 2.1 Bushfire assessment inputs

The following section is a consideration of spatial bushfire risk and has been used to inform the bushfire assessment in this report.

#### 2.1.1 Fire Danger Index

A blanket rating of FDI 80 is adopted for Western Australian environments, as outlined in AS 3959–2018 and endorsed by Australasian Fire and Emergency Service Authorities Council (AFAC).

#### 2.1.2 Vegetation classification

Vegetation within the subject site and surrounding 150 m (the assessment area) was assessed in accordance with the Guidelines and *AS 3959-2018 Construction of Buildings in Bushfire Prone Areas* (SA 2018) with regard given to the *Visual guide for bushfire risk assessment in Western Australia* (DoP 2016).

An initial assessment of the site was undertaken by Element and DevelopmentWA, with direction from ELA on the 13<sup>th</sup> of January 2020. A subsequent on-site assessment was undertaken by ELA on the 26<sup>th</sup> of February 2020.

The following vegetation classes and exclusions were identified within the assessment area as depicted in Figure 4 and listed below.

- Class C shrubland;
- Class G grassland; and
- Exclusions as per clause 2.2.3.2 (e) and (f) (i.e. non-vegetated areas and low-threat vegetation).

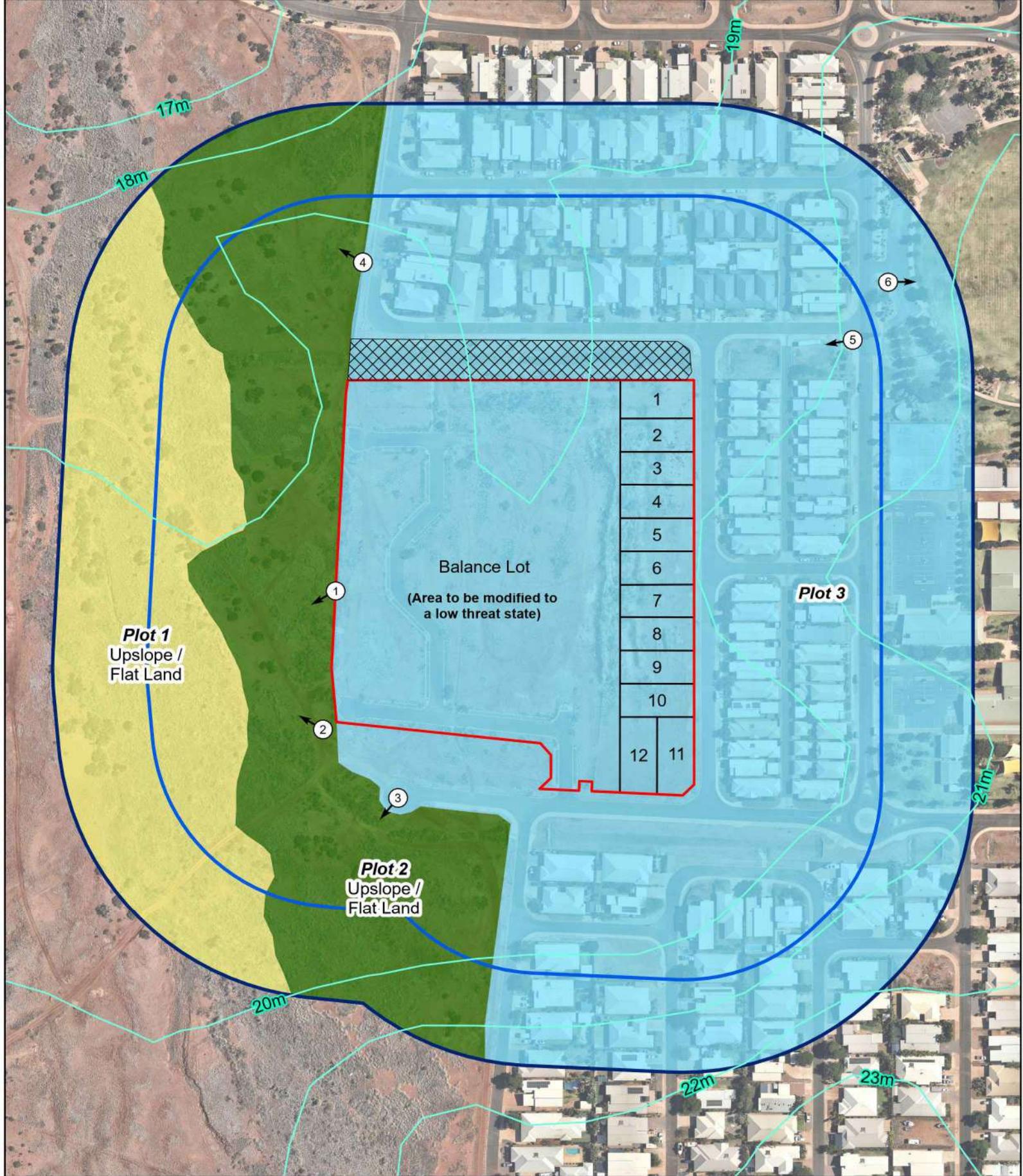
Photographs relating to each vegetation type are included in Appendix A.

A drainage swale was identified to the north of the subject site (Drainage Reserve 50192). It is understood that the drainage swale is under the management of the City of Karratha and is part of the identified works program. This area has been assessed as low threat vegetation (i.e. excluded as per clause 2.2.3.2 (f) of AS3959-2018).

#### 2.1.3 Topography and slope under vegetation

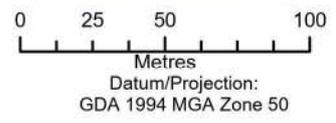
Effective slope under vegetation was assessed for a distance of 150 m from the subject site in accordance with the Guidelines and AS 3959-2018 and is depicted in Figure 4. Slope under all classified vegetation was assessed as upslope / flat.

**Figure 4: Vegetation Classification**



- Legend**
- Subject site
  - Lot Boundary
  - 100m Assessment Area
  - 150m Assessment Area
  - Photo location

- Contour (1m)
  - Drainage Swale (Drainage Reserve 50192)
- Vegetation classification**
- Class C shrubland
  - Class G grassland
  - Excluded as per clause 2.2.3.2 (e) and (f)



## 2.2 Bushfire assessment outputs

A Bushfire Attack Level (BAL) assessment has been undertaken in accordance with SPP 3.7, the Guidelines, AS 3959-2018 and the bushfire assessment inputs in Section 2.1.

### 2.2.1 BAL assessment

All land located within 100 m of the classified vegetation depicted in Figure 4 is considered bushfire prone and is subject to a BAL assessment in accordance with AS 3959-2018.

A Method 1 BAL assessment (as outlined in AS 3959-2018) has been completed for the proposed development and incorporates the following factors:

- State adopted Fire Danger Index (FDI) rating;
- Vegetation class;
- Slope under classified vegetation; and
- Distance between proposed development area and the classified vegetation.

Based on the identified BAL, construction requirements for proposed buildings can then be assigned. The BAL rating gives an indication of the expected level of bushfire attack (i.e. radiant heat flux, flame contact and ember penetration) that may be received by proposed buildings and subsequently informs the standard of construction required to increase building survivability.

### 2.2.2 Method 1 BAL assessment

Table 1 and Figure 5 displays the Method 1 BAL assessment (in the form of BAL contours) that has been completed for the proposed development in accordance with AS 3959-2018 methodology.

**Table 1: Method BAL Calculation (BAL contours)**

Plot and vegetation classification	Effective slope	Hazard separation distance	BAL rating	Comment
Plot 1 Class C Shrubland	Upslope Flat	0-<7	BAL-FZ	No residential lots proposed in this area
		7-<9	BAL-40	No residential lots proposed in this area
		9-<13	BAL-29	No residential lots proposed in this area
		13-<19	BAL-19	No residential lots proposed in this area
		19-<100	BAL-12.5	No residential lots proposed in this area
Plot 2 Class G Grassland	Upslope/flat	0-<6	BAL-FZ	No residential lots proposed in this area
		6-<8	BAL-40	No residential lots proposed in this area
		8-<12	BAL-29	No residential lots proposed in this area
		12-<17	BAL-19	No residential lots proposed in this area
		17-<50	BAL-12.5	No residential lots proposed in this area
Plot 3				
Excluded as per clause 2.2.3.2 (e) and (f) of AS 3959- 2018		N/A		

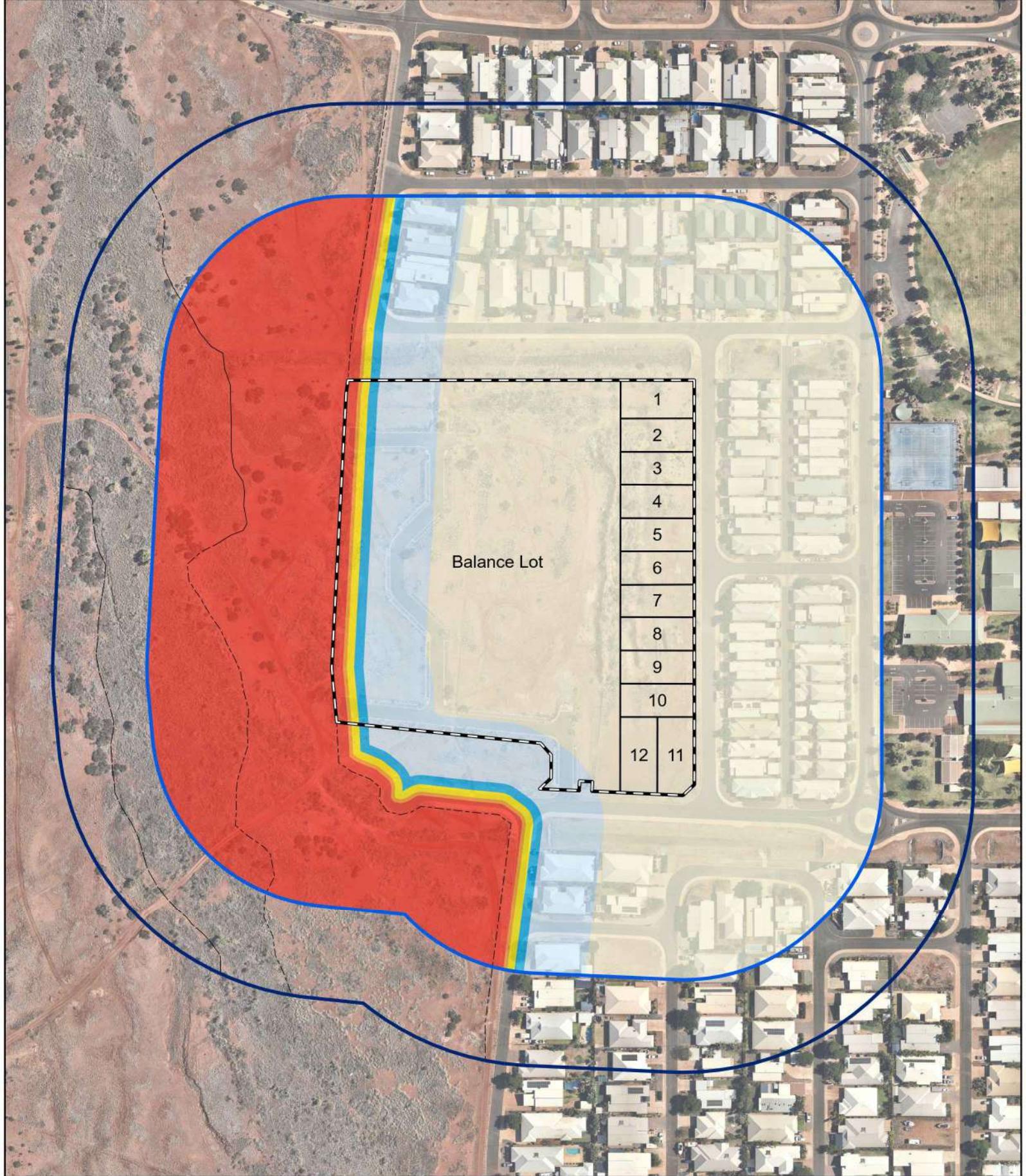
\*a front of lot setback of 2m could result in a BAL-12.5 rating

### 2.3 Identification of issues arising from the BAL assessment

All of the 12 proposed residential lots are located in areas that will be subject to a BAL rating of BAL-LOW, post-development of the subject site. The Balance Lot is subject to BAL-FZ and BAL-40, however, this will be appropriately addressed and responded to in the Stage 2 application and supporting BMP

Should there be any changes in development design or vegetation/hazard extent that requires a modified bushfire management response, then the above BAL ratings will need to be reassessed for the affected areas and documented in a brief addendum to this BMP.

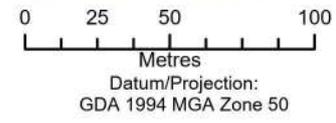
**Figure 5: Bushfire Attack Level (BAL) Contours**



- Legend**
- Subject site
  - 100m Assessment Area
  - 150m Assessment Area
  - Lot Boundary
  - Bushfire Hazard Interface

**Bushfire attack level (BAL)**

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



### 3. Assessment against the Bushfire Protection Criteria

#### 3.1 Compliance

The proposed subdivision is required to comply with policy measures 6.2 and 6.4 of SPP 3.7 and the Guidelines. Implementation of this BMP is expected to meet objectives 5.1 5.4 of SPP 3.7.

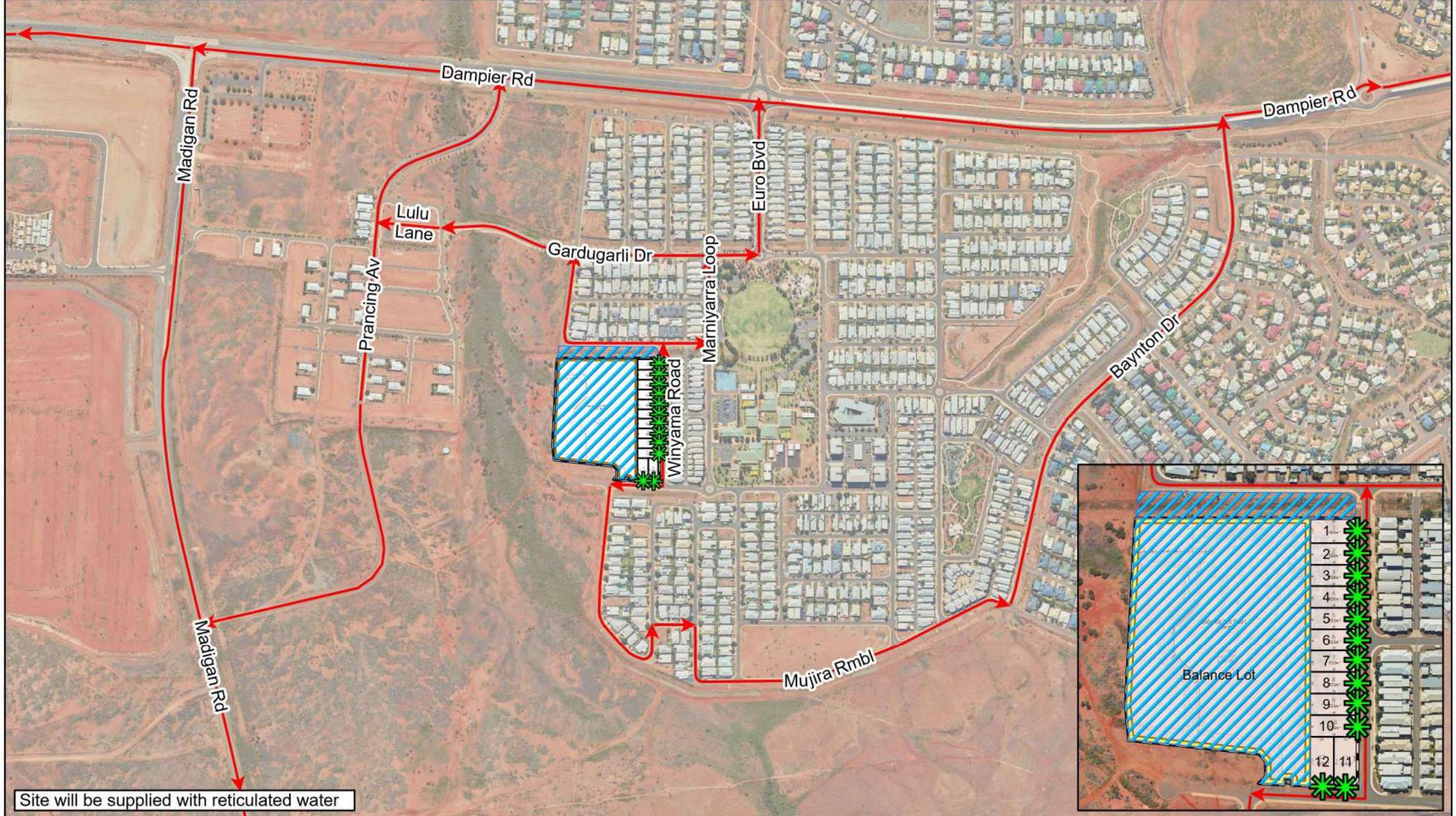
In response to the above requirements of SPP 3.7 and the Guidelines, bushfire management measures, as outlined, have been devised for the proposed development in accordance with Guideline acceptable solutions to meet compliance with bushfire protection criteria.

**Table 2: Summary of solutions used to achieve bushfire performance criteria**

Bushfire Performance Criteria	AS	PS	N/A	Comment
Element 1: Location A1.1 Development location	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Post-development of the subject site, all proposed residential lots are will be located in areas subject to BAL ratings of BAL-LOW. The balance lot will be subject to BAL-FZ; however , however, this will be appropriately addressed and responded to in the Stage 2 application and supporting BMP The proposed development is considered to be compliant with A1.1.
Element 2: Siting and design of development A2.1 Asset Protection Zone (APZ)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	APZs can be maintained between all proposed dwellings and classified vegetation in the form of roads, managed drainage swales and other non-vegetated and landscaped areas (refer to Figure 6). The balance lot will also be maintained to an APZ Standard.  All APZs will be managed in accordance with the requirements of 'Standards for Asset Protection Zones' (WAPC 2017; Appendix B).  The proposed development is considered to be compliant with A2.1.
Element 3: Vehicular access A3.1 Two access routes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All proposed residential lots have direct frontage to public roads which provide access in two directions (Figure 6).  The proposed development is considered to be compliant with A3.1.
Element 3: Vehicular access A3.2 Public road	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No public roads are proposed.
Element 3: Vehicular access A3.3 Cul-de-sac	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No cul-de-sacs are proposed.
Element 3: Vehicular access A3.4 Battle-axe	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No battle axe lots are proposed.
Element 3: Vehicular access A3.5 Private Driveway longer than 50 m	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No private driveways longer than 50 m are proposed.
Element 3: Vehicular access A3.6 Emergency Access way	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Emergency Access Way is proposed as part of this development.

Bushfire Performance Criteria	AS	PS	N/A	Comment
Element 3: Vehicular access A3.7 Fire-service access routes	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No fire service access routes are required or proposed.
Element 3: Vehicular access A3.8 Firebreak width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The balance lot is greater than 2,024 m <sup>2</sup> and therefore a firebreaks will be required (CoK 2020), Figure 6.
Element 4: Water A4.1 Reticulated areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The subject site has a reticulated water supply that will be extended to all proposed lots. The proposed development is considered to be compliant with A4.1. A4.2 and A4.3 are not applicable to this proposed development. .

**Figure 6: Spatial representation of the bushfire management strategies**



- Legend**
- Access point
  - 4m Firebreak
  - Asset Protection Zone (APZ)
  - Access / egress route
  - Subject site
  - Lot Boundary

0 75 150 300  
Metres  
Datum/Projection:  
GDA 1994 MGA Zone 50

## 4. Implementation and enforcement

Implementation of the BMP applies to the developer and the City of Karratha to ensure bushfire management measures are adopted and implemented on an ongoing basis. A summary of the bushfire management measures described in Section 3, as well as a works program, is provided in Table 3. These measures will be implemented to ensure the ongoing protection of life and property assets is achieved. Timing and responsibilities are also defined to assist with implementation of each measure.

**Table 3: Proposed works program**

No	Bushfire management measure	Responsibility
<b>Prior to issue of Titles</b>		
1	Clear and maintain APZ depicted in Figure 6.	Developer
2	Place Section 70A on title of all lots within Bushfire Prone Areas	Developer
<b>Prior to sale or occupancy</b>		
3	Maintain the drainage swale to the north of the subject site, to APZ standards as part of the ongoing maintenance schedule	City of Karratha
4	Maintain the subject site to APZ standards	Developer until development completion.
5	Implement increased building construction standards as per AS3959-2018	Builders
6	Provide reticulated water supply	Developer
7	Comply with current fire control order	Developer
<b>Ongoing management</b>		
8	Maintain vegetation to APZ standard	Individual landowners (within property) Developer (within balance lot) City of Karratha (within public reserves)

## 5. Conclusion

In the author's professional opinion, the bushfire protection requirements listed in this assessment provide an adequate standard of bushfire protection for the proposed development. As such, the proposed development is consistent with the aim and objectives of SPP 3.7 and associated guidelines and is recommended for approval.

## 6. References

City of Karratha (CoK). 2020. *City of Karratha Fire Break Requirements*. Available from: <https://karratha.wa.gov.au/local-fire-information>

Department of Fire and Emergency Services (DFES). 2019. *Map of Bush Fire Prone Areas, [Online]*, Government of Western Australia, available from: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/Pages/default.aspx>.

Department of Planning (DoP). 2016. *Visual guide for bushfire risk assessment in Western Australia*. DoP, Perth.

Standards Australia. 2018. *Construction of buildings in bushfire-prone areas, AS 3959-2018*. SAI Global, Sydney.

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

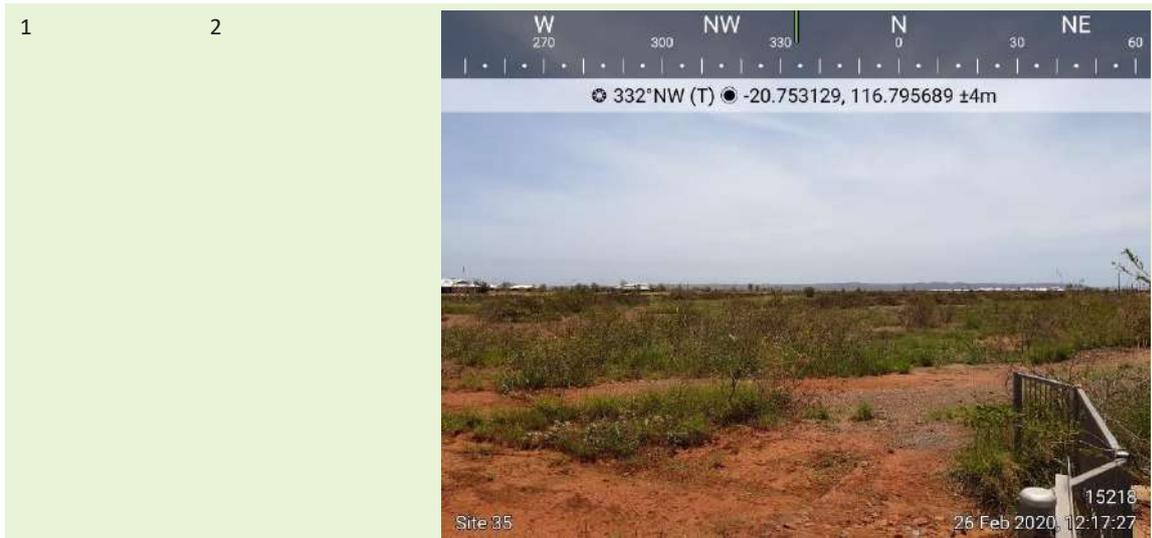
Western Australian Planning Commission (WAPC). 2017. *Guidelines for Planning in Bushfire Prone Areas Version 1.3 (including appendices)*. WAPC, Perth.

## Appendix A – Plates

Plot	Photo ID	Photo and vegetation classification
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Class C shrubland (background of photo)



Class C shrubland (background of photo)

2	3
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**Plot Photo ID Photo and vegetation classification**



Class G grassland – open tussock grassland with less than 10%



Excluded under clause 2.2.3.2 (e) and (f)

Plot	Photo ID	Photo and vegetation classification
3	9	 <p data-bbox="788 797 1182 831">Excluded under clause 2.2.3.2 (e) and (f)</p>

## Appendix B – Standards for Asset Protection Zones

The following standards have been extracted from the *Guidelines for Planning in Bushfire Prone Areas v 1.2* (WAPC 2017).

Every habitable building is to be surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:

**a. 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 fire does not exceed 29kW/m<sup>2</sup> (BAL 29) in all circumstances.

**b. Location:** the APZ should be contained solely within the boundaries of the lot on which a 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 (see explanatory notes).

**c. Management:** the APZ is managed in accordance with the requirements of ‘Standards for Asset Protection Zones’ (below):

- Fences: within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used
- Objects: within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors
- Fine Fuel load: combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare
- Trees (> 5 metres in height): trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy (**Figure 7**).

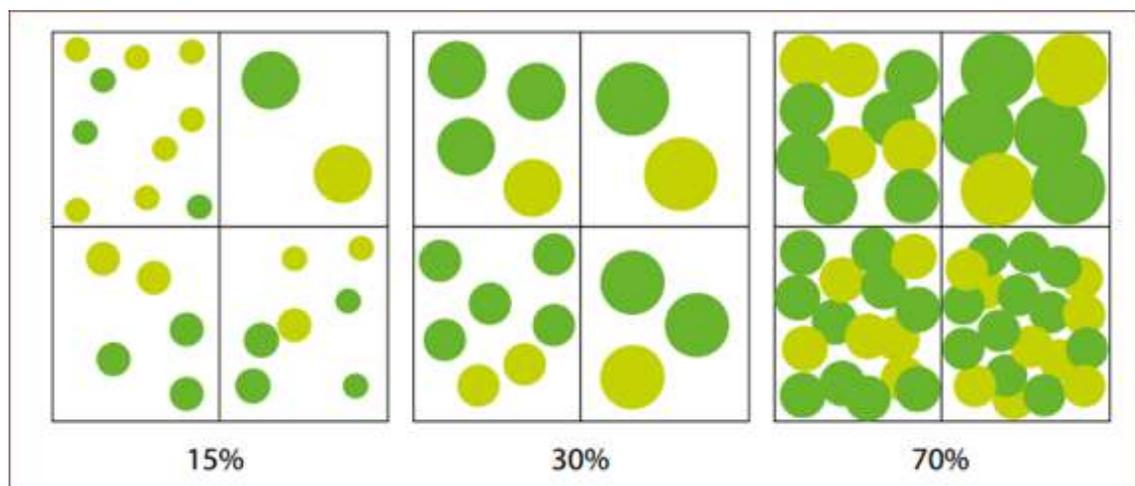


Figure 7: Illustrated tree canopy cover projection (WAPC 2017)

- **Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m<sup>2</sup> in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees
- **Ground covers (<0.5 metres in height):** can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs
- **Grass:** should be managed to maintain a height of 100 millimetres or less.

### **Additional notes**

The Asset Protection Zone (APZ) is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level. Hazard separation in the form of using subdivision design elements or excluded and low threat vegetation adjacent to the lot may be used to reduce the dimensions of the APZ within the lot.

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. The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

## Appendix C - Vehicular access technical requirements (WAPC 2017)

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



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