



AMENDMENT NO. 27

TO THE

EAST WANNEROO (CELL 1)

AGREED STRUCTURE PLAN NO. 3

**RECORD OF AMENDMENT(S) MADE TO THE EAST WANNEROO CELL 1
AGREED STRUCTURE PLAN NO. 3**

Amendment No.	Summary of the Amendment	Date approved by WAPC
1	To recode certain lots located at the southern part of the Agreed Structure Plan area from R20 to R40	1 April 2005
2	Modifies the road layout and the distribution of the Public Open Space areas over Lot 2706 Pinjar Road, Tapping.	1 April 2005
3	Modifies the road layout, density codes and the distribution of Public Open Space over Crown Reserve 27294, Lots 1, 20, 21 and 22 Wanneroo Road and Lots 14, 15, 17, 18 and Pt Lot 101 Clarkson Avenue, Tapping.	1 April 2005
4	Recodes minor portions of Lot 13 Wanneroo Road, Ashby from R20 to R40	1 April 2005
5	Recodes Lots 235-259 Taplow Parade, portion of Lot 25 Pinjar Road and portion of Lot 9006 Pinjar Road, Ashby from R20 to R40.	1 April 2005
6	Recodes minor portions of Lots 25 and 26 Pinjar Road, Ashby from R20 to R40	15 June 2005
7	Recodes the residential portion of Lots 23 & 24 Ashley Road, Tapping from R20 to R30 & R40	27 June 2005
8	Recodes Lot 135 Paxton Way, Ashby from R20 to R40	22 June 2006
9	Modifies the road layout of Lot 501 Conti Road & Lot 502 & Lot 9601 Pinjar Road, Ashby and recodes a portion of that land from R20 to R40.	29 Aug 2006
10	Recodes Lots 118 and 120 Gosford Meander and Lots 121 and 134 Paxton Way, Ashby from R20 to R40	5 Dec 2006
13	Recodes the following lots in Ashby from R20 to R40: Lots 101, 104, 106-116, 123-126, 273-274, 277-278, 283, 285-287, 289, 291-293 Gosford Meander Lots 129-132, 136-137, 246-250, 280-282 Sistina Road Lots 138-144 Hennessy Drive Lots 251-263 Shipton Loop Lots 264-267 Cranley Link Lot 9013 Pinjar Road, Sinagra	30.6.08
11	Rezoned Lot 9602 Pinjar Road, Ashby from Residential to Centre Zone, with a maximum net lettable area of 4600m ² , & Community Purpose Site; and Rezoned Lot 25 Ashley Road, Tapping from Centre Zone to Residential Zone with a density coding of R20	SAT Matter No. DR 171/2008 10.9.08
14	Recodes Lot 208 Grallina Way, Tapping from R20 to R30	10.3.09
16	<ul style="list-style-type: none"> • Deletes the Community Purpose site from Lot 9603 Pinjar Road, Ashby and relocates it on a portion of Lot 9031 Waldburg Drive, Tapping • Recodes a portion of Lot 9031 Ashley Road, Tapping from Residential R20 to R40. 	23.3.10
12	<ul style="list-style-type: none"> • Rezones Lot 19 Clarkson Avenue, Tapping from Residential Precinct to Commercial Zone and Residential Precinct (R40); • Modifies Schedule 1 to include the NLA as 1100m²; and • Includes an additional provision relating to the Commercial Zone 	9.5.11

18	<ul style="list-style-type: none"> • Recodes Lot 9603 Pinjar Road, Ashby from Residential R20 to Residential R30, R40 and R60 excepting for the future R20 lots abutting Conti Road; and • Recodes a portion of Lot 501 Conti Road, Ashby to the east of Fomiatti Street from Residential R40 to Residential R60 and from Residential R20 to Residential R30, R40 and R60 excepting for the future R20 lots abutting Conti Road. 	23.1.12
20	Amends 'Schedule 1 – Retail Floorspace Provision' to permit a maximum retail floorspace limit of 7,000m NLA (rounded to the nearest 50m).	1.3.13
21	Modifies Schedule 1 to include the NLA for Lot 19 Clarkson Avenue, Tapping as 1900m ² .	2.9.13
17	Modifies the road layout on Lots 21 and 24 Carosa Road, Ashby and recodes portion of Lots 21 and 24 Carosa Road, Ashby in the Residential zone from R20 to R25, R40 and R60.	20.11.12
19	Recodes Lot 9017 Lautrec Loop, Ashby from R20 to R30	22.7.13
22	<ul style="list-style-type: none"> • Recodes portions of Lots 9623 and 9624 Pinjar Road, Ashby from Residential R60 to Residential R80 • Identifies areas to be designated as 'Height Limit A' and 'Height Limit B' • Inserts Provision 7 – Residential Design Code Variations 	16.2.15
24	Recodes portion of Lot 1 (96) Clarkson Avenue, Tapping from Residential R20 to Residential R40	30.3.15
23	Recodes the eastern portion of Lot 19 (20) Clarkson Avenue, Tapping from Residential R40 to Residential R60 and inserts a new Clause 4.1.1 – Subdivision and Development Requirements for Residential zoned land.	13.10.16
25	Amends the development requirements for the Commercial zone and modifies Schedule 1 to include the NLA for Lot 19 Clarkson Avenue, Tapping as 4300m ²	13.10.16

**PROPOSED AMENDMENT(S) TO THE EAST WANNEROO CELL 1
AGREED STRUCTURE PLAN NO. 3**

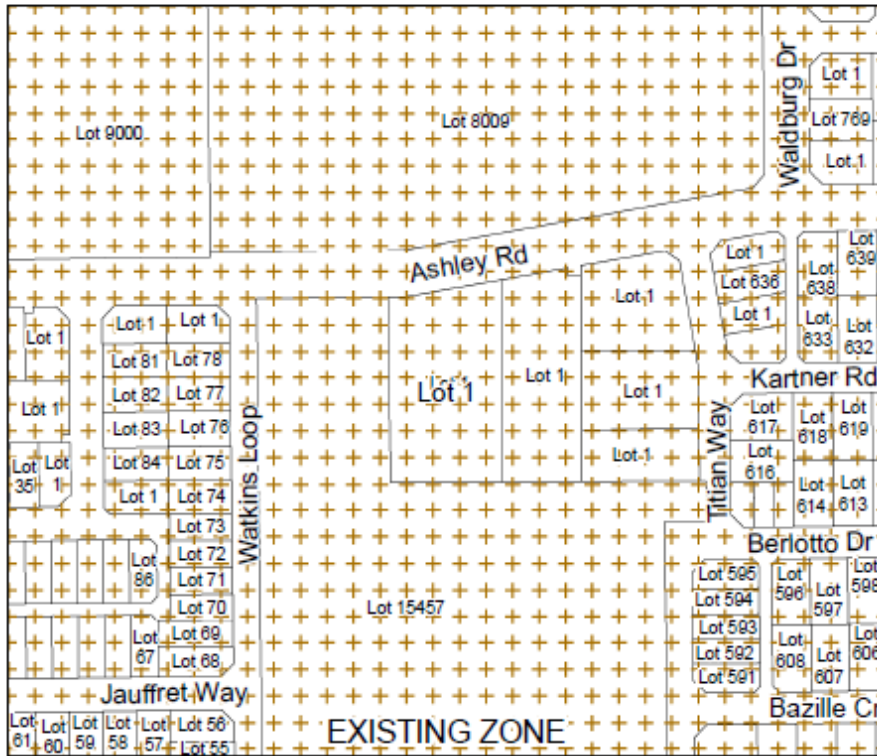
Amendment No.	Summary of the Amendment	Amendment Type	Date approved by WAPC
27	<ul style="list-style-type: none"> • Rezone Lot 1 (76) Ashley Road, Tapping from 'Residential R20' to 'Civic and Cultural'. 	Standard	

**AMENDMENT NO. 27 TO THE EAST WANNEROO CELL 1
AGREED STRUCTURE PLAN NO. 3**

The City of Wanneroo, pursuant to its District Planning Scheme No. 2, hereby amends the above Agreed Structure Plan by:


1. Rezone Lot 1 (76) Ashley Road, Tapping from 'Residential R20' to 'Civic and Cultural', as shown on the amendment map.

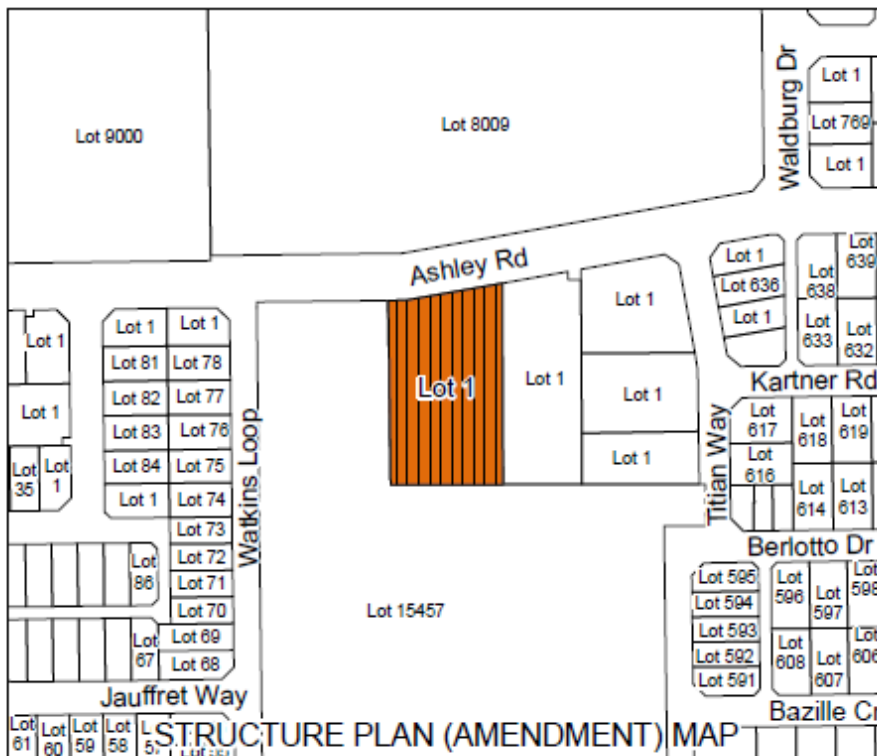
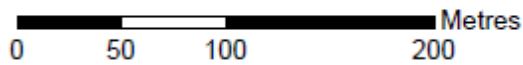
Amendment No.27 to East Wanneroo Cell 1 ASP 3




LOT 1 (76) ASHLEY ROAD TAPPING

LEGEND

 RESIDENTIAL



LEGEND

 CIVIC & CULTURAL



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24/07/2018
KACE : 49334

This Structure Plan Amendment is prepared under the provisions of the City of Wanneroo
District Planning Scheme No. 2

IT IS CERTIFIED THAT THIS STRUCTURE PLAN AMENDMENT NO. 27 TO THE EAST
WANNEROO (CELL 1) AGREED STRUCTURE PLAN NO. 3

WAS APPROVED BY

RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON

.....

Signed for and on behalf of the Western Australian Planning Commission

.....

an officer of the Commission duly authorised by the Commission pursuant to section 24 of the
Planning and Development Act 2005 for that purpose, in the presence of:

..... Witness

..... Date

..... Date of Expiry

PART 2 – EXPLANATORY REPORT

AMENDMENT NO. 27 TO THE EAST WANNEROO (CELL 1) AGREED STRUCTURE PLAN NO. 3

1.0 INTRODUCTION

1.1 Introduction and Purpose

The City of Wanneroo has prepared Amendment No. 27 to the East Wanneroo (Cell 1) Agreed Structure Plan 3 (ASP 3), to amend the zoning of Lot 1 (76) Ashley Road, Tapping from 'Residential' to 'Civic and Cultural'. The City has prepared this ASP 3 amendment for the purpose of facilitating development for a Community Scout Hall on the subject site. The proposed development is considered to fall under the 'Club (Non-Residential)' land use within the City's District Planning Scheme No. 2 (DPS). 'Club (Non-Residential)' is a non-permitted 'X' use under the 'Residential' zone of DPS 2, but is a permitted 'P' use under the Civic and Cultural zone of DPS 2.

The community purpose site forms part of the Public Open Space calculations for East Wanneroo (Cell 1) as depicted within ASP 3.

1.2 Description of the Subject Land

Lot 1 (76) Ashley Road, Tapping is bordered by Ashley Road to the north, residential dwellings to the east and Ashley Park (reserved as a conservation park) to the west and south. The subject site has a land area of 5,000m².

The subject site is vacant with no existing vehicular access or car parking facilities on site. An aerial photograph of the subject site is shown on the map within **Appendix 1** of this Report.

1.3 Current Zoning and Land Use Classification

The land within and surrounding the subject site is zoned 'Urban Development' under DPS 2. Under DPS 2, the 'Urban Development' Zone is intended to designate land for future urban development accommodate existing and enable planning to be flexible and responsive to changing circumstances throughout the developmental stages of the area. DPS 2 also prescribes that the permissibility of uses in the 'Urban Development' zone shall be determined in accordance with the provisions of a relevant structure plan. In this case, a structure plan – being ASP 3 – has previously been prepared and is proposed to be amended as part of this planning proposal.

The subject site has a land use classification of 'Residential' under ASP 3. Land use classifications that are included in ASP 3 correspond to zones referred to in DPS 2. As outlined in Clause 3.8 of DPS 2, the objective of the 'Civic and Cultural' zone in DPS 2 is to make provision for public facilities such as government offices, halls, theatres and art galleries. ASP 3 states that the DPS 2 provisions for the 'Civic and Cultural' zone are to be used to determine the land uses and forms of development allowed on land with the 'Civic and Cultural' land use classification in ASP 3.

ASP 3 does not specifically prescribe land use permissibility for land with a 'Civic and Cultural' land use classification, and therefore land use permissibility is as per the DPS 2 provisions pertaining to 'Civic and Cultural' zoned land.

2.0 AMENDMENT DETAIL AND JUSTIFICATIONS

2.1 Reasons for the Amendment Proposal

The City considers that there is an opportunity for a diversity of land uses within the locality and to provide a community benefit on the currently vacant site. The intended development for a 'Club (Non-Residential)' land use would incorporate shared outdoor activity and community facilities. The facility is intended to be utilised by the public for community groups which serves a community purpose within the area.

Following an advertising process for prospective tenants, expressions of interest were received from Scouts WA requesting the subject site be rezoned accordingly to allow for a 'Club (Non-Residential)' land use to facilitate for the development of a Community Scouts Hall.

2.2 Detail of the Amendment Proposal

The City has identified that the 'Residential' zoning limits the potential range of land uses that could occupy this portion of land. On review, it is considered that modifying the zoning of the subject site from 'Residential' to 'Civic and Cultural' is needed to allow for a more diverse range of land uses to be accommodated.

The City considers that modifying the zoning to 'Civic and Cultural' would allow for development of the 'Club (Non-Residential)' land use that is listed within DPS 2. As outlined above, interest has been received by Scouts WA to develop the subject site for the purpose of a Community Scouts Hall. The proposed development is considered to fall under the 'Club (Non-Residential)' land use within the City's District Planning Scheme No. 2 (DPS). 'Club (Non-Residential)' is a non-permitted 'X' use under the 'Residential' zone of DPS 2, but is a permitted 'P' use under the Civic and Cultural zone of DPS 2.

2.3 Justification for the Proposed Amendments

The City considers the proposed amendment acceptable from a planning perspective for the following reasons:

- The amendment would enable uses on the subject site that would complement, and not be incompatible with, the surrounding properties. It is noted that the subject site is reserved for 'Community Purpose' under Plan 1 of ASP 3. The proposal for a 'Club (Non-Residential) land use' to support a Community Scout Hall is considered to satisfy the intent of the 'Community Purpose' reserve purpose;
- An increased range of uses that could be permissible within ASP 3 would attract a more diverse mix of activity, employment and visitors; and
- The 'Club (Non-Residential)' land use in a 'Civic and Cultural' zone under DPS 2 is a permitted 'P' land use. Therefore, the land use is considered acceptable with what is prescribed for within the 'Civic and Cultural' zone in DPS 2.

2.4 WAPC Structure Plan Framework Document

ASP 3 was initially adopted in April 2005, which was well before the current *Planning and Development (Local Planning Schemes) Regulations 2015* (Regulations) came into effect in October 2015. The Regulations (among other things) effect how structure planning amendment proposals (including proposals for structure plan amendments) are to be assessed and determined, as well as how structure plans are to function in relation to a local planning scheme.

To support the Regulations coming into effect, it is acknowledged that the Western Australian Planning Commission (WAPC) published its Structure Plan Framework (the Framework). The Framework constitutes the manner and form in which a structure plan is to be prepared, pursuant to the Regulations. Clause 17.6 of the Framework (relating to Structure Plan amendments) states:

If amendments are proposed to structure plans approved prior to the Regulations coming into effect, the structure plan is also to be amended to remove any references to statutory provisions and having the force and effect of the scheme.

ASP 3 was adopted prior to the Regulations coming into effect (and prior to the Framework being published) – and contains ‘statutory provisions’. However, the City is not proposing at this stage to amend ASP 3 to align with the Framework (such as removing statutory provisions), for the following reasons:

- Although not a ‘minor’ structure plan amendment in the context of the Framework, the ASP 3 amendment is not considered comprehensive, as the amendment only directly affects the zoning of the subject site; and
- This amendment has been prepared to address an immediate need to review the zoning on the subject site to facilitate for the development of a Community Scouts Hall which satisfies the intent of the ‘Community Purpose’ reserve purpose as identified within ASP 3.

2.5 Bushfire Planning

The subject site has been designated as ‘bushfire prone’ by the Department of Fire and Emergency Services (DFES). The extent that the bushfire prone designation covers the site is shown on the plan included as **Appendix 2**. State Planning Policy 3.7: Planning in Bushfire Prone Areas (SPP 3.7) was released by the WAPC in December 2015 and sets out the minimum requirements for bushfire planning assessments.

SPP 3.7 categorises the minimum standards for bushfire planning assessments for each type of planning proposal such as development applications, subdivision applications or structure plans. SPP 3.7 categorises ‘Local Planning Schemes and Amendments’ as a ‘Strategic Planning Proposal’ and sets out the following requirements for bushfire risk assessment:

- A Bushfire Hazard Level assessment (new or updated) or Bushfire Attack Level (BAL) Contour Map (where the lot layout is already known); and
- The consideration of bushfire protection criteria which may be prepared in conjunction with the BAL Contour Map. This includes an assessment against the following four elements:
 - Element 1: Location;
 - Element 2: Sitting and Design of Development;
 - Element 3: Vehicular Access; and
 - Element 4: Water.

In preparing this amendment, the City requested a BAL Contour Map and an assessment against the bushfire protection criteria, which is included as **Appendix 2**. The BAL Contour Map identifies the bushfire risk associated with the lot and identifies the subject lot having a BAL rating of BAL-12.5 to BAL-Flame Zone (BAL-FZ). Further to the requirements above, section 5.2 of the BMP addresses the acceptable solutions for the four elements relating to the bushfire protection criteria.

3.0 CONCLUSION

Should Amendment No. 27 to ASP 3 be considered favourably by the WAPC, it would allow the accommodation for a 'Club (Non-Residential)' land use on the subject site, to serve a community purpose within the locality.

Amending the zoning of the subject site from 'Residential' to 'Civic and Cultural' will facilitate for the development of the currently vacant site, and would attract new business, employment and visitors to the area whilst still maintaining the integrity of the locality. Ultimately, the proposed amendment will provide an opportunity for the subject site to better contribute toward making the suburb of Tapping more vibrant and active.

As part of this amendment proposal, the City does not consider the need to modify the entire structure plan text as prescribed in the WAPC's Structure Plan Framework. The reason for this conclusion recognises that this proposed amendment is not comprehensive.

As the amendment to ASP 3 is considered to be a strategic planning proposal, a BAL Contour Map and BMP have been provided in accordance with the requirements of SPP 3.7. The BAL Contour Map and BMP adequately identify the bushfire risk associated with Lot 1 (76) Ashley Road, Tapping and has been prepared to facilitate for development of a 'Club (Non-Residential)' land use such as a Community Scout Hall on the subject site. Alternatively, should the City prepare or receive a subdivision or development application proposal other than a Community Scout Hall within the future, the City will at that point may apply the acceptable standard solutions covered within the attached BMP to support such applications.

APPENDIX 1

AERIAL PHOTOGRAPH OF LOT 1 (76)
ASHLEY ROAD, TAPPING



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Ashley Road Community Purpose Site

Date: 17/08/2017

Printed by Spinks, Shane

Scale = 1:1350



APPENDIX 2

**BUSHFIRE ATTACK LEVEL CONTOUR
MAP AND BUSHFIRE PROTECTION
CRITERIA ASSESSMENT FOR LOT 1 (76)
ASHLEY ROAD, TAPPING**



BAL Contour Map & Bushfire Protection Criteria Assessment

Lot 1 (No.76) Ashley Road, Tapping

City of Wanneroo

Job Number:	180605
Assessment Date:	19 July 2018
Report Date:	23 July 2018

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Disclaimer

The measures contained in this Bushfire Management Plan are considered to be minimum standards and they do not guarantee that a building will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather conditions. Additionally, the correct implementation of the required bushfire protection measures (and any associated response/evacuation plan if applicable) will depend, among other things, on the actions of the landowners or occupiers over which Bushfire Prone Planning has no control.


All surveys, forecasts, projections and recommendations made in this report associated with the project are made in good faith based on information available to Bushfire Prone Planning at the time.

All maps included herein are indicative in nature and are not to be used for accurate calculations.


Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents - arising out of the services provided by their consultants.

Document Control

Version	Version Details	Date Submitted
1.0	BAL Contour & BPC	27-Jul-18
		-
		-

Author	Accreditation	Signature
Greg Dunstan	BPAD Level 1 - No. 16382	
Co-author		

- - -

Reviewed/Approved		
Kathy Nastov	BPAD Level 3 - No. 27794	

Document Content Compliance Statement

This Bushfire Management Plan (the Plan) provides the required information to address State Planning Policy No. 3.7: Planning in Bushfire Prone Areas - December 2015 (SPP 3.7), the associated Guidelines for Planning in Bushfire Prone Areas - WAPC 2017 v1.3 (Guidelines), and any additional information as directed by the WA Planning Commission (WA Department of Planning, Lands and Heritage). It is fit for accompanying a planning application.

BAL Contour & BPC Template v1.0

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Executive Summary

Bushfire Prone Planning (BPP Group Pty Ltd) has been commissioned by the City of Wanneroo to prepare a Bushfire Attack Level (BAL) Contour Map and an assessment against the Bushfire Protection Criteria for Lot 1 (No.76) Ashley Road, Tapping. The land consists of a 5000m² Residential zoned Lot for Community Purpose.

Contained within this report, contour mapping is utilised to visually show the potential radiant heat impacts (from bushfire prone vegetation), as separate Bushfire Attack Level contours across the site. The indicative BAL's have been derived for the Lot within the assessed area. The purpose is to inform future development planning by determining or indicating the Bushfire Attack Levels (BAL's) that future buildings, within the Lot, are potentially subject to.

Against the Bushfire Protection Criteria, the decision maker's assessment of a future Proposal will be on the basis of it being able to meet the Acceptable Solutions, once construction and landscaping (if applicable) is complete, as follows:

- For Element 1 'Location', the Lot is able to achieve the acceptable solution (by being located in an area that will on completion be subject to BAL-29 or less);
- For Element 2 'Siting and Design' the Proposal is able to meet the acceptable solutions by habitable buildings being able to achieve an APZ of sufficient size to ensure the radiant heat impact does not exceed BAL-29. APZ's will be managed in a low-fuel state within the Lot and across the neighbouring established residential Lots;
- For Element 3 'Vehicular Access', the location of the Lot is able to meet the current acceptable solution A3.1 and E3.1 (provision of two access routes to different destinations);
- For Element 4 'Water', the Location of the Lot is able to achieve the acceptable solution (it is able to provide reticulated water supply for fire-fighting).

The proximity of vegetation external to the subject site, contained within the Ashley Park (Reserve), has the impact of creating a BAL-FZ and BAL-40 rating on the Lot. Intensification of development or land use are generally not supported where a BAL-F or BAL-40 rating applies to a Lot. However, reasonable area within the Lot (subject site) remains for development where a BAL-29 or lower can be achieved.

1 The Proposal and Purpose of the Plan

Details

Landowner / Proponent:	City of Wanneroo
1.1 Site Address:	Lot 1 (No. 76) Ashley Road, Tapping
Local Government:	City of Wanneroo
Site Area:	5000m ²
No. of Proposed Lots:	N/A
Planning Stage:	N/A
Subdivision Type:	N/A
Overview of the Proposal:	Bushfire planning assessment of Lot 1 (No.76) Ashley Road, Tapping.
Bushfire Prone Planning Commissioned to Produce the Plan by:	City of Wanneroo
Purpose of the Plan:	To inform the construction of future development
For Submission to:	City of Wanneroo

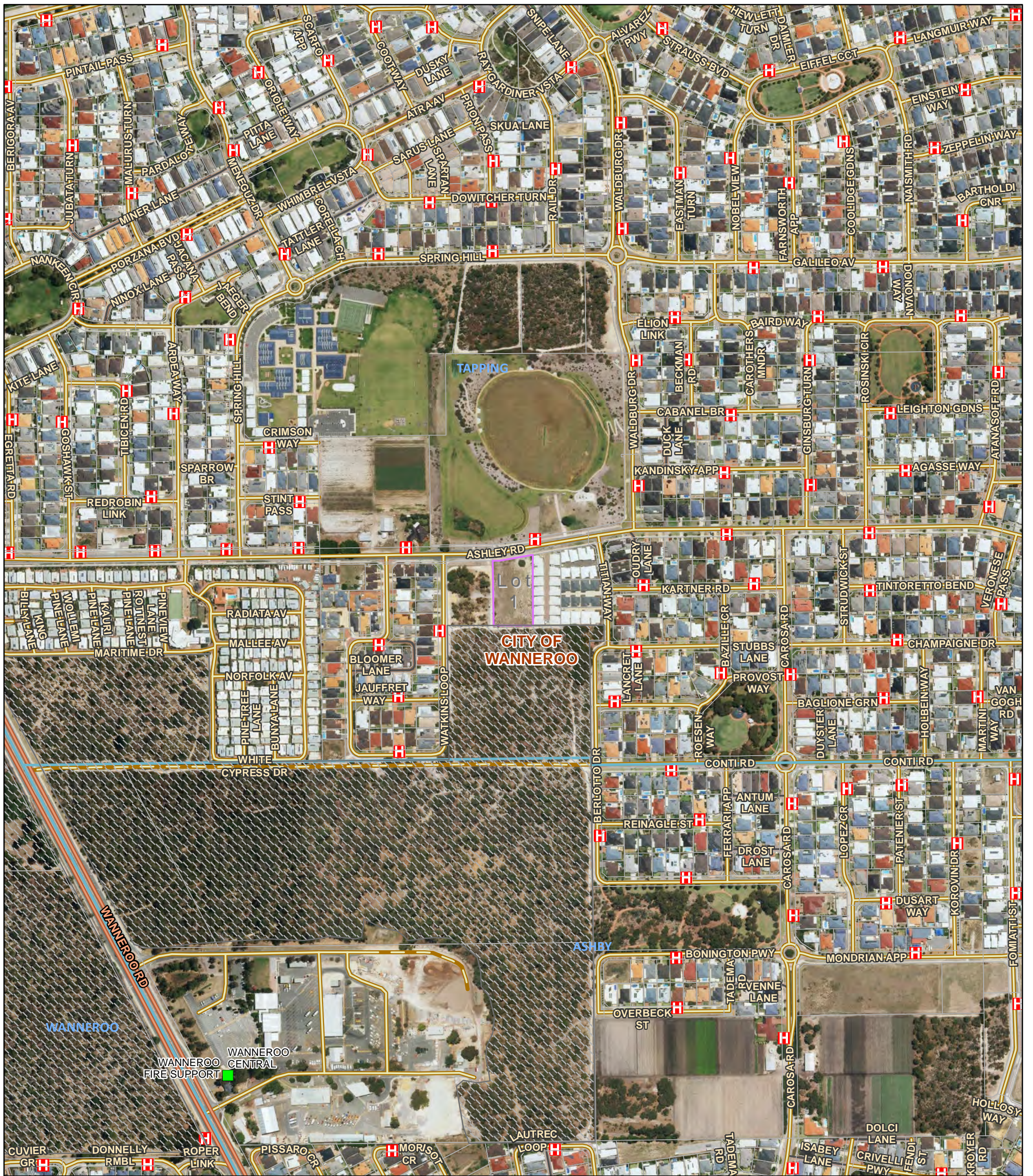
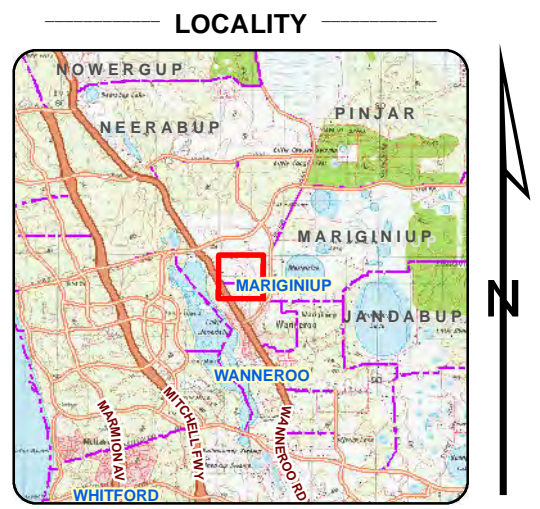


Figure 1.1
Site Location

Lot 1 on Plan 69528
[Street No. 76]
Ashley Road
TAPPING

LEGEND

- Subject Area: Lot 1
- Other Lots
- Bush Fire Brigade
- Hydrant / Standpipe
- Bush Forever sites



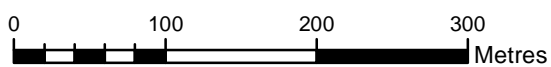
Aerial Imagery : Landgate/SLIP
Image Date : Jan 2018

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre



Map compiled by: Russell Wornes
Date map compiled/updated: 24 Jul 2018

SCALE (A3)



Disclaimer and Limitation: This map has been prepared for bushfire management planning purposes only. All depicted areas, contours and any dimensions shown are subject to survey. Bushfire Prone Planning does not guarantee that this map is without flaw of any kind and disclaims all liability for any errors, loss or other consequence which may arise from relying on any information depicted.

Table 1.1.1: Details of Lot

Details of Lot				
Lot No.	Street No.	Lot Area	Zoning	Map of Bush Fire Prone Areas 2018
1	76	5000m ²	Residential	This site is within a designated bushfire prone area.

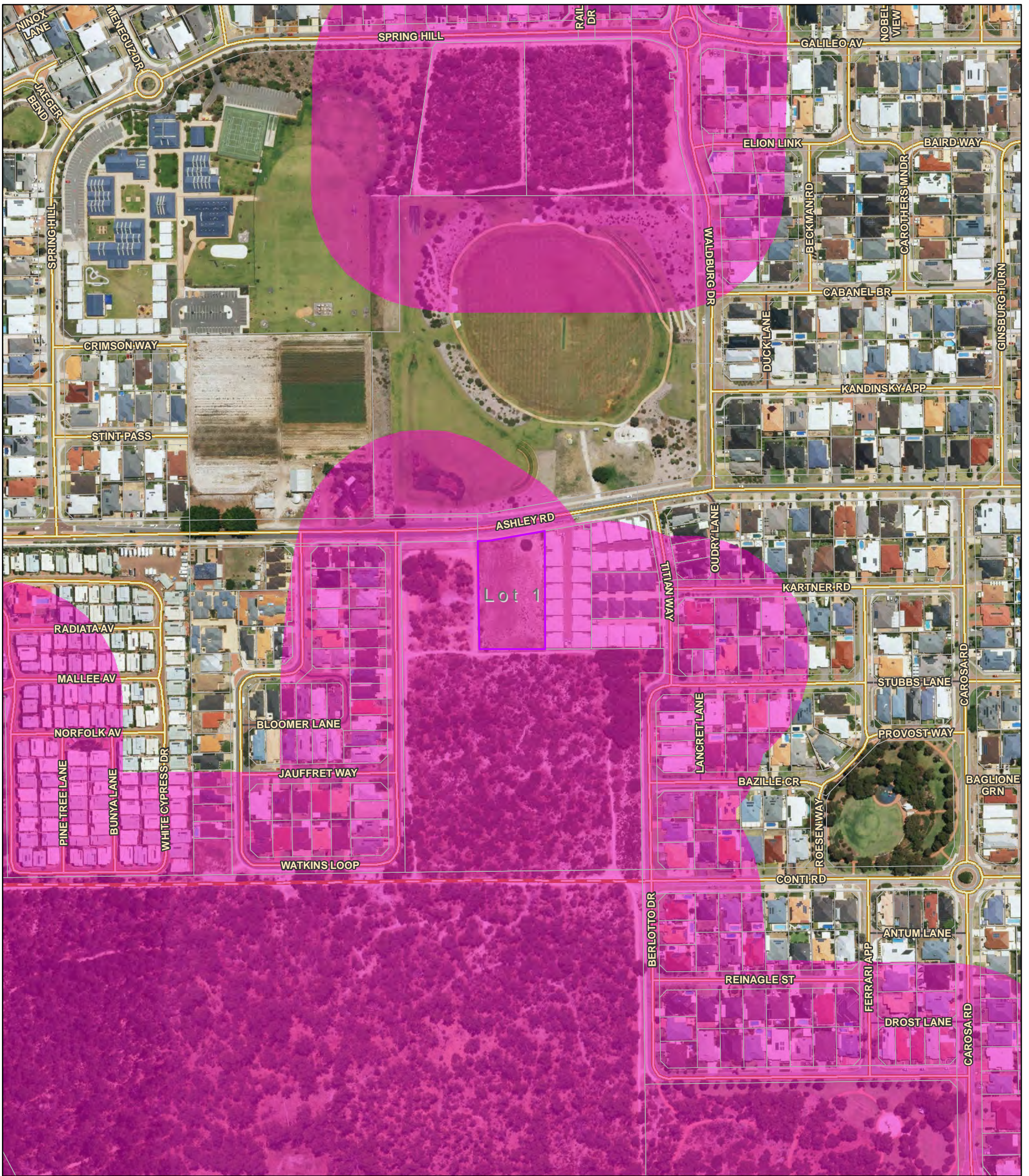



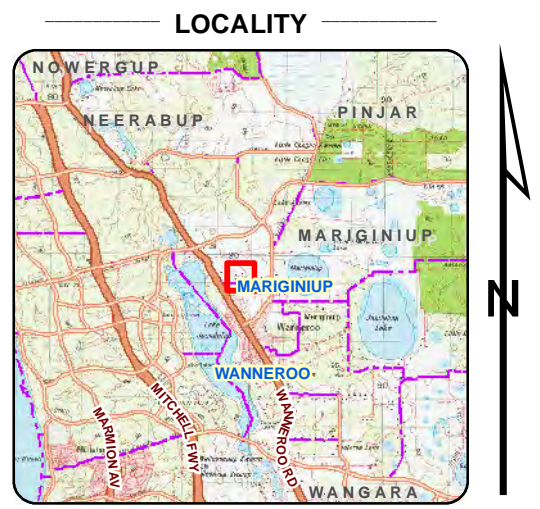


Figure 1.2
Bushfire Prone Area

Lot 1 on Plan 69528
[Street No. 76]
Ashley Road
TAPPING

LEGEND

-  Subject Area: Lot 1
-  Other Lots
-  Bush Fire Prone Areas (2018)



Aerial Imagery : Landgate/SLIP
Image Date : Jan 2018

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre



Map compiled by: Russell Wornes
Date map compiled/updated: 24 Jul 2018



Existing Documentation Relevant to the Construction of this Plan

This section acknowledges any known reports or plans that have been prepared for previous planning stages, that refer to the subject area and that may or will impact upon the assessment of bushfire risk and/or the implementation of bushfire protection measures and will be referenced in this Bushfire Management Plan.

1.2

Relevant Documents		
Existing Document	Copy Provided by Client	Title
Structure Plan	N/A	-
Environmental Report	N/A	-
Landscaping (Revegetation) Plan	N/A	-
Bushfire Risk Assessments	N/A	-

Landscaping (revegetation) within the site requires consideration of the bushfire management planning requirements to ensure an increase in bushfire hazards does not occur, nor alter bushfire attack levels determined for the site. Where an environmental report or landscaping (revegetation) is required as a condition of future development, the bushfire management planning may be required to address any bushfire impacts arising from these subsequent reports or plans.

2 Environmental Considerations

Native Vegetation – Modification and Clearing

2.1 Existing conservation areas that are potentially affected by the development proposal are required to be identified. This may result in vegetation removal/modification prohibition or limitations. These areas include National Parks, Nature Reserves, Wetlands and Bush Forever sites.

'Guidelines' s2.3: "Many 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."

Environmental Protection Act 1986: "Clearing of native vegetation in Western Australia requires a clearing permit under Part V, Division 2 of the Act unless clearing is for an exempt purpose. Exemptions from requiring a clearing permit are contained in Schedule 6 of the Act or are prescribed in the Environmental Protection Regulations" ('Guidelines' s2.3).

The Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act): This Act administered by the Australian Government Department of Environment, provides a national scheme of environment and heritage protection and biodiversity conservation. Nationally threatened species and ecological communities are a specific matter of significance. Areas of vegetation can be classified as a Threatened Ecological Community (TEC) under the EPBC Act and consequently have removal restrictions imposed.

Vegetation Modification and Clearing Assessment

Will on-site clearing of native vegetation be required?	No
Does this have the potential to trigger environmental impact/referral requirements under State and Federal environmental legislation?	N/A
Identified environmental legislation applicable to the Proposal site - No.1:	N/A
Identified environmental legislation applicable to the Proposal site - No.2:	N/A
For the proposed development site, have any areas of native vegetation been identified as species that might result in the classification of the area as a Threatened Ecological Community (TEC)?	N/A
Potential TEC species identified:	N/A

The bushfire assessment and management strategies contained in this report, assume that environmental approval will be achieved or clearing permit exemptions will apply.

Development Design Options

Establishing development in bushfire prone areas can adversely affect the retention of native vegetation through clearing associated with the creation Lots and/or Asset Protection Zones. Where loss of vegetation is not acceptable or causes conflict with landscape or environmental objectives, it will be necessary to consider available design options to minimise the removal of native vegetation.

Minimising the Removal of Native Vegetation		
Design Option	Identified	Adopted
Reduction of lot yield	N/A	N/A
Cluster development	N/A	N/A
Construct building to a standard corresponding to a higher BAL rating as per BCA (AS 3959-2009 and/or NASH Standard)	N/A	N/A
Modify the development location	N/A	N/A

As there is no native vegetation on the site, the future construction of buildings on the Lot will allow for the development of asset protection zones without the clearing of large areas of significant vegetation. The grasses currently on site are able to be maintained below 100mm in height to the extent required and subsequently will rate as low threat.

Impact on Adjoining Land

Is this planning proposal able to implement the required bushfire measures within the boundaries of the land being developed so as not to impact on the bushfire and environmental management of neighbouring reserves, properties or conservation covenants?	N/A at this stage
---	-------------------

Re-vegetation / Retained Vegetation / Landscape Plans

Is re-vegetation of riparian zones and/or wetland or foreshore buffers and/or public open space a part of this Proposal?	No
2.2 Is the requirement for ongoing maintenance of existing vegetation in riparian zones and/or wetland or foreshore buffers and/or public open space a part of this Proposal?	No

In assessing vegetation for bushfire threat, consideration must be given to possible future vegetation changes likely on the site that is being assessed and in particular those that would have the potential to increase the bushfire risk. This may be due to growth of existing vegetation or growth of planned landscape plantings, including future re-vegetation. There must be careful consideration of the creation of vegetation corridors where they join offsite vegetation and which may provide a route for fire to enter an area of future development.

Landscaping or revegetation within the site should be undertaken as to align with the bushfire management planning requirements to ensure an increase in bushfire hazards does not occur, nor alter the indicative bushfire attack levels indicated for the site.

All future onsite landscape planting is to be managed in a low threat state as per the criteria detailed in AS3959-2009 s2.2.3(f) "Low threat vegetation" and all other vegetation remaining on the Lot managed in accordance with the annual City of Wanneroo Firebreak Notice and Fire and Burning Information Brochure. This ensures BAL separation distances can be effectively maintained and bushfire hazards on-site are reduced and maintained at low threat levels.

3 Potential Bushfire Impact Assessment

Assessment Input

3.1.1 Fire Danger Index (FDI) Applied

- 3.1 AS 3959-2009 specifies the fire danger index values to apply for different regions as per Table 2.1. The values used in the model calculations are for the Forest Fire Danger Index (FFDI) and for which equivalent representative values of the Grassland Fire Danger Index (GFDI) are applied as per Appendix B. The values can be refined if appropriately justified.

Table 3.1.1: Applied FDI Value

FDI Value			
Vegetation Area	As per AS 3959 - 2009 Table 2.1	As per DFES for the Location	Value Applied
1 & 2	80	N/A	80

Existing Vegetation Identification, Classification and Effective Slope

Vegetation identification and classification has been conducted in accordance with AS 3959-2009 s2.2.3 and the Visual Guide for Bushfire Risk Assessment in WA (DoP February 2016).

When more than one vegetation type is present, each type is identified separately with the worst-case scenario being applied as the classification. The predominant vegetation is not necessarily the worst-case scenario.

The vegetation structure has been assessed as it will be in its mature state (rather than what might be observed on the day). Areas of modified vegetation are assessed as they will be in their natural unmodified state (unless maintained in a permanently low threat, minimal fuel condition, satisfying AS 3959-2009 s2.2.3.2-f and asset protection zone standards). Vegetation destroyed or damaged by a bushfire or other natural disaster has been assessed on its revegetated mature state.

Effective Slope: Is the ground slope under the classified vegetation and is determined for each area of classified vegetation. It is the measured or determined slope which will most significantly influence the bushfire behaviour in that vegetation as it approaches a building or site. Where there is a significant change in effective ground slope under an area of classified vegetation, that will cause a change in fire behaviour, separate vegetation areas will be identified, based on the change in effective slope, to enable the correct assessment.

Table 3.1.2: Vegetation identification and classification

All Vegetation Within 150 metres of the Lot				
Vegetation Area	Identified Classification Types ¹ or Description if 'Excluded'	Applied Classification ²	Effective Slope Under Classified Vegetation	
			degrees	description
1	Maintained parkland, nature strips & recreational area	Excluded AS3959-2009 2.2.3.2 (f)	0	Upslope
1	Maintained parkland, nature strips & recreational area	Excluded AS3959-2009 2.2.3.2 (f)	1.4	Downslope
2	Woodland (Banksia dominant)	Class B Woodland	0	Upslope
2	Woodland (Banksia dominant)	Class B Woodland	0.8	Downslope
3	Managed land	Excluded AS3959-2009 2.2.3.2 (e) (f)	N/A	N/A
4	Low grasses/weeds	Excluded AS3959-2009 2.2.3.2 (f)	N/A	N/A

Representative photos of each vegetation area, descriptions and classification justification, are presented on the following pages. The areas of classified vegetation are defined, and the photo locations identified on the topography and classified vegetation map, Figure 3.1.

Note¹: As per AS 3959-2009 Table 2.3 and Figures 2.3 and 2.4 a-g

Note²: As per AS 3959-2009 Table 2.3.

It is assumed for the purposes of assessment that Area 4 will be managed in a low threat state, grasses maintained at <100mm in height within the Lot.

Vegetation Area 1	Classification Applied or Exclusion Clause: Excluded AS3959-2009 2.2.3.2 (f)
--------------------------	---

Vegetation Type Present: Low Threat Vegetation

Description / Classification Justification: Off-site maintained parkland, nature strips (mulched and drip reticulated) and mown recreational grass area.



Photo ID: 1a



Photo ID: 1b

Vegetation Area 1	Classification Applied or Exclusion Clause: Excluded AS3959-2009 2.2.3.2 (f)
--------------------------	---

Vegetation Type Present: Low Threat Vegetation

Description / Classification Justification: Off-site maintained parkland, nature strips (mulched and drip reticulated) and mown recreational grass area.



Photo ID: 1c



Photo ID: 1d

Vegetation Area 1	Classification Applied or Exclusion Clause: Excluded AS3959-2009 2.2.3.2 (f)
--------------------------	---

Vegetation Type Present: Low Threat Vegetation

Description / Classification Justification: Off-site maintained parkland, nature strips (mulched and drip reticulated) and mown recreational grass area.



Photo ID: 1e



Photo ID: 1f

Vegetation Area 2	Classification Applied or Exclusion Clause: Class B Woodland
--------------------------	---

Vegetation Type Present: Woodland B-05

Description / Classification Justification: Flooded Gum & Marri with predominantly Banksia canopy, Zamia Palm, Grass Tree and grassy understorey. Tree height upper canopy ~20.0m and lower canopy 6m, foliage cover ~15%, open canopy between trees.



Photo ID: 2a



Photo ID: 2b

Vegetation Area 2

Classification Applied or Exclusion Clause: Class B Woodland

Vegetation Type Present: Woodland B-05 ; Low woodland B-07

Description / Classification Justification: Predominantly Banksia canopy, Grass Tree, Zamia Palm, low shrubs and grassy understorey. Tree height upper canopy ~4.0m to 6.0m, foliage cover ~15%, open canopy between trees.



Photo ID: 2c



Photo ID: 2d

Vegetation Area 2

Classification Applied or Exclusion Clause: Class B Woodland

Vegetation Type Present: Woodland B-05 ; Low woodland B-07

Description / Classification Justification: Marri & Banksia canopy, Zamia Palm, Grass Tree and grassy understorey. Tree height upper canopy ~20.0m and lower canopy 6m, foliage cover ~15%, open canopy between trees.



Photo ID: 2e



Photo ID: 2f

Vegetation Area 2	Classification Applied or Exclusion Clause: Class B Woodland
--------------------------	---

Vegetation Type Present: Woodland B-05 ; Low woodland B-07

Description / Classification Justification: Predominantly Banksia canopy, Grass Tree, Zamia Palm, low shrubs and grassy understorey. Tree height upper canopy ~4.0m to 6.0m, foliage cover ~15%, open canopy between trees.



Photo ID: 2c



Photo ID: 2d

Vegetation Area 2	Classification Applied or Exclusion Clause: Class B Woodland
--------------------------	---

Vegetation Type Present: Woodland B-05 ; Low woodland B-07

Description / Classification Justification: Marri & Banksia canopy, Zamia Palm, Grass Tree and grassy understorey. Tree height upper canopy ~20.0m and lower canopy 6m, foliage cover ~15%, open canopy between trees.



Photo ID: 2e



Photo ID: 2f

Vegetation Area 3

Classification Applied or Exclusion Clause: Excluded AS3959-2009 2.2.3.2 (e) (f)

Vegetation Type Present: Non-vegetated Areas & Low Threat Vegetation

Description / Classification Justification: Residential buildings, foot paths, roads, mown lawns and maintained landscaped gardens.



Photo ID: 3a



Photo ID: 3b

Vegetation Area 4

Classification Applied or Exclusion Clause: Excluded AS3959-2009 2.2.3.2 (f)

Vegetation Type Present: Low Threat Vegetation

Description / Classification Justification: On-site low grasses and weeds <100mm in height. Vegetation within the Lot is able to be maintained and managed in low threat state by the City of Wanneroo.



Photo ID: 4a



Photo ID: 4b

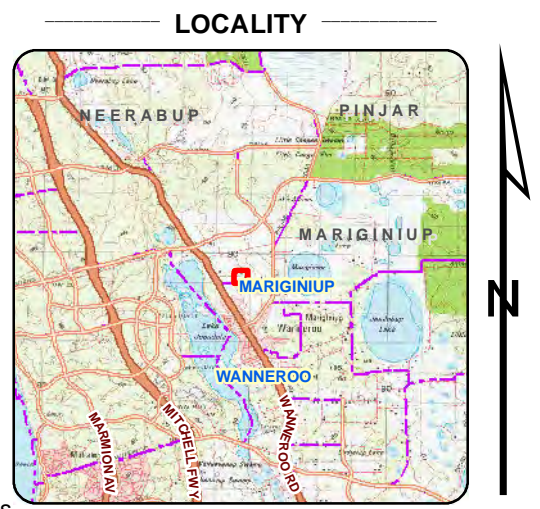


Figure 3.1
Topography &
Classified Vegetation

Lot 1 on Plan 69528
[Street No. 76]
Ashley Road
TAPPING

LEGEND

- Subject Area: Lot 1
- Other Lots
- Assessment Area**
- Vegetation - 150m
- Elevation contour (m)
- Class (B) Woodland
- Exclusion 2.2.3.2
- Photo No., location & direction



Aerial Imagery : Landgate/SLIP
Image Date : Jan 2018

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre

Map compiled by: Russell Wornes
Date map compiled/updated: 24 Jul 2018



Assessment Output

Understanding the Bushfire Assessment Results - Application of Bushfire Attack Levels (BAL)

The BAL rating has a different application in the building environment compared to the planning environment and the BAL assessment can result in a determined BAL or an indicative BAL which have different implications.

3.2

Building versus Planning Applications

In the building environment, a determined BAL rating is required (for the proposed construction) at the building application stage. This is to inform approval considerations and establish the construction standards that are to apply if approved. An indicative BAL rating is not acceptable for a building application.

In the planning environment, assessing the ability of a proposed development site to achieve BAL-29 or less is the objective (as one of the bushfire protection criteria being assessed). The 'development site' is defined by the LPS Amendment Regulations 2015 as "that part of a lot on which a building that is the subject of development stands or is to be constructed".

Therefore, being able to show that a BAL rating of BAL-29 or lower is achievable for a proposed development site (i.e. the building footprint) is an acceptable outcome for that criteria, as established by the bushfire provisions, SPP 3.7 and the associated Guidelines. For planning purposes, this BAL rating could be either indicative or determined.

Determined BAL Ratings

A determined BAL rating is to apply to an existing or proposed construction site (building) and not to a lot or envelope. Its purpose is to state the potential radiant heat flux to which the building will be exposed.

A determined BAL cannot be given for a future building whose location, elevation design and footprint (on a given lot) are unknown. It is not until these variables have been fixed that a BAL can be determined (typically at the development application or building application stage).

The one exception is when a building of **any dimension** can be **positioned anywhere** on a proposed lot or within defined limits within the lot (i.e. building setbacks or building envelope) and always remain subject to the same BAL rating. For this to be the case, there needs to be no classified vegetation either onsite or offsite that if retained could impact upon the determined BAL rating.

Indicative BAL Ratings

When this Plan presents a single indicative BAL rating for a proposed construction site (building), this will be because the construction is still subject to a location within the lot being confirmed and/or a vegetation separation distance being achieved. That is, it will be conditional upon some factor being confirmed at a later stage.

For planning applications associated with proposed lots, the building location, elevation design and footprint have typically not been established. Therefore, indicative rather than determined BAL rating/s will be presented for each lot (with the exception as noted above under 'Determined BAL Ratings').

When this Plan presents a single indicative BAL rating for a lot or building envelope (i.e. an 'area' that is not a located building footprint) it will represent the highest BAL rating affecting that 'area'. The BAL rating of a future building on that 'area' will be dependent on its eventual location.

Otherwise, this Plan will present all BAL ratings for each lot and for each BAL rating, the vegetation separation distances from each area of classified vegetation that are to apply. These distances will be presented as either figures in a table or as a BAL contour map.

From this indicative BAL information, it can be assessed if acceptable BAL ratings (\leq BAL-29) can be achieved for future buildings.

3.2.1 Indicative BAL Results Presented as a Table

Table 3.2.1: Vegetation separation distances required to achieve the stated BAL rating.

Indicative (Achievable) Bushfire Attack Levels for the Lot								
(A BAL rating is achievable if a separation distance range is shown)								
Lot No.	Veg. Area	Applied Vegetation Classification	Effective Slope (degrees)	BAL Method	Indicative BAL's - Separation Distance (m) or Status			
					BAL-29	BAL-19	BAL-12.5	BAL-LOW
(refer to following page for further explanation).								
1	1	Excluded AS3959-2009 2.2.3.2 (f)	0	Method 1	N/A	N/A	N/A	N/A
	1	Excluded AS3959-2009 2.2.3.2 (f)	1.4	Method 1	N/A	N/A	N/A	N/A
	2	Class B Woodland	0	Method 1	14-<20	20-<29	29-<100	Not Achievable
	2	Class B Woodland	0.8	Method 1	17-<25	25-<35	35-<100	Not Achievable
	3	Excluded AS3959-2009 2.2.3.2 (e)	N/A	Method 1	N/A	N/A	N/A	N/A
	4	Excluded AS3959-2009 2.2.3.2 (f)	N/A	Method 1	N/A	N/A	N/A	N/A

Explanation of Cell Entries in Table 3.2.5

Separation Distance - Range in Metres: Indicates the minimum to maximum distance that a building will need to be located from the relevant area of classified vegetation to achieve the corresponding BAL rating.

Not Achievable: Indicates that there is no physical means of achieving the required separation distance. This includes the situation of when the relevant classified vegetation is offsite, owned by another party and therefore cannot be modified as the proponent has no control.

Potential Environmental Restrictions: Indicates that the modification of existing native vegetation is likely or is, prohibited or restricted - or requires approval. These controls can be put in place by the Department of Environment (Australian Government), the Department of Environment Regulation, the Department of Parks and Wildlife, or by any local government for a variety of purposes including biodiversity, habitat retention, protecting ecological communities and other conservation purposes.

Risk of Ember Attack: Indicates that the subject site is in a bushfire prone area and as a result will always be at risk of an ember attack - even though the assessed BAL rating is BAL-LOW. A BAL rating is a measure of radiant heat exposure, not embers – but embers are very likely to exist at greater distances than 100 metres, the distance to classified vegetation that corresponds to a BAL-Low rating. Bushfire Prone Planning recommends to at least construct to the standard required by a BAL-12.5 rating to improve building survival from an ember attack.

Interpretation: The results showing the required separation distance for each achievable BAL rating can be used to locate a building site on a lot with respect to the relevant area of classified vegetation. Moving the proposed construction and/or modifying/removing classified vegetation will provide a vegetation separation distance from each bushfire prone vegetation area which will dictate the BAL rating achieved. It is the highest BAL rating that impacts the subject building or site that will apply to that building or site.

3.2.2 Indicative BAL Results Presented as a BAL Contour Map

Interpretation of the Bushfire Attack Level (BAL) Contour Map

The contour map will present different coloured contour intervals constructed around the classified bushfire prone vegetation. These represent the different Bushfire Attack Levels that exist at varying distances away from the classified vegetation. Each BAL represents a set range of radiant heat flux (as defined by AS 3959-2009) that can be generated by the bushfire in that vegetation at that location.

The width of each shaded contour (i.e. the distance interval) will vary and is determined by consideration of variables including vegetation type, fuel structure, ground slope, climatic conditions. They are unique to a site and can vary across a site. The width of each contour is a diagrammatic expression of the separation distances from the classified vegetation that apply for each BAL rating, for that site. A building (or 'area') located within any given BAL contour will be subject to that BAL rating and potentially multiple BAL ratings of which the highest rating will be applied.

Separation Distances Calculated to Construct the BAL Contours

Table 3.2.2: Vegetation separation distances applied to construct the BAL contours.

Calculated Vegetation Separation Distances									
Vegetation Area	Vegetation Classification	Effective Slope	Site Slope (Degrees)	BAL Assessment Method Applied ¹	BAL Rating and Corresponding Separation Distance ² (metres)				
					BAL-FZ	BAL-40	BAL-29	BAL-19	BAL12.5
1	Excluded AS3959-2009 2.2.3.2 (f)	U/S	0	Method 1	N/A	N/A	N/A	N/A	N/A
1	Excluded AS3959-2009 2.2.3.2 (f)	D/S	1.4	Method 1	N/A	N/A	N/A	N/A	N/A
2	Class B Woodland	U/S	0	Method 1	<10	10-<14	14-<20	20-<29	29-<100
2	Class B Woodland	D/S	0.8	Method 1	<13	13-<17	17-<25	25-<35	35-<100
3	Excluded AS3959-2009 2.2.3.2 (e)(f)	N/A	N/A	Method 1	N/A	N/A	N/A	N/A	N/A
4	Excluded AS3959-2009 2.2.3.2 (f)	N/A	N/A	Method 1	N/A	N/A	N/A	N/A	N/A

¹ Method 1 as per AS 3959-2009 Table 2.4.3 and Method 2 as per AS 3959-2009 Appendix B. The input variables applied, other than the calculation model defaults, are presented in Section 3.1 of this Plan.

² Copies of the summaries of Method 2 calculation inputs and outputs are presented in the Appendices if applicable.

Note: D/S = Downslope U/S = Upslope C/S = Cross Slope

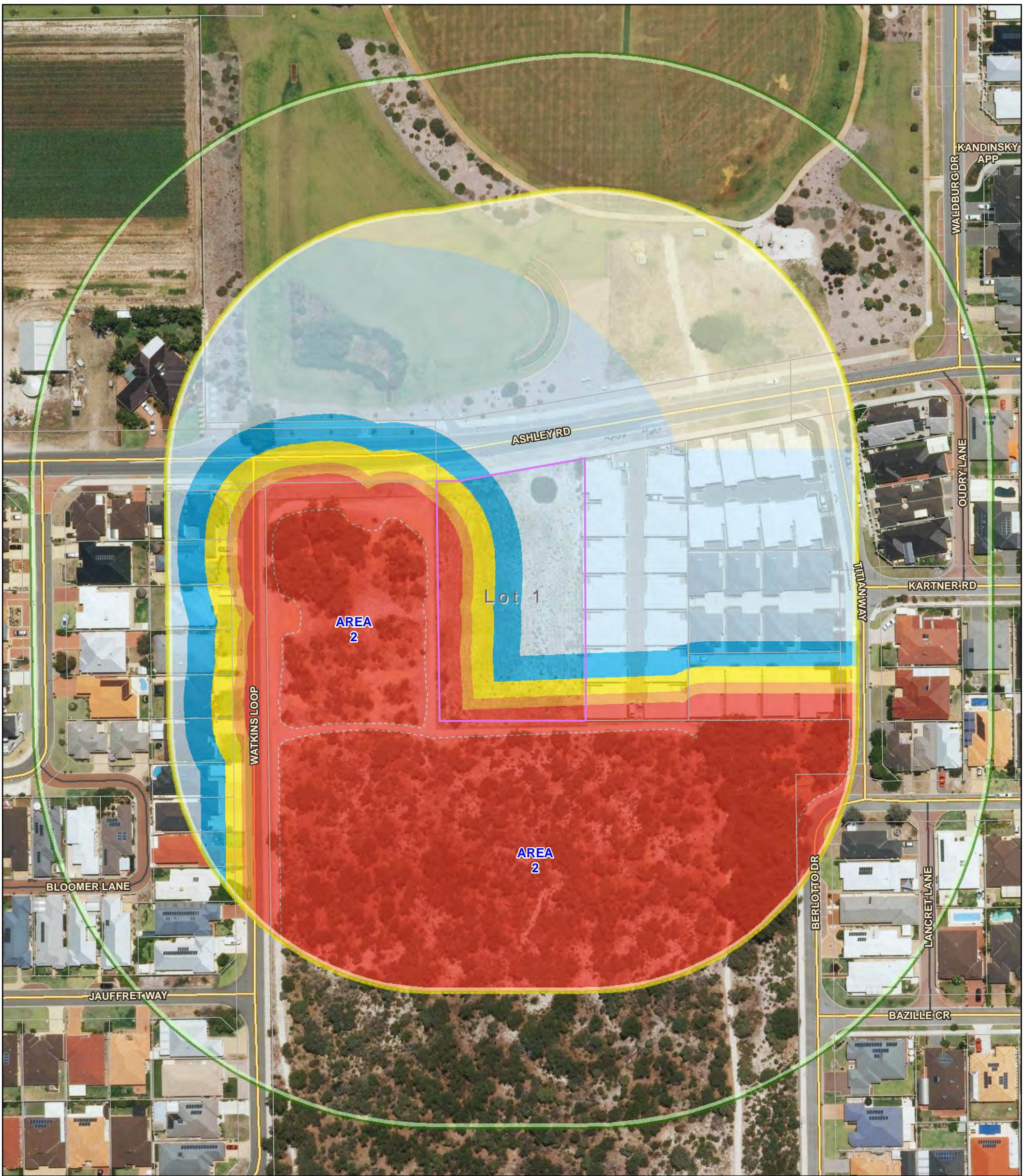


Figure 3.2
BAL Contour Map

Lot 1 on Plan 69528
[Street No. 76]
Ashley Road
TAPPING

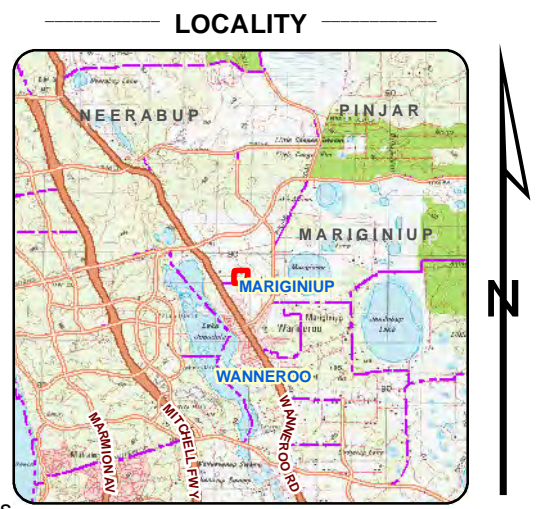
Aerial Imagery : Landgate/SLIP
Image Date : Jan 2018

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre



Map compiled by: Russell Wornes
Date map compiled/updated: 24 Jul 2018

LEGEND	
	Subject Area: Lot 1
	Other Lots
Assessment Area	
	Vegetation - 150m
	BAL Contour - 100m
Bushfire Attack Levels (Method 1)	
	Vegetation edge (Indicative only)
	BAL FZ (Indicative only)
	BAL 40 (Indicative only)
	BAL 29 (Indicative only)
	BAL 19 (Indicative only)
	BAL 12.5 (Indicative only)
	BAL LOW (Indicative only)



3.2.3 Bushfire Attack Levels (BAL) Derived from The Contour Map

Deriving a BAL Rating for a Future Construction Site (Building) from the BAL Contour Map Data

(Capacity to Issue a BAL Certificate)

Key Assumptions: The actual location of a building within a lot or envelope (an 'area') has not been determined at this stage of planning; and the BAL ratings represent the BAL of an 'area' not a building.

The BAL Rating is Assessed as Indicative

If the assessed BAL for the 'area' is stated as being 'indicative', it is because that 'area' is impacted by more than one BAL contour interval and/or classifiable vegetation remains on the lot, or on adjacent lots, that can influence a future building's BAL rating (and this vegetation may have been omitted from being contoured for planning purposes e.g. Grassland or when the assumption is made that all onsite vegetation can be removed and/or modified).

In this report the indicative BAL is presented as either the highest BAL impacting the site or as a range of achievable BAL's within the site – whichever is the most appropriate.

The BAL rating that will apply to any future building within that 'area' will be dependent on:

1. vegetation management onsite; and/or
2. vegetation remaining on adjacent lots; and/or
3. the actual location of the future building within that 'area'.

A BAL Certificate cannot be provided for future buildings, within a lot or envelope with an indicative BAL, until the building location and in some instances building design (elevation), have been established and any required and approved vegetation modification/removal has been confirmed. Once this has occurred a report confirming the building location and BAL rating will be required to submit with the BAL certificate.

The required confirmation of the BAL rating must be done by a bushfire practitioner with the same level of accreditation as has been required to compile this Bushfire Management Plan. This is dependent on the type of calculations utilised (e.g. if performance based solutions have been used in the Plan BPAD Level 3 accreditation is required)

The BAL Rating is Assessed as Determined

If the assessed BAL for the lot or envelope is stated as being 'determined' it is because that lot or envelope is impacted by a single BAL contour interval. This BAL has been determined by the existence (or non-existence) of classified vegetation outside the lot or envelope, and no classifiable vegetation currently exists on the lot or envelope (i.e. it has been cleared to a minimal fuel, low bushfire threat state). In the situation where the BAL Contour Map has been constructed around multiple lots, there also needs to be no classifiable vegetation on an adjacent lot if this vegetation has not already been incorporated into the creation of the BAL Contour Map.

As a result, a determined BAL can be provided in this limited situation because:

1. No classified vegetation is required to be removed or modified to achieve the determined BAL, either within the lot/envelope or on adjacent lots (or if vegetation is excluded from classification, it is reasonable to assume it will be maintained in this state into the future); and
2. A future building can be located anywhere within the 'site' and be subject to the determined BAL rating; and
3. The degree of certainty is more than sufficient to allow for any small discrepancy that might occur in the mapping of the BAL contours.

For a determined BAL rating for a lot/envelope, A BAL Certificate (referring to this BMP) can be provided for a future building, if the BMP remains current.

Table 3.2.3: Indicative Bushfire Attack Levels for Future Buildings on the Lot

Indicative Bushfire Attack Level for Future Buildings on the Lot	
Relevant Fire Danger Index (AS 3959-2009 Table 2.1)	80
BAL Determination Method	Method 1 as per AS 3959-2009 s2.2.6 and Table 2.4.3.
Lot No.	Indicative BAL
1	BAL-FZ

Note: Lot 1 is able to achieve a BAL-29 for future building/s, dependent upon final location of the building/s within the Lot.

4 Identification of Bushfire Hazard Issues

This bushfire planning assessment is required to show that the Bushfire Protection Criteria can be complied with in the future. The intent is to ensure future development is located where the bushfire hazard level is (or will on completion be) moderate or low and subject to a maximum Bushfire Attack Level of BAL-29. This can be achieved for this site due to the separation distances required for the appropriate BAL rating that considers the following:

The primary bushfire hazard issue for this site is the native vegetation within Ashley Park and the limited separation created by the established firebreaks in the reserve and the subject site boundaries.

Onsite Vegetation

The key factor to facilitate the determining of Indicative Bushfire Attack Levels for the Lot is that vegetation onsite is under the control of the City of Wanneroo. Vegetation onsite therefore can potentially be removed or modified to lower the bushfire risk and therefore presents a low bushfire threat.

Offsite Vegetation

Areas of vegetation offsite that are not within the control of the City of Wanneroo or form part of native vegetation reserves, cannot be removed or modified and as a result the assessed BAL's determined by the proximity of this vegetation are unable to be further reduced. These areas external to the site but not part of the future development have been factored for the BAL Contour mapping.

5 Assessment Against the Bushfire Protection Criteria (BPC)

Bushfire Protection Criteria - Assessment Summary

Summarised Outcome of the Assessment Against the Bushfire Protection Criteria (BPC)				
5. Element	Basis for the Assessment of Achieving the Intent of the Element			
	Achieves compliance with the Element through meeting Acceptable Solutions		Achieves compliance with the Element by application of a Performance Based Solution	
	Meets or can meet all relevant acceptable solutions	One or more relevant Acceptable Solutions are not <u>fully</u> met. A <u>variation</u> of the solution is provided and justified.	One or more applicable Acceptable Solutions are not met. A solution is developed with the summary presented in this Plan in Section 5.5. The supporting document presenting Bushfire Prone Planning's detailed methodology is submitted separately to the decision makers.	Minor or Unavoidable Development
Location	✓			Minor Development
Siting and Design of Development	✓			
Vehicular Access	✓			
Water	✓			

The subject site has been assessed against:

1. The requirements established in Appendix 4 of the Guidelines for Planning in Bushfire Prone Areas, WAPC 2017 v1.3 (the 'Guidelines'). The detail, including technical construction requirements, are found at <https://www.planning.wa.gov.au/8194.aspx>. A summary of relevant information is provided in the appendices of this Plan; and
2. Any endorsed variations to the Guideline's acceptable solutions and associated technical requirements that have been established by the relevant local government. If known and applicable these have been stated in Section 5.2 of this Plan with the detail included as an appendix if required by the relevant local government.

Bushfire Protection Criteria – Acceptable Solutions Assessment Detail

5.2.1 Element 1: Location

Bushfire Protection Criteria Element 1: Location

Assessment Statements and Bushfire Protection Measures to be Applied

5.2 **Intent:** To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure.

Acceptable Solution:	A1.1: Development Location	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution can be fully met in the future (at a later planning stage).
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The subject site can achieve compliance by:

- By ensuring future building work on the Lot can be located on an area that will be subject to potential radiant heat from a bushfire not exceeding 29 kW/m² (i.e. a BAL rating of BAL-29 or less will apply – refer Figure 3.2: BAL Contour Map). This can be achieved by using positioning, design and appropriate on-site vegetation management; and
- Managing the remaining bushfire risk to an acceptable level by the existence/implementation and ongoing maintenance of all required bushfire protection measure. These measures include the requirements for vegetation management, vehicular access and firefighting water supply.

5.2.2 Element 2: Siting and Design of Development

Bushfire Protection Criteria Element 2: Siting and Design of Development

Assessment Statements and Bushfire Protection Measures to be Applied

Intent: To ensure that the siting and design of development (note: not building/construction design) minimises the level of bushfire impact.

Acceptable Solution:	A2.1: Asset Protection Zone	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution can be fully met in the future (at a later planning stage).
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The subject site achieves compliance by:

- Ensuring future building work on the Lot can have established around it an APZ of the required dimensions - to ensure that the potential radiant heat from a bushfire to impact future building/s, does not exceed 29 kW/m² (i.e. a BAL rating of BAL-29 or less will apply to determine building construction standards);
- The APZ/s can be partially established within the Lot boundaries. The balance of the APZ's required dimensions are being contributed by an area on adjoining land that is either non-vegetated or assessed as being managed in a low-fuel state and which can most reasonably be expected to be managed this way in perpetuity (Residential established properties and limestone firebreaks on Ashley Reserve).
- The landowner/s having the responsibility of continuing to manage the required APZ as low threat vegetation in a minimal fuel state, by maintaining the APZ to the required dimensions and standard, including compliance with the local government's annual firebreak notice.

The required APZ dimensions are set out in Section 5.3.1. The APZ technical requirements (Standards) are detailed in Appendix 1.

5.2.3 Element 3: Vehicular Access

Bushfire Protection Criteria Element 3: Vehicular Access

Assessment Statements and Bushfire Protection Measures to be Applied

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

Acceptable Solution:	A3.1: Two access routes	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution is fully met.
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Ashley Road provides safe access and egress to two different destinations. As a sealed public road, it is available to all residents and the public at all times and under all weather conditions.

Acceptable Solution:	A3.2 Public Road	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution is fully met.
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Ashley Road is an existing constructed road that meets the City of Wanneroo standards and specifications.

The construction technical requirements established by the Guidelines and/or the local government can and will be complied with. These requirements are set out in Appendix 2.

Bushfire Protection Criteria Element 3: Vehicular Access (continued)
Assessment Statements and Bushfire Protection Measures to be Applied

Acceptable Solution:	A3.3 Cul-de-sacs (including a dead-end road)	Method of achieving Element compliance and/or the Intent of the Element:	N/A
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N/A

Acceptable Solution:	A3.4: Battle-axe	Method of achieving Element compliance and/or the Intent of the Element:	N/A
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N/A

Acceptable Solution:	A3.5: Private Driveways	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution can be fully met in the future (at a later planning stage).
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Future development will require increased construction standards for driveways for any future buildings being greater than 50m from the public road.

The future buildings are to ensure the construction technical requirements established by the Guidelines and/or the local government will be complied with. These requirements are set out in Appendix 2.

Acceptable Solution:	A3.6 Emergency Access Way	Method of achieving Element compliance and/or the Intent of the Element:	N/A
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N/A

Acceptable Solution:	A3.7 Fire Service Access Routes	Method of achieving Element compliance and/or the Intent of the Element:	N/A
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N/A

Acceptable Solution:	A3.8 Firebreak Width	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution is fully met.
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The subject site will comply with the requirements of the local government annual firebreak notice issued under s33 of the Bush Fires Act 1954. Firebreaks and hazard reduction, as necessary, will be installed/maintained annually and in perpetuity.

5.2.4 Element 4: Water

Bushfire Protection Criteria Element 4: Water

Assessment Statements and Bushfire Protection Measures to be Applied

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

Acceptable Solution:	A4.1 Reticulated Areas	Method of achieving Element compliance and/or the Intent of the Element:	The acceptable solution is fully met.
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A reticulated water supply is available to the subject site and hydrants are installed at the required regular intervals. (State required hydrant separation distances – 100m commercial, 200m residential, 400m rural residential >1ha).

The construction technical requirements established by the Guidelines and/or the local government can and will be complied with. These requirements are set out in Appendix 3.

Acceptable Solution:	A4.2 Non-Reticulated Areas	Method of achieving Element compliance and/or the Intent of the Element:	N/A
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N/A

Acceptable Solution:	A4.3 Non-reticulated Areas (Individual Lots)	Method of achieving Element compliance and/or the Intent of the Element:	N/A
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N/A

Additional Information for Required Bushfire Protection Measures

The subject site will be required to be maintained in accordance with the City of Wanneroo Firebreak Notice and Fire and Burning Information Brochure. The Notice specifies hazard reduction requirements and Asset Protection Zone detail.

Note: This Notice may be subject to change in the future.

5.3.5.3.1 Vegetation Management

Vegetation management other than that described in the City of Wanneroo Firebreak Notice and Fire and Burning Information Brochure is not required for the subject site.

Asset Protection Zone (APZ) Dimensions that are to Apply

The required dimensions of the APZ will vary dependent upon the purpose for which the APZ has been defined. There are effectively three APZ dimensions that can apply:

1. An application for planning approval will be required to show that an APZ can be created which is of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29); and
2. If the assessment has determined a BAL rating for an existing or future building is less than BAL-29, the APZ must be of sufficient size to ensure the potential radiant heat impact of a fire does not exceed the kW/m² corresponding to the lower assessed BAL rating; or
3. Complying with the relevant local government's annual firebreak notice may require an APZ of greater size than that defined by the two previous parameters.

The minimum dimensions (vegetation separation distances) that are to apply to the APZ for this Proposal are presented in the tables below.

The 'Planning (WAPC) BAL-29' APZ

Required Dimensions for the Subject Site

Requirement Set By	Guidelines for Planning in Bushfire Prone Areas (WAPC 2017 v1.3)			
Relevant Fire Danger Index (AS3959-2009 Table 2.1)	80			
BAL Determination Method	Method 1 (as per AS 3959-2009 s2.2.6 and Table 2.4.3)			
Vegetation Area	Applied Vegetation Classification	Effective Slope (degrees)	Maximum Acceptable 'Planning' BAL	Required Separation Distance (metres)
1	Excluded AS3959-2009 2.2.3.2 (f)	0	BAL-29	-
1	Excluded AS3959-2009 2.2.3.2 (f)	1.4		-
2	Class B Woodland	0		14
2	Class B Woodland	0.8		17
3	Excluded AS3959-2009 2.2.3.2 (e)(f)	N/A		-
4	Excluded AS3959-2009 2.2.3.2 (f)	N/A		-

This requirement has been established through the State bushfire provisions, SPP 3.7 and the associated Guidelines, as being a key compliance requirement for development proposals in WA.

'Local Government Firebreak Notice APZ'

Required Minimum Dimensions for the Subject Site

Requirement Set By:	Local Government (City of Wanneroo)
Minimum Dimensions:	The area within a distance of 20 metres (where applicable to Lot area & Zoning) from any external wall of any habitable building.
Other Conditions:	If Asset Protection Zone technical requirements are defined in the Notice, the standards and dimensions may differ from the Guideline's APZ Standards, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with. Refer to Appendix 1.

This requirement has been established through the stated local government's annual fire break notice issued under the Bushfires Act 1954 s33.

5.3.2 Consideration/Implementation of Public Open Space and Reserves Management

Public Open Space/Reserves - Formal and Funded Vegetation Management in Perpetuity. The requirement for fuel loads to be managed and vegetation to be maintained in a low bushfire threat state is to be undertaken by the City of Wanneroo and funded via specified area rates, formally ensuring the targeted fuel loads are achieved and maintained in perpetuity.

5.3.3 Future Stage Planning Application – Additional Information Required

For future development on the subject site, there is a requirement to review the bushfire management planning requirements at the relevant stage, to address the land use proposal in particular:

- Future Vulnerable Land Uses – Evacuation planning required.

6 Responsibilities for Implementation and Management of the Bushfire Protection Measures

Table 6.1: Ongoing management responsibilities for the Local Government.

LOCAL GOVERNMENT - ONGOING	
No.	Ongoing Management Actions
1	Monitor compliance with the annual Firebreak Notice and Fire And Burning Information brochure.
2	<p>The public open space/Reserves are to be managed, to ensure the vegetation does not present a bushfire hazard to the adjacent residential area; and</p> <p>Where control of an area of vegetated land is vested in the control of the local government and that area of land has influenced the assessed BAL rating/s of the subject site/s – and the BAL rating has been correctly assessed - there is an obligation to consider the impact of any changes to future vegetation management and/or revegetation plans with respect to that area.</p>

Appendix 1 - Onsite Vegetation Management Technical Requirements

It is the responsibility of the landowner to maintain the established bushfire protection measures on their property. Not complying with these responsibilities can result in buildings being subject to a greater potential impact from bushfire than that determined by the assessed BAL rating presented in this Bushfire Management Plan.

For the management of vegetation within a lot (i.e. onsite) the following technical requirements exist:

1. **The APZ:** Installing and maintaining an asset protection zone (APZ) of the required dimensions to the standard established by the Guidelines for Planning in Bushfire Prone Areas (WA Planning Commission, as amended). When, due to the planning stage of the proposal to which this Bushfire Management Plan applies, defined APZ dimensions are known and are to be applied to existing or future buildings – then these dimensions are stated in Section 5.4.1 of this Plan.
2. **The Firebreak/Fuel Load Notice:** Complying with the requirements established by the relevant local government's annual firebreak notice issued under s33 of the Bushfires Act 1954. Note: If an APZ requirement is included in the Notice, the standards and dimensions may differ from the Guideline's APZ Standard – the larger dimension must be complied with.
3. **Changes to Vegetated/Non-Vegetated Areas:**
 - a. If applicable to this Plan, the minimum separation distance from any classified vegetation, that corresponds to the determined BAL for a proposed building, must be maintained as either a non-vegetated area or as low threat vegetation managed to a minimal fuel condition as per AS 3959-2009 s2.2.3.2 (e) and (f). Refer to Part 4 of this Appendix 1.
 - b. Must not alter the composition of onsite areas of classified vegetation (as assessed and presented in Section 3.1.2) to the extent that would require their classification to be changed to a higher bushfire threat classification (as per AS 3959-2009); and
 - c. Must not allow areas within a lot (i.e. onsite) that have been:
 - i. excluded from classification by being low threat vegetation or non-vegetated; and
 - ii. form part of the assessed separation distance that is determining a BAL rating
-
...to become vegetated to the extent they no longer represent a low threat (refer to Part 4 of Appendix 1). Note: The vegetation classification exclusion specifications as established by AS 3959-2009 s2.2.3.2, are included at A1.4 below for reference.

1. Requirements Established by the Guidelines – the Asset Protection Zone (APZ) Standards

(Source: Guidelines for Planning in Bushfire Prone Areas - WAPC 2017 v1.3 Appendix 4, Element 2, Schedule 1 and Explanatory Note E2.1)

Defining the Asset Protection Zone (APZ)

Description: An APZ is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level (by reducing fuel loads). The width of the required APZ varies with slope and vegetation. For planning applications, the minimum sized acceptable APZ is that which is of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29). It will be site specific.

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.

For subdivision planning, design elements and excluded/low threat vegetation adjacent to the lot can be utilised to achieve the required vegetation separation distances and therefore reduce the required dimensions of the APZ within the lot.

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

Establishment: 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.

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

Schedule 1: Standards for APZ

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 mm in thickness reduced to and maintained at an average of two tonnes per hectare (example below).

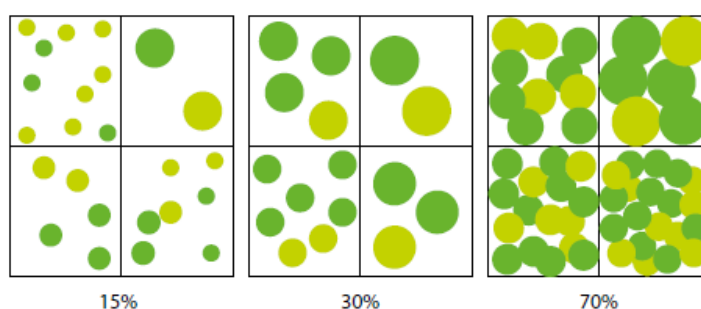
Example Fine Fuel Load of Two Tonnes per Hectare



(Image source: Shire of Augusta Margaret River's Firebreak and Fuel Reduction Hazard Notice)

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. Diagram below represents tree canopy cover at maturity.

Tree canopy cover – ranging from 15 to 70 per cent at maturity



(Source: Guidelines for Planning in Bushfire Prone Areas 2017, Appendix 4)

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 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated 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 mm 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 mm or less.

The following example diagrams illustrate how the required dimensions of the APZ will be determined by the type and location of the vegetation.

Hazard on one side

● APZ



Hazard on three sides

● APZ



2. Requirements Established by the Local Government – the Firebreak Notice

These requirements are established by the relevant local government's Firebreak Notice created under s33 of the Bushfires Act 1954 and issued annually (potentially with revisions). The Notice may include additional components directed at managing fuel loads, accessibility and general property management with respect to limiting potential bushfire impact.

The relevant local government's current Firebreak Notice is available on their website, at their offices and is distributed as ratepayer's information. It must be complied with.

If Asset Protection Zone technical requirements are defined in the Notice, the standards and dimensions may differ from the Guideline's APZ Standards, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with.

When, due to the planning stage of the proposal to which this Bushfire Management Plan applies, defined APZ dimensions are known and are to be applied to existing or future buildings – then these dimensions are stated in Section 5.4.1 of this Plan.

3. Requirements Recommended by DFES – Property Protection Checklists

Further guidance regarding ongoing/lasting property protection (from potential bushfire impact) is presented in the publication 'DFES – Fire Chat – Your Bushfire Protection Toolkit'. It is available from the Department of Fire and Emergency Services (DFES) website.

4. Requirements Established by AS 3959-2009 - Maintaining Areas within your Lot as 'Low Threat'

This information is provided for reference purposes. This knowledge will assist the landowner to comply with Management Requirement No. 3 set out in the Guidance Panel at the start of this Appendix. It identifies what is required for an area of land to be excluded from classification as a potential bushfire threat.

"Australian Standard - AS 3959-2009 Section 2.2.3.2: Exclusions - Low threat vegetation and non-vegetated areas:

The Bushfire Attack Level shall be classified BAL-LOW where the vegetation is one or a combination of the following:

- a) Vegetation of any type that is more than 100m from the site.*
- b) Single areas of vegetation less than 1ha in area and not within 100m of other areas of vegetation being classified.*
- c) Multiple area of vegetation less than 0.25ha in area and not within 20m of the site or each other.*
- d) Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified.*
- e) Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.*
- f) Low threat vegetation, including grassland managed in a **minimal fuel condition** (i.e. insufficient fuel available to significantly increase the severity of a bushfire attack – recognisable as short cropped grass to a nominal height of 100mm for example), maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks."*

Appendix 2 - Vehicular Access Technical Requirements

Each local government may have their own standard technical requirements for emergency vehicular access and they may vary from those stated in the Guidelines.

Contact the relevant local government for the requirements that are to apply in addition to the requirements set out as an acceptable solution in the Guidelines. If the relevant local government requires that these are included in the Bushfire Management Plan, they will be included in this appendix and referenced.

Requirements Established by the Guidelines – The Acceptable Solutions

(Source: Guidelines for Planning in Bushfire Prone Areas WAPC 2017 v1.3, Appendix 4)

Vehicular Access Technical Requirements - Part 1

Acceptable Solution 3.3: Cul-de-sacs (including a dead-end road)

- N/A

Acceptable Solution 3.4: Battle-axe

- N/A

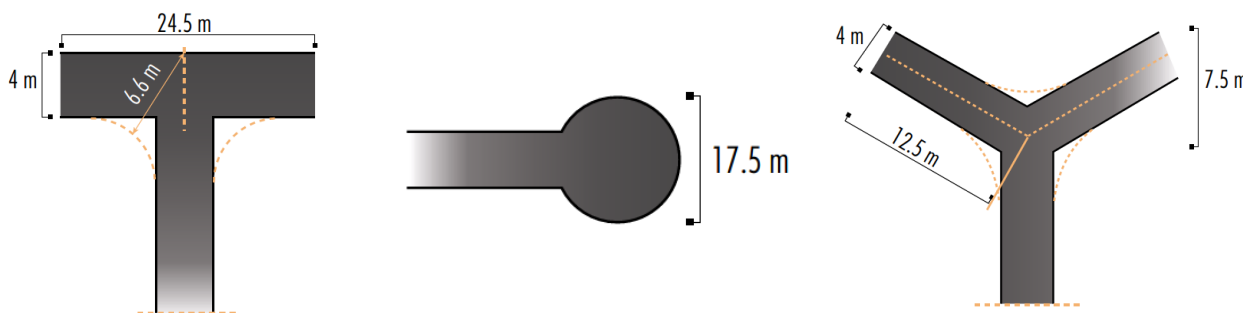
Acceptable Solution 3.5: Private Driveways

The following requirements are to be achieved:

- The design requirements set out in Part 2 of this appendix; and

Where the house site is more than 50 metres from a public road:

- Passing bays every 200 metres with a minimum length of 20 metres and a minimum width of two metres (ie combined width of the passing bay and constructed private driveway to be a minimum six metres);
- Turn-around areas every 500 metres and within 50 metres of a house, designed to accommodate type 3.4 fire appliances to turn around safely (ie kerb to kerb 17.5 metres);
- Any bridges or culverts are able to support a minimum weight capacity of 15 tonnes; and
- All weather surface (i.e. compacted gravel, limestone or sealed).



Acceptable Solution 3.6: Emergency Access Way

- N/A
-

Acceptable Solution 3.7: Fire Service Access Routes (Perimeter Roads)

- N/A
-

Acceptable Solution 3.8: Firebreak Width

- Lots greater than 0.5 hectares must have an internal perimeter firebreak of a minimum width of three meters or to the level as prescribed in the local firebreak notice issued by the local government.
-

Vehicular Access Technical Requirements - Part 2

Technical Component	Vehicular Access Types				
	Public Roads	Cul-de-sacs	Private Driveways	Emergency Access Ways	Fire Service Access Routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	4.5	4.5	4.5	4.5
Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum cross-fall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5

* A six metre trafficable surface does not necessarily mean paving width. It could, for example, include four metres of paving and one metre of constructed road shoulders. In special circumstances, where 8 lots or less are being serviced, a public road with a minimum trafficable surface of four metres for a maximum distance of ninety metres may be provided subject to the approval of both the local government and DFES.

Appendix 3 - Water Technical Requirements

Requirements Established by the Guidelines - Acceptable Solution A4.1: Reticulated Areas

(Source: Guidelines for Planning in Bushfire Prone Areas WAPC 2017 v1.3, Appendix 4, Element 4)

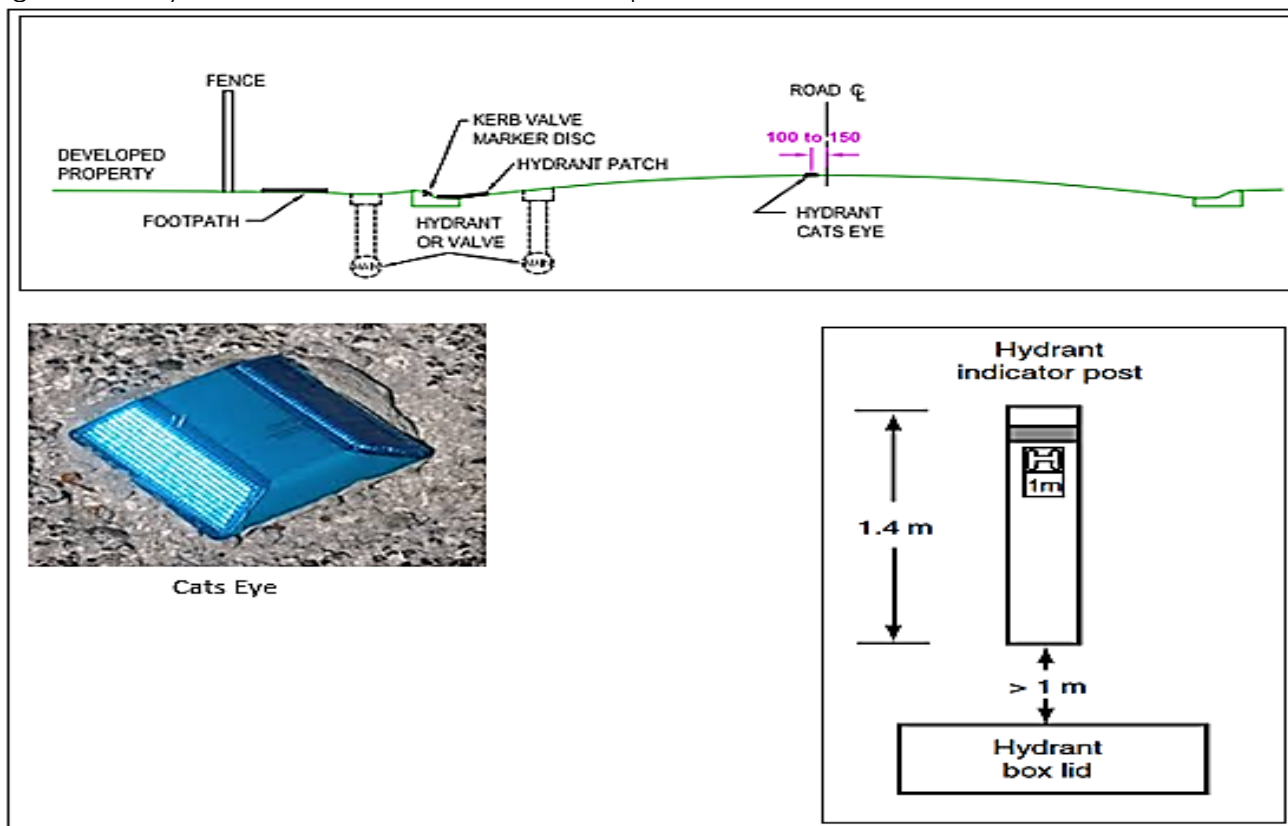
The requirement is to supply a reticulated water supply and fire hydrants, in accordance with the technical requirements of the relevant water supply authority and DFES.

The Water Corporation's 'No 63 Water Reticulation Standard' is deemed to be the baseline criteria for developments and should be applied unless local water supply authority's conditions apply.

Key specifications in the most recent version/revision of the design standard include:

- **Residential Standard** – hydrants are to be located so that the maximum distance between the hydrants shall be no more than 200 metres.
- **Commercial Standard** – hydrants are to be located with a maximum of 100 metre spacing in Industrial and Commercial areas.
- **Rural Residential Standard** – where minimum site areas per dwelling is 10,000 m² (1ha), hydrants are to be located with a maximum 400m spacing. If the area is further subdivided to land parcels less than 1ha, then the residential standard (200m) is to be applied.

Figure A4.1: Hydrant Location and Identification Specifications



Contact the relevant water supply authority to confirm the technical requirements that are to be applied. They may differ from the minimum requirements of the 'baseline' Water Corporation's No. 63 Water Reticulation Standard.