

Bushfire Management Plan Coversheet

This Coversheet and accompanying Bushfire Management Plan has been prepared and issued by a person accredited by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme.

Bushfire Management Plan and Site Details

Site Address / Plan Reference:	Lot 9 (No.419) Holmes Street			
Suburb:	Southern River	State:	WA	P/code: 6110
Local government area:	Gosnells			
Description of the planning proposal:	Residential subdivision			
BMP Plan / Reference Number:	200102	Version:	1.1	Date of Issue: 25 Mar 2020
Client / Business Name:	KeyClub Holdings Pty Ltd			

Reason for referral to DFES	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?	☐	☒
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the BPC elements)?	☐	☒
Is the proposal any of the following special development types (see SPP 3.7 for definitions)?		
Unavoidable development (in BAL-40 or BAL-FZ)	☐	☒
Strategic planning proposal (including rezoning applications)	☐	☒
Minor development (in BAL-40 or BAL-FZ)	☐	☒
High risk land-use	☐	☒
Vulnerable land-use	☐	☒

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

Note: The decision maker (e.g. the local government or the WAPC) should only refer the proposal to DFES for comment if one (or more) of the above answers are ticked "Yes".

BPAD Accredited Practitioner Details and Declaration

Name	Accreditation Level	Accreditation No.	Accreditation Expiry
Jeremy Durston	Level 3	BPAD 36525	April 2020
Company	Contact No.		
Bushfire West Pty Ltd	0403 328 835		

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

Signature of Practitioner



Date

25 Mar 2020

Bushfire Management Plan

Subdivision Application

Lot 9 Holmes Street, Southern River



Bushfire West Pty Ltd
www.bushfirewest.com.au



Ref: 200102
Version: 1.1
Mar 2020

REPORT DETAILS

Subject Land

Street No.	Lot No.	PIN	Street Name
419	9	381310	Holmes Street
Locality		Southern River (6110)	
Zoning		Residential Development; and Other Regional Road	
Local Government		Gosnells	
Proposal description		Residential subdivision	

Document Reference

Version	Date	Purpose
Ref: 200102		
Version 1.0	23 Jan 2020	Bushfire Management Plan – subdivision.
1.1	25 Mar 2020	Inclusion of proposed Emergency Access Way.

Author

Practitioner	Accreditation Level	Accreditation No.
Jeremy Durston	Level 3	BPAD 36525

Report Limitations

The measures contained in this report are considered to be minimum standards only. Bushfire West Pty Ltd and the author do not guarantee that if such standards are complied with a building or property will not be damaged or that lives will not be harmed or lost during a bush fire event.

Bushfire and weather conditions can be extremely dangerous and unpredictable. The management of bushfire risk will depend on, among other things, the actions of property owners and/or occupiers over which the author has no control.

All surveys, forecasts, projections and recommendations made in this report are made in good faith on the basis of information available at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.

Notwithstanding anything contained therein, the author will not, except as the law may require, be liable for any loss or other consequences arising out of the services provided.

Jeremy Durston
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Bushfire West Pty Ltd



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Appendix 1 – Asset Protection Zone Standards

Appendix 2 – City of Gosnells Fire Hazard Reduction Notice

1.0 Summary

This Bushfire Management Plan has been prepared to accompany the subdivision application for Lot 9 Holmes Street, Southern River located in the City of Gosnells, to create 50 residential lots with associated public open space and road reserves (the proposal).

The subdivision site of 3.0892 ha is within a designated bushfire prone area and the Proposal requires the application of *State Planning Policy No. 3.7: Planning in Bushfire Prone Areas* (SPP 3.7).

The aim of this report is to reduce the threat to people, property and infrastructure in the event of a bushfire. The report includes how the identified bushfire threat will be managed, and how the Bushfire Protection Criteria in the Guidelines will be addressed.

This report determines the following compliance of the Proposal with the objectives of State Planning Policy 3.7:

1. It avoids any increase in the threat of bushfire to people, property and infrastructure.

The proposed subdivision avoids unacceptable bushfire hazard. The design provides for the management of the bushfire threat to people, property and infrastructure to an acceptable level.

2. It reduces vulnerability to bushfire through the identification and consideration of bushfire risks in the design of the development and the decision-making process.

The bushfire risks have been identified, assessed and considered in the subdivision design, as described within this report.

3. The design of the subdivision takes into account bushfire protection requirements and includes specific bushfire protection measures.

Compliance with the Bushfire Protection Criteria of the Guidelines is as follows:

- All proposed lots will ultimately be developable to a rating of BAL-29 or lower. Initially, proposed Lots 47, 48, 49 and 50 (as identified within this report) are to be quarantined until the bushfire hazard is reduced on the adjoining land to the south-west of the site.
- Asset Protection Zones will comprise adjoining residential development, unrestricted public open space and road reserves that are all required to be managed for low threat. The area currently within the site proposed for the realignment of Holmes Street is also required to be managed to the standards of an Asset Protection Zone. Additionally, Lots 47, 48, 49 and 50 (as identified within this report) are to form a temporary Asset Protection Zone while quarantined from development.
- Holmes Street provides primary access to the subdivision. Alternate emergency access will be established by the proposed Emergency Access Way via the Lot 70 easement linking the existing northern and southern sections of Passmore Street. All roads providing internal access to the subdivision are to be constructed to the relevant standards. The proposed entrance road into the subdivision will terminate in a temporary cul-de-sac requiring a 17.5m vehicle turnaround area compliant with the Guidelines.
- The subdivision will be serviced by a reticulated water supply including fire hydrants.

4. Achieves an appropriate balance between bushfire risk management measures and biodiversity, conservation values, and environmental protection.

The subdivision will avoid impact to any vegetation having significant conservation value.

2.0 Existing Conditions & Proposal Details

2.1 Subject Site

The subject site of this report is Lot 9 Holmes Street, Southern River located in the City of Gosnells. The undeveloped site is 3.0892 ha in area and currently comprises pasture with isolated trees. Figure 2A illustrates the subject site and immediate surrounds.

The site is identified as being Bushfire Prone on the Map of Bush Fire Prone Areas 2019 (OBRM, 2019), as illustrated in Figure 2B.

The site is subject to the Southern River Sub-precinct 3D Local Structure Plan (LSP), which designates the areas of the site to be developable in future as residential R30 and R40 with public open space and road network, as illustrated in Figure 2C.

2.2 Subdivision Description

The proposal involves the subdivision of the site as follows:

Current Lot	Area (ha)
9	3.0892

Proposed Land Use Areas	Area (ha)
Residential Lots	1.6125
Public Open Space	0.2723
Internal Road Reserves	0.9234
Reserved for Holmes St re-alignment	0.2810

Figure 2D illustrates the proposed subdivision plan dated 1 October 2019.

2.3 Previous Bushfire Assessments

A Bushfire Management Plan for the Southern River Sub-precinct 3D Local Structure Plan (the LSP BMP) was completed by Strategen Environmental Consultants Pty Ltd (reference KEY17215_01, revision 1 dated 18th October 2019).

Subsequently, an amendment to the LSP BMP was prepared by Smith Bushfire Consultants Pty Ltd (dated 4th March 2020), including the following access solution utilising the existing easement over Lot 70:

The access will be enhanced by constructing a compacted limestone emergency access way ... linking the two bitumen sections of Passmore Road. This will then provide two different access routes to two different destinations for the development.

2.4 Fire Control Order

The City of Gosnells Fire Hazard Reduction Notice stipulates the following for all land not zoned 'General Rural' or 'Special Rural':

Clear and maintain the land free of all flammable matter to a height no greater than 10cm.

A copy of the 2019/20 Fire Hazard Reduction Notice is included in Appendix 2.



Area Map

Size: A4
Scale: 1:3000



- | | |
|---|--|
|  Cadastre |  150m assessment area |
|  Subject land |  Contours (1m) |
|  proposed Cadastre | |

Lot 9 Holmes St,
Southern River
Assessor: Jeremy Durston
BPAD: 36525, Level 2
Expiry April 2020
Aerial imagery: Jan 2019

Figure 2A: Area Map

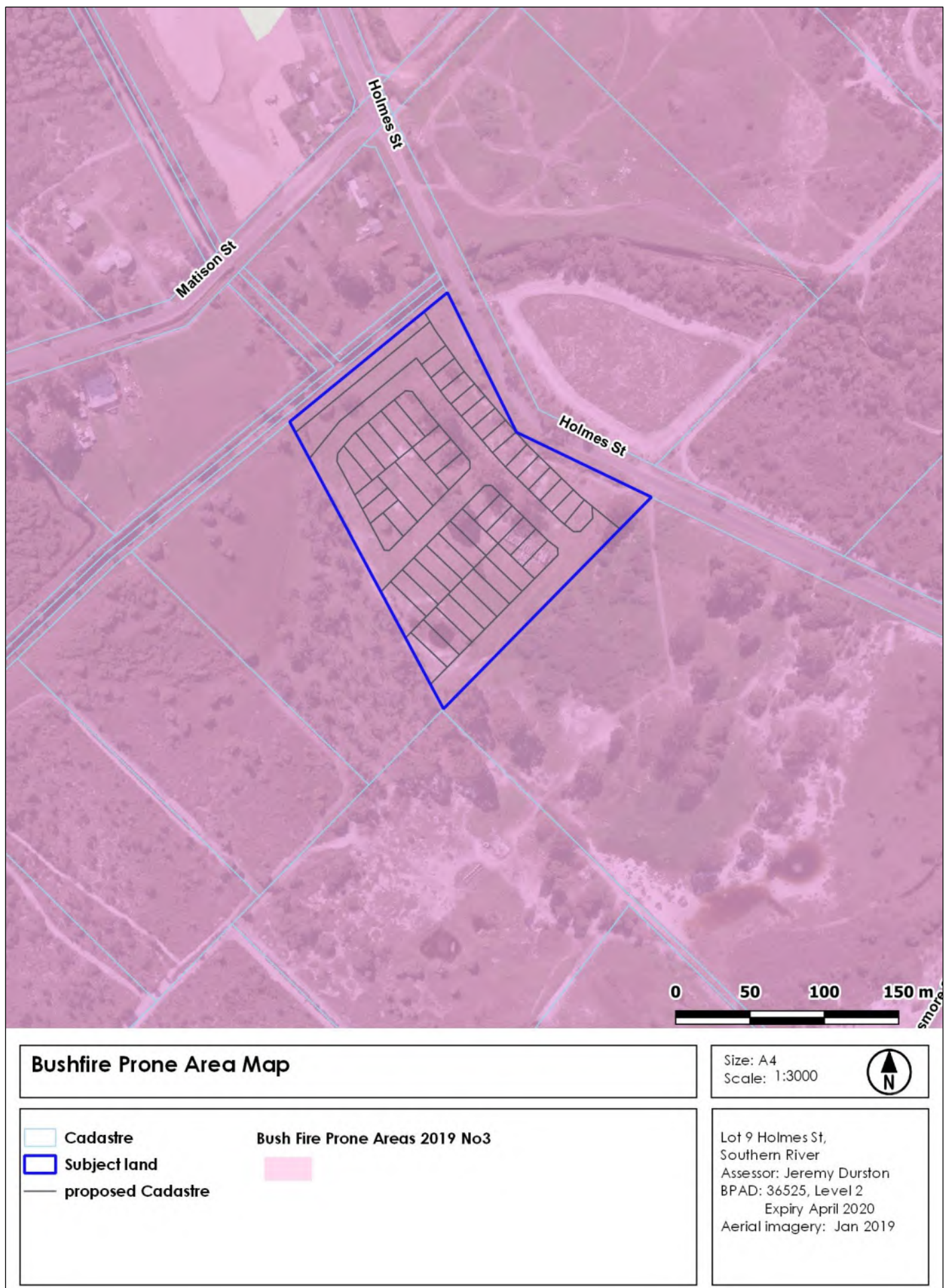


Figure 2B: Designated Bushfire Prone Area Map

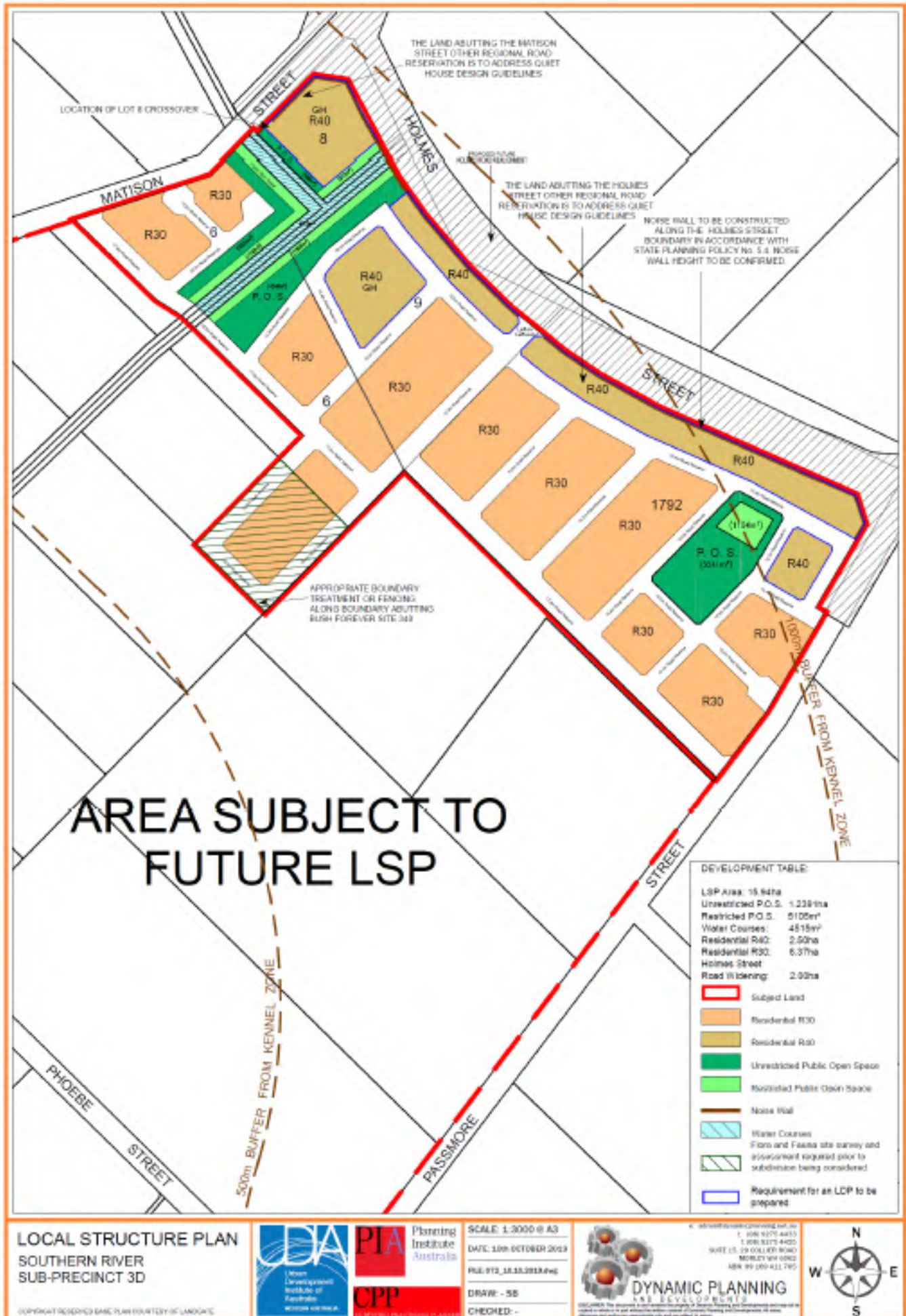


Figure 2C: Local Structure Plan

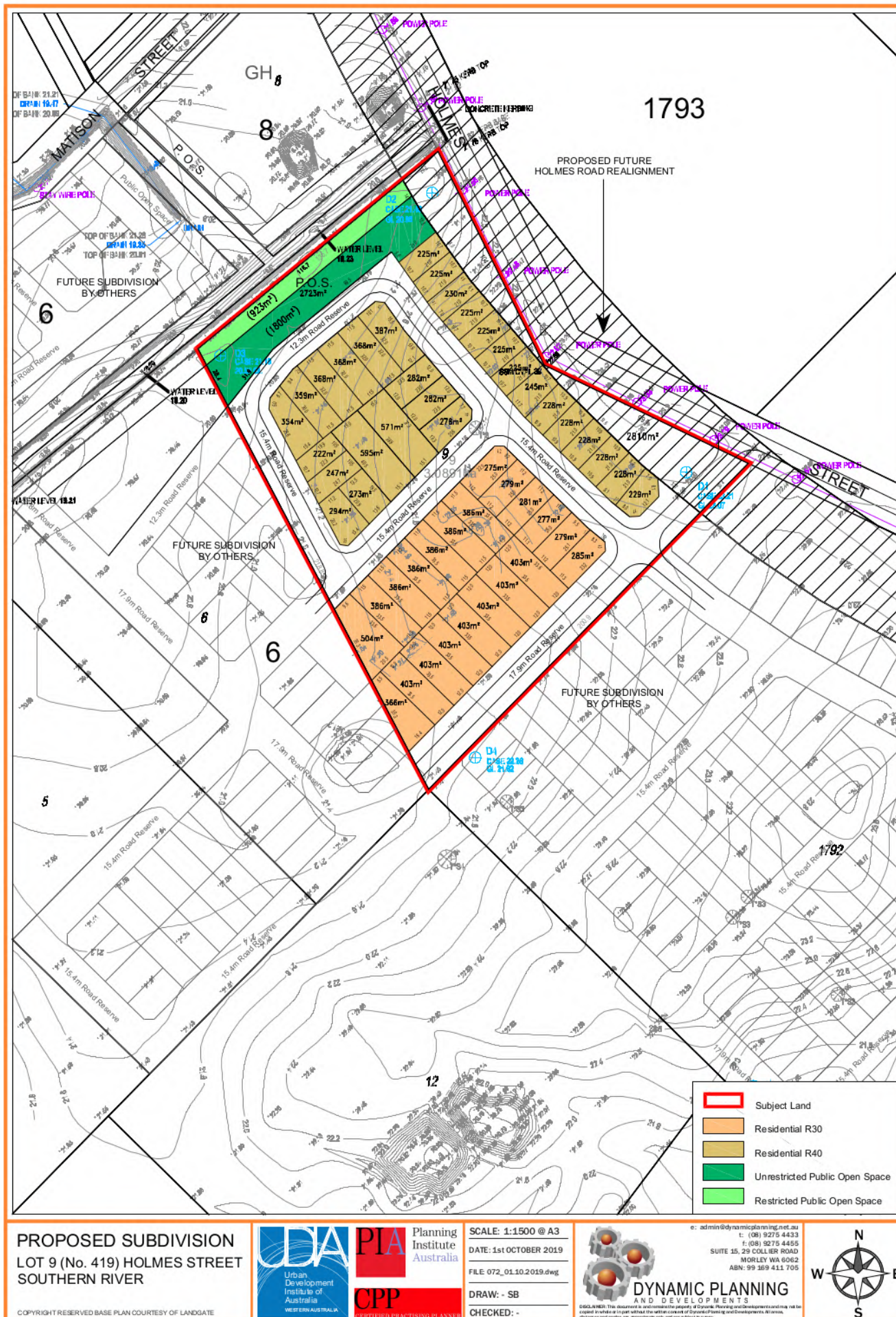


Figure 2D: Subdivision Plan

3.0 Environmental Considerations

The Bushfire Management Plan for the Local Structure Plan, including the subject land, concluded:

The project area does not contain any significant environmental assets, given that it is predominantly cleared and subject to previous grazing land uses.

3.1 Vegetation – Modification & Clearing

Vegetation within the site is grass pasture with isolated Eucalypt and Pine trees generally comprising introduced varieties. The proposal will involve the clearing of the majority of the site for residential allotments and roads.

3.2 Landscaping & Re-vegetation

Public Open Space (POS) is proposed along the northern boundary of the site, divided between sections of restricted and unrestricted POS.

The unrestricted POS will be adjacent to the northern-most residential allotment. The vegetation within the unrestricted POS area is to be maintained for low threat consistent with AS3959 exclusion clause 2.2.3.2. The unrestricted POS will be subject to initial management by the developer to achieve an ongoing low fuel state until it is transferred to the City of Gosnells.

Following the transfer, the City of Gosnells will be responsible for ongoing management of the unrestricted POS area to ensure that any vegetation remains in a low fuel state all year round. Management to achieve an ongoing low fuel state may include removal of dead material and weeds, pruning and slashing or mowing of grass.

4.0 Bushfire Assessment Inputs

4.1 Effective Slope

Effective slope under each vegetation area was assessed in accordance with the methodology detailed in AS 3959-2018 *Construction of buildings in bushfire prone areas*. Slope data was measured on site and cross referenced with Landgate elevation data. The assessment area was found to be generally flat with minimal variation in relief. The effective slope applicable to each vegetation area is included in Section 4.2 below.

4.2 Bushfire Fuels

The location and extent of classified vegetation structures, including low-threat exclusions, within 150 metres of the site are mapped in Figure 4A and illustrated in the photos below. All bushfire structures and fuel loads are assessed in their mature states unless otherwise identified. The areas of classified vegetation are summarised in Table 4A.

Area 1	
AS3959-2018 Classification	Class B Woodland
Effective Slope	Flat/upslope
<i>Plot 1 comprises the wooded area adjacent to the western boundary and extending adjacent to the southern corner of the site. Vegetation consists of low woodland characterised by trees below 10m in height and canopy cover less than 30% with prominent grassy understorey.</i>	
 Photo ID: 1a	 Photo ID: 1b
 Photo ID: 1c	

Area 2	
AS3959-2018 Classification	Class B Woodland
Effective Slope	Flat/upslope
Area 2 comprises a pocket of vegetation along the watercourse to the north-east of the site and extending adjacent to a section of Holmes Street. Vegetation consists of low woodland characterised by trees below 10m in height and canopy cover less than 30% with prominent grassy understorey and isolated shrubs.	
DIRECTION 355 deg(T) -32.10598° +115.96949° ACCURACY 10 m DATUM WGS84  3 Holmes St Sthn River 9/1/20, 12:33:52 Photo ID: 2a	DIRECTION 12 deg(T) -32.10663° +115.96957° ACCURACY 5 m DATUM WGS84  5a Holmes St Sthn River 9/1/20, 12:38:08 Photo ID: 2b
DIRECTION 92 deg(T) -32.10555° +115.96924° ACCURACY 5 m DATUM WGS84  4 Holmes St Sthn River 9/1/20, 12:41:45 Photo ID: 2c	

Area 3	
AS3959-2018 Classification	Class B Woodland
Effective Slope	Flat/upslope
Area 3 comprises a pocket of vegetation to the north of the site. Vegetation consists of woodland characterised by trees with canopy cover less than 30% with prominent grassy understorey and isolated shrubs.	
DIRECTION 186 deg(T) -32.10535° +115.96777° ACCURACY 5 m DATUM WGS84  10 Holmes St Sthn River 9/1/20, 12:49:36 Photo ID: 3a	DIRECTION 140 deg(T) -32.10638° +115.96816° ACCURACY 5 m DATUM WGS84  10 Holmes St Sthn River 9/1/20, 12:59:02 Photo ID: 3b

Area 4	
AS3959-2018 Classification	Class D Scrub
Effective Slope	Flat/upslope
Area 4 comprises the vegetation in the south-west section of the assessment area. Vegetation consists of heath with shrubs below 4m in height and grass.	
DIRECTION 187 deg(T) -32.10732° +115.96680° ACCURACY 5 m DATUM WGS84  16 Holmes St Sthn River 9/1/20, 13:06:57 Photo ID: 4a	

Area 5	
AS3959-2018 Classification	Class D Scrub
Effective Slope	Flat/upslope
Area 5 comprises the pocket of vegetation to the south-east of the site. Vegetation consists of heath with shrubs below 4m in height and grass.	
DIRECTION 117 deg(T) -32.10791° +115.96936° ACCURACY 5 m DATUM WGS84 2a Holmes St Sthn River 9/1/20, 13:22:04 Photo ID: 5a	DIRECTION 164 deg(T) -32.10739° +115.97013° ACCURACY 5 m DATUM WGS84 2a Holmes St Sthn River 9/1/20, 13:24:38 Photo ID: 5b

Area 6	
AS3959-2018 Classification	Class D Scrub
Effective Slope	Flat/upslope
Area 6 comprises the vegetation in the eastern section of the assessment area and north of Holmes Street. Vegetation consists of heath with shrubs below 4m in height and grass.	
DIRECTION 357 deg(T) -32.10728° +115.97137° ACCURACY 5 m DATUM WGS84 1 Holmes St Sthn River 9/1/20, 12:18:51 Photo ID: 6a	DIRECTION 231 deg(T) -32.10636° +115.97099° ACCURACY 5 m DATUM WGS84 1 Holmes St Sthn River 9/1/20, 12:30:07 Photo ID: 6b

Area 7	
AS3959-2018 Classification	Class G Grassland
Effective Slope	Flat/upslope
Area 7 comprises the pasture areas to the south and east of the site. Vegetation consists of open woodland characterised by isolated trees having canopy cover less than 10% with prominent grassy understorey and isolated shrubs.	
DIRECTION 353 deg(T) -32.10728° +115.97067° ACCURACY 10 m DATUM WGS84  2 Holmes St Sthn River 9/1/20, 12:25:26 Photo ID: 7a	DIRECTION 196 deg(T) -32.10869° +115.96940° ACCURACY 5 m DATUM WGS84  17 Holmes St Sthn River 9/1/20, 13:14:16 Photo ID: 7b
DIRECTION 359 deg(T) -32.10921° +115.97020° ACCURACY 5 m DATUM WGS84  2 Holmes St Sthn River 9/1/20, 13:18:11 Photo ID: 7c	

Area 8	
AS3959-2018 Classification	Class G Grassland
Effective Slope	Flat/upslope
Area 8 comprises the pasture area to the east of the site. Vegetation consists of grass with isolated shrubs.	
DIRECTION 2 deg(T) -32.10668° +115.97055° ACCURACY 5 m DATUM WGS84  3 Holmes St Sthn River 9/1/20, 12:28:44 Photo ID: 8a	DIRECTION 178 deg(T) -32.10584° +115.96992° ACCURACY 5 m DATUM WGS84  3 Holmes St Sthn River 9/1/20, 12:32:38 Photo ID: 8b

Area 9	
AS3959-2018 Classification	Class G Grassland
Effective Slope	Flat/upslope
Plot 9 comprises the area undergoing development to the north of the site and east of Holmes Street. Vegetation consists of grass with isolated shrubs.	
DIRECTION 21 deg(T) -32.10550° +115.96904° ACCURACY 5 m DATUM WGS84  6 Holmes St Sthn River 9/1/20, 12:42:18 Photo ID: 9a	DIRECTION 82 deg(T) -32.10504° +115.96873° ACCURACY 5 m DATUM WGS84  6 Holmes St Sthn River 9/1/20, 12:43:08 Photo ID: 9b

Area 10	
AS3959-2018 Classification	Class G Grassland
Effective Slope	Flat/upslope
Area 10 comprises the pasture areas to the west of the site and extending along the watercourse to the north of the site and including the area within the subject land designated as restricted POS. Vegetation consists of open woodland characterised by isolated trees having canopy cover less than 10% with prominent grassy understorey and isolated shrubs.	
DIRECTION 159 deg(T) -32.10593° +115.96710° ACCURACY 5 m DATUM WGS84  8 Holmes St Sthn River 9/1/20, 12:47:01 Photo ID: 10a	DIRECTION 266 deg(T) -32.10654° +115.96792° ACCURACY 5 m DATUM WGS84  9 Holmes St Sthn River 9/1/20, 12:58:35 Photo ID: 10b
DIRECTION 240 deg(T) -32.10674° +115.96800° ACCURACY 5 m DATUM WGS84  15 Holmes St Sthn River 9/1/20, 13:00:53 Photo ID: 10c	DIRECTION 222 deg(T) -32.10599° +115.96872° ACCURACY 5 m DATUM WGS84  12 Holmes St Sthn River 9/1/20, 12:56:03 Photo ID: 10d

Area 11	
AS3959-2018 Classification	Exclusions 2.2.3.2(e)
Effective Slope	n/a
Area 11 comprises the cleared development area to the north of Matison Street.	
 Photo ID: 11a	

Area 12	
AS3959-2018 Classification	Class G Grassland
Effective Slope	Flat/upslope
Area 12 comprises the pasture area to the north of Matison Street. Vegetation consists of open woodland characterised by isolated trees having canopy cover less than 10% with prominent grassy understorey and isolated shrubs.	
 Photo ID: 12a	

Area 13

AS3959-2018 Classification	Exclusions 2.2.3.2(e) and (f)
Effective Slope	n/a

Area 13 comprises the developed residential area to the north of the site and extending along the western section of the Holmes Street road reserve. Vegetation consists of lawns, gardens and road verge managed for low threat.



Photo ID: 13a

Area 14

AS3959-2018 Classification Pre-development	Class G Grassland
AS3959-2018 Classification Post-development	Exclusions 2.2.3.2(e) and (f)
Effective Slope	n/a

Area 14 comprises the area of the subject land, not including the area designated as restricted POS. Existing vegetation consists of open woodland characterised by isolated trees having canopy cover less than 10% with prominent grassy understorey and isolated shrubs.

Post-development the vegetation in this area will comprise residential lawns, gardens, road verges and unrestricted public open space all required to be managed for low threat.



Photo ID: 14a



Photo ID: 14b

Area 14



Photo ID: 14c

Table 4A Areas of classified vegetation and exclusions, post-development:

Vegetation Area	Vegetation Classification	Effective Slope
Area 1	Class B Woodland	Flat/upslope
Area 2	Class B Woodland	Flat/upslope
Area 3	Class B Woodland	Flat/upslope
Area 4	Class D Scrub	Flat/upslope
Area 5	Class D Scrub	Flat/upslope
Area 6	Class D Scrub	Flat/upslope
Area 7	Class G Grassland	Flat/upslope
Area 8	Class G Grassland	Flat/upslope
Area 9	Class G Grassland	Flat/upslope
Area 10	Class G Grassland	Flat/upslope
Area 11	Exclusions 2.2.3.2 (e)	n/a
Area 12	Class G Grassland	Flat/upslope
Area 13	Exclusions 2.2.3.2 (e) & (f)	n/a
Area 14	Exclusions 2.2.3.2 (e) & (f)	n/a

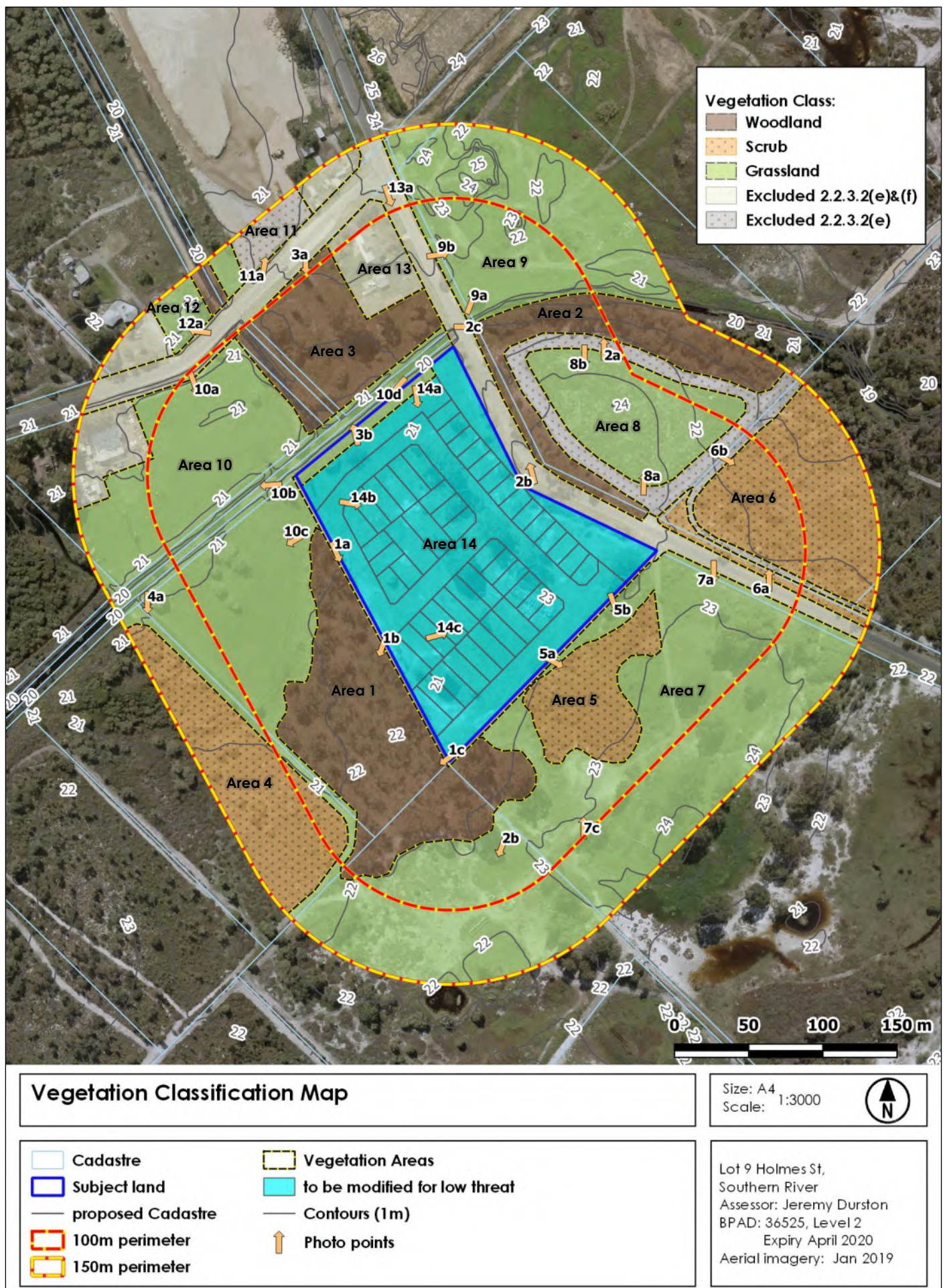


Figure 4A: Vegetation Classifications

5.0 Bushfire Assessment Outputs

5.1 Potential Bushfire Impact

Potential bushfire impact analysis was undertaken in accordance with SPP3.7 Guidelines and AS3959-2018 to determine the potential radiant heat impacts to future habitable buildings within the proposed lots of the subdivision.

In accordance with SPP 3.7, BAL Contour Maps have been prepared to illustrate the potential radiant heat impacts and associated BAL ratings after the subdivision is completed (see Figures 5A and 5B). The resulting indicative BAL ratings are presented in the following table (Table 5A):

Table 5A: Maximum BAL ratings that apply at the proposed lot boundaries (AS3959 Method 1)

Proposed Lots *	Indicative BAL Rating
48, 49, 50.	BAL-FZ
47	BAL-40
7, 8, 9, 25, 26, 27, 28, 46	BAL-29
4, 5, 6, 10, 11, 12, 13, 24, 30, 37, 38, 41, 42, 44, 45	BAL-19
1, 2, 3, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 29, 31, 32, 33, 34, 35, 36, 39, 40, 43,	BAL-12.5
nil	BAL-LOW

* the lot numbers have been adopted only for identification purposes for this report.

As indicated above, all lots except Lots 47, 48, 49, and 50 are rated BAL-29 or lower when assessed at the lot boundaries.

In accordance with the LSP BMP:

Should development stages be constructed prior to removal of bushfire hazards on adjoining landholdings, temporary quarantining of some lots would be required if the rating exceeded BAL-29.

Accordingly, proposed Lots 47, 48, 49 and 50 must be quarantined until the bushfire hazard is reduced on the adjoining land to the south-west of the site, e.g. when the adjoining land is cleared for development, as detailed by the Southern River Sub-precinct 3D Local Structure Plan.

While quarantined from development, Lots 47, 48, 49 and 50 are to be managed for low threat to form a temporary Asset Protection Zone for the proposed subdivision.

Once the bushfire hazard is reduced on the adjoining land, the BAL ratings for Lots 47, 48, 49 and 50 are to be re-assessed. The lots may then be removed from quarantine when ratings of BAL-29 or lower are achieved.

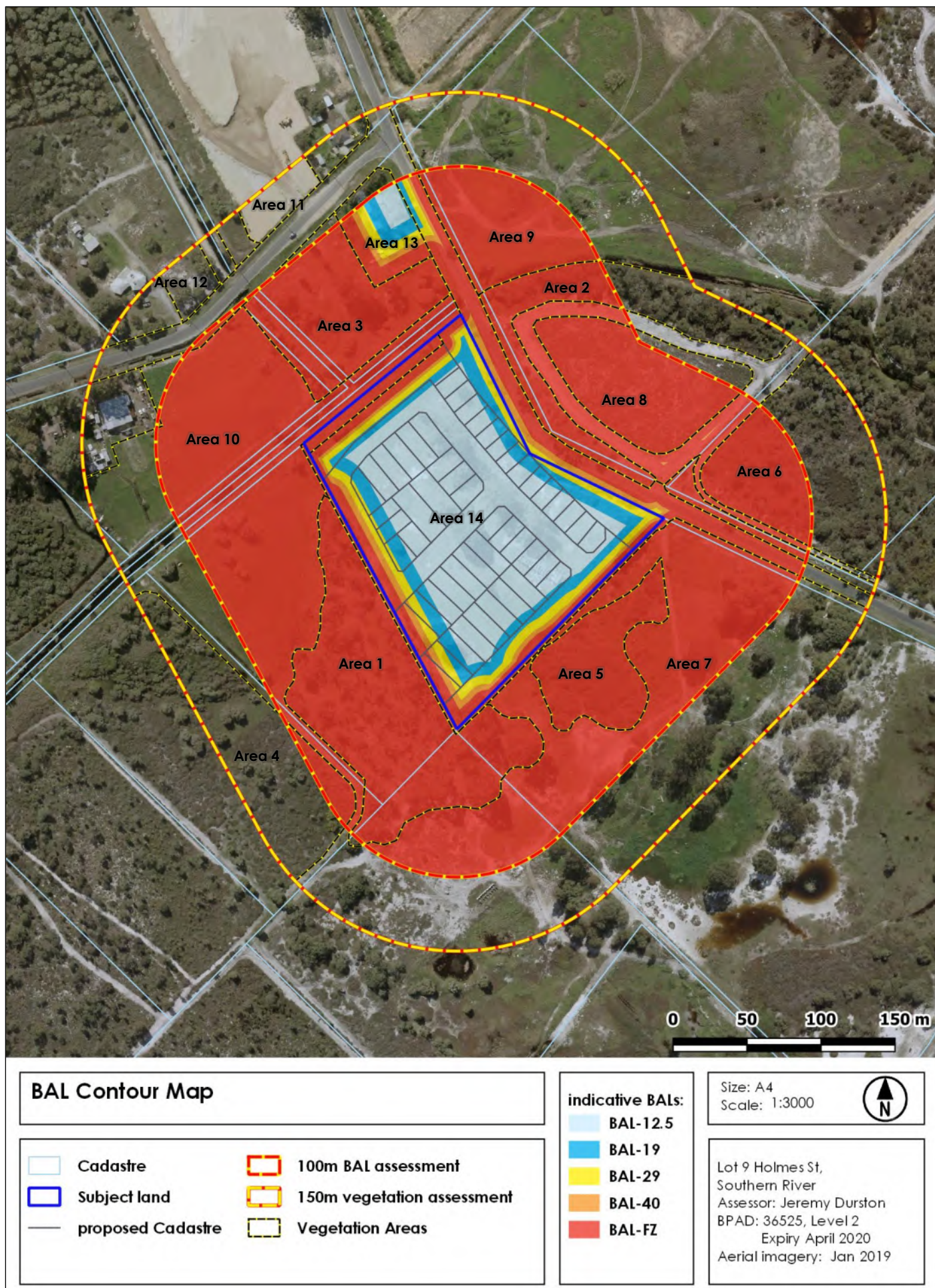


Figure 5A: BAL Contour Map (overview)

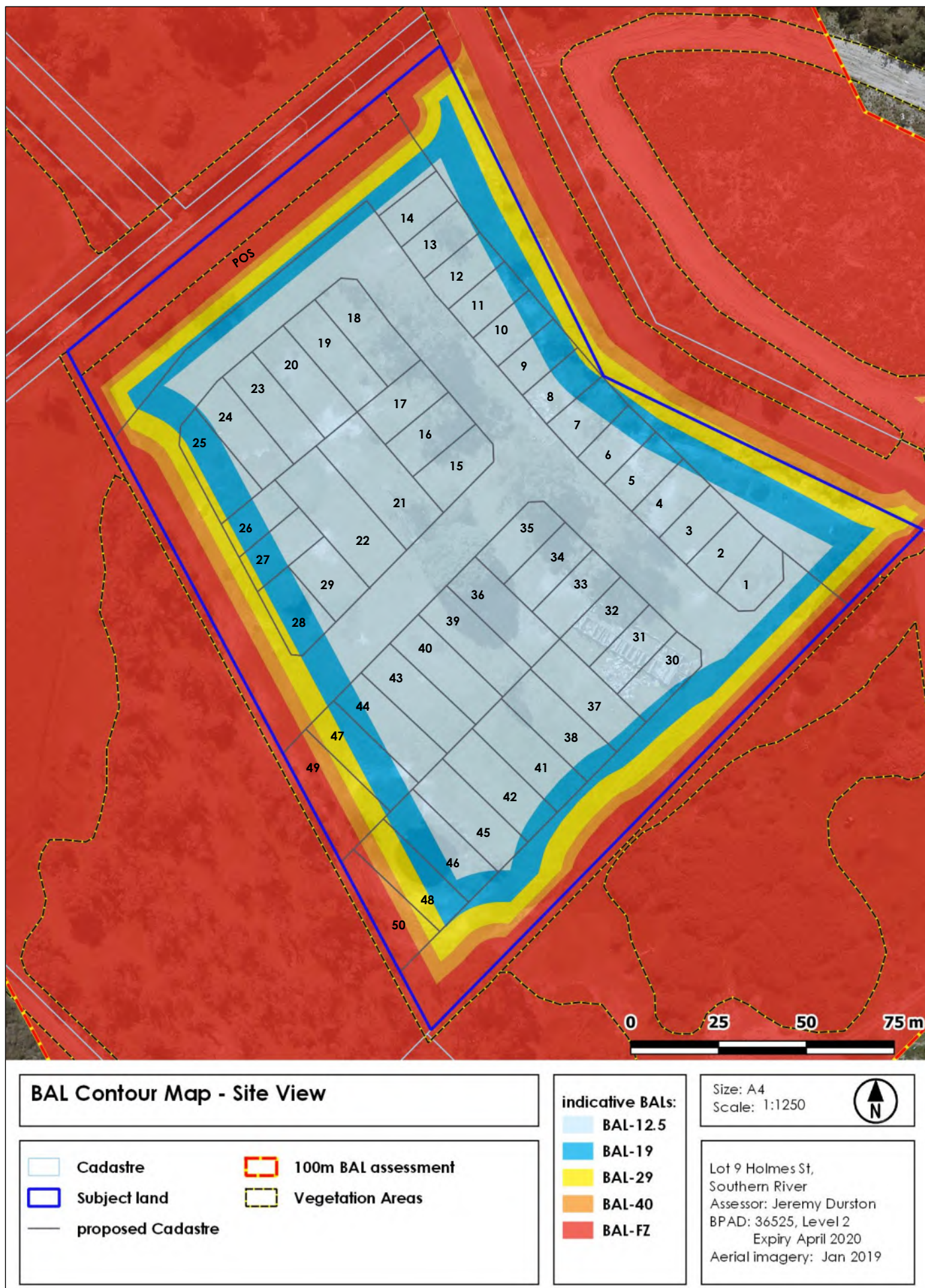


Figure 5B: BAL Contour Map (site detail)

5.2 Bushfire Hazard Issues

The BAL Contour assessment illustrates the identified bushfire hazards to the subject land from:

- The areas of native vegetation in the locality surrounding the site.
- The areas of unmanaged pasture in the locality surrounding the site.
- The land adjoining the site that is within the LSP area and is yet to be developed, consequently remaining a bushfire hazard in the interim.

The primary hazard relates to the interface between the site and the adjoining unmanaged lands. While the subdivision design largely manages this interface through internal road reserve buffers, proposed Lots 49 and 50 will directly abut unmanaged land designated for future development. Consequently, Lots 47, 48, 49 and 50 are required to be quarantined as a temporary Asset Protection Zone for the subdivision.

Once the adjoining lands undergo subdivision and residential development the bushfire hazard to the site will be significantly reduced.

6.0 Bushfire Protection Criteria

6.1 Guidelines for Planning in Bushfire Prone Areas Version 1.3 (the Guidelines)

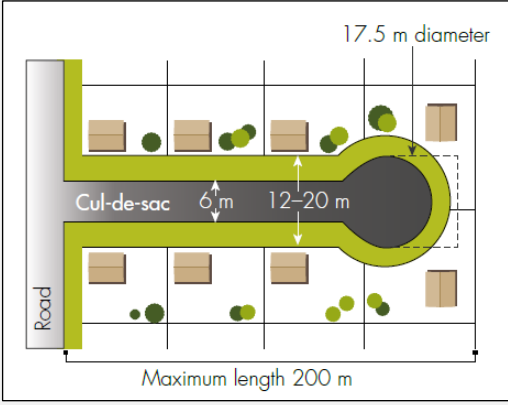
The Guidelines apply to subdivision applications located within designated bushfire prone areas. The Guidelines provide supporting information for implementation of SPP 3.7. Specifically, they provide the Bushfire Protection Criteria to be address for all applications.

6.2 Proposal Assessment

Table 6A provides an assessment against the bushfire protection criteria detailed in Appendix 4 of the Guidelines, including the applicable Acceptable Solutions for each element.

Table 6A: Assessment against the bushfire protection criteria of the Guidelines

Element	Acceptable Solution (A)	Compliance	Notes
1. Location	A1.1 Development location	Complies	All lots will ultimately be developable to ratings of BAL-29 or lower. Lots 47, 48, 49 and 50 are to be temporarily quarantined from development until the bushfire hazard is reduced on the adjoining land to the south-west. The remaining lots will be developable to BAL-29 or lower upon the required internal areas of the site being managed for low threat.
2. Siting of Development	A2.1 Asset Protection Zone	To Comply	The lots are not large enough to contain an APZ within their own boundaries. APZs will comprise adjoining residential development, unrestricted POS and road reserves that are all required to be managed for low threat. The area currently within the site proposed for the realignment of Holmes Street is also required to be managed for low threat to the standards of an Asset Protection Zone. Additionally, Lots 47, 48, 49 and 50 are to form a temporary Asset Protection Zone while quarantined from development. The lots, unrestricted POS and required sections of road reserve are to be maintained in accordance with the Asset Protection Zone standards from the Guidelines (included in Appendix 1) in conjunction with the City of Gosnells Fire Hazard Reduction Notice (Appendix 2) where applicable.

Element	Acceptable Solution (A)	Compliance	Notes
3. Vehicular Access	A3.1 Two access routes	To Comply	Holmes Street provides primary access to the subdivision. Holmes Street currently provides no through access to the south. Ultimately, the planned realignment of Holmes Street will form a southern extension to Garden Street with a connection to Tonkin Hwy. In the meantime, secondary access to the subdivision relies on the proposed Emergency Access Way being constructed (refer to A3.6). The subdivision will accordingly provide all proposed lots with at least two future access/egress routes with connections to the wider public road network.
	A3.2 Public road	To Comply	All roads providing internal access to the subdivision are to be constructed to the relevant standards specified in the Local Government Guidelines for Subdivisional Development, which meet the requirements for bushfire access.
	A3.3 Cul-de-sac	To Comply	The proposed entrance road into the subdivision will terminate in a temporary cul-de-sac until the adjoining land is developed to extend the road in accordance with the LSP. The temporary cul-de-sac is to incorporate a 17.5m diameter turnaround area compliant with the Guidelines, illustrated as follows:  The diagram illustrates a cul-de-sac layout. A road enters from the left and terminates in a cul-de-sac. The cul-de-sac has a 17.5m diameter turnaround area at the end. The width of the cul-de-sac is 6m, and its length is 12-20m. The maximum length of the cul-de-sac is 200m. The diagram also shows buildings and trees along the road and cul-de-sac.
	A3.4 Battle-axe	N/A	No battle-axe lots are proposed.
	A3.5 Private driveways longer than 50m	N/A	All lots are less than 50m deep.

Element	Acceptable Solution (A)	Compliance	Notes
	A3.6 Emergency access way (EAW)	To Comply	Emergency access will be established by the construction of the proposed Emergency Access Way, via the Lot 70 easement, linking the existing northern and southern sections of Passmore Street.
	A3.7 Fire service access routes (FSAR)	N/A	There is no proposed FSAR.
	A3.8 Firebreak widths	N/A	Internal Firebreaks are not required. Instead, the entire areas of all lots and unrestricted POS are to be managed for low threat.
4. Water	A4.1 Reticulated areas	To Comply	The subdivision will be serviced with fire hydrants in accordance with the required specifications. A plan of the hydrants will be submitted to Council and DFES as part of the subdivision clearance.
	A4.2 Non-reticulated areas	N/A	Reticulated area.
	A4.3 Individual lots within non-reticulated areas	N/A	Reticulated area.

6.3 Spatial Representation of Bushfire Management Strategies

The bushfire management measures detailed in Table 6A are illustrated in the following Bushfire Management Strategies Map (Figure 6A).

The road access alternatives available to the subdivision, including the proposed Emergency Access Way, are illustrated in the Road Access Map (Figure 6B).

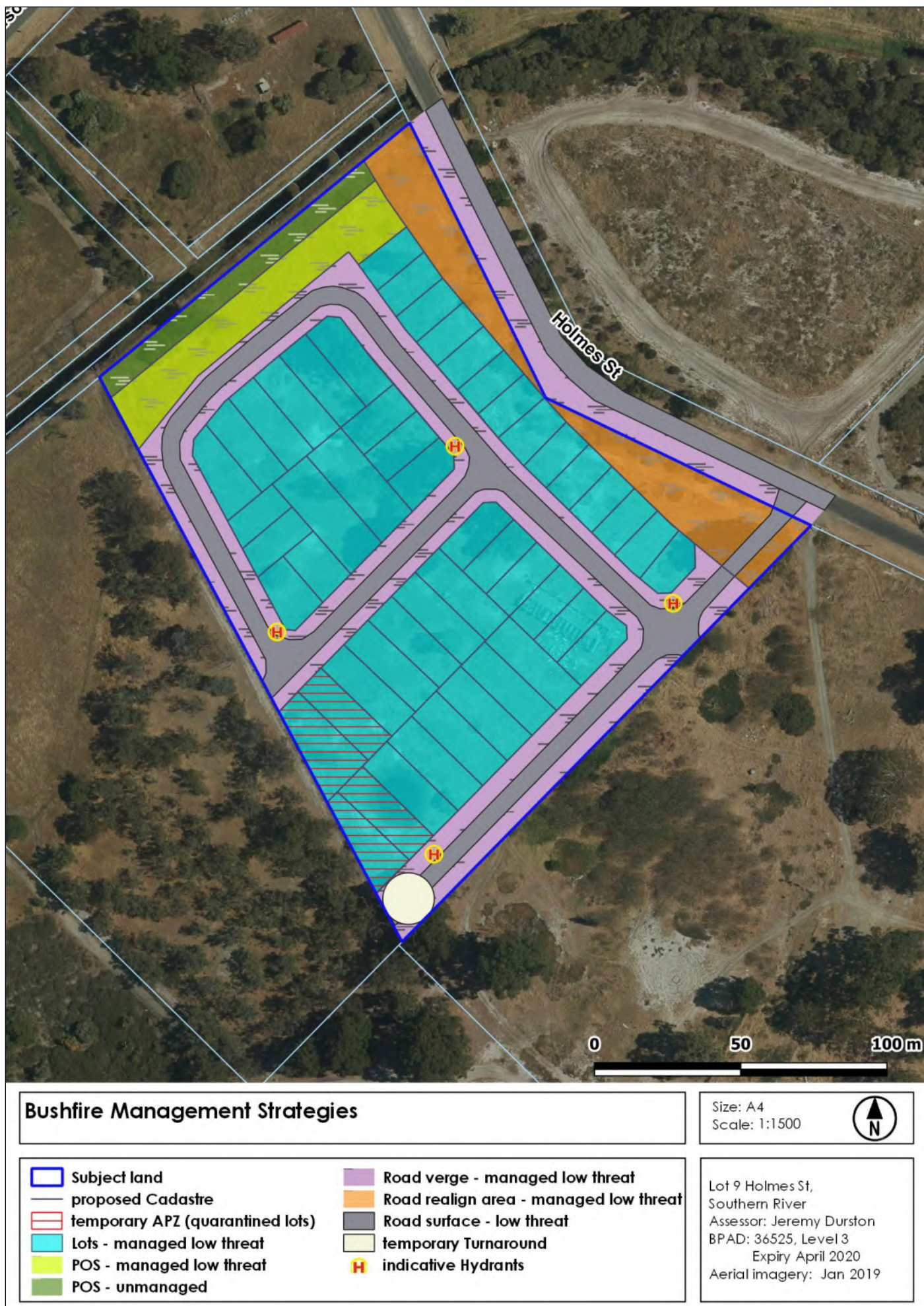


Figure 6A: Bushfire Management Strategies Map



Figure 6C: Road Access Map

7.0 Implementation and Management

The management of the bushfire risk is a shared responsibility between the developer, future landowners and local government. These responsibilities are summarised in Table 7A.

Table 7A: Implementation Schedule

	Developer Actions	Timing
1.0 Prior to Issue of Titles		
1.1	Construction of subdivision roads to standards outlined in the BMP to ensure safe access and egress, including the required temporary cul-de-sac with turnaround area.	Subdivision
1.2	Clearing, modification and/or maintenance of the vegetation within the site in a low threat condition including all residential lots, the proposed unrestricted POS, road reserves and the area designated for the realignment of Holmes Street.	Subdivision
1.3	Submit a plan of hydrants for Council and DFES approval.	Subdivision
1.4	Prepare a notification to be included on the certificate of titles for lots with a BAL rating of 12.5 or above, advising the relevant Bushfire Attack Level and that the land is subject to a Bushfire Management Plan.	Subdivision
2.0 Prior to Sale		
2.1	Quarantine from development the lots initially rated above BAL-29.	Sale of Lots
2.2	Sell no lots prior to construction of the proposed Emergency Access Way over the Lot 70 easement, or until two access alternatives otherwise become available to the subdivision.	Sale of Lots
2.3	Provide prospective residents with a summary of this BMP.	Sale of Lots
	Landowners Actions	Timing
3.0 Prior to Occupancy		
3.1	Where required, ensuring that any application for a building permit for a dwelling is to include a Bushfire Attack Level assessment.	Development
4.0 Ongoing		
4.1	Undertaking regular property maintenance in preparation for the annual fire season.	Ongoing
4.2	Comply with all required fire mitigation measures on their land, as prescribed in Council's annual Fire Hazard Reduction Notice.	Ongoing

	Local Government Actions	Timing
5.0 Ongoing Management		
5.1	Ensuring Building Permit Applications and Development Applications are compliant with the building and land use planning provisions.	Ongoing
5.2	Maintenance of vegetation in low threat condition within the unrestricted POS, once transferred.	Ongoing
5.3	Enforce compliance with its annual Fire Hazard Reduction Notice.	Ongoing

8.0 References

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WAPC. (2017b). Guidelines for Planning in Bushfire Prone Areas Appendices Version 1.3.

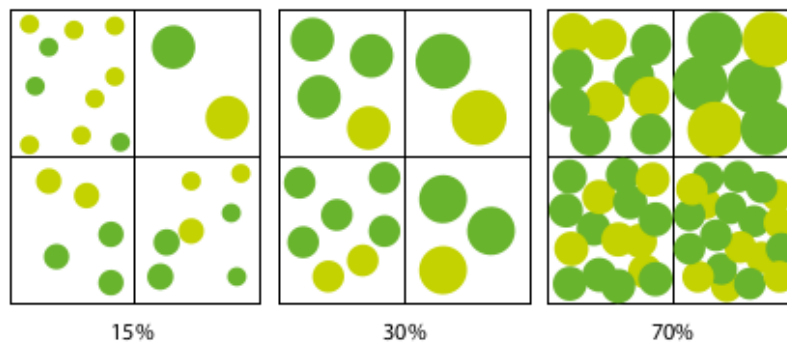
Appendix 1

Asset Protection Zone Standards

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

- **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 18: Tree canopy cover – ranging from 15 to 70 per cent at maturity



- **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 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.

Source: Guidelines for Planning in Bushfire Prone Areas Appendices Version 1.3

Appendix 2

City of Gosnells Fire Hazard Reduction Notice



Annual Fire Hazard Reduction Notice

Bush Fires Act 1954 Section 33(1)

To prevent bush fires and to minimise the spread of a bush fire, all owners and occupiers of land within the City's district are required to comply with the requirements of this Annual Fire Hazard Reduction Notice.

For the purposes of this Notice, flammable matter includes, but is not limited to, vegetation (except for living trees, shrubs, plants and lawns under cultivation), prunings, cardboard, wood, paper, general rubbish and any other combustible material.

1. Owners or occupiers of land zoned 'General Rural' or 'Special Rural'

On or before 30 November each year, all owners or occupiers of land zoned 'General Rural' or 'Special Rural' under the City of Gosnells Town Planning Scheme No. 6 are required to:

- a. Clear and maintain the land free of all flammable matter to a height no greater than 10cm; or
- b. Maintain a mineral earth firebreak immediately inside all external boundaries of each lot on the land and maintain a mineral earth firebreak within 20m of all haystacks and stockpiled flammable matter.

Mineral earth firebreaks must be continuous (no dead ends) and maintained to a minimum standard of 3m wide by 4m high (vertical clearance) so as to provide unimpeded access for emergency vehicles. Driveways must also be maintained to these standards.

Firebreaks are intended to provide safe access on your property for emergency vehicles and to ensure fire does not travel under the vehicles or underfoot.

Note: The firebreaks and requirements set out above must be maintained up to and including 30 April in the following year.

2. Owners or occupiers of all other land, which is not zoned 'General Rural' or 'Special Rural'

At all times throughout the year, all owners or occupiers of land zoned other than 'General Rural' or 'Special Rural' under the Scheme are required to clear and maintain the land free of all flammable matter to a height no greater than 10cm.

Permission needed to vary requirements

If, due to the topography or other constraints of your land, you are unable to adhere to the requirements set out in this Notice, you may apply in writing to the City no later than 1 November each year for permission to provide firebreaks in alternative locations or take alternative measures.

Unless and until permission in writing is granted by the City, you shall comply with the requirements of this Notice.

All land owners

Further to the above minimum requirements, the landowner may receive a separate written notice, sent to the address shown on the City of Gosnells rates record, requiring additional works which may be considered necessary by an Authorised Officer of the City.

Penalty for non-compliance

Failing to comply with the requirements of this Notice is an offence under the *Bush Fires Act 1954 (Act)*, which carries a penalty of up to \$5,000. In addition, where the owner or occupier of the land fails to comply with a Notice given pursuant to Section 33(1), the City may enter the land to carry out the work required to comply with the Notice and also recover any costs and expenses incurred in carrying out that work from the owner or occupier of the land.