

Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address:

Site visit: Yes No

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

Report author or reviewer:

WA BPAD accreditation level (please circle):

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

If accredited please provide the following.

BPAD accreditation number: Accreditation expiry: Month Year

Bushfire management plan version number:

Bushfire management plan date: Day Month Year

Client/business name:

	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?	<input type="checkbox"/>	<input type="checkbox"/>
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the bushfire protection criteria elements)?	<input type="checkbox"/>	<input type="checkbox"/>

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

None of the above

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

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

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

Signature of report author or reviewer

 53

Date

BAL CONTOUR PLAN & BUSHFIRE MANAGEMENT PLAN



Lot 420 (N0. 58) Sydney Street

Yakamia, WA 6330

Final

10/03/2022



Site Details			
Address:	Lot 420 (NO. 58) Sydney Street		
Suburb:	Yakamia	State:	W.A. Postcode 6330
Local Government Area:	City of Albany		
Description of Building Works:	Proposed Subdivision		
Stage of WAPC Planning	Subdivision Application		

BAL Contour Plan Details			
Report / Job Number:	MSC0483	Report Version:	Final
Assessment Date:	14 February 2022	Report Date:	10 March 2022
BPAD Practitioner	Jason Benson (Level 2)	Accreditation No.	BPAD 37893
BPAD Practitioner	Kathryn Kinnear (Level 2)	Accreditation No.	BPAD 30794



Bio Diverse Solutions Australia Pty Ltd

Albany Office
 29 Hercules Crescent
 Albany WA 6330
 (08) 9842 1575

Denmark Office
 Unit 7, 40 South Coast Highway
 Denmark WA 6333
 (08) 9848 1309

Esperance Office
 Unit 2A, 113 Dempster Street
 Esperance WA 6450
 (08) 9072 1382

www.biodiversesolutions.com.au

ABN 46 643 954 929

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1. Introduction

Ayton Baesjou Planning commissioned Bio Diverse Solutions (Bushfire Consultants) to prepare a Bushfire Management Plan (BMP) to accompany a WAPC subdivision to Lot 420 (No. 58) Sydney Street Yakamia (the subject site), within the City of Albany (CoA). The Bushfire Management Plan (BMP) is developed to assess the proposal to ensure it is consistent with the current and endorsed ‘Guidelines for Planning in Bushfire Prone Areas Version (WAPC, 2021, Vers 1.4)’ and ‘State Planning Policy 3.7 (WAPC, 2015).

1.1 Location

The subject site is located to the north of Albany CBD in the municipality of Yakamia, as shown in Figure 1.

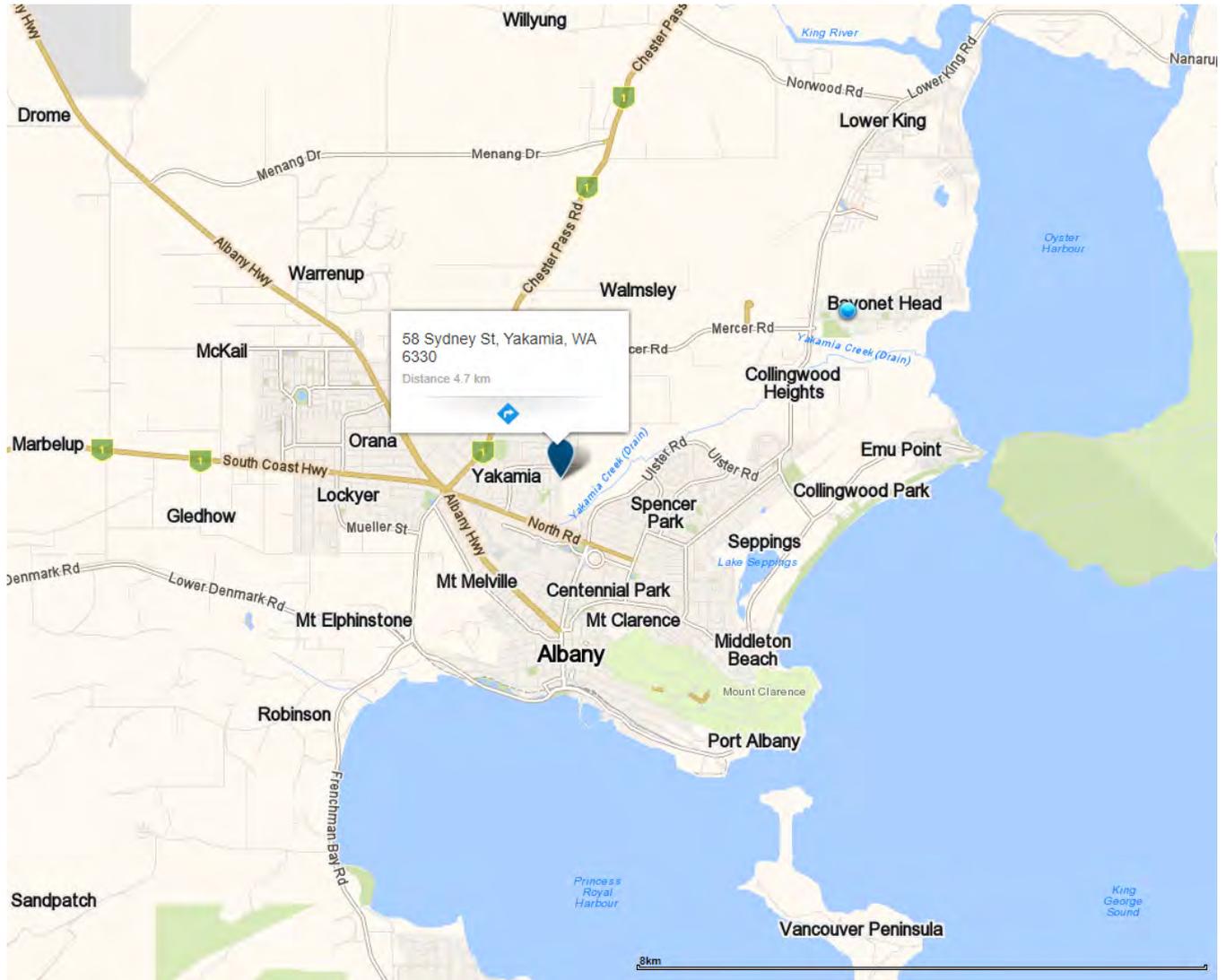
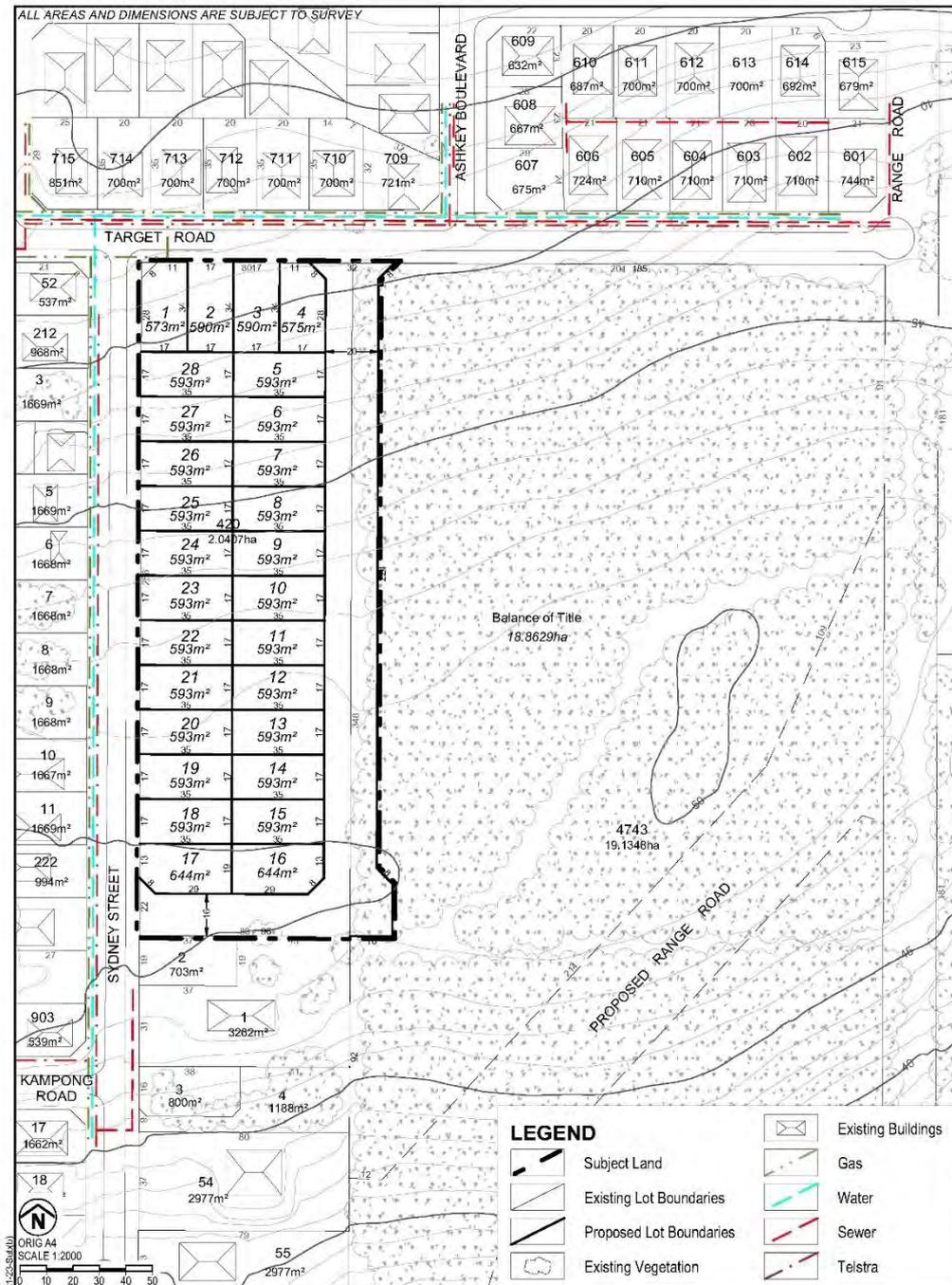


Figure 1: Location Mapping of the subject site.

1.2 Development Proposal

The purpose of this report is to support the subdivision application to subdivide existing Lot 420 into 28 lots ranging from 573m² to 644m², see Figure 2, proposed subdivision.



PLAN OF SUBDIVISION

Lots 420 Target Road & Pt Lot 4743 North Road Yakamia, City of Albany

AYTON PLANNING

PO Box 5476, ALBANY WA 6332
PH 9842 2304

Figure 2: Proposed subdivision of the subject site.

The subject site is zoned as 'Future Urban' under the City of Albany Local Planning Scheme (No. 1). The publicly released Bushfire Prone Area Mapping (OBRM, 2021) shows that the subject site is located within a Bushfire Prone Area (within 100m of >1ha of bushfire prone vegetation) and as such is subject to a planning assessment of the bushfire risks. Bushfire Prone Area Mapping (OBRM, 2021) is shown in Figure 3.

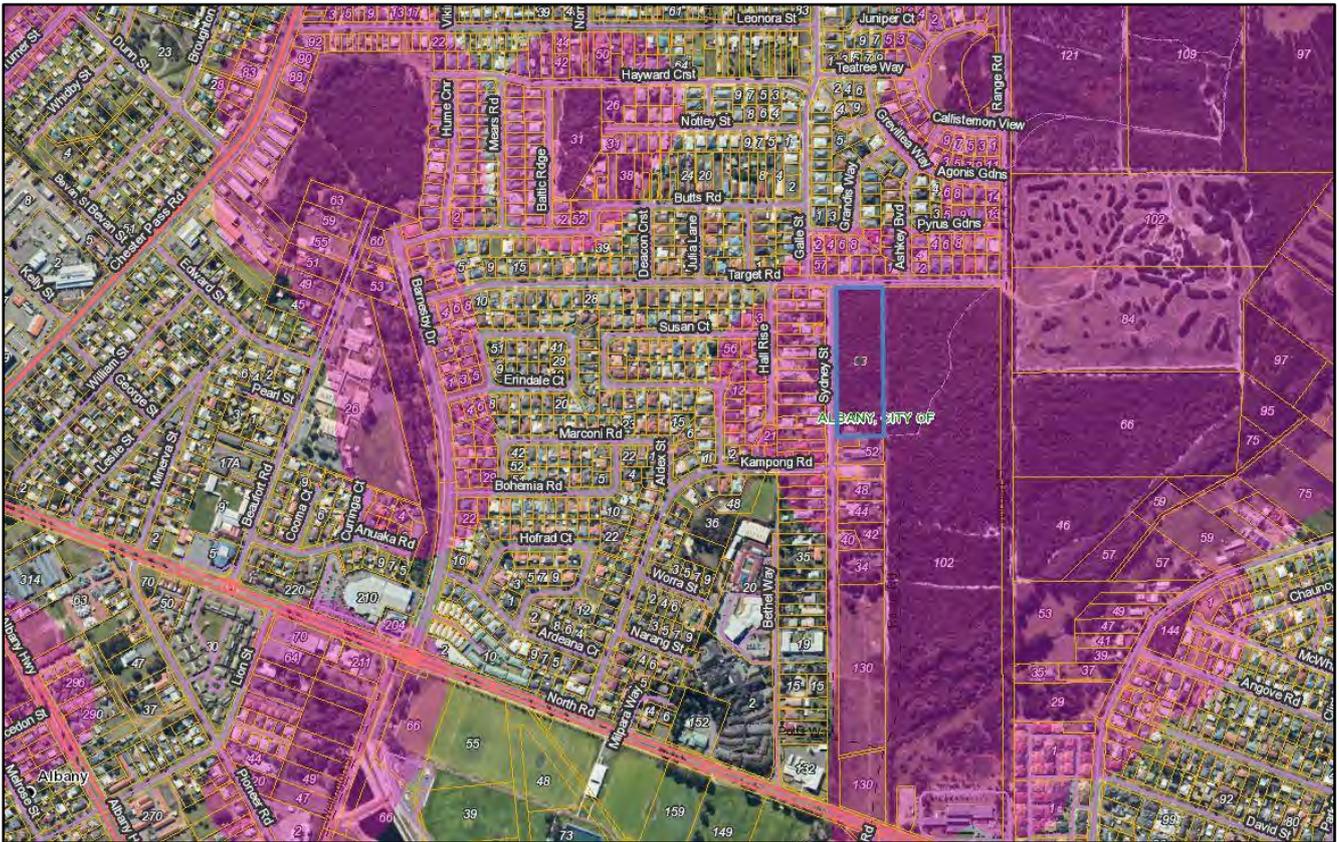


Figure 3: Map of Bushfire Prone Areas and relevance to subject site (OBRM, 2021).

1.3 Statutory Framework

This document and the recommendations contained within are aligned to the following policy and guidelines:

- *Planning and Development Act 2005;*
- *Planning and Development (Local Planning Scheme) Regulations 2015;*
- *State Planning Policy (SPP) 3.7 Planning in Bushfire Prone Areas 2015 (WAPC, 2015);*
- *Guidelines for Planning in Bushfire Prone Areas (WAPC, 2021, Vers 1.4);*
- *Building Act 2011;*
- *Building Regulations 2012;*
- *Building code of Australia (National Construction Code) (NCC, n.d.);*
- *Fire and Emergency Services Act 1998.*
- **AS3959-2018 “Construction of Buildings in Bushfire Prone Areas” current and endorsed standards;**
- *Bushfires Act 1954;* and
- *CoA Fire Management Notice (CoA, 2021/22).*

2 Environmental Considerations

2.1 Native Vegetation – Modification and Clearing

This BMP utilises the assumption that the proposed lots can be maintained in a low fuel state as per the WAPC Asset Protection Zone (APZ) Standards, Schedule 1 (refer to Appendix B). Internal vegetation is to be removed/modified to a low threat state for the construction of the new road and enable all lots to achieve BAL-29 or lower, see future low fuel area on, Figure 4 Vegetation Classes. The low fuel areas are to be managed in perpetuity and implemented by the developer at subdivision construction stages. Strategies to manage low fuel areas for the developer and future landowners are outlined in Section 5.2 of this report.

In addition to the onsite vegetation modification, there will be an additional 17m of vegetation that will be removed within Lot 102 to the east of the development area. This will include the removal of vegetation to construct the new road (20m), of which 10m will be within CoA land and in addition to the managed road reserve a further 7m of low fuel vegetation to ensure BAL-29 or lower is achieved for each new lot. Lot 102 is under the management of the City of Albany and any removal of vegetation within this land must be agreed upon in writing and managed in a low threat state in perpetuity.

An environmental assessment of the area was completed in 2013 by Aurora Environmental. For specific information regarding the environmental issues, refer to Yakamia Structure Plan Area, City of Albany Environmental Assessment – Opportunities and Constraints (Aurora Environmental, 2013).

2.2 Review of the Environmental Data Sets (Landgate SLIP)

A review of the environmental data sets (Landgate SLIP) as identified in the Department of Planning Lands and Heritage BMP Template for a complex development application, does not identify that any regulated (restricted) vegetation will be affected by the proposal, see Table 1 Environment Dataset Review.

Table 1: Environmental Dataset Review.

Dataset	Impact on Proposal	Comment
Conservation category wetlands and buffer	No	
RAMSAR wetlands	No	
Threatened and priority flora	Unaware	For survey of priority flora, see environmental assessment completed by Aurora Environmental (2013)
Threatened Ecological Communities	No	For survey of priority flora, see environmental assessment completed by Aurora Environmental (2013)
Bush Forever areas 2000	No	
Clearing regulations –Environmentally Sensitive Areas	No	
Swan Bioplan Regionally Significant Natural Areas 2010	No	
Conservation Covenants Western Australia	Unaware	

Note: Relevant checks have been completed and the proposal does not currently impact on and of the above sites. However, the management strategies contained in this BMP, assume that all environmental approvals will be achieved or clearing permit exemptions will be applied. It is recommended that the proponent seeks specific advice in relation to the clearing of any native vegetation that is proposed as part of this development. Clearing of native vegetation may utilise an exemption under the EP act through the WAPC process. It is advised that the proponent seek further advice from an Environmental Consultant or the WA Department of Biodiversity, Conservation and Attractions (DBCA) on the condition and species contained within the development area and any requirement for referral of the proposal.

2.3 Revegetation or Landscaping

There is no revegetation/landscaping known for this development application and any future landscaping. An accredited Level 2 Bushfire Practitioner is to review and approve any further planting in the subdivision to ascertain if the actions increase the bushfire risk into the development.

3 Bushfire Assessment Results

The bushfire assessment for this site has followed the Bushfire Attack Level (BAL) Assessment and WAPC Planning in Bushfire Prone Areas Guidelines (Vers 1.4, 2021).

3.1 Assessment Inputs

Bushfire Assessment inputs for the site has been calculated using the Method 1 BAL Assessment procedure as outlined in AS3959-2018. This incorporates the following factors:

- WA adopted Fire Danger Index (FDI), being FDI 80;
- Vegetation Classes;
- Effective Slope under classified vegetation; and
- Distance between proposed development site and classified vegetation.

3.1.1 Vegetation Classification

Site assessment occurred on the 14th February by 2022 Bushfire Practitioner of Bio Diverse Solutions, Jason Benson (BPAD 37893). All vegetation within 150m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified in the following pages and shown on the Vegetation Classes Map on the following pages.

A summary of the Plot data assessed as per Clause 2.2.3 of AS 3959-2018 is provided below in Table 2 below, detailed plot data is provided in Appendix A.

Table 2: Vegetation Classification Table (in accordance with AS 3959-2018) of the subject site.

Plot Number	Vegetation Type	Effective Slope
1	Excluded 2.2.3.2 (e)	N/A
2	Excluded 2.2.3.2 (f)	N/A
3	Excluded 2.2.3.2 (c)	N/A
4	Forest Type A	Downslope >0-5 degrees
5	Forest Type A	Downslope >5-10 degrees
6	Grassland Type G	Downslope >0-5 degrees

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Overview Map Scale 1:100,000

Legend

- Subject Site
 - 100m Assessment Boundary
 - 150m Assessment Boundary
 - Cadastre
 - 5m Contours
 - Separation Distance
 - Slopes Degrees
 - Photo Point
 - Future Low Fuel (Onsite)
 - Future Low Fuel (Offsite)
 - Vegetation/Plot Boundary
- Vegetation**
- Forest Type A
 - Grassland Type G
 - Low fuel or non vegetated 2.2.3.2



Scale
 1:2,500 @ A3
 GDA MGA 94 Zone 50

Data Sources
 Aerial Imagery: WA Now, Landgate Subscription Imagery
 Cadastre, Relief Contours and Roads: Landgate 2017
 IRIS Road Network: Main Roads Western Australia 2017
 Overview Map: World Topographic map service, ESRI 2012

CLIENT
 Martin Shuttleworth
 Lot 420 (No. 58) Sydney Street
 Yakamia, WA 6330

Vegetation Classes

BAL Assessor	QA Check	Drawn by
JB	BT	GSK
STATUS	FILE	DATE
FINAL	MSC0483	03/03/2022

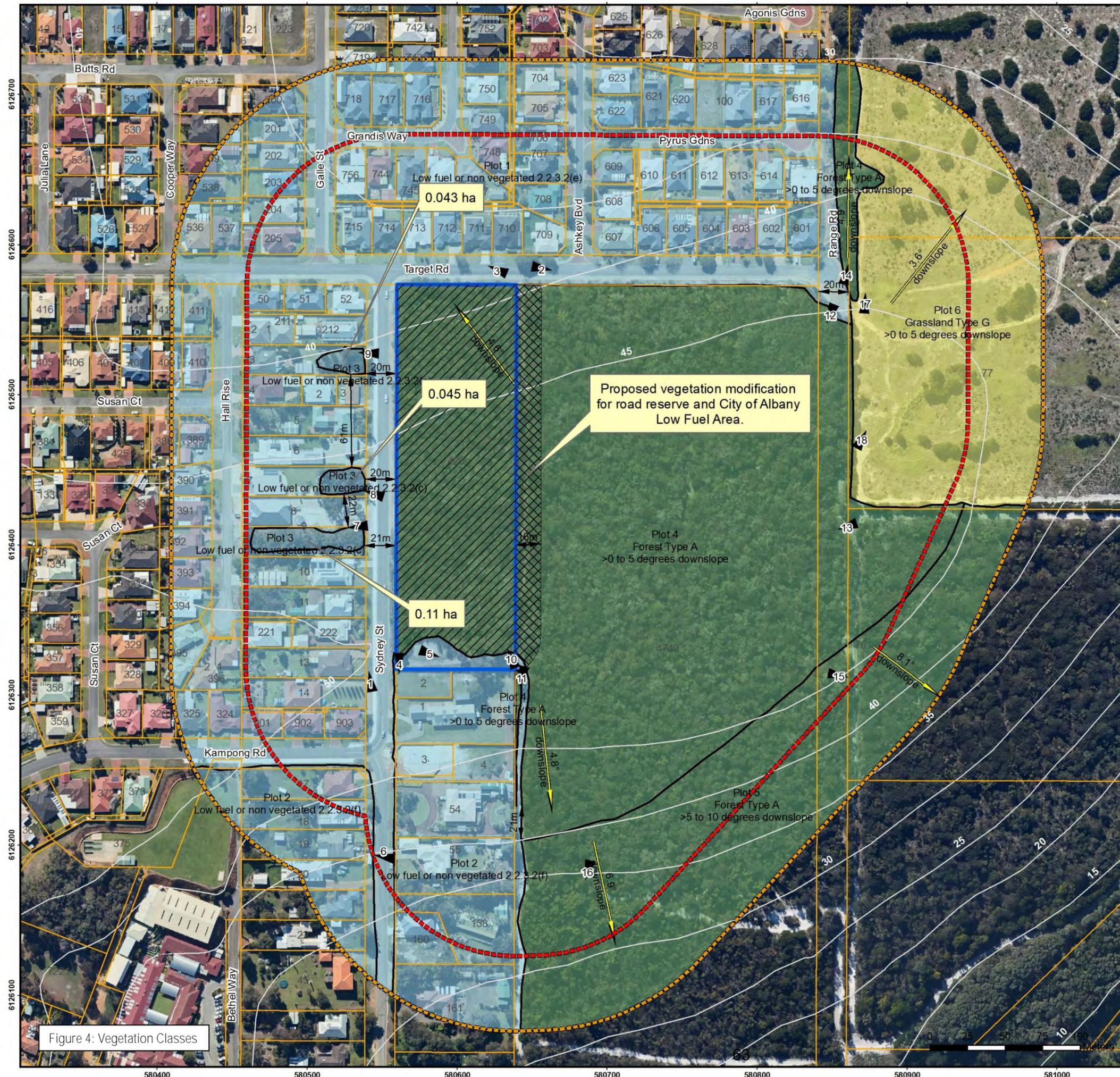


Figure 4: Vegetation Classes

580400 580500 580600 580700 580800 580900 581000

3.2 Assessment Outputs

A Method 1 BAL calculation (in the form of BAL contours) has been completed for the proposed subdivision in accordance with AS3959-2018 methodology. The BAL rating gives an indication of the level of bushfire attack (i.e., the radiant heat flux) that may be received by proposed buildings and subsequently informs the standard of building construction required to increase building tolerance to potentially withstand such impacts in line with the assessed BAL.

The assessed BAL ratings for the subdivision are depicted as BAL contours, as shown on Figure 5 and Table 3.

Table 3: AS3959 Determined BAL Rating for the proposed lots within the subject site.

Lot number/s	Vegetation Classification	Effective Slope	Highest BAL rating impacting the lot/s	Achievable BAL rating within the lot/s
1 – 2	Forest Type A (Plot 4)	Downslope >0-5 degrees	BAL-12.5	BAL-12.5
3	Forest Type A (Plot 4)	Downslope >0-5 degrees	BAL-19	BAL-19
4	Forest Type A (Plot 4)	Downslope >0-5 degrees	BAL-29	BAL-29
5 – 16	Forest Type A (Plot 4)	Downslope >0-5 degrees	BAL-29	BAL-29 and BAL-19 can prevail
17 – 28	Forest Type A (Plot 4)	Downslope >0-5 degrees	BAL-12.5	BAL-12.5

Note: This BAL contour plan is reliant on the recommended management strategies being implemented. All future low fuel areas that are removed/modified to a low threat state, as part of the implementation of this BMP, are managed in perpetuity and all existing low threat areas (Plots 1, 2 and 3) are maintained in a way that will not negatively impact the development area reflecting the state areas at the time of the assessment.

Assumptions/comments on BAL Contour Plan:

- Method 1 (AS3959-2018) Simplified procedure was used for vegetation classification and BAL Assessment process;
- The BAL Contour Plan was prepared by an Accredited Level 2 Bushfire Planning Practitioner (BPAD37893);
- The BAL Contour Map (Figure 5) has been prepared in accordance with Department of Planning (WAPC) Guidelines for Planning in Bushfire Prone Areas (WAPC, 2021, Version 1.4);
- The vegetation within the subject site (part of Plot 4 Forest), see future low fuel (onsite) on Figure 4 Vegetation Classes Map, has been excluded from BAL contouring as this vegetation will be modified to a low threat state;
- A strip (17m) of vegetation external to the subject site, along the eastern boundary (part of Plot 4 Forest Type A), see future low fuel (offsite) on Figure 4 Vegetation Classes Map, has been excluded from BAL contouring, has been excluded from BAL contouring as this vegetation will be modified to a low threat state and managed by the CoA as part of the new road reserve (10m) and an additional (7m) of vegetation to achieve BAL-29 setbacks, until further development in the future;
- Subdivision and assumptions contained within the BAL Contour Plan is based on plan of subdivision plan as supplied by the client (Figure 2); and
- Subject site is located in a Bushfire Prone Area, see Figure 3 (OBRM, 2021).

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Overview Map Scale 1:100,000

Legend

- Subject Site
 - 100m Assessment Boundary
 - 150m Assessment Boundary
 - Cadastre
 - 5m Contours
 - Development Setback
 - Proposed Lot Boundary
 - Vegetation/Plot Boundary
- BAL Contours**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



Scale
 1:2,500 @ A3
 GDA MGA 94 Zone 50

Data Sources
 Aerial Imagery: WA Now, Landgate Subscription Imagery
 Cadastre, Relief Contours and Roads: Landgate 2017
 IRIS Road Network: Main Roads Western Australia 2017
 Overview Map: World Topographic map service, ESRI 2012

CLIENT
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 Lot 420 (No. 58) Sydney Street
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BAL Contour Plan

BAL Assessor	QA Check	Drawn by
JRB	KPK	BRM
STATUS	FILE	DATE
FINAL	MSC0483	03/03/2022

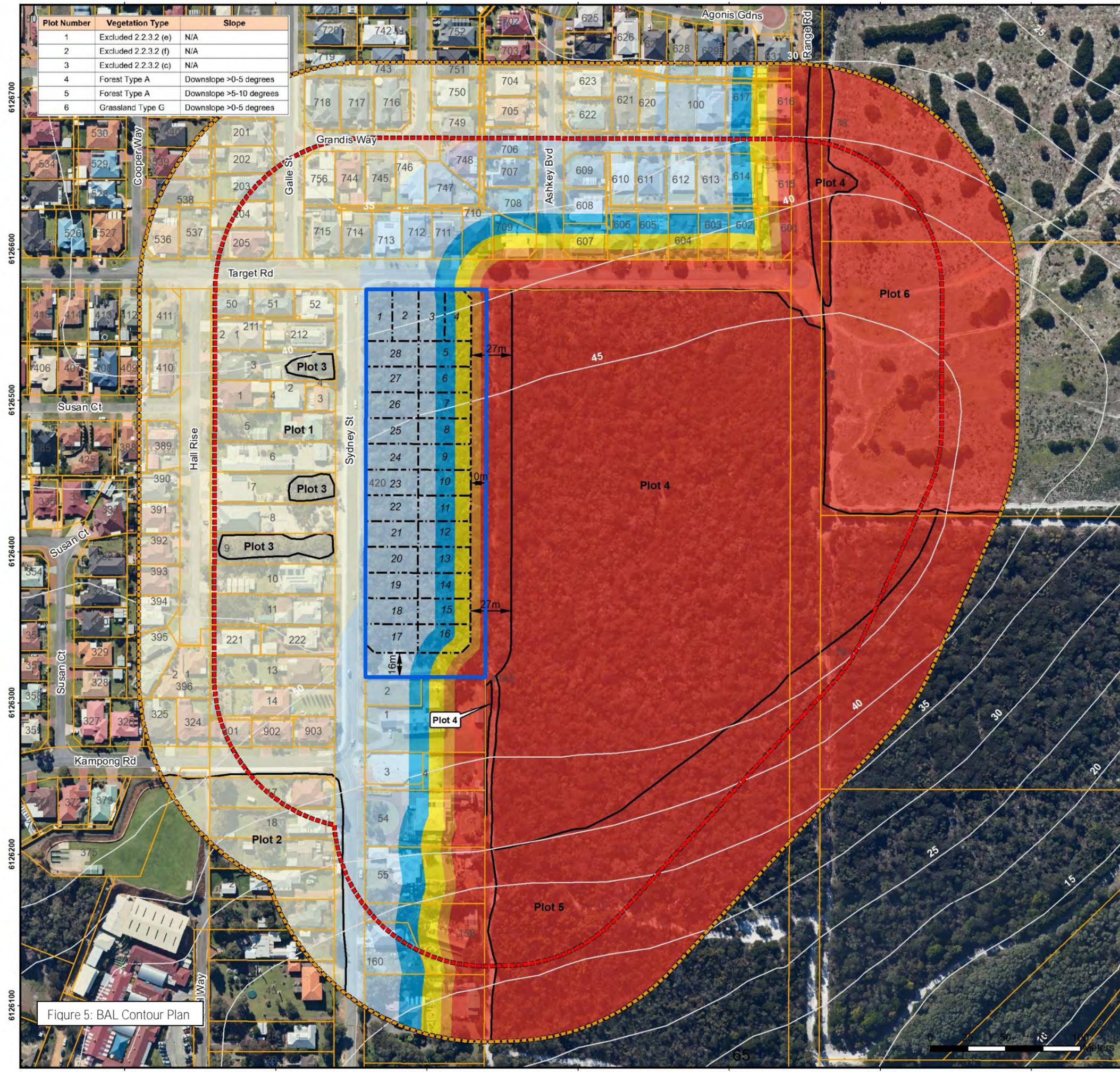


Figure 5: BAL Contour Plan

4 Identification of Bushfire Hazard Issues

4.1 Bushfire Hazard Level

The identified bushfire risks associated with the subject site is the continuous vegetation to the south and east of the subject site. This area presents as predominantly Forest Type A which are defined as 'Extreme', Bushfire Hazard Level (BHL). Under hot, dry and unstable conditions ('Severe' to 'Catastrophic' bushfire weather) the subject site is most at risk from bushfire from these directions.

To the northeast of the subject site there is a large area is partially managed and occasionally slashed, this area has been classified as Grassland Type G, if left unmanaged this grassland vegetation poses a moderate BHL to the proposed development.

To the north and west of the development site, existing residential areas occur as predominately low fuel, presenting a Low BHL. All of the new habitable buildings associated with the development are to be located in BAL-29, BAL-19 and BAL-12.5 zones (refer to the BAL Contour Plan Figure 5).

4.2 Landscape Risk

Analysis of the vegetation types and corresponding bushfire fuels (to AS3959-2018) outlines the vegetation to the southeast which has the highest risk of fire run into the subject site. Forest Type A is classified as Extreme BHL and present extreme risks to the subject site. Modified landscapes exist to the northeast which have a lower intensity of bushfire however, may still pose a medium risk of fire run into the subject site if left unmanaged. Building to BAL and AS3959-2018, in BAL-29, BAL-19 and BAL-12 zones will enable some protection to future residents in the development.

4.3 Access

The proposed subdivision is accessed from two public roads, Sydney Street and Target Road to the west and north (respectively). The existing public road network and the construction of a new public road will provide access in two different directions to at least two different destinations. New and existing roads will be constructed and maintained to the required standards as stated in the Guidelines for Planning in Bushfire Prone Areas with an all-weather surface (two-way access). Sydney Street, Target Road and the existing road network, head into the surrounding urban area, away from the bushfire threat.

4.4 Water Supply

A reticulated water supply is currently available to the site. The nearest Water Corporation WA (WCWA) standard hydrants are located adjacent to the subject site to the north on Target Road, and to the west on Sydney Street.

This meets the current acceptable solutions of the guidelines. Hydrants will be installed in the road reserve fire hydrant will be installed to **WCWA standards installed in accordance with the Water Corporation's No 63 Water Reticulation Standard (WC, 2016) and are to be identified by standard pole and/or road markings and installed by the Developer.**

Albany Office:
29 Hercules Crescent
Albany, WA 6330
(08) 9842 1575

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Legend

- Cadastre
- 5m Contours
- Access Routes (External)
- Access Routes (Internal)
- Hydrant

Fire service Access



Scale
1:2,500 @ A3
GDA MGA 94 Zone 50

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2017
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI 2012

CLIENT

Martin Shuttleworth
Lot 420 (No. 58) Sydney Street
Yakamia, WA 6330

Hydrant and Access Routes

BAL Assessor	QA Check	Drawn by
JB	BT	GSK
STATUS	FILE	DATE
FINAL	MSC0483	04/03/2022

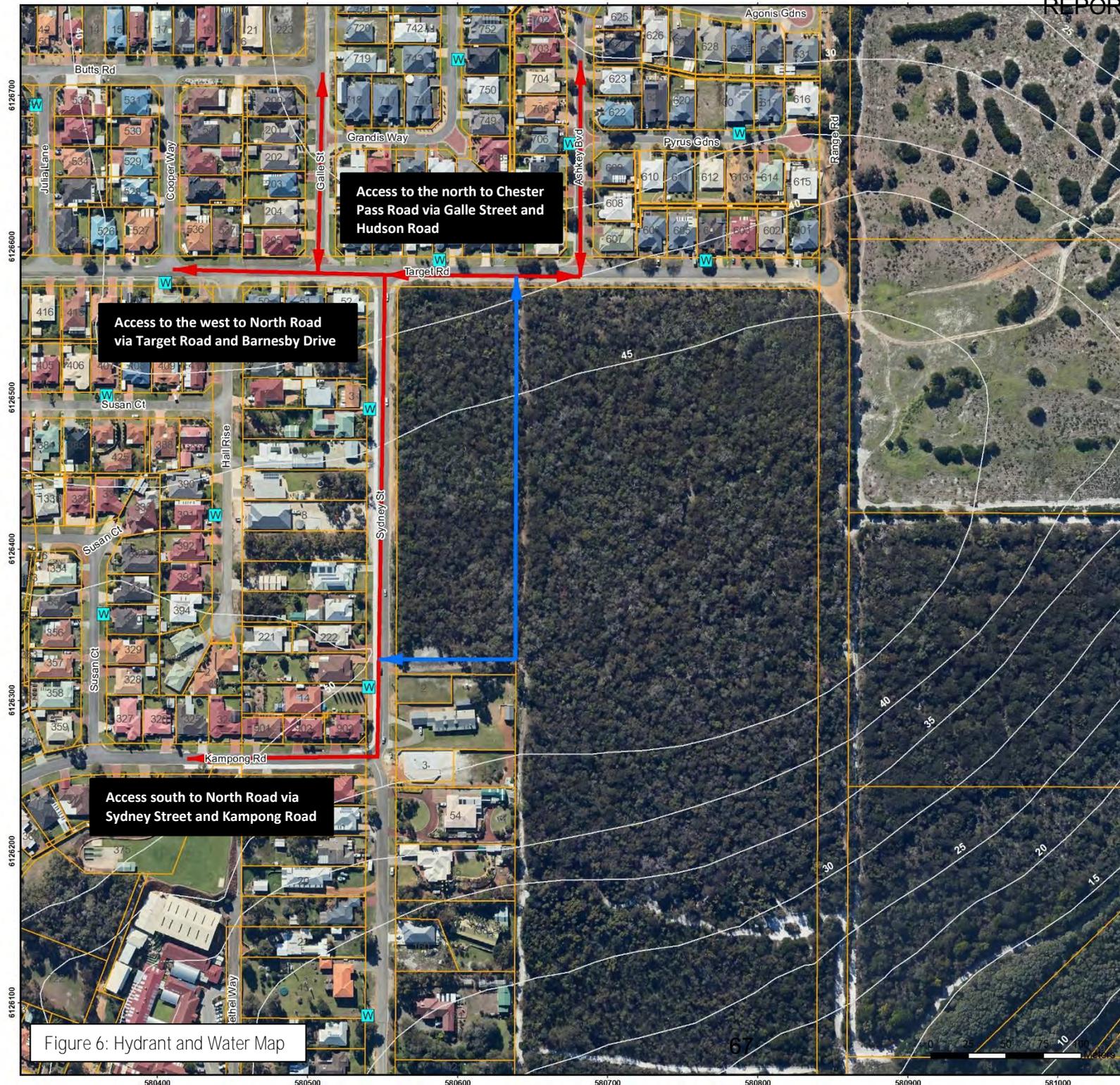


Figure 6: Hydrant and Water Map

5 Assessment against the Bushfire Protection Criteria

5.1 Compliance Table

The Guidelines for Planning in Bushfire Prone Areas (WAPC, 2021, Vers 1.4) outlines bushfire protection criteria which subdivision and development proposals are assessed for compliance. The bushfire protection criteria (Appendix 4, WAPC, 2021, Vers 1.4) are performance-based criteria utilised to assess bushfire risk management measures and they outline four elements, being:

- Element 1: Location;
- Element 2: Siting and Design of Development;
- Element 3: Vehicle Access; and
- Element 4: Water.

The subject site and the plan of subdivision has been **assessed and are required to meet the “Acceptable Solutions” of each element of the bushfire mitigation measures** (WAPC, 2021). The proposal has been assessed against all elements of the bushfire protection criteria and found to be compliant, refer to Table 4.

Table 4: Bushfire protection criteria applicable to the subject site

Element	Acceptable Solution	Applicable or not Yes/No	Proposal meets Acceptable Solution
Element 1 – Location	A1.1 Development Location	Yes	Compliant With appropriate vegetation modification/removal all proposed new lots have the ability to have a building located within the lot that will be subject to a BAL rating of BAL-29 or lower. BAL-29, BAL-19 or BAL-12.5 will apply to future buildings on site depending on final location of proposed dwelling. Proposal meets Acceptable Solution A1.1.
Element 2 – Siting and Design	A2.1 Asset Protection Zone (APZ)	Yes	Compliant With appropriate vegetation modification/removal, APZ's of the required dimensions to achieve BAL-29 or lower can be achieved. The APZ areas will prominently be contained within the subject site. Vegetation management areas external to the subject site will include a 10m portion of road reserve and an additional 7m strip of fuel reduced vegetation to the east of the subject site. This area, which will be managed by the CoA, will form part of the BAL-29 APZ/s over the eastern lots. The BAL ratings over these lots are reliant on the ongoing management of this vegetation. All onsite and offsite vegetation management areas, will be maintained in a low fuel condition as per, Schedule 1 WAPC APZ standards (WAPC, 2021, Vers 1.4). Refer to the standard in Appendix B and further information on APZ management in Section 5.2 of this report. It is recommended that an accredited Level 2 Bushfire Practitioner certifies that low fuel conditions prevail of each lot prior to release of titles. Proposal meets Acceptable Solution A2.1.
Element 3 – Vehicular Access	A3.1 Public Roads	Yes	Compliant Sydney Street and Target Road are 20m wide road reserves and constructed to required standards. A new road will be constructed to the east and south of the subject area, this road will have a 20m wide road reserve, the proposed new internal roads are to be 6m (subject to detailed engineering design). All public road design is to be approved by the CoA and all public roads approved at subdivision approval stages. Proposal meets Acceptable Solution A3.1
	A3.2a multiple access routes	Yes	Compliant The proposed subdivision is accessed via two public roads, Sydney Street to the west and Target Road to the north, which along with the new public road, will provide two-way access to the subdivision. Sydney Street and Target Road links the subdivision area to the greater road network to the north, south and west and head away from the bushfire threat, onto low fuel urban areas. The two-road network provides safe access and egress to two different destinations. As sealed public roads, they will be available to all residents and the public at all times and under all weather conditions. Refer to the Access Plan (Figure 6). Proposal meets Acceptable Solution A3.2a.
	A3.2b Emergency Access Ways	No	No emergency access ways are proposed. Not assessed to A3.2b.
Element 3 – Vehicular Access cont.	A3.3 Through Roads	No	There are no no-through roads planned as part of this proposal. Not assessed to A3.3.

Table 4 cont.

Element	Acceptable Solution	Applicable or Not Yes/No	Proposal meets Acceptable Solution
	A3.4a Perimeter roads	Yes	<p>Compliant</p> <p>The subject site is currently bordered by two existing public roads to the north and the west, A perimeter road will be constructed around this urban infill site to create separation between the new lots and the classified vegetation. The perimeter road will be constructed to a public road standard.</p> <p>Proposal meets Acceptable Solution A3.4a</p>
	A3.4b Fire Service Access Route	No	No Fire Service Access Routes are proposed. Not assessed to A3.4b.
	A3.5 Battle axe access legs	No	No battle axe legs are proposed. Not assessed to A3.5.
	A3.6 Private driveways	No	Not addressed in subdivision planning, to be actioned in subsequent planning stages (DA and building approval). Not assessed to A3.6.
Element 4 – Water	A4.1 Identification of future water supply	No	Not addressed in subdivision planning. Not assessed to A4.1.
	A4.2 Provision of water for firefighting supply	Yes	<p>Compliant.</p> <p>A reticulated water supply is currently available to the site. The nearest Water Corporation WA (WCWA) standard hydrants are located adjacent to the subject site to the north on Target Road and to the west on Sydney Street. New hydrants will be installed within the development areas. These must be installed to WCWA standards installed in accordance with the Water Corporation's No. 63 Water Reticulation Standard (WC, 2016).</p> <p>Proposal meets Acceptable Solution A4.2.</p>

5.2 Other Bushfire Mitigation Measures

The bushfire risk assessment (section 4.0) has outlined the extreme bushfire risks for the site. The following section outlines additional measures to assist in mitigating the bushfire risk for the proposed development.

5.2.1 Minimise Ignition Sources

There is little control of offsite ignition sources, however the following is recommended to be undertaken by the developer while in ownership of the land and any subsequent lots.

Prior to the bushfire season (October) the following activities are undertaken:

- Mowing, slashing and brush cutting (noting illegal to do so on designated total fire ban days);
- Maintenance of road access into and out of the site;
- Sub-contractors are aware of their obligations through contractual requirements.

During the summer bushfire season (1st December to 30th April inclusive as designated in the fire control notice) maintenance activities internal to the site should be planned and risk assessed prior to commencement. This includes but not limited to:

- Mowing, slashing and brush cutting (noting illegal to do so on designated total fire ban days);
- Welding, grinding and hot works (not undertaken on designated total fire ban days);
- Temporary waste disposal areas and green waste dumps – ensure piles are not exceeding 1.5m high and have bare mineral earth surrounding (min of 10m); and
- A water tender (min of 200L) fast attack unit is on site during the fire season (any site construction activities).

The Site Construction manager (during subdivision construction phases) in consultation with developer are responsible for safety in construction activities during the bushfire season and are to ensure safety of the site and adjacent properties at all times from potential ignition sources.

5.2.2 Fuel Reduction and APZ Management

Ongoing fuel reduction by landowners to ensure their allocated BAL applies through mechanical slashing and mowing will be required to be undertaken regularly to ensure all internal grasses are maintained. Buildings are to be inspected regularly for build-up of wind-borne debris and leaf accumulation in gutters and at penetrations to buildings (doors, windows, etc). The lot owner is to be responsible for implementation of the maintenance schedule to maintain their BAL and general bushfire preparedness which should generally reflect the following actions, refer to Table 5.

Table 5: Maintenance schedule – landowners.

<i>Frequency</i>	<i>Activity</i>
Weekly (During fire season operations and prior to bushfire event) Also refer to Schedule 1, Appendix B	Check all buildings for wind borne debris build up and remove.
	Check gutters are free from vegetation.
	Trimming and removing dead plants or leaf litter.
	Pruning climbing vegetation (such as vines) on a trellis, to ensure it does not connect to a building, particularly near windows and doors.
	Removing vegetation in close proximity to a water tank to ensure it is not touching the sides of a tank.
	Check outdoor objects around buildings (see list below).
	Raking and cleaning underfloor spaces (if applicable).

Frequency	Activity
Monthly	Mowing, slashing and maintaining grasses, more frequent during spring and autumn growth periods.
	Whipper snipper/grass cutter around all buildings.
	Check no combustible materials are store near buildings or penetrations of buildings (windows doors etc), includes but not limited to – gas bottles, fences stored combustible material, vines, plants etc.
	Ensure weeds or woody material is not encroaching into the APZ area around buildings (20m minimum), attend to any dead material through trimming and pruning, raking and removing to green waste.
	Any material from pre fire season preparation is either disposed to green waste or burn in piles away for the buildings with a 10m mineral earth break around the pile.

Prior to a bushfire event best practice recommends that objects within the APZ are moved away from the building prior to any bushfire event. Objects may include, but are not limited to:

- Door mats.
- Outdoor furniture.
- Potted plants.
- Shade sails or umbrellas.
- Plastic garbage bins.
- Firewood stacks.
- Flammable sculptures.
- **Playground equipment and children’s toys.**

These should always be considered in the proximity to buildings and stored appropriately when not in attendance at site. Consider any replanting or landscaping refer to the Country Fire Authority’s Landscaping for Bushfire: Garden Design and Plant Selection (CFA, 2012) – Plant Selection Key or aim for plants within the APZ that have the following characteristics:

- Grow in a predicted structure, shape and height.
- Are open and loose branching with leaves that are thinly spread.
- Have a coarse texture and low surface-area-to-volume ratio.
- Will not drop large amounts of leaves or limbs, that require regular maintenance.
- Have wide, flat, and thick or succulent leaves.
- Trees that have bark attached tightly to their trunk or have smooth bark.
- Have low amounts of oils, waxes, and resins (which will often have a strong scent when crushed).
- Do not produce or hold large amounts of fine dead material in their crowns.
- Will not become a weed in the area.

Also refer to Schedule 1, Appendix B of this report.

5.2.3 Barrier Fencing

In November 2010, the Australian Bushfire CRC issued a “Fire Note” (Bushfire CRC, 2010), which outlined the potential for residential fencing systems to act as a barrier against radiant heat, burning debris and flame impingement during bushfire. The research aimed to observe, record, measure and compare the performance of commercial fencing of Colourbond steel and timber (treated softwood and hardwood).

The findings of the research found that:

“.. Colourbond steel fencing panels do not ignite and contribute significant heat release during cone calorimeter exposure” (exposure to heat)”

“.. Colourbond steel (fencing) had the best performance as a non-combustible material. It maintained structural integrity as a heat barrier under all experimental exposure conditions, and it did not spread flame laterally and contribute to fire intensity during exposure”

It is also noted that non-combustible fences are recommended by WAPC (2021, Vers 1.4), through APZ standards: Fences and sheds within the APZ are constructed using non-combustible materials e.g., colourbond iron, brick, limestone, metal post and wire. The developer will be encouraged to build Colourbond or non-combustible fences where applicable.

5.2.4 Evaporative Air Conditioners

Evaporative air conditioning units can catch fire as a result of embers from bushfires entering the unit. These embers can then spread quickly through the home causing rapid destruction. It can be difficult for fire-fighters to put out a fire in the roof spaces of homes.

It is also recommended that the Proponent:

- Ensure that suitable external ember screens are placed on roof top mounted evaporative air conditioners compliant with AS3959-2018 (current and endorsed standards) and that the screens are checked annually; and
- Maintain evaporative air conditioners regularly as per DFES recommendations, refer to the DFES website for further details: <http://www.dfes.wa.gov.au>

5.2.5 Individual fire plan

Residents should prepare their own individual fire plans, as they need to make a commitment to develop a bushfire survival plan detailing preparations and actions to take if a bushfire threatens. By compiling information as outlined above, the individual lot owner can be prepared for their response in a bushfire emergency. Home owners should not rely on emergency personnel to attend their home and thus it is stressed to prepare an individual bushfire emergency plan regarding their intentions and property. [This Bushfire Management Plan is not an individual bushfire emergency plan.](#) More information can be gained from the DFES website (s):

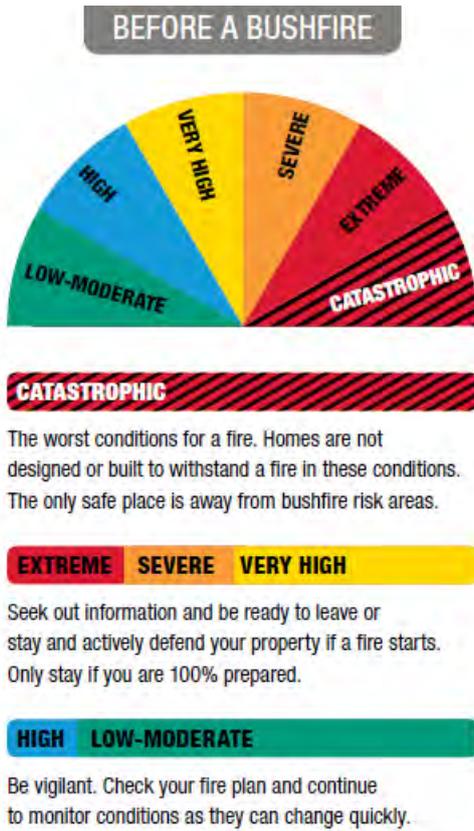
www.dfes.wa.gov.au

www.emergency.wa.gov.au



Figure 7: DFES emergency access plan home page (DFES, 2022).

The DFES FDR ratings and warning systems are shown below in Figure 8.



BUSHFIRE WARNING SYSTEM

EMERGENCY WARNING

An out of control fire is approaching fast and you need to take immediate action to survive. If you haven't prepared your home it is too late.

You must seek shelter or leave now if it is safe to do so.

WATCH AND ACT

A fire is approaching and there is a possible threat to lives or homes. Put your plan into action. If your plan is to leave, make sure you leave early. If your plan is to stay, check all your equipment is ready.

Only stay and defend if you are mentally and physically prepared.

ADVICE

A fire has started but there is no immediate danger. Stay alert and watch for signs of a fire.

Be aware and keep up to date.

Where can I get information during an emergency?

[emergency.wa.gov.au](https://www.emergency.wa.gov.au)
 📞 13 DFES (13 33 37)
 🇦🇺 [@dfeswa](https://www.facebook.com/dfeswa)
 🇦🇺 [@dfes_wa](https://www.instagram.com/dfes_wa)
 📻 Local ABC Radio

Figure 8: DFES Warning Systems (DFES, 2022).

6 Implementation Actions

The responsibilities of the developer(s), Landowners and local government are shown in Table 6, 7 and 8.

6.1 Future Lot owner's Responsibility

It is recommended the future property owners shall be responsible for the following:

Table 6: Implementation actions future lot owners.

Future Lot owner				
No	Implementation Action	Initial	Annual	All times
1	Build to AS3959-2018 as it applies to their property and provide a certified BAL to their proposed building at building approval stages.	✓		
2	Establish/maintain APZ's to the standard stated in this BMP and their allocated certified BAL, see Schedule 1 Standards for APZ's (Appendix B; WAPC, 2021, Vers 1.4).	✓		✓
3	Maintain individual lots fire breaks and bushfire fuel load in accordance with the current CoA Fire Management Notice, See Appendix C and Schedule 1 Standards for APZs, see Appendix B.		✓	
4	A driveway cross over to be designated/ installed for access into the lots to the minimum technical standards as required by current and endorsed WAPC guidelines. To be demonstrated to CoA at planning approval/building approval stages.	✓		✓

6.2 Developer's Responsibility

It is recommended the developer be responsible for the following:

Table 7: Implementation actions current land owner/developer.

Developer		
No	Implementation Action	Subdivision Clearance
1	Continue to manage lots in ownership as per the CoA Fire Management Notice and this BMP requirements until lots are sold and titles relinquished.	✓
2	Ensure all onsite future low fuel areas, as marked on Figure 4 Vegetation Classes, are modified to a low threat state and the management is ongoing.	✓
3	An accredited Level 2 Bushfire Practitioner certifies that low fuel conditions have been implemented in accordance with the assumptions of the BAL Contour Plan and low fuel conditions prevail of each lot prior to release of titles.	✓
4	An accredited Level 2 Bushfire Practitioner is to review and approve any further planting, landscaping or revegetation in the subdivision to ascertain if the actions increase the bushfire risk into the development	✓
5	Ensure public roads and perimeter roads are constructed to the required standards, all public roads approved by the CoA at subdivision approval stages.	✓
6	Ensure reticulated water is supplied in accordance with the Water Corporation's No 63 Water Reticulation Standard (WC, 2016) and hydrants are to be identified by standard pole and/or road markings.	✓
7	Ensure prospective buyers are aware of the BAL Contour Plan and the applicable BAL to their property through provision of BAL Contour Plan. Update the BAL contour plan and provide certification of BAL Contour prior to lodgement of titles (post construction).	✓
8	Prior to sale of proposed lots, the subject site is to be compliant with the relevant local government's annual firebreak notice issued under s33 of the <i>Bushfires Act 1954</i>.	✓

6.3 Local Government Responsibility

It is recommended the local government be responsible for the following:

Table 8: Implementation actions, City of Albany.

CoA		
No	Implementation Action	Stage of approval
1	Request that a certified BAL Contour Plan is provided prior to release of lots, inspection undertaken by an accredited bushfire practitioner to ensure low fuel conditions prevail over each individual lot.	Subdivision clearance
2	Request BAL certification at Building Approval stages on any proposed habitable buildings. Buildings to be located in BAL-29, BAL-19 and BAL-12.5 zones. Increased construction standards to BAL and AS3959-2018 applies to buildings located in the WA bushfire Prone Area Mapping (OBRM, 2021).	Development and Building Approval
3	Ensure all buildings and their respective driveways conform at DA stages to the current and endorsed WAPC guidelines technical standards which apply to driveway construction.	Development Approval
4	Ensure reticulated water is supplied in accordance with the Water Corporation's No. 63 Water Reticulation Standard (WC, 2016) and hydrants are to be identified by standard pole and/or road markings.	Subdivision clearance
5	Ensure all public roads and perimeter roads are constructed to the required standards, all public roads approved by the CoA at subdivision approval stages.	Subdivision clearance
6	Ensure any vegetation modification/removal that takes place on areas of land vested in the control of the City of Albany, is managed in a low threat state in perpetuity.	Subdivision clearance

7 Disclaimer

The recommendations and measures contained in this assessment report are based on the information available at the time of writing following the instructions of the regulatory authorities and following the requirements of the Australian Standards 3959-2018 – Building in Bushfire Prone Areas, WAPC State Planning Policy 3.7 (WAPC, 2015), WAPC Guidelines for Planning in Bushfire Prone Areas (WAPC, 2021, Vers 1.4), and applying best practise as described by Fire Protection Association Australia. These are considered the minimum standards required to balance the protection of the dwellings and occupants with the aesthetic and environmental conditions required by local, state and federal government authorities. They DO NOT guarantee that a building will not be destroyed or damaged by a bushfire, people injured, or fatalities occur either at the site or while evacuating. All surveys and forecasts, projections and recommendations made in this assessment report and associated with this proposed development are made in good faith on the basis of the information available to the fire protection consultant at the time of assessment. The achievement of the level of implementation of fire precautions will depend amongst other things on actions of the landowner or occupiers of the land, over which the bushfire consultant has no control. Notwithstanding anything contained within, the consultant/s will not, except as the law may require, be liable for any loss or other consequences (whether or not due to negligence of the bushfire consultant) arising out of the services rendered by the consultant.

AS3959-2018 disclaimer: It should be borne in mind that the measures contained within this Standard (AS3959-2018) cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather condition.

Building to AS3959-2018 is a standard primarily concerned with improving the ability of buildings in designated bushfire prone areas to better withstand attack from bushfire thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself (AS3959, 2018).

8 Certification

I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level (s) stated in this document have been prepared in accordance with the requirements of AS 3959-2018 and the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2021, Vers 1.4).



SIGNED, ASSESSOR: DATE: 10/03/2022

Jason Benson, Bio Diverse Solutions

Accredited Level 2 Bushfire Practitioner (Accreditation No: BPAD37893)



9 Revision Record

Revision	Prepared By	Summary	Reviewed By	Date
Draft Id	Jason Benson	Internal QA review	Mary Holt	4/03/2022
Draft Id	Jason Benson	Issued to the Client		4/03/2022
Draft Id	Jason Benson	Internal Tech Review	Kathryn Kinnear	9/03/2022
Final Id	Jason Benson	Issued to client		10/03/2022

10 References

- AS3959-2018 Australian Standard, *Construction of buildings in bushfire-prone areas*, Building Code of Australia, Primary Referenced Standard, Australian Building Codes Board and Standards Australia.
- Bushfire CRC (2010). *Bushfire CRC 2003-2010*. Accessed at: https://www.bushfirecrc.com/sites/default/files/managed/1102_bcrc_ar_p01-60_final.pdf
- Department of Fire and Emergency Services (DFES) (2022). *Department of Fire and Emergency Services*. Accessed at: <https://www.dfes.wa.gov.au/Pages/default.aspx>
- Government of Western Australia (GoWA) (2021). *Emergency WA Warnings and Incidents*. Accessed at: <https://www.emergency.wa.gov.au/>
- Government of Western Australia (GoWA) (2015). *Planning and Development (Local Planning Scheme) Regulations 2015*.
- Government of Western Australia (GoWA) (2012). *Building Regulations 2012*.
- Government of Western Australia (GoWA) (2011). *Building Act 2011*
- Government of Western Australia (GoWA) (2005). *Planning and Development Act 2005*.
- Government of Western Australia (GoWA) (1998). *Fire and Emergency Services Act 1998*.
- Government of Western Australia (GoWA) (1954). *Bushfire Act 1954*.
- NCC, National Construction Code (n.d.) *Building Code of Australia*. Accessed from: <https://ncc.abcb.gov.au/>
- Office of Bushfire Risk management (OBRM) (2021). Map of Bushfire Prone Areas. Data retrieved from State Land Information Portal (SLIP) <https://maps.slip.wa.gov.au/landgate/bushfireprone/>
- City of Albany (CoA) (2021/22), City of Albany *Fire Management Notice 2021/2022*. Accessed from: [Fire Management Notice » City of Albany](#)
- Water Corporation (WC) (2016) *Design standards DS63-01, Water Reticulation Standard – Supplement – Dual Water Supply Systems*.
- Western Australian Planning Commission (WAPC) (2015). *State Planning Policy 3.7 Planning in Bushfire Prone*
- Western Australian Planning Commission (WAPC) (2021, Vers 1.4). *Guidelines for Planning in Bushfire Prone Areas Version 1.4*. Western Australian Planning Commission and Department of Planning WA, Government of Western Australia.
- Yakamia Structure Plan Area, City of Albany Environmental Assessment – Opportunities and Constraints (Aurora Environmental, 2013).

11 Appendices

Appendix: A: Vegetation Classifications to AS3959-2018

Appendix: B: Schedule 1 - WAPC Asset Protection Zone (APZ) standards to apply

Appendix: C: City of Albany Fire Management Notice 2021/2022

Appendix A

Vegetation Classification to AS3959-2018

Vegetation classification to AS3959-2018

Site Details			
Address:	Lot 420 (No. 58) Sydney Street		
Suburb:	Yakamia	State:	W.A.
Local Government Area:	City of Albany		
Stage of WAPC Planning	Subdivision Application		

BMP Plan Details			
Report / Job Number:	MSC0483	Report Version:	Final
Assessment Date:	14 February 2022	Report Date:	4 March 2022
BPAD Practitioner	Jason Benson	Accreditation No.	BPAD 37893

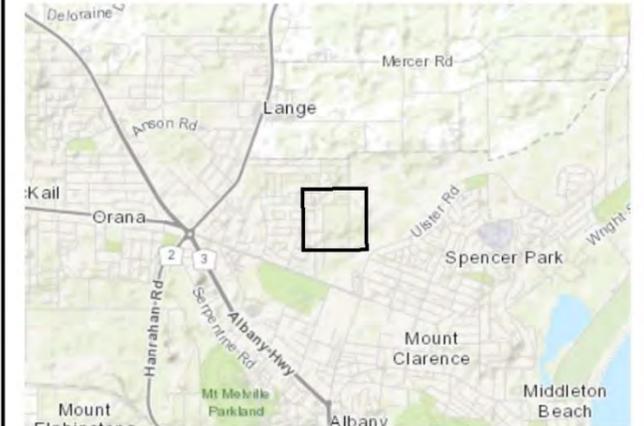
Vegetation Classification

Site assessment occurred on the 14th February 2022 by Jason Benson (BPAD 37893). All vegetation within 150m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified in the following pages and shown below in Table 1 and on the on the Vegetation Classes Map Page 2.

Table 1: Vegetation Classification Table (in accordance with AS 3959-2018) of the subject site

Plot number	Vegetation Type (Table 2.3)	Slope (Table 2.4.3)
1	Excluded 2.2.3.2 (e)	N/A
2	Excluded 2.2.3.2 (f)	N/A
3	Excluded 2.2.3.2 (c)	N/A
4	Forest Type A	Downslope >0-5 degrees
5	Forest Type A	Downslope >5-10 degrees
6	Grassland Type G	Downslope >0-5 degrees

Albany Office: 29 Hercules Crescent Albany, WA 6330 (08) 9842 1575
 Denmark Office: 7/40 South Coast Highway Denmark, WA 6333 (08) 9848 1309
 Esperance Office: 2A/113 Dempster Street Esperance, WA 6450 (08) 9072 1382



Overview Map Scale 1:100,000

Legend

- Subject Site
 - 100m Assessment Boundary
 - 150m Assessment Boundary
 - Cadastre
 - 5m Contours
 - Separation Distance
 - Slopes Degrees
 - Photo Point
 - Future Low Fuel (Onsite)
 - Future Low Fuel (Offsite)
 - Vegetation/Plot Boundary
- Vegetation**
- Forest Type A
 - Grassland Type G
 - Low fuel or non vegetated 2.2.3.2



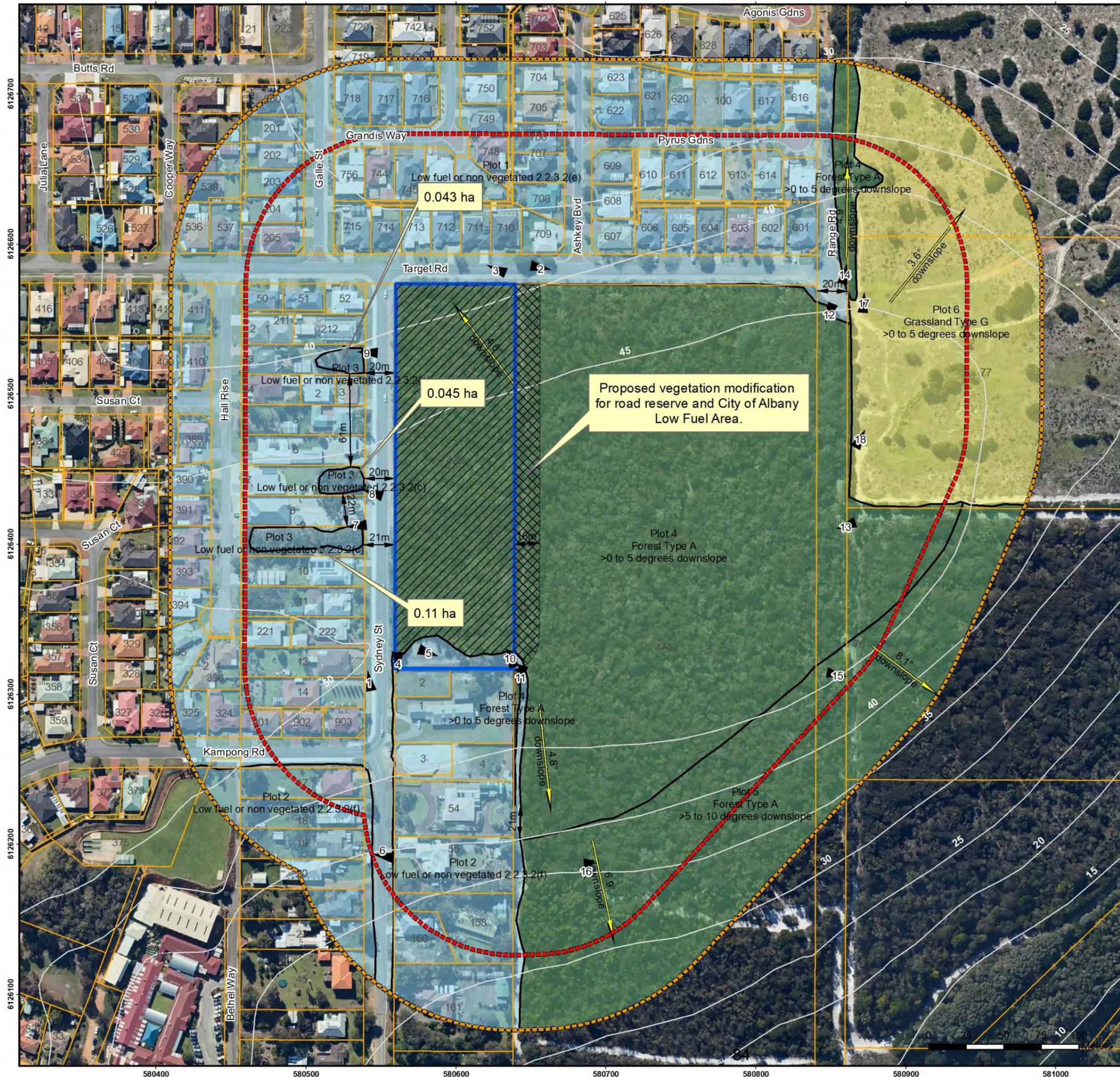
Scale
 1:2,500 @ A3
 GDA MGA 94 Zone 50

Data Sources
 Aerial Imagery: WA Now, Landgate Subscription Imagery
 Cadastre, Relief Contours and Roads: Landgate 2017
 IRIS Road Network: Main Roads Western Australia 2017
 Overview Map: World Topographic map service, ESRI 2012

CLIENT
 Martin Shuttleworth
 Lot 420 (No. 58) Sydney Street
 Yakamia, WA 6330

Vegetation Classes

BAL Assessor JB	QA Check BT	Drawn by GSK
STATUS FINAL	FILE MSC0483	DATE 03/03/2022



Plot	1	Classification or Exclusion Clause	Low fuel or non-vegetated areas exclusion 2.2.3.2 (e)
			<p>Location: North and west of the subject site.</p> <p>Description: Roads, driveways, buildings and other non-vegetated areas.</p> <p>As per exclusion clause 2.2.3.2 (e) of AS3959-2018.</p> <p><i>Note: Some areas of low fuel exclusion 2.2.3.2 (f) within this plot. However, predominantly non-vegetated areas.</i></p>

Photo Id 1: View facing north along Sydney Street located to the west of the subject site.

Plot	1 cont.	Classification or Exclusion Clause	Low fuel or non-vegetated areas exclusion 2.2.3.2 (e)
			<p>Additional Photo of Plot 1.</p>

Photo Id 2: View facing east along Target Road located to the north of the subject site.

Plot	1 cont.	Classification or Exclusion Clause	Low fuel or non-vegetated areas exclusion 2.2.3.2 (e)
			<p>Additional Photo of Plot 1.</p>

Photo Id 3: View facing west-northwest along Target Road located to the north of the subject site.

Plot	2	Classification or Exclusion Clause	Low fuel or non-vegetated areas exclusion 2.2.3.2 (f)
			<p>Location: Southwest of the subject site.</p> <p>Description: Maintained gardens and lawns in Asset Protection Zone (APZ) areas surrounding existing buildings, managed parks, City of Albany managed road reserves and firebreaks.</p> <p>Excluded as per AS3959 exclusion clause 2.2.3.2 (f).</p> <p>Available fuel loading: <2 t/ha.</p>

Photo Id 4: View facing south toward managed APZ in residential area, located to the southwest of the subject site.

Plot	2 cont.	Classification or Exclusion Clause	Low fuel or non-vegetated areas exclusion 2.2.3.2 (f)
			<p>Additional Photo of Plot 2.</p>

Photo 1d 5: View facing east-southeast towards managed low fuel area, located internal to the subject site in the southwest.

Plot	2 cont.	Classification or Exclusion Clause	Low fuel or non-vegetated areas exclusion 2.2.3.2 (f)
			<p>Additional Photo of Plot 2.</p>

Photo 1d 6: View facing west toward managed APZ in residential area, located to the southwest of the subject site.

Plot	3	Classification or Exclusion Clause	Low fuel or non-vegetated areas exclusion 2.2.3.2 (c)
		<p>Location: West of the subject site.</p> <p>Separation Distance: 20m from the subject site boundary and >20m from other areas of classified vegetation.</p> <p>Description: Multiple areas of vegetation less than 0.25ha in area and not within 20m of the site, 20m of the site, each other or other areas of classified vegetation.</p> <p>As per exclusion clause 2.2.3.2 (c) of AS3959-2018.</p>	

Photo Id 7: View facing west towards small area of vegetation (0.11ha in size), located to the west of the subject site.

Plot	3 cont.	Classification or Exclusion Clause	Low fuel or non-vegetated areas exclusion 2.2.3.2 (c)
		<p>Additional Photo of Plot 3.</p>	

Photo Id 8: View facing west-northwest towards small area of vegetation (0.045ha in size), located to the west of the subject site.

Plot	3 cont.	Classification or Exclusion Clause	Low fuel or non-vegetated areas exclusion 2.2.3.2 (c)
			<p>Additional Photo of Plot 3.</p>

Photo Id 9: View facing west towards small area of vegetation (0.043ha in size), located to the west of the subject site.

Plot	4	Classification or Exclusion Clause	Forest Type A
			<p>Location: Internal to the subject site and external to the northeast and southeast.</p> <p>Separation Distance: 0m.</p> <p>Description: Forest vegetation consisting Jarrah, Marri and Casuarina. Dense canopy cover with multilayered scrub mid/understorey of Acacia, Tea Tree, Leucopogon, sedges and rushes.</p> <p>Average vegetation height: 6-12m.</p> <p>Vegetation Coverage: 30-70% foliage cover.</p> <p>Available fuel loading: 25-35 t/ha.</p> <p>Effective slope: Downslope >0 to 5 degrees.</p>

Photo Id 10: View facing north-northwest towards forest vegetation, located to the south of the subject site.

Plot	4 cont.	Classification or Exclusion Clause	Forest Type A
 <p>14 Feb 2022, 13:40:56</p>			<p>Additional Photo of Plot 4.</p> <p><i>Note: The photo of this vegetation is does not currently present as forest vegetation. However, if left unmanaged, at maturity it will return as Forest Type A. Precautionary Principle has been applied.</i></p>

Photo Id 11: View south-southwest towards very thin strip of forest vegetation, located to the south of the subject site.

Plot	4 cont.	Classification or Exclusion Clause	Forest Type A
 <p>14 Feb 2022, 13:57:23</p>			<p>Additional Photo of Plot 4.</p>

Photo Id 12: View south-southwest towards forest vegetation, located near the northeast corner of the subject site.

Plot	4 cont.	Classification or Exclusion Clause	Forest Type A
			<p>Additional Photo of Plot 4.</p>

Photo Id 13: View facing west-southwest towards forest vegetation, located to the east of the subject site.

Plot	4 cont.	Classification or Exclusion Clause	Forest Type A
			<p>Additional Photo of Plot 4.</p>

Photo Id 14: View facing north-northeast towards thin strip of forest vegetation, located within the Range Road reserve to the northeast of the subject site.

Plot	5	Classification or Exclusion Clause	Forest Type A
			<p>Location: South and southeast of the subject site.</p> <p>Separation Distance: 21m.</p> <p>Description: Forest vegetation consisting Jarrah, Marri and Casuarina. Dense canopy cover with multilayered scrub mid/understorey of Acacia, Tea Tree, Leucopogon, sedges and rushes.</p> <p>Average vegetation height: 6-12m.</p> <p>Vegetation Coverage: 30-70% foliage cover.</p> <p>Available fuel loading: 25-35 t/ha.</p> <p>Effective slope: Downslope >5 to 10 degrees.</p>

Photo Id 15: View facing east towards forest vegetation, located to the southeast of the subject site.

Plot	5 cont.	Classification or Exclusion Clause	Forest Type A
			<p>Additional Photo of Plot 5.</p>

Photo Id 16: View facing south-southwest towards forest vegetation, located to the south of the subject site.

Plot	6	Classification or Exclusion Clause	Grassland Type G
			<p>Location: Internal to the subject site in the northeast.</p> <p>Separation Distance: 20m.</p> <p>Description: Mixed unmanaged grasses, sedges and weeds in open area. Occasional tree and shrub, less than 10% coverage.</p> <p>Average vegetation height: 50-400mm.</p> <p>Vegetation Coverage: <10% trees.</p> <p>Available fuel loading: 4.5 t/ha.</p> <p>Effective slope: Downslope >0-5 degrees.</p>

Photo Id 17: View north towards grassland vegetation, located to the east of the subject site.

Plot	6 cont.	Classification or Exclusion Clause	Grassland Type G
			<p>Additional Photo of Plot 6.</p>

Photo Id 18: View facing north-northeast towards grassland vegetation, located to the east of the subject site.

COMMENTS ON VEGETATION CLASSIFICATIONS:

- Distances from vegetation were made based on surface fuels to edge of lot (subject site) boundary;
- Effective slopes were measured in the field using a Nikon Forestry Pro and represented on the respective plots;
- Method 1 (AS3959-2018) Simplified procedure was used for vegetation classification Assessment process;
- All vegetation was classified within the subject site and within 150m of the lot boundaries to AS3959 Table 2.3; and
- The perimeter of the vegetation was measured using field GPS and notations on field GIS maps.

CERTIFICATION

I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level stated above in accordance with the requirements of AS 3959-2018.



SIGNED, ASSESSOR: DATE: 4/03/2022

Jason Benson, Bio Diverse Solutions
Accredited Level 2 BAL Assessor (Accreditation No: BPAD37893)



REVISION RECORD

Revision	Prepared By	Summary	Reviewed By	Date
Draft Id	Jason Benson	Internal Review	Bianca Theyer	23/02/2022
Final Id	Jason Benson			4/03/2022

Appendix B

Schedule 1 WAPC Asset Protection Zone (APZ) standards to apply



ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Fences within the APZ	<ul style="list-style-type: none"> Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> Should be managed and removed on a regular basis to maintain a low threat state. Should be maintained at <2 tonnes per hectare (on average). Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	<ul style="list-style-type: none"> Trunks at maturity should be a minimum distance of six metres from all elevations of the building. Branches at maturity should not touch or overhang a building or powerline. Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. Canopy cover within the APZ should be <15 per cent of the total APZ area. Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. <p>Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity</p>
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	<ul style="list-style-type: none"> Should not be located under trees or within three metres of buildings. Should not be planted in clumps >5 square metres in area. Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul style="list-style-type: none"> Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.



ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Grass	<ul style="list-style-type: none"> • Grass should be maintained at a height of 100 millimetres or less, at all times. • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
Defendable space	<ul style="list-style-type: none"> • Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
LP Gas Cylinders	<ul style="list-style-type: none"> • Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

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

Appendix C

City of Albany Fire Management Notice 2021/2022



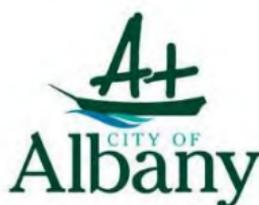
**FIRST AND FINAL NOTICE IS HEREBY
SERVED TO ALL LAND OWNERS AND
OCCUPIERS IN THE CITY OF ALBANY**

**These are your legal requirements. Please read
carefully and retain for future reference.**

**This Notice constitutes the City of Albany
Fire Management Notice and is issued
under Section 33 of the *Bush Fires Act 1954*.**

You are required to prepare and maintain your property for the fire season. This Notice sets out the actions you must take.

All fire mitigation measures **must remain in place
until the completion of the fire season.**



102 North Road, Yakamia

PO Box 484, ALBANY WA 6330

Phone 6820 3000 Fax 6820 3888

Email staff@albany.wa.gov.au

www.albany.wa.gov.au

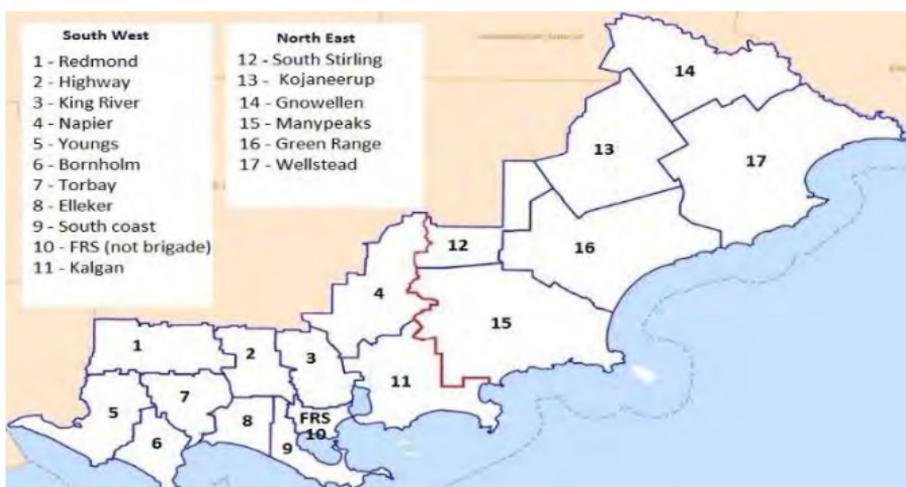
REPORT ITEM CCS438 REFERS TO

Significant Dates

NORTH EAST SECTOR FIRE SEASON	
1 October 2021 – 14 November 2021	Restricted Burning permits required
1 October 2021	Fire mitigation installation deadline
15 November 2021 – 15 February 2022	BURNING PROHIBITED
16 February 2022 – 30 April 2022	Restricted Burning permits required

SOUTH WEST SECTOR FIRE SEASON	
1 November 2021 – 14 December 2021	Restricted Burning permits required
1 December 2021	Fire mitigation installation deadline
15 December 2021 – 14 March 2022	BURNING PROHIBITED
15 March 2022 – 14 May 2022	Restricted Burning permits required

These dates are subject to change. Any changes will be published in local newspapers and on the City of Albany website at www.albany.wa.gov.au



Prohibited Burning Times

It is an offence to light an unauthorised fire during the Prohibited Burning Time.

Penalties of up to \$25,000 or 12 months' imprisonment, or both, may apply under the *Bush Fires Act 1954*.

Restricted Burning Times

You must not light a fire without a permit during the Restricted Burning Time. All permit holders must comply with the requirements of the *Bush Fire Act 1954* and any additional conditions imposed.

These dates are subject to change depending on the prevailing weather conditions. Any changes will be published in local newspapers and on the City of Albany website at www.albany.wa.gov.au

Variations to Requirements

If you cannot meet the fire management requirements listed in this Notice, you must apply for a variation or submit a Bush Fire Management Plan. If approved, the conditions of the approval and application are to be complied with.

For details, please visit the City's website at www.albany.wa.gov.au

Bush Fire Management Plans

Approved Bushfire Management Plans are a strategy for specific fire risk management and can encompass singular or multiple properties. The City will only accept plans completed by an accredited Bush Fire Planning and Design practitioner. Where an approved Bushfire Management Plan is in place, all properties covered by the Plan are to comply with the conditions of the plan. Please contact the City of Albany Planning Department on 9820 3000 for more details.

Brigade zone- the designated response area for specific volunteer bush fire brigades. A larger map than the one in this notice is available at www.albany.wa.gov.au

Fine fuel- Combustible dead vegetation matter less than 6mm in thickness reduced to and maintained at an average of 2 tonnes/hectare. Does not include processed mulch below an average depth of 50mm

Harvest and Movement Bans- A municipality specific prohibition on the use of combustion powered vehicles driven in paddocks or bush areas, harvesting, and 'hot works' (includes welding, grinding, soldering and gas cutting) in the open air. Christmas Day and New Year's day are automatically declared as harvest and movement ban dates.

Hazard Specific Fire Break- a 3 metre low fuel area around flammable hazards with vegetation maintained below 50mm. Includes but is not limited to; Haystacks, non-dwelling sheds, green power domes, power poles and fuel storage areas.

North East/ South West Sector- division of brigade boundaries in relation to where they are located within the Albany region. A map is available at www.albany.wa.gov.au

Perimeter fire break- a continuous access track that has standard dimensions of 3 metres wide with 4 metres vertical clearance. Located within 20 metres of the property boundary with the capacity to allow a firefighting truck to safely navigate the interior perimeter of the property. All vegetation on the break is to be maintained below 50mm in height.

Strategic fire break- a designated emergency access route included into subdivisions at a planning stage. Contact the City of Albany Planning Department to see if your subdivision has specific fire mitigation requirements.

REPORT ITEM CCS438 REFERS TO
Total fire ban a DFES declaration on days of extreme weather or when widespread fires are seriously stretching firefighting resources. Certain activities and the lighting of any fires are restricted or prohibited. Refer to www.dfes.wa.gov.au for more information.

Asset Protection Zones

All properties, regardless of size must meet Asset Protection Zone (APZ) (building protection zone and hazard separation zones) requirements.

An Asset Protection Zone is an area of at least 20 metres (as far as practicable) within a property boundary that surrounds all habitable buildings to reduce the bushfire hazard and create a defensible space.

Under new legislation, properties with dwellings built before 2015 may be able to clear APZ vegetation regardless of scheme or zoning restrictions. *A copy of the Bush Fire Treatment Standards can be obtained at the DFES website www.dfes.wa.gov.au*

If the development of your property includes BAL conditions, those conditions must be adhered to.

For all other properties the following applies:

- Fine Fuel (combustible dead vegetation matter less than 6 millimetres in thickness) is to be reduced to and maintained at an average of two tonnes per hectare
- Branches that have the potential to fall on the house must be removed
- Clearance of 2.5 metres between trees and power lines

REPORT ITEM CCS438 REFERS TO
Vegetable gardens, tended lawns, landscaped gardens and trees are acceptable if they are maintained.

Fine fuel and dead vegetation must be reduced that in opinion of an inspecting COA officer it does not constitute an unacceptable fire risk



Additional recommendations on how to prepare your APZ to mitigate fire risk are available on the City of Albany and the Department of Fire and Emergency services (DFES) websites.

Conservation, Special Residential & Rural Residential (Special Rural) Zones

Properties located in these zones may be subject to specific fire mitigation requirements contained in the Albany Local Planning Scheme, a subdivision guide plan (structure plan) or an approved Bush Fire Management Plan.

All bush fire mitigation conditions that apply to your property are to be complied with.

REPORT ITEM CCS438 REFERS TO:

Conditions may include (but are not limited to):

- Additional Asset Protection Zone (APZ) requirements.
- Compliant access to dwellings.
- Permanent water supply.
- Maintenance of Strategic Fire Access Routes.
- Vegetation protection. *(may not apply to clearing for APZ installation, refer AZP section of this notice)*

Any zoned properties without the above fire mitigation provisions are to comply with the conditions of this notice.

Paddock and grassed areas are to be maintained to reduce fine fuel loading.

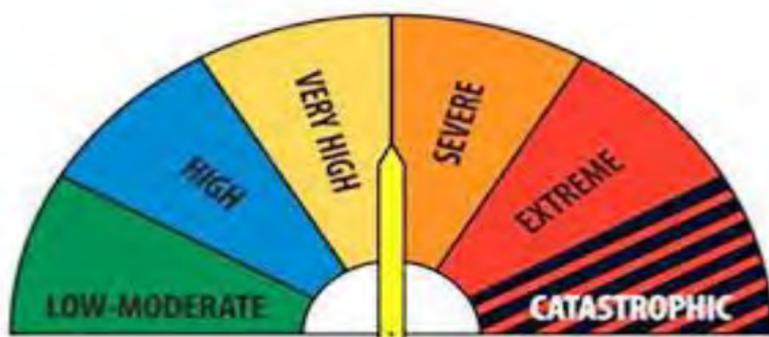
For more information or to check your properties zoning, please contact the City of Albany Planning Department on 6820 3000.

Properties up to 4,000m²

(May exclude some Conservation, Special Residential and Rural Residential zoned properties.)

The following mitigation requirements apply to vacant and developed land with an area of 4,000m² or less:

- Asset Protection Zone conditions
- Fine fuel load (see definitions) is to be reduced and maintained to an average of no more than two tonnes per hectare across the whole property
- Install hazard specific fire breaks



REPORT ITEM CCS438 REFERS TO Properties 4,000 m² to 50 Ha

(May exclude some Conservation and Rural Residential zoned properties.)

The following fire mitigation measures apply to vacant and developed land with an area between 4,000m² and 50 Ha:

- Perimeter fire breaks.
- Hazard specific fire breaks.
- Asset Protection Zone conditions.
- Maintain fine fuel load to an average of 8 tonnes per hectare or less across the whole property.

Properties over 50 Ha

Non-agricultural Properties

Non-agricultural properties with an area over 50 Ha require the following measures:

- Hazard specific breaks, Asset Protection Zone conditions and perimeter fire breaks.

You can apply for a Variation to Requirements if your property is managed in a way that:

- reduces the risk of bush fire; or
- You have additional capacity for preventing the outbreak and/or spread of bushfire.

Agricultural properties

During **restricted and prohibited burning times**, all harvesting machinery, including tractors and trucks that are involved in harvesting operations must carry a fire extinguisher

You can apply for a Variation to Requirements if your property is managed in a way that:

- reduces the risk of bush fire; or
- you have additional capacity for preventing the outbreak and/or spread of bushfire.

REPORT ITEM CCS438 REFERS TO

If a Variation is not granted the following requirements apply:

- Asset Protection Conditions.
- Hazard specific fire breaks.
- Perimeter fire breaks.
- Cropping paddocks must be broken into compartments not exceeding 250Ha in area each separated by internal fire breaks.
- During harvest operations, a fully operational self-propelled (i.e. not trailer mounted) firefighting unit with a minimum water capacity of 600 litres is to be located in the paddock being harvested. Where two or more harvesting machines are operating, the minimum water capacity is to be 1,000 litres.

Plantations & Regeneration Lots

Owners and lessees of plantation and regeneration lots must comply with the conditions detailed in *DFES Guidelines for Plantation Fire Protection*. (Available from the DFES website at www.dfes.wa.gov.au)

The following measures are also required (unless a variation has been granted by the City of Albany):

Provide a red PVC container at the main entry point to the property containing map(s) showing water points, tracks and contact details.

Ensure the property is broken into compartments not exceeding 250Ha in area and separated by internal fire breaks 6 metres wide and with 4 metres vertical clearance.

Install a 15 metres wide fire break devoid of vegetation with a height above 50mm under all power lines.

Cooking Fires

NO COOKING FIRES ARE TO BE LIT DURING A TOTAL FIRE BAN

Public land

Unauthorised fires are prohibited on all City of Albany land throughout the year.

This includes

- City of Albany reserves.
- Campsites.
- Beaches.
- Council road verges.

Gas appliances can be utilised and the City provides free BBQ facilities at multiple locations for public use.

Private land

Cooking or BBQ style encapsulated fires (solid fuel) can be used on private land during the fire season under the following conditions:

- the fire is not lit on a day where the Fire Danger Forecast is “very high” or above (approval from the City of Albany can be granted in special circumstances).
- the fire has a 3 metre zone clear of flammables.
- the fire is fully contained to prevent escape.
- the fire is attended at all times.
- sufficient water is available to extinguish fire.
- the fire and any remnants are completely extinguished with no possibility of re-ignition.

REPORT ITEM CCS438 REFERS TO Volunteer Bush Fire Brigades

The City of Albany has 16 volunteer fire brigades, spread from Youngs Siding in the West through to Wellstead in the East.



They are run by selfless men and women who donate their time and skills to ensure that we remain safe in the event of an emergency.

Each brigade is always in need of new volunteers, whether they are an active member or an auxiliary member. If you are aged 16 and above they would love to see you. The City of Albany, working with each local brigade, will provide you with comprehensive and on-going training and uniform.

If you would like to join a brigade, or to make a donation, please contact the City of Albany Ranger & Emergency Services team on 6820 3999 or go to the City of Albany website for contact details

REPORT ITEM CCS438 REFERS TO PENALTIES MAY APPLY

City of Albany officers are authorised to enter private property, without notice to the owner in order to confirm compliance with this notice. If you fail to comply with the conditions contained in this Notice, penalties up to \$5,000 under the *Bush Fires Act 1954* may apply.

The City of Albany, or a contractor engaged by the City, may enter your land to install fire breaks or reduce fuel loads with any expenses incurred charged to the landowner.

Any 'variation to requirements' approval you hold may be declared void.

Clearing or the removal of native vegetation beyond the requirements of this notice may require permission from other legislative authorities.

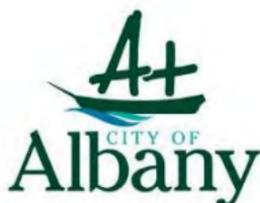
Disclaimer:

The City of Albany may vary a condition or conditions of this Notice at its discretion.

This notice is issued and authorised by:

Andrew Sharpe

Chief Executive Officer



102 North Road, Yakamia
PO Box 484, ALBANY WA 6330
Phone 6820 3000 Fax 6820 3888
Email staff@albany.wa.gov.au
www.albany.wa.gov.au



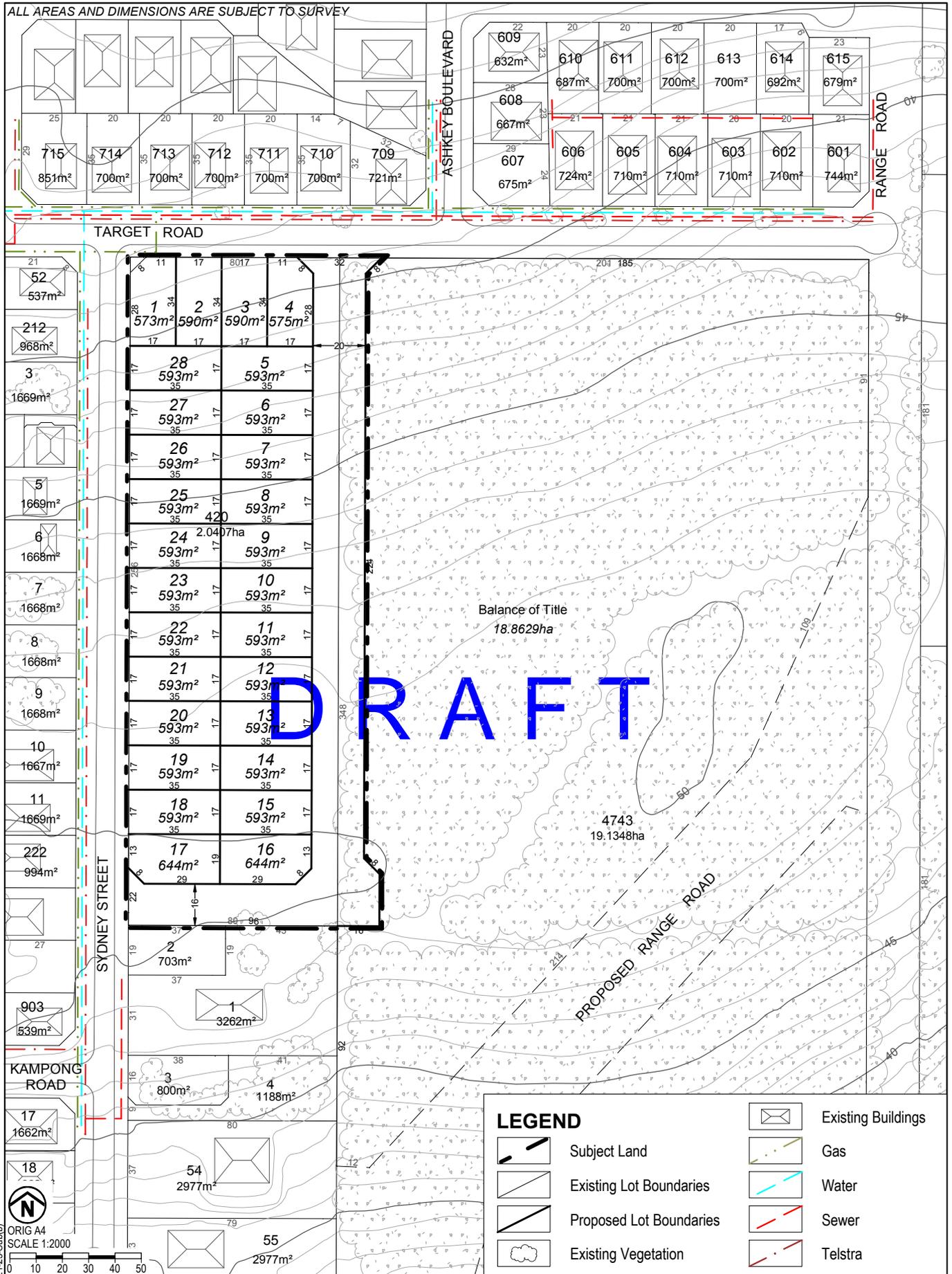
CONCEPT PLAN
 Lots 420 Target Road &
 Pt Lot 4743 North Road
 Yakamia, City of Albany

LEGEND

- Subject Land
- Existing Vegetation
- Existing Buildings
- R25
- R30
- Public Open Space

ORIG A3
 SCALE 1:2000
 0 10 20 30 40 50

ATYON BAESJOU
 P L A N N I N G
 59 Precht Place
 ALBANY WA 6330
 Ph 9842 2304 Fax 9842 8494



AYTON PLANNING

PO Box 5476, ALBANY WA 6332
Ph 9842 2304

PLAN OF SUBDIVISION

Lots 420 Target Road &
Pt Lot 4743 North Road
Yakamia, City of Albany