

Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address: 101 FAUNTLEROY AVENUE AND 52-64 HAY ROAD, ASCOT

Site visit: Yes ☒ No ☐

Date of site visit (if applicable): Day 5 and 18 Month February Year 2020

Report author: Brendan Marsh

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: 37413 Accreditation expiry: Month June Year 2020

Bushfire management plan version number: 1

Bushfire management plan date: Day 12 Month March Year 2020

Client/business name: Peter Betz

	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 checked="" 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 checked="" 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 checked="" type="checkbox"/>
Strategic planning proposal (including rezoning applications)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
High risk land-use	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vulnerable land-use	<input type="checkbox"/>	<input checked="" 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

B Marsh

Date 12/3/2020



BJ MARSH PTY LTD

ABN 67 603 964 049

CONSULTING ENGINEERS AND BUSHFIRE PLANNERS



BUSHFIRE MANAGEMENT PLAN

REZONING OF LAND TO R60

**LOTS 177, 180, 181, 182, 183, 184 ON PLAN 1792
AND LOT 1 ON D12661**

**101 FAUNTLEROY AVENUE AND 52-64 HAY ROAD, ASCOT
CITY OF BELMONT**

DATE OF SITE INSPECTION(S): 5 February 2020 and 18 February 2020

REPORT DATE: 12 March 2020

REPORT REFERENCE: 173-1-1

VERSION: 1

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Document control

Client: Peter Betz

Report version	Purpose	Author/reviewer and accreditation details	Date submitted
0	Rezoning	Brendan Marsh L2 BPAD 37413	21/2/2020
1	Scope expanded	Brendan Marsh L2 BPAD 37413	12/3/2020

Disclaimer

This plan documents minimum actions required for planning approval of this development under State Planning Policy 3.7, Planning in Bushfire Prone Areas. It does not warrant the safety of any people or animals and does not warrant that buildings or assets will not be damaged or destroyed. The land owner and occupier are fully responsible for mitigation of all risks.

1 PROPOSAL DETAILS

The subject land, comprising Lots 177, 180, 181, 182, 183 and 184 all on Plan 1792 and Lot 1 on Diagram 12661, Fauntleroy Avenue and Hay Road, Ascot, is proposed for rezoning to R60. The lots on Plan 1792 each have an area of 1497 m² and Lot 1 on Diagram 12661 has an area of 2990 m² equating to a total subject land area of 1.20 ha. All Lots have frontage to Hay Road which is constructed to Ivy Street to the north east and Fauntleroy Avenue to the southwest, with both of these roads connecting to Great Eastern Highway, which is located to the south and east of the subject land.

The Swan River is located to the north and west of the land, with Hay Road fronting vegetated Swan River reserve to the north of the subject land. The properties to the south west are of a residential character. Land to the northeast is in a state of stalled development and it is understood it was to be developed into high density residential land similar to the subject land. Land to the east is commercial/industrial land fronting Great Eastern Highway. Perth airport is located to the east of the property.

The land is located in a “Special Development Precinct” termed DA9.

Figure 1 shows the location of the subject land.

Figure 2 shows cadastral information associated with the subject land. A plan for the development of the land has not yet been prepared.

Figure 3 is an excerpt from the bushfire prone areas map which shows the land has been identified as bushfire prone by the Commissioner of Fire and Emergency Services.



Figure 1: Location plan (from City of Belmont's Intramaps System)



Bushfire Management Plan – BAL Contour



Figure 2: Subject land cadastral and lot information (from Landgate).



Figure 3: Map of Bushfire Prone Areas showing the subject land is affected (from FESA mapping).

2 ENVIRONMENTAL CONSIDERATIONS

The land is cleared of native vegetation and is in a paddock condition and Class G Grassland from a Bushfire Attack Level assessment point of view.

2.1 Native vegetation – modification and clearing

No modification or clearing of native vegetation is proposed.




2.2 Revegetation/landscape plans

All vegetation and landscaped areas within the Structure Plan are to comply with the requirements of AS3959-2018 Clause 2.2.3.2 (e), non-vegetated areas, or Clause 2.2.3.2 (f), vegetation regarded as low-threat due to factors such as flammability, moisture content or fuel load.

3 BUSHFIRE ASSESSMENT RESULTS




3.1 Assessment inputs

The results of the site assessment are presented in the following tables.

Photo ID: 1 Plot: N/A	
Vegetation Classification or Exclusion Clause Excludable - 2.2.3.2(e) Non Vegetated Areas	
Description / Justification for Classification Fuel station predominantly without vegetation.	
Photo ID: 2 Plot: N/A	
Vegetation Classification or Exclusion Clause Excludable - 2.2.3.2(e) Non Vegetated Areas	
Description / Justification for Classification Depot without vegetation.	
Photo ID: 3 Plot: 2	
Vegetation Classification or Exclusion Clause Class G Grassland – Open tussock G-23	
Description / Justification for Classification Paddock area dominated by grasses with effective slope flat with respect to the subject land.	



Bushfire Management Plan – BAL Contour

Photo ID:	4	Plot:	N/A	
Vegetation Classification or Exclusion Clause				
Excludable - 2.2.3.2(f) Low Threat Vegetation				
Description / Justification for Classification				
Grasses beyond fence well upkept as a lawn and in minimum fuel condition. Foreground contains plot 2.				
Photo ID:	5	Plot:	N/A	
Vegetation Classification or Exclusion Clause				
Excludable - 2.2.3.2(e) Non Vegetated Areas				
Description / Justification for Classification				
Dense housing with negligible garden.				
Photo ID:	6	Plot:	N/A	
Vegetation Classification or Exclusion Clause				
Excludable - 2.2.3.2(f) Low Threat Vegetation				
Description / Justification for Classification				
Grassed area kept as a lawn, in minimum fuel condition.				



Bushfire Management Plan – BAL Contour

Photo ID:	7	Plot:	N/A	
Vegetation Classification or Exclusion Clause				
Excludable - 2.2.3.2(f) Low Threat Vegetation				
Description / Justification for Classification				
Gardens well upkept in minimum fuel condition.				
Photo ID:	8	Plot:	2	
Vegetation Classification or Exclusion Clause				
Class G Grassland – Open tussock G-23				
Description / Justification for Classification				
Paddock area dominated by grasses. Effective slope flat with respect to subject land.				
Photo ID:	9	Plot:	2	
Vegetation Classification or Exclusion Clause				
Class G Grassland – Open tussock G-23				
Description / Justification for Classification				
Subject land has evidence of not being kept as per AS3959 Clause 2.2.3.2(f) as evidence of grasses longer than 100mm observed. Effective slope flat.				



Bushfire Management Plan – BAL Contour

Photo ID:	10	Plot:	N/A	
Vegetation Classification or Exclusion Clause				
Excludable - 2.2.3.2(f) Low Threat Vegetation				
Description / Justification for Classification				
Lawns kept in minimum fuel condition.				

Photo ID:	11	Plot:	N/A	
Vegetation Classification or Exclusion Clause				
Excludable - 2.2.3.2(f) Low Threat Vegetation				
Description / Justification for Classification				
Grasses have been mowed very low as per AS3959 clause 2.2.3.2(f).				

Photo ID:	12	Plot:	N/A	
Vegetation Classification or Exclusion Clause				
Excludable - 2.2.3.2(f) Low Threat Vegetation				
Description / Justification for Classification				
Grasses observed in have been mowed very low.				


Photo ID:	13	Plot:	1
Vegetation Classification or Exclusion Clause			
Class A Forest - Open forest A-03			
Description / Justification for Classification			
Dense trees with surface and ladder fuels along river with up to 3 degrees downslope.			
			


Photo ID:	14	Plot:	1
Vegetation Classification or Exclusion Clause			
Class A Forest - Open forest A-03			
Description / Justification for Classification			
Dense trees with surface and ladder fuels along river with up to 3 degrees downslope.			
			



Photo ID:	15	Plot:	N/A
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
Lawns and garden kept in minimum fuel condition.			
			

Photo ID:	16	Plot:	N/A	
Vegetation Classification or Exclusion Clause				
Excludable - 2.2.3.2(f) Low Threat Vegetation				
Description / Justification for Classification				
Lawns and garden kept in minimum fuel condition.				
Photo ID:	17	Plot:	3	
Vegetation Classification or Exclusion Clause				
Class G Grassland – Open tussock G-23				
Description / Justification for Classification				
Grasses not in minimum fuel condition. Effective slope flat.				
Photo ID:	18	Plot:	3	
Vegetation Classification or Exclusion Clause				
Class G Grassland – Open tussock G-23				
Description / Justification for Classification				
Grasses not in minimum fuel condition. Effective slope flat.				

Vegetation area/plot	Applied vegetation classification	Effective slope under the classified vegetation (degrees)
1	Class A Forest	3 degrees downslope
2	Class G Grassland	Flat or upslope
3	Class G Grassland	Flat or upslope

A Site sketch or vegetation classification map showing the current situation is presented in Figure 4.



Figure 4 Vegetation classification map

3.2 Assessment outputs

BAL Assessment has been undertaken in accord with AS3959, Method 1. The Highest BAL Contour is based upon the current vegetated state of the Land, thus is BAL-FZ for all habitable structures. The Modified BAL Contour is based upon:

- All subject land being brought into minimum fuel condition through regular mowing.
- All habitable and associated structures on Lot 183 being setback 8m from the northwest boundary of the lot with Hay Road.
- All habitable and associated structures on Lot 184 being setback 8m from the northwest boundary of the lot with Hay Road and being setback 8m from the northeast boundary.

2. VACANT LAND WITH AN AREA OF 3,000 SQUARE METRES OR LESS

- Have all inflammable matter except living trees, shrubs, plants under cultivation and lawns, slashed, mowed or trimmed down by means (other than burning) to a height no greater than 5cm across the entire property.

Figure 5: Excerpt from City of Belmont 2019-20 Firebreak Notice.

Figure 6 shows the current Bushfire Hazard Level Map and Figure 7 shows the BAL Contour Map for the modified vegetation condition.

Method 1 BAL determination						
Lot	Applied vegetation classification	Effective slope under the classified vegetation (degrees)	Separation distance to the classified vegetation (metres)	Hazard Level	Highest BAL Contour	Modified BAL Contour
177	Class G Grassland	Flat or upslope	0	Mod	FZ	
	Class A Forest	3 downslope	96	Mod		12.5
1	Class G	Flat or upslope	0	Mod	FZ	
	Class A Forest	3 downslope	65	Mod		12.5
180	Class G Grassland	Flat or upslope	0	Mod	FZ	
	Class A Forest	3 downslope	48	Mod		19
181	Class G Grassland	Flat or upslope	0	Mod	FZ	
	Class A Forest	3 downslope	34	Mod		29
182	Class A Forest	3 downslope	27	Mod	29	29
183	Class A Forest	3 downslope	20	Mod	40	
	Class A Forest	3 downslope	28	Mod		29
184	Class G Grassland	Flat or upslope	0	Mod	FZ	
	Class G Grassland	Flat or upslope	8	Mod		29
	Class A Forest	3 downslope	19	Mod	FZ	
	Class A Forest	3 downslope	27	Mod		29

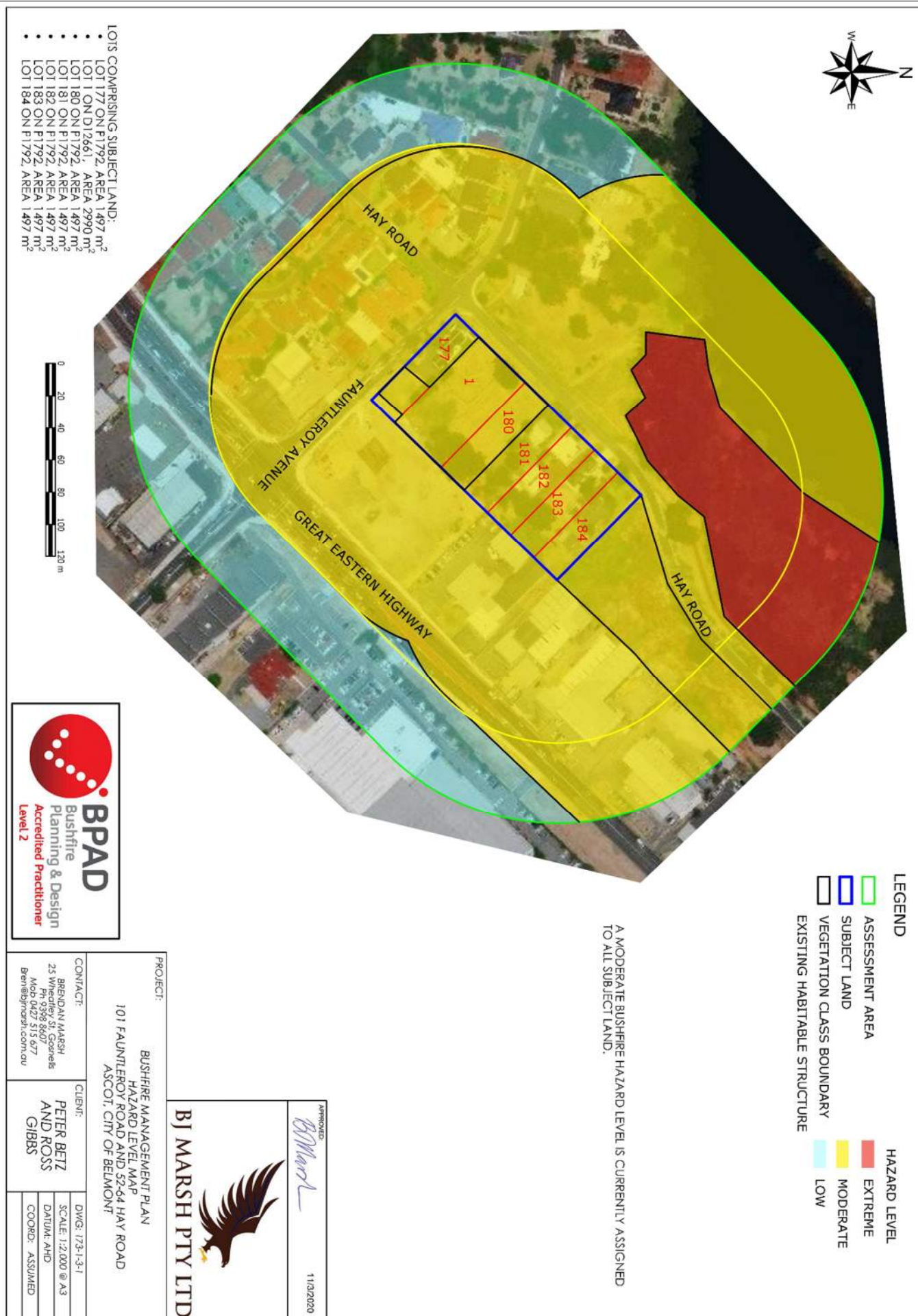


Figure 6: Bushfire Hazard Level Map

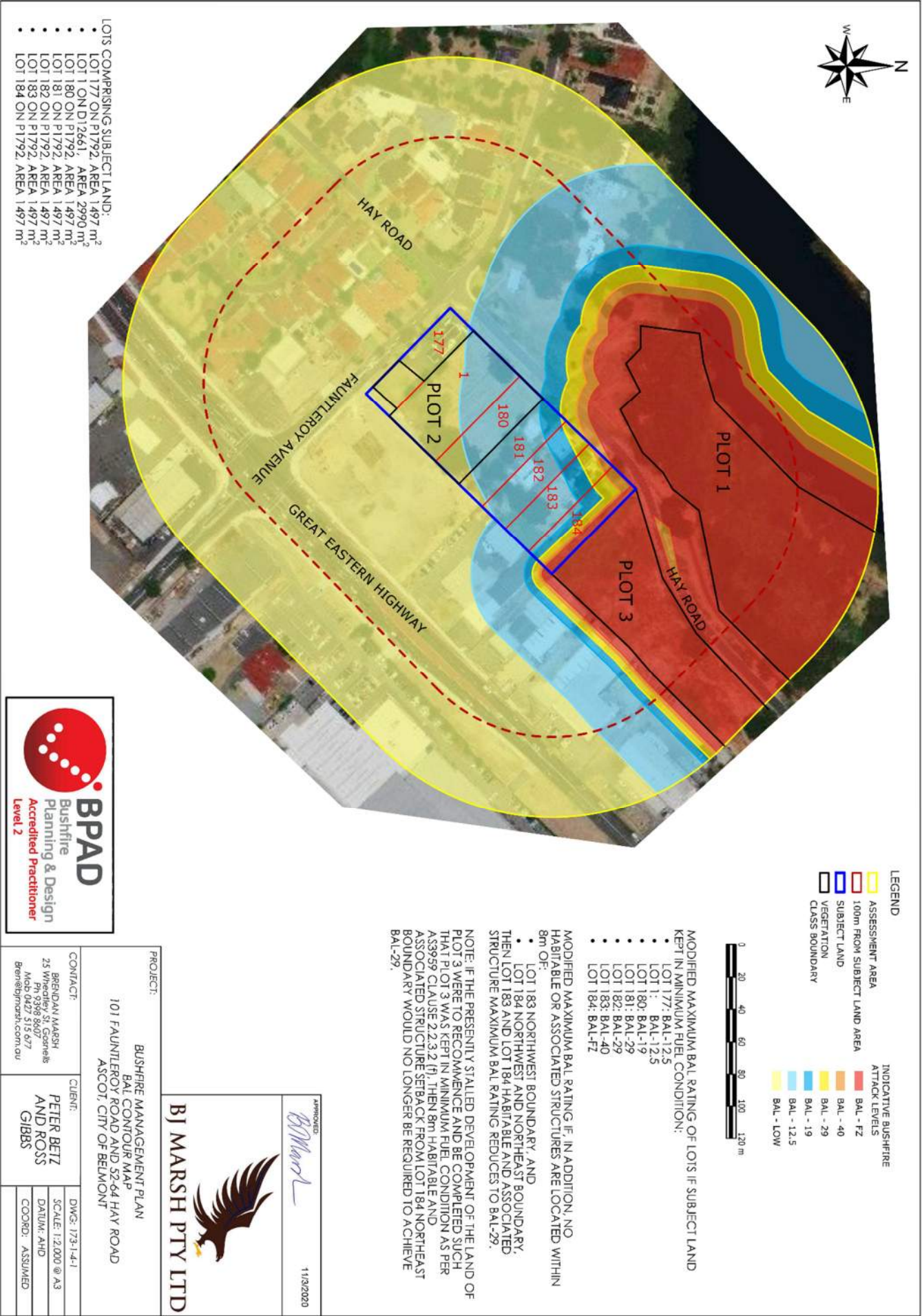


Figure 7: BAL contour map (modified vegetation)

4 IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

The primary hazard from a bushfire perspective is from Plot 1, the forested area alongside the Swan River to the north of the subject land. Plot 2 is within the subject land and is to be brought and kept in minimum fuel condition under this Bushfire Management Plan.

Plot 3 is a partially cleared and partially grassed piece of land, abutting the subject land northeast of Lot 184, and is associated with a stalled development which currently is not reliably kept in minimum fuel condition. It is State Government owned land and so does not fall within the remit of the City of Belmont's firebreak notices. Should the development of the Plot 3 land resume and be completed to cause this land to be kept in minimum fuel condition, then this bushfire plan should be updated to remove the development restrictions which are caused by Plot 3.

A petrol station is located on the northern corner of the intersection between Fauntleroy Avenue and Great Eastern Highway. It is recommended the City of Belmont Firebreak notice be enforced for land within Plot 2.

The risks presented in the maps are in accord with the method 1 assessment method. However, the extent of the forested land to the north is relatively low indicating that the actual risk is lower than for a similar development nearby an extensive forest.

5 ASSESSMENT AGAINST BUSHFIRE PROTECTION CRITERIA

5.1 Compliance table

The following compliance table documents the proposed bushfire management strategies. All solutions proposed are Acceptable Solutions.

Bushfire protection criteria	Method of compliance	Proposed bushfire management strategies
	Acceptable solutions	
Element 1: Location	A1.1 Development location	All habitable and associated structures will on completion be located in an area that is BAL-29 or less. All subject land will be brought into and kept in accord with the requirements and AS3959 Clause 2.2.3.2 (e) non-vegetated area or (f) minimum fuel condition, and in accord with the guideline's requirement for Asset Protection Zone (see Appendix A). Habitable and associated structures on Lot 183 shall be setback 8m from the northwest boundary with Hay Road. Habitable and associated structures on Lot 184 shall be setback 8m from the northwest boundary with Hay Road and 8m from the northeast boundary which abuts Plot 3.
Element 2: Siting and design	A2.1 Asset Protection Zone	
Element 3: Vehicular access	A3.1 Two access routes.	Hay Road provides two access routes via Fauntleroy Avenue and Great Eastern Highway to the west and via Ivy Street and Great Eastern Highway to the east.
	A3.2 Public road	The land fronts public road constructed in accord with the guidelines.
	A3.3 Cul-de-sac (including a dead-end-road)	Not applicable.
	A3.4 Battle-axe	Not applicable.
	A3.5 Private driveway longer than 50 metres	Internal driveways exceeding 50m in length are not recommended. Should they be required for the development, then the driveways shall comply with the requirements of the guidelines for bushfire turn around, passing, and design and construction standard.
	A3.6 Emergency access way (EAW)	Not applicable.
	A3.7 Fire service access routes/ perimeter roads	The subject land is located in an established area with perimeter road access around the relevant block via Hay Road, Ivy Street, Fauntleroy Avenue and Great Eastern Highway.
	A3.8 Firebreak width	The Lots comprising the subject land are all less than 3000m ² and is to be kept in minimum fuel condition and in accord with the requirements for Asset Protection Zone, thus does not require a firebreak. All subject land is to be kept in accord with City of Belmont's firebreak notice.
Element 4: Water	A4.1 Reticulated areas	The subject land is located within a reticulated area with two fire hydrants within 200m of each Lot as per the requirements.
	A4.2 Non-reticulated areas	Not applicable
	A4.3 Individual lots within non-reticulated areas	Not applicable.

5.2 Additional management strategies

As the land is to be residential and the risks are well mitigated by deemed to comply solutions, additional management strategies are not required.

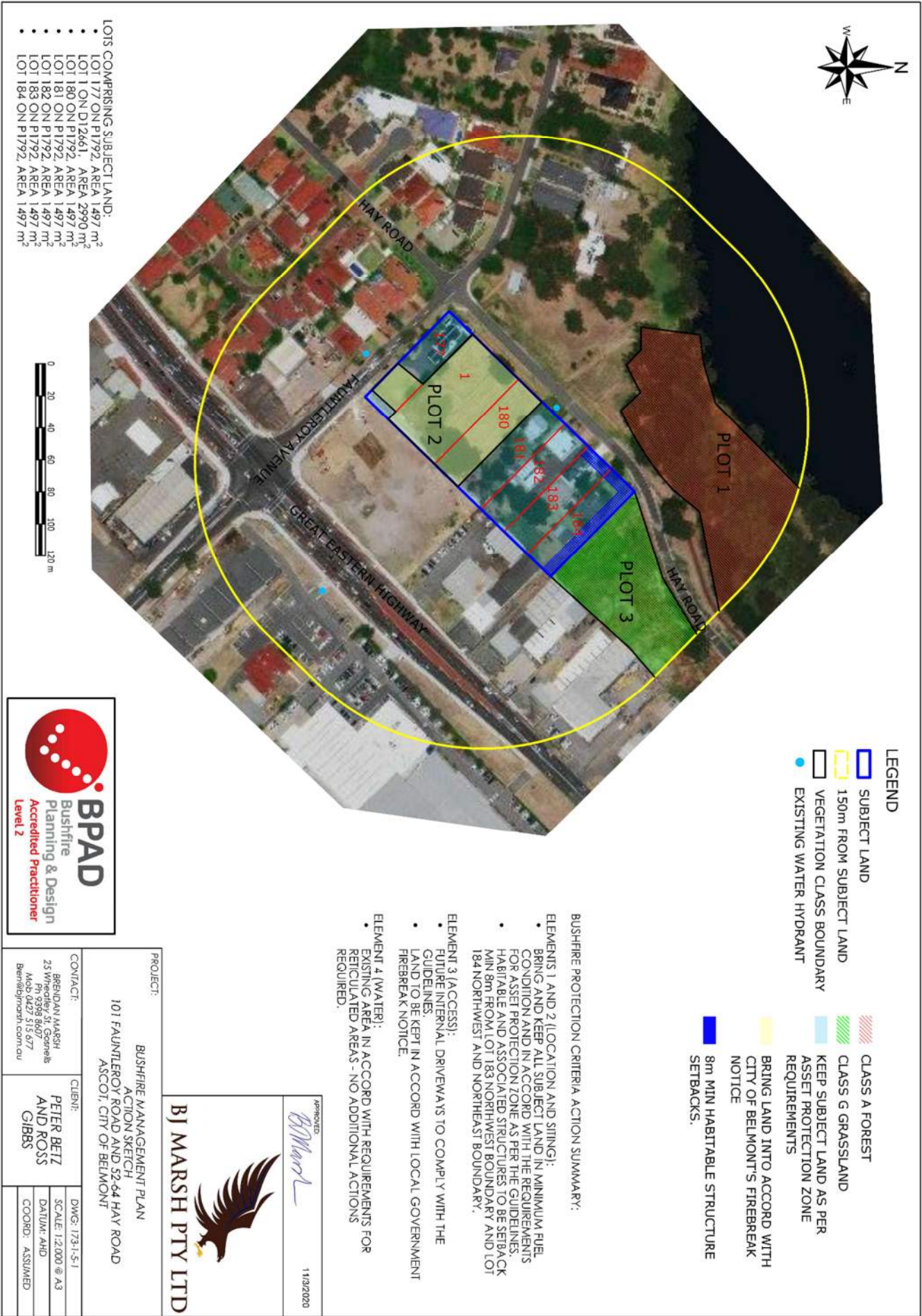


Figure 8: Spatial representation of the bushfire management strategies

6 RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES

DEVELOPER – PRIOR TO FINAL PLANNING APPROVAL			
No.	Implementation action	Local government clearance	Bushfire consultant clearance
1	Clearing and/or vegetation modification to be undertaken in accordance with the BMP on the Subject Land (i.e. all subject land to be brought into and kept in accord with AS3959 clauses 2.2.3.2 (e) or (f) and the requirements of the Guidelines for Asset Protection Zone.		<input type="checkbox"/>
2	Implement a mechanism for informing existing and prospective future land owners that this Bushfire Management Plan applies to the land and may restrict future development of the subject land.	<input type="checkbox"/>	

Certification by bushfire consultant

I _____, certify that at the time of inspection, the BAL ratings contained within this BMP are correct; and implementation action 1 has been undertaken in accordance with the BMP. Clearance by local government is recommended.

Signature: _____ Date: _____

LANDOWNER/DEVELOPER – PRIOR TO SALE OR OCCUPANCY	
No.	Implementation action
1	Ensure subject land is in accord with the requirements for Asset Protection Zone (APZ) and in accord with AS3959 Clauses 2.2.3.2 (e) or (f) and inform prospective owners and occupants that this Bushfire Management Plan applies to the Lot.
LANDOWNER/OCCUPIER – ONGOING	
No.	Management action
1	Maintain the Asset Protection Zones (APZ) and keep all resort land in minimum fuel condition in accord with AS3959 Clauses 2.2.3.2 (e) or (f).
2	Comply with the relevant local government annual firebreak notice issued under s33 of the <i>Bush Fires Act 1954</i> .

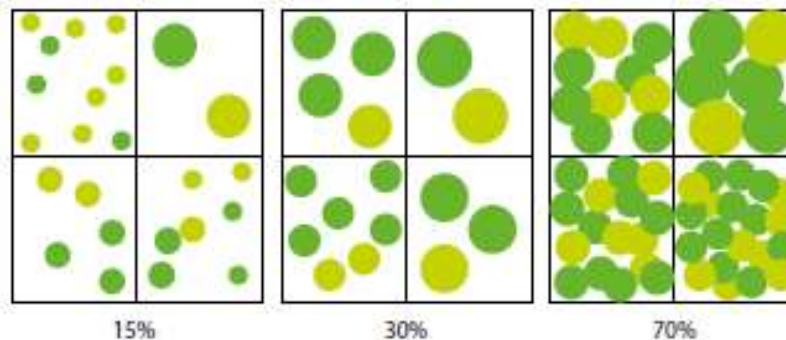
APPENDIX A: ASSET PROTECTION ZONE REQUIREMENTS

The present Standards for Asset Protection Zones are located in Schedule 1 of the Guidelines as follows:

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.