



Bushfire Management Plans – BAL Assessments – BAL Contour Maps – Bushfire Statements

**Lot 1, 300 and 4308 Yangebup Road,
Cockburn Central, WA**

Version 2.0

BMP No: BMP26108v2.0

Bushfire Management Plan

Proposed development of Single Lot

Development Commercial

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Bushfire Management Plan Coversheet

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

Bushfire management Plan and Site Details

Site Address: Lot 1, 300 and 4308 Yangebup Road, Cockburn Central, Western Australia,

Date of site visit: 3 September 2025

Report Author and/ or Reviewer: Dwayne Griggs, Level 2, BPAD 40466 - WA Fire & Safety

(BMP) Bushfire Management Plan Number: BMP 26108v2.0

BMP Date: 6 February 2026

If one or more of the following are marked **X / YES**, then this BMP should be referred to DFES for comment: **Yes** **No**

Has the BAL been calculated by a method other than Method 1 as outlined in AS3959?	X	X
Have any of the bushfire protection criteria elements been addressed through the use of an outcomes-based approach?	X	X
Strategic planning proposal (including rezoning applications)	X	X
Local planning scheme amendment containing supplementary provisions, additional to the deemed provisions for bushfire risk management	X	X
Where a bushfire local planning policy, or variation to the acceptable solutions or the APZ is proposed	X	X
Where there is a conflict of opinion between the decision maker and proponent	X	X
Expert technical advice on bushfire behaviour, emergency management, or other occasions where bushfire technical advice is required to support planning decision-making	X	X
Expert technical advice on bushfire matters referred to State Administrative Tribunal (SAT) or Development Assessment Panel (DAP)	X	X
Comments on future buildings' compliance with FES Commissioner's operational requirement guidelines	X	X
Decision maker discretionary referral, (e.g. renewable energy, hazardous materials, vulnerable land use)	X	X

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

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

Dwayne Griggs, WA Fire & Safety, 6 February 2026



Document control

Report version	Purpose	Author/reviewer and accreditation details	Date submitted
1.0	Approval of Commercial 4 x Class 6 Structures	Dwayne Griggs Level 2- BPAD40466 Claire Taylor Level 1 – BPAD62089	15 September 2025
2.0	Approval of Commercial 4 x Class 6 Structures & 4 x Class 10a Non-Associated Structures (Change of Site Plans)	Dwayne Griggs Level 2- BPAD40466 Claire Taylor Level 1 – BPAD62089	6 February 2026

Disclaimer

The Bushfire Management Plan prepared by WA Fire & Safety (Dwayne Griggs BPAD40466), is solely intended for the use of:

1. Current & future landowners
2. Developers & contractors engaged by the current landowners
3. Local Government Authority (LGA)

The enclosed strategies intended for the mitigation of the bushfire risk for this development are the minimum standard and the risk is assessed to the ability of the bushfire consultant and provided information from all stakeholders at the time of the accepted task.

This BMP considers the bushfire aspects of planning only and does not consider all the environmental aspects involved. A limited environmental survey has been completed and further consultation and/or approval for vegetation clearances is up to the Local Government Authority (LGA).

The setbacks and distances for the Asset Protection Zone(s) APZs should be confirmed at the time of vegetation modification for the proposed structures and after the vegetation clearance a final inspection may be required to provide a to confirm distance and issue a BAL certificate, thus ensuring the correct risk mitigation distances has been achieved, the decision for a final inspection is up to the LGA.

There is no guarantee that in the event of a bushfire that property loss will not occur, and the author has used the information provided, appropriate guidelines and due care to provide what they believe is the best possible solution to combat a relatively unpredictable fire threat.

WA Fire & Safety (Dwayne Griggs) excludes all liability for any damage, loss, injury or claim from any fire event, by the acceptance of this BMP the property owner is made aware and agrees to this exclusion of liability.

The ongoing responsibility falls on the landowner for the correct site maintenance to maintain the BAL Levels outlined inside this BMP and their continuance to mitigate the risks involved with extreme fire behaviour. The poor maintenance of vegetation, fuel loads, APZ requirements, Local government fire break notices and fire risk mitigation strategies provided within this BMP can severely impact the level of risk that a fire event can have. If the landowner believes that any factors have changed or modified the potential risk, then the bushfire consultant should be informed, and a new BMP may be required.

On submission of this BMP the landowner authorises direct contact from the LGA to the bushfire consultant for any issues, changes, or queries, contact details are below.

This Bushfire Management Plan is Valid for 3 years from the date completed.

Compliance Statement

This document has been prepared in accordance to comply with the latest State Planning Policy 3.7 Bushfire April 2023 and the Planning for Bushfire Guidelines September 2024.

Bushfire Management Plan

Author:

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Level 1 FPAA Accredited Practitioner

Accreditation Number: 62089

Reviewer:

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1.0 Introduction and Proposal Details

This BMP has been requested by the landowners for the proposed development of Lot 1, 300 and 4308 Yangebup Road, Cockburn Central, Western Australia, within the LGA of the City of Cockburn.

The zoned Mixed Business lot is currently identified as inside the Bushfire Prone area 2. Currently this lot is in an undeveloped state with only the firebreaks being established to an acceptable standard.

This proposed application is for a 4 x commercial structures:

1. Class 6 Main Shopping Centre located to the North.
2. Class 6 Service Station Located to the Southwest.
3. Class 6 Fast Food Building 1 located to the Southeast.
4. Class 6 Fast Food Building 2 located to the Southeast.
5. 4 x Class 10a Non-Associated Car park Shades located in the center of the lot

The assessed bushfire risk for the lot is moderate to extreme, BAL-29 or less is achievable for all proposed structures with vegetation separation and an APZ (Asset Protection Zone) established inside the lot.

Determined BAL rating is BAL-FZ on the day for all proposed structures on the day of the site visit and further vegetation modification is required to achieve BAL-29 or less.

1.1 Site Location

The proposed development is located 1km East of Cockburn centre on Yangebup Road having access from West and East.

1.2 Aims and Objectives

The aim of this Bushfire Management Plan is to identify issues, requirements and provide bushfire risk mitigation measures for the proposed development. Aims for this site include:

- avoid increasing the threat to people, property and infrastructure
- reduce the developments vulnerability from extreme bushfire behaviour
- allow ingress and egress for fire and emergency services
- consider and minimize environmental impacts by reducing vegetation modification.

The objectives of this Bushfire Management Plan are to:

- demonstrate suitability for development
- display bushfire risk levels, fuels, vegetation types and the impact before and after
- show Bushfire management strategies recommended for the site
- demonstrate compliance with the bushfire protection criteria and the use of acceptable solutions for the site.

1.3 Document Preparation

Dwayne Griggs from WA Fire & Safety a BPAD Level 2 accredited practitioner with the Fire Protection Association of Australia has conducted the site assessment and prepared this BMP.

FIGURE 1: Copy of Site Plans



- Legend**
- Existing Site Boundary
 - - - Proposed Site Boundary
 - △ Vehicle Entry/Exit
 - * Pedestrian Entry
 - * Public Amenities
 - * Staff Amenities- End of Trip

Note:
All NLA measured in accordance with PCA method of measurement.
This plan remains preliminary and subject to design evolution and authority approvals.

CAR PARKING	
On-Site Boys North-West	49
On-Site Pick Up Boys	6
Street Boys	12
On-Site Boys	216
Pod Site Boys	32
TOTAL BAYS PROVIDED	315
Motorcycle Bays	7
BIKE PARKING	
Visitor Parking	44
Secure Staff Parking	24
TOTAL BAYS PROVIDED	62

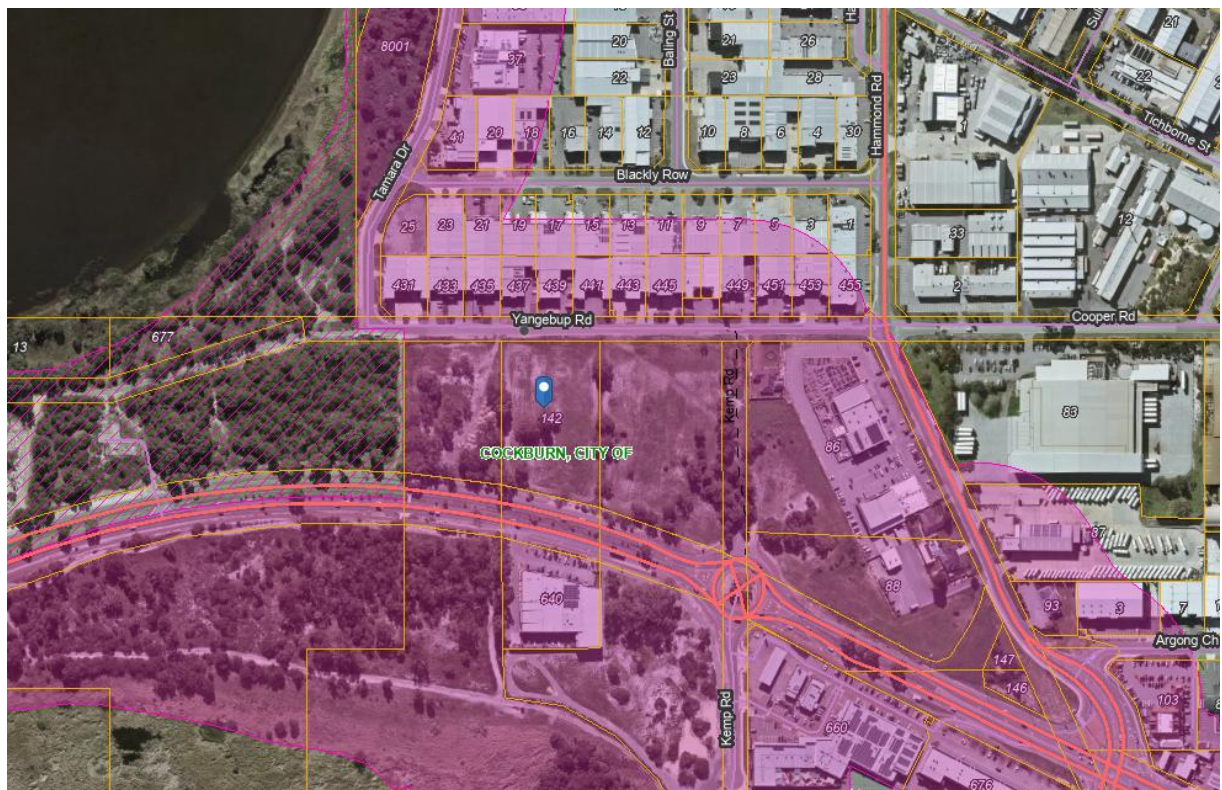
Beehlor SC
2433

Site Plan
Pg 3
Rev A
01/2026
**Place
Fabric.**

FIGURE 2: Proposed Location



FIGURE 3: Map of Bushfire Prone Areas for the subject site



Site is entirely inside the bushfire prone area 2.

2.0 Environmental Considerations

Limited considerations below have been assessed with no issues:

Department of Biodiversity, Conservation and Attractions (DBCA)

Conservation category wetlands and buffer **DBCA-019**,

Augusta to Walpole **DBCA-017**

RAMSAR wetlands (**DBCA-010**)

Threatened and priority flora (**DBCA-036**)-May require investigation.

Threatened Ecological Communities (**DBCA-038**)-May require investigation.

Department of Planning, Lands and Heritage

Bush Forever areas 2000 (**DPLH-019**)

Department of Water and Environmental Resources (DWER)

Clearing regulations – Environmentally Sensitive Areas (**DWER-046**)

Swan Bioplan Regionally Significant Natural Areas 2010 (**DWER-070**)

Department of Primary Industries and Regional Development (DPIRD)

Conservation Covenants Western Australia (**DPIRD-023**)-May require investigation.

2.1 Native vegetation – Modification and Clearing

Vegetation modification is required to achieve BAL-29 for all proposed structures within the proposed lot.

The area of 7025m² of Class A Forest and 2.924 ha of Class G Grassland will be required to be modified to the Asset Protection Zone – Siting and Design (appendix 1) and the requirements of the Local Government Authority Firebreak Notice (Appendix 2) in order to establish and APZ of BAL-29.

There are no alternative bushfire management design solutions that will reduce the extent of vegetation clearing as the commercial structure location has been provided to minimise vegetation modification.

The proposed layout will result in an appropriate balance between bushfire risk mitigation and vegetation retention.

2.2 Revegetation/Landscape Plans

Revegetation inside the APZ will be designed and maintained as per the Asset Protection Zone – Siting and Design (Appendix 1) and the Local Government Authority Firebreak Notice (Appendix 2)

Landscape Plans provided below with layout of trees and plants to be used within the subject lot.

[illegible]

REV	DATE	DWN	APP	DESCRIPTION
A	21.01.25	KD	KD	PLANTING PLAN

PLANTING IMAGES
TREES



SHRUB PLANTING



STRAPPY PLANTING



GROUND COVER PLANTING



PRECEDENT IMAGES

[illegible]

THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS
APPROVED BY CLIENT AND REVISED 'D' ISSUED FOR CONSTRUCTION

3.0 Bushfire Assessment Results

The site requires a BAL assessment in accordance with clause 6.5 of SPP 3.7. The assessment of this site or development was undertaken by Dwayne Griggs of WA Fire & Safety, a BPAD Accredited Level 2 Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959 - 2018 Simplified Procedure (Method 1). All vegetation within 150m of the proposed site has been assessed and classified in accordance with AS3959.

3.1 BAL Assessment Inputs

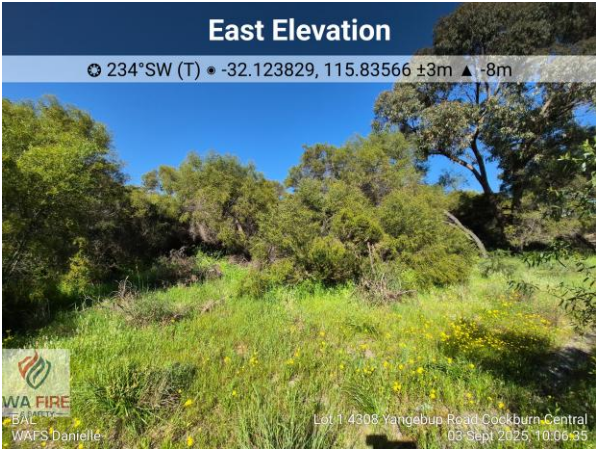
Vegetation and land use within 150 m of the site has been classified as per descriptions included in *AS 3959 – 2018 Construction of Buildings within Bushfire Prone Areas*.

All vegetation inside the 150m Vegetation survey is either Class A Forest or Class G Grassland.

Plot 1	
Vegetation Classification or Exclusion Clause:	Class G Grassland
Description / Justification for Classification	
Grassland of >100mm in Height Canopy Cover of Less than 10% Understorey of Grasses Minimal surface, Near surface and Intermediate Fuel loads	
	
Photo ID: 15	Photo ID: 27
	
Photo ID: 45	Photo ID:

Plot 2	
Vegetation Classification or Exclusion Clause:	Class A Forest
Description / Justification for Classification	
Overstorey 10-30m in Height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads	
	
Photo ID: 19	Photo ID: 24

Plot 3	
Vegetation Classification or Exclusion Clause:	Class A Forest
Description / Justification for Classification	
Overstorey 10-30m in Height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads	
	
Photo ID: 8	Photo ID: 80

Plot 4	
Vegetation Classification or Exclusion Clause:	Class A Forest
Description / Justification for Classification	
Overstorey 10-30m in Height Canopy Cover of 30-70% Understorey of Low Trees, Shrubs, Scrub and Grasses High surface, Near surface and Intermediate Fuel loads	
	
Photo ID: 59	Photo ID: 71

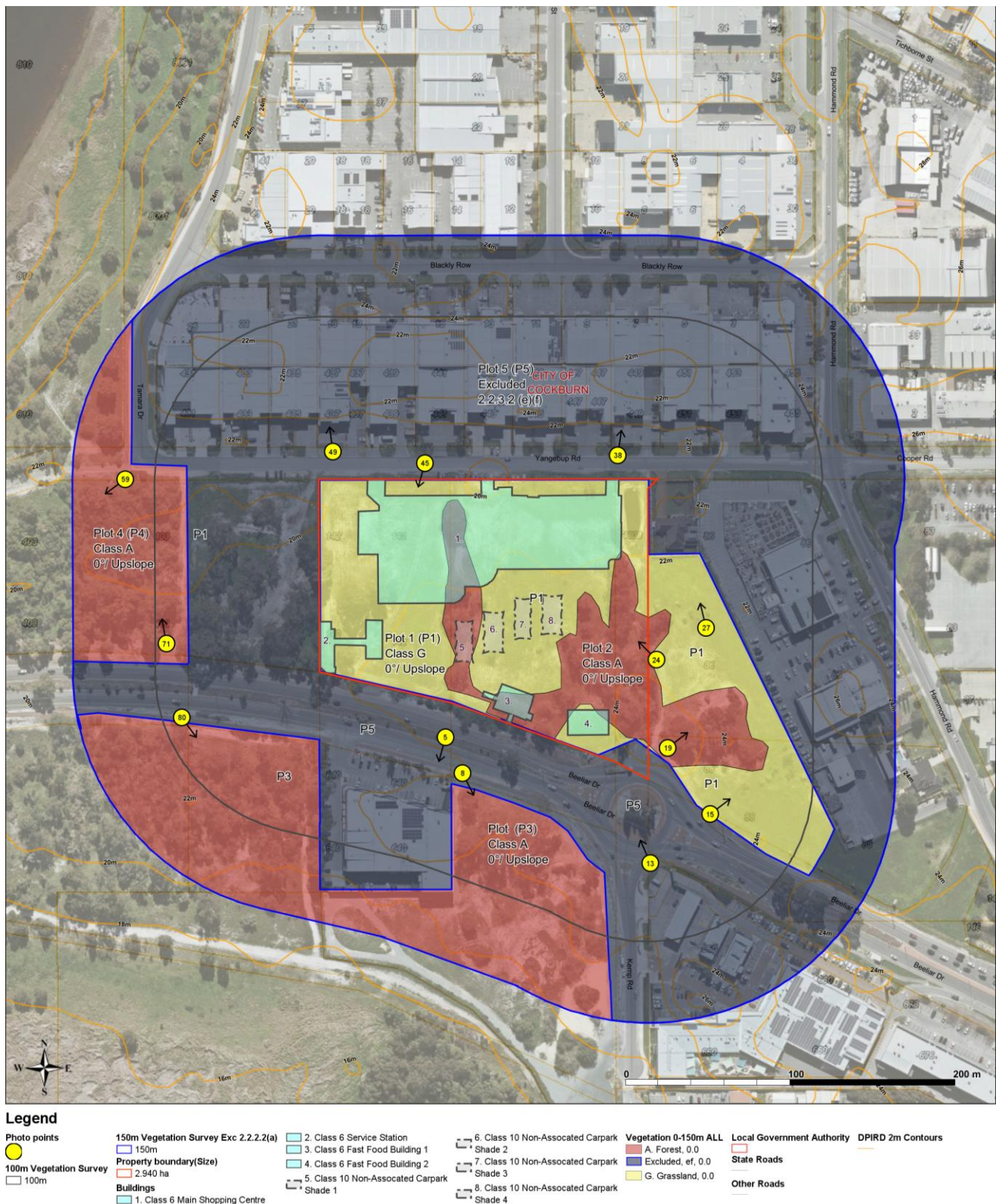
Plot 5	
Vegetation Classification or Exclusion Clause:	Excludable - 2.2.3.2 (e) (f) Low Threat Vegetation/Non Vegetated
Description / Justification for Classification	
Maintained Areas Canopy Cover of Less than 10% Industrial Areas and Roads Insufficient Fuels to increase the risk from bushfire Non-Vegetated Areas	
 North Elevation 195°S (T) • -32.125399, 115.837702 ±2m ▲ -7m Lot 1 4308 Yangebup Road Cockburn Central 03 Sept 2025, 9:50:20 WA FIRE BAL WAFS Danielle	 South Elevation 337°NW (T) • -32.125942, 115.83907 ±4m ▲ -5m Lot 1 4308 Yangebup Road Cockburn Central 03 Sept 2025, 9:52:33 WA FIRE BAL WAFS Danielle
Photo ID: 5	Photo ID: 13
 South Elevation 9°N (T) • -32.123757, 115.838758 ±3m ▲ -7m Lot 1 4308 Yangebup Road Cockburn Central 03 Sept 2025, 10:00:29 WA FIRE BAL WAFS Danielle	 South Elevation 352°N (T) • -32.123755, 115.837009 ±4m ▲ -7m Lot 1 4308 Yangebup Road Cockburn Central 03 Sept 2025, 10:03:37 WA FIRE BAL WAFS Danielle
Photo ID: 38	Photo ID: 49

This site is flat ground

Table 3A: Vegetation Classification and Slopes

Plot	Vegetation Classification	Effective Slope
1	Class G Grassland	0/Upslope
2	Class A - Forest	0/Upslope
3	Class A - Forest	0/Upslope
4	Class A - Forest	0/Upslope
5	Excludable – Clause 2.2.3.2 (e) & (f)	-

Figure 5: Vegetation Classification Map



3.2 BAL-Assessment Outputs

Table 3B) 1. Class 6 Main Shopping Centre provides the distances and determined radiant heat impact in the form of a BAL rating before vegetation modification or the establishment of APZ.

Table 3B: Determined BAL Ratings

Plot	Vegetation Classification	Effective Slope in Degrees	Separation (m)	BAL
1	Class G Grassland	0/Upslope	0	BAL – FZ
2	Class A - Forest	0/Upslope	0	BAL – FZ
3	Class A - Forest	0/Upslope	91	BAL – 12.5
4	Class A - Forest	0/Upslope	103	BAL – LOW
5	Excludable – Clause 2.2.3.2 (e) & (f)	-	-	BAL – LOW

Table 3C) 2. Class 6 Service Station provides the distances and determined radiant heat impact in the form of a BAL rating before vegetation modification or the establishment of APZ.

Table 3C: Determined BAL Ratings

Plot	Vegetation Classification	Effective Slope in Degrees	Separation (m)	BAL
1	Class G Grassland	0/Upslope	0	BAL – FZ
2	Class A - Forest	0/Upslope	36	BAL – 19
3	Class A - Forest	0/Upslope	41	BAL – 19
4	Class A - Forest	0/Upslope	80	BAL – 12.5
5	Excludable – Clause 2.2.3.2 (e) & (f)	-	-	BAL – LOW

Table 3D) 3. Class 6 Fast Food Building 1 provides the distances and determined radiant heat impact in the form of a BAL rating before vegetation modification or the establishment of APZ.

Table 3D: Determined BAL Ratings

Plot	Vegetation Classification	Effective Slope in Degrees	Separation (m)	BAL
1	Class G Grassland	0/Upslope	0	BAL – FZ
2	Class A - Forest	0/Upslope	0	BAL – FZ
3	Class A - Forest	0/Upslope	45	BAL – 12.5
4	Class A - Forest	0/Upslope	179	BAL – LOW
5	Excludable – Clause 2.2.3.2 (e) & (f)	-	-	BAL – LOW

Table 3E) 4. Class 6 Fast Food Building 2 provides the distances and determined radiant heat impact in the form of a BAL rating before vegetation modification or the establishment of APZ.

Table 3E: Determined BAL Ratings

Plot	Vegetation Classification	Effective Slope in Degrees	Separation (m)	BAL
1	Class G Grassland	0/Upslope	0	BAL – FZ
2	Class A - Forest	0/Upslope	0	BAL – FZ
3	Class A - Forest	0/Upslope	51	BAL – 12.5
4	Class A - Forest	0/Upslope	232	BAL – LOW
5	Excludable – Clause 2.2.3.2 (e) & (f)	-	-	BAL – LOW

Figure 6: BAL Assessment Map

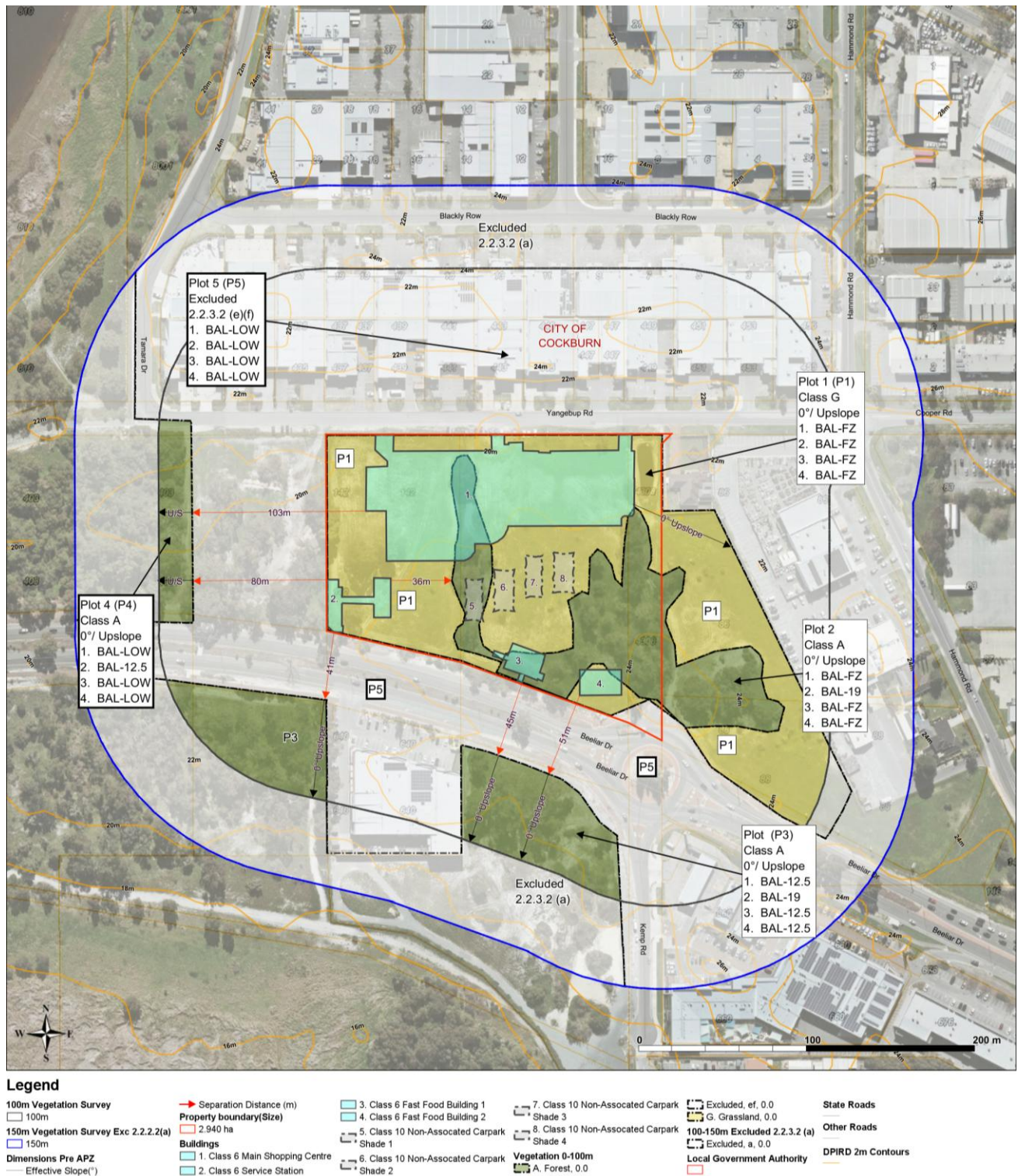


Table 3F) 1. Class 6 Main Shopping Centre provides the indicative BAL rating after the proposed APZ has been established inside the lot boundary.

Table 3F: Prescribed BAL ratings and required separation distances

Plot	Vegetation Classification	Effective Slope in Degrees	Separation (m)	BAL
1	Class G Grassland	0/Upslope	15	BAL – 19
2	Class A - Forest	0/Upslope	38	BAL – 19
3	Class A - Forest	0/Upslope	91	BAL – 12.5
4	Class A - Forest	0/Upslope	103	BAL – LOW
5	Excludable – Clause 2.2.3.2 (e) & (f)	-	-	BAL – LOW

Table 3G) 2. Class 6 Service Station provides the indicative BAL rating after the proposed APZ has been established inside the lot boundary.

Table 3G: Prescribed BAL ratings and required separation distances

Plot	Vegetation Classification	Effective Slope in Degrees	Separation (m)	BAL
1	Class G Grassland	0/Upslope	161	BAL – LOW
2	Class A - Forest	0/Upslope	161	BAL – LOW
3	Class A - Forest	0/Upslope	41	BAL – 19
4	Class A - Forest	0/Upslope	80	BAL – 12.5
5	Excludable – Clause 2.2.3.2 (e) & (f)	-	-	BAL – LOW

Table 3H) 1. Class 6 Fast Food Building 1 provides the indicative BAL rating after the proposed APZ has been established inside the lot boundary.

Table 3H: Prescribed BAL ratings and required separation distances

Plot	Vegetation Classification	Effective Slope in Degrees	Separation (m)	BAL
1	Class G Grassland	0/Upslope	72	BAL – LOW
2	Class A - Forest	0/Upslope	69	BAL – 12.5
3	Class A - Forest	0/Upslope	45	BAL – 12.5
4	Class A - Forest	0/Upslope	179	BAL – LOW
5	Excludable – Clause 2.2.3.2 (e) & (f)	-	-	BAL – LOW

Table 3I) 1. Class 6 Fast Food Building 2 provides the indicative BAL rating after the proposed APZ has been established inside the lot boundary.

Table 3I: Prescribed BAL ratings and required separation distances

Plot	Vegetation Classification	Effective Slope in Degrees	Separation (m)	BAL
1	Class G Grassland	0/Upslope	25	BAL – 12.5
2	Class A - Forest	0/Upslope	24	BAL – 29
3	Class A - Forest	0/Upslope	51	BAL – 12.5
4	Class A - Forest	0/Upslope	232	BAL – LOW
5	Excludable – Clause 2.2.3.2 (e) & (f)	-	-	BAL – LOW

Figure 7: BAL Assessment Map (Prescribed with APZ)



Legend

100m Vegetation Survey	Property boundary(Size)	5. Class 10 Non-Associated Carpark	8. Class 10 Non-Associated Carpark	100-150m Excluded 2.2.3.2 (a)	State Roads
150m Vegetation Survey Exe 2.2.2.2(a)	Buildings	Shade 1	Shade 4	Excluded, a, 0.0	Other Roads
150m	1. Class 6 Main Shopping Centre	6. Class 10 Non-Associated Carpark	Vegetation APZ-100m	A2.2 Asset Protection Zone (APZ)	DPIRD 2m Contours
Dimensions Post APZ	2. Class 6 Service Station	Shade 2	A. Forest, 0.0	29or<	
Effective Slope(°)	3. Class 6 Fast Food Building 1	7. Class 10 Non-Associated Carpark	Excluded, ef, 0.0	APZ Lot Boundary	
Separation Distance (m)	4. Class 6 Fast Food Building 2	Shade 3	G. Grassland, 0.0	Local Government Authority	

4.0 Identification of Bushfire Hazard Issues

Below are the identified bushfire hazard issues relating to this site:

- The development has class A Forest within the subject lot and running down the Eastern boundary outside the subject lot
- Asset Protection Zones are to be established and maintained in perpetuity to ensure the commercial structures will maintain BAL-29.
- The indicative BAL ratings are to demonstrate compliance only and will need to be established during the building process with building permit being issued after BMP is approved by the local government authority, APZ has been established and the issue of a BAL-29 Report and certificate.
- Storage of hazardous, flammable or combustible materials are located in BAL-29 or less.
- As this development is above BAL-LOW the relevant bushfire protection criteria apply and will need to be addressed (section 4.0).

5.0 Assessment against the Bushfire Protection Criteria

5.1 Compliance Table

Bushfire Management Plan – BAL Assessment

Table 4: Compliance with bushfire protection criteria

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
Element 1: Location Avoid broader landscapes that present an unacceptable bushfire risk to life, property and infrastructure	BPA Area 1	Not Applicable for Commercial Development
	BPA Area 2	Not Applicable for Commercial Development
Element 2: Siting and design Ensure siting and design solutions: • manage or mitigate the bushfire risk to people, property and infrastructure; and • avoid, or where unavoidable, minimises the clearing of native vegetation	A2.1a Siting and Design Every proposed new habitable commercial building or associated structure achieves a radiant heat impact not exceeding 29 kW/m ² (BAL-29).	All proposed habitable commercial building within the subject lot can achieve BAL-29 or less in the sited locations. Compliant – Y ☒ / N ☐
	A2.1b Siting in an area with a radiant heat impact exceeding 29 kW/m² (BAL-40 or BAL-FZ). The siting of a commercial habitable building, with a radiant heat impact exceeding 29 kW/m ² (BAL-40 or BAL-FZ). Should only be considered where: • the lot was created prior to December 2015; and	N/A –BAL-29 or less can be achieved. Compliant – Y ☒ / N ☐

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
	• there are demonstrated site characteristics and/or biodiversity or conservation values that prevent the achievement of a radiant heat impact not exceeding 29 kW/m² (BAL-29); and • it is demonstrated that the reduction of the building footprint or a redesign to manage or mitigate the risk, is not practical or appropriate. If the provision of an APZ in accordance with acceptable solution A2.2 cannot be achieved, then the vegetation immediately surrounding the building is to be managed as defensible space in accordance with Appendix 1, Table 9 – APZ technical requirements.	
	A2.2 Asset Protection Zone (APZ) Where a residential habitable building cannot be wholly within an area with a radiant heat impact not exceeding 29 kW/m² (BAL-29) in its pre-development state, an APZ is to be provided and meet the following requirements: Width: the APZ is to be measured from any external wall or supporting post or column of the building, and of sufficient size to ensure the radiant heat impact of a bushfire does not exceed 29 kW/m² (BAL-29) in all circumstances. Location: the APZ is to be contained solely within the boundaries of the lot, except in instances where: – the vegetation on the adjoining lot(s) is, and will continue to be, low threat as per Clause 2.2.3.2 of AS 3959 or the requirements	APZ is to be established and maintained in perpetuity to: 1. Lot Boundary APZ has been designed to minimise environmental impact within the lot boundary. APZ's are to be maintained in perpetuity in accordance with: 1. APZ Siting and Design (Appendix 1 - Table 9) and 2. Local Government Authority Firebreak Notice (Appendix 2). Compliant – Y ☒ / N ☐

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
	of Appendix B.2, Table 9 - APZ technical requirements, or an alternative standard in a local planning scheme, on an ongoing basis in perpetuity; or – the adjoining land is and will remain in perpetuity, non-vegetated. Management: the APZ is managed in accordance with the requirements of Appendix B.2, Table 9 – APZ technical requirements (Appendix 1), or an alternative standard in a gazetted local planning scheme.	
	A2.3 Clearing of native vegetation The development avoids, or where unavoidable, minimises the clearing of native vegetation	Proposed site is suitable and avoids excessive vegetation management or clearing. Compliant – Y ☒ / N ☐
	A2.4 Storage of hazardous, flammable and/or combustible materials Where a proposed land use will include the storage of hazardous, flammable and/or combustible materials as part of its ongoing day to day operations, the materials are to be stored in an area that: • is subject to a radiant heat impact not exceeding 29 kW/m2 (BAL-29); • is non-combustible and shields the materials to reduce their exposure to radiant heat from the bushfire to levels significantly lower than 29 kW/m2 and prevents the entry of debris and embers; and	Materials on site are stored in an area that: - is subject to a radiant heat impact not exceeding 29 kW/m2 (BAL-29) - is non-combustible and shields the materials to reduce their exposure to radiant heat from the bushfire to levels significantly lower than 29 kW/m2 and prevents the entry of debris and embers; and - limits to the degree necessary and practical, the escape of sources of ignition from the stored materials into bushfire prone vegetation

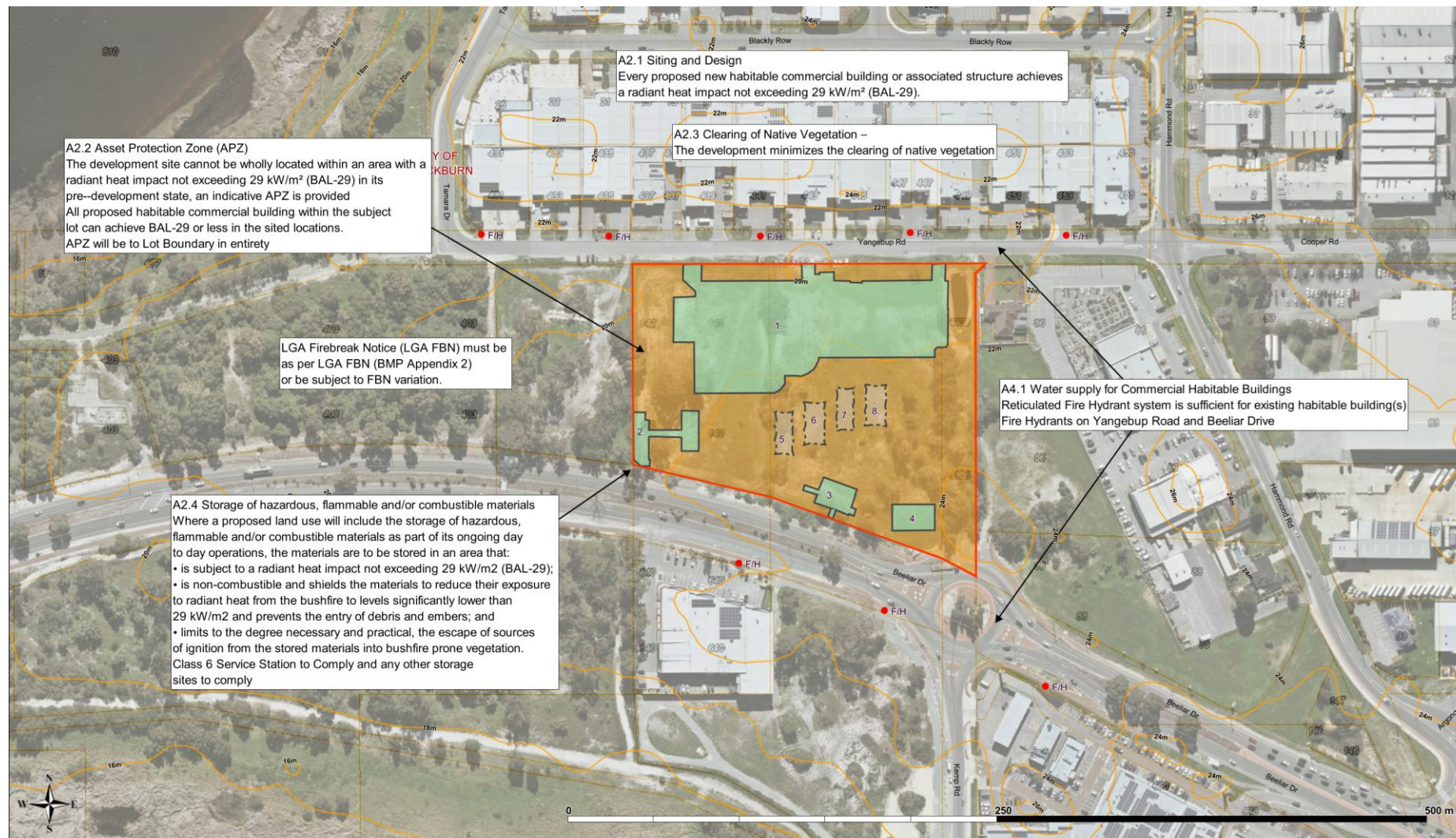
Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
	limits to the degree necessary and practical, the escape of sources of ignition from the stored materials into bushfire prone vegetation	Class 6 Service Station to Comply and any other storage sites to comply Compliant – Y ☒ / N ☐
Element 3: Ensure the design and capacity of vehicular access and egress provide: - for efficient and effective evacuation to a suitable destination(s) and/or - as a contingency measure for vulnerable land uses, an on-site shelter, where demonstrated appropriate, as a last resort option	A3.1 Private Driveways There are no private driveway technical requirements (prescribed by these Guidelines) where the private driveway is within a lot: - serviced by reticulated water and - is no greater than 70 metres in length between the most distant external part of the habitable building and the public road (curb as a hose lay). In circumstances where the above conditions are not met, the private driveway is to meet all of the following requirements: - requirements of Appendix 3 - Table 10, column 5; and - passing bays every 200 metres with a minimum length of 20 metres and a minimum additional carriageway width of 2 metres (i.e. the combined carriageway width of the passing bay and constructed private driveway is to be a minimum 6 metres); and - turn-around area (Figure 30) and within 30 metres of the residential habitable building (Figure 38).	N/A - as structure is less than 70m to the curb as a hose lay and has a reticulated fire hydrant system on the road. Compliant – Y ☒ / N ☐
Element 4: Water Water is available to the subdivision, development or land use to enable people,	A4.1 Water supply for residential / habitable commercial buildings Where a reticulated water supply is existing or proposed, a hydrant connection(s) should be provided in accordance with the	Existing Fire Hydrants on Yangebup Road and Beeliar Drive hydrant connections provided in accordance with Water Corporation's No. 63 Water Reticulation Standard.

Bushfire protection criteria Intent	Acceptable solutions	Proposed bushfire management strategies/solutions
property and infrastructure to be defended from bushfire	specifications of the relevant water supply authority. Where these specifications cannot be met, a water tank(s) should be provided in accordance with the requirements of Appendix 4 , Table 11 – Water supply dedicated for bushfire firefighting.	Compliant – Y ☒ / N ☐

Bushfire Management Plan BAL Assessment- Commercial Development

5.2 Bushfire Mitigation Measures

Figure 8: Spatial representation of the bushfire mitigation measures (BMS)



Legend

Property boundary(Size) 2.940 ha	Buildings 1. Class 6 Main Shopping Centre 2. Class 6 Service Station 3. Class 6 Fast Food Building 1 4. Class 6 Fast Food Building 2 5. Class 10 Non-Associated Carpark Shade 1 6. Class 10 Non-Associated Carpark Shade 2 7. Class 10 Non-Associated Carpark Shade 3 8. Class 10 Non-Associated Carpark Shade 4	A2.2 Asset Protection Zone (APZ) 29 or < APZ Lot Boundary	A4.1 Water supply for residential F/H - Fire Hydrants Local Government Authority	State Roads Other Roads	DPIRD 2m Contours
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6.0 Roles & Responsibilities

Responsibilities & implementation measure for the proposed development, these are shared by the Current and future landowners, project developer and the Local Government Authority (LGA).

Table 5: Roles & Responsibilities

DEVELOPER/LANDOWNER/CONSULTANT – PRIOR TO USE	
No.	Implementation action
1	A notification, pursuant to Section 165 of the Planning and Development Act 2005, is required to be placed on the certificate(s) of title of the proposed lot(s) with a Bushfire Attack Level (BAL) rating of 12.5 or above, advising of the existence of a hazard or other factor. Notice of this notification is to be included on the diagram or plan of survey (deposited plan). The notification is to state as follows “This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and is/may be subject to a Bushfire Management Plan. Additional planning and building requirements may apply to development on this land.” Notification placed on title ☐ Certified ☐ dated the ____ of _____ 20____ - Certified by _____
2	Establish an Asset Protection Zone (APZ) to the - dimensions (Table 4 A2.2), and - standard stated in this BMP in APZ Siting and Design (Appendix 1) and - to the additional requirements outlined in the LGA Firebreak Notice (Appendix 2). APZ Clearance Completed Certified ☐ dated the ____ of _____ 20____ - Certified by _____
3	Maintain the lot and firebreaks to comply with the relevant (LGA) annual firebreak notice issued under s33 of the Bush Fires Act 1954 to required standard in perpetuity as per Local Government Authority Firebreak Notice (Appendix 2) or per variation issued by LGA.
4	Hazardous, flammable or combustible materials on site must be stored as per the requirements in - BMP (table 4 A2.4) - Bushfire Management Strategies map
LANDOWNER – ONGOING	
No.	Management action
1	Maintain an Asset Protection Zone (APZ) to: - dimensions (Table 4 A2.2), and - standard stated in this BMP in APZ Siting and Design (Appendix 1) and - to the additional requirements outlined in the LGA Firebreak Notice (Appendix 2).
2	Maintain the lot and firebreaks to comply with the relevant (LGA) annual firebreak notice issued under s33 of the Bush Fires Act 1954 to required standard in perpetuity as per Local Government Authority Firebreak Notice (Appendix 2) or per variation issued by LGA.
3	Maintain Storage of Hazardous, flammable or combustible materials on site must be stored as per the requirements in - BMP (table 4 A2.4) Bushfire Management Strategies map

LOCAL GOVERNMENT AUTHORITY (LGA) – ONGOING MANAGEMENT	
No.	Management action
1	Inspection and issue of works orders or fines for non-compliance, this includes firebreaks, private driveway, Asset Protection Zone and water supply.

Bushfire Management Plan Appendices

Appendix 1 – Asset Protection Zone (APZ) – Siting and Design

B.2: SITING AND DESIGN

State Planning Policy outcome for Element 2: Siting and design

Ensure siting and design solutions:

- manage or mitigate the bushfire risk to people, property and infrastructure; and
- avoid, or where unavoidable, minimise clearing of native vegetation.

B.2.1 IDENTIFYING AN ASSET PROTECTION ZONE

An Asset Protection Zone (APZ) is a low fuel area, maintained around a building to increase the likelihood a building will survive a bushfire, by reducing the potential for direct flame contact, radiant heat exposure and ember attack. The APZ allows emergency services access and provides an area for firefighters and home-owners to defend their property.

The width of an APZ should ensure the radiant heat impact does not exceed 29 kW/m² for a habitable building, or 10 kW/m² where a building is identified for use as an on-site shelter. Where a building or development site achieves a radiant heat impact of 29 kW/m² or lower in its pre-development state (prior to any vegetation clearing or modification), an APZ is generally not required.

Exclusion of vegetation on adjoining land, which is covered by a local government firebreak notice, issued under section 33 of the *Bushfires Act 1954*, may occur in limited circumstances at the development application stage. Where it is evident the adjoining landowner is managing the vegetation in accordance with the firebreak notice, a copy of the firebreak notice and photographic evidence of the managed vegetation should be included in a BMP. It will also be necessary to seek written confirmation from the local government, to confirm support for the exclusion.

B.2.2 DESIGNING AN ASSET PROTECTION ZONE

An APZ should not be seen as an area entirely cleared of vegetation, but as a strategically designed space that considers how existing and future mature vegetation, and combustible and non-combustible features interact with and affect the building's resilience to bushfire.

An APZ should provide the greatest level of vegetation management within at least three metres of a habitable building, to ensure adequate unobstructed defensible space for emergency services to operate. This area should contain minimal vegetation and be free of combustible materials and obstructions. Within the remainder of the APZ, planting of vegetation can increase as you move farther away from the building.

The placement of plants within an APZ is a key design technique. Separation of garden beds with areas of low fuel or non-combustible material will break up fuel continuity and reduce the likelihood of vegetation within an APZ supporting a bushfire. It is important to consider the plant density and final structure and form of plants in their mature state.

However, providing for the ongoing management of an APZ in perpetuity, as low threat vegetation, within the implementation section of the BMP and/or condition of development approval, will ensure the BAL rating of the building does not increase over time.

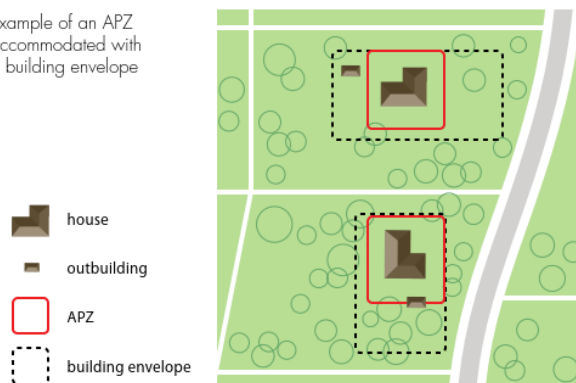
Clearing or modification of native vegetation to reduce the radiant heat impact below 29 kW/m² is generally not supported.

At the subdivision stage where a lot contains a building envelope, and the development site(s) is yet to be determined, the BMP should demonstrate the lot(s) can achieve an indicative development site(s) with a radiant heat impact not exceeding 29 kW/m², within the building envelope (Figure 24).

It may not be necessary for an entire building envelope to achieve 29 kW/m² or lower, where this results in unnecessary clearing or modification of native vegetation.

An APZ should be contained within the boundaries of the lot on which the building is situated, except in instances where it is demonstrated the vegetation on the adjoining land is, and will continue to be, low threat as per cl. 2.2.3.2 of AS 3959, or the vegetation on the adjoining lot is, and will remain in perpetuity, non-vegetated. However, it should be noted there is no requirement for a neighbouring landowner or land manager (public or private) to be party to a legal agreement to undertake ongoing management of vegetation as low threat, in perpetuity.

Figure 24: Example of an APZ accommodated with a building envelope



Strategic landscaping measures can be applied, such as replacing weeds with low flammability vegetation to create horizontal and vertical separations between the retained vegetation.

Mulches used within the APZ should be non-combustible. The use of stone, gravel, shells, rock and crushed mineral earth is encouraged. Very fine or light mulch (such as shredded pine bark, pine needles, or poplar woodchips) less than five millimeters in diameter should be avoided. It is recommended that wood mulch is used in garden beds or areas where the moisture level is higher by regular irrigation, and these areas are separated with non-combustible elements, such as pathways and open spaces.

Incorporation of landscaping features, such as masonry feature walls, can provide habitable buildings with barriers to wind, radiant heat and embers. These features can include noise walls or wind breaks. Use of Appendix F of AS 3959 for bushfire resistant timber selection or the use of non-combustible fencing materials such as iron, brick, limestone, metal post and wire is encouraged within an APZ.

B.2.3 MANAGEMENT OF AN ASSET PROTECTION ZONE

Ongoing maintenance of an APZ is usually enforced through a condition of a development approval, which should refer to Table 9 APZ technical requirements within this Appendix.

In addition to regular maintenance of an APZ, further bushfire protection can be provided by:

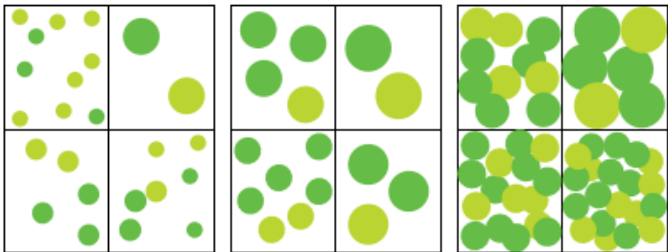
- ensuring gutters are free from vegetation
- installing gutter guards or plugs

- regular cleaning of underfloor spaces, or enclosing them to prevent gaps
- 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
- following the requirements of the relevant local government firebreak notice, which may include additional provisions such as locating wood piles more than 10 metres from a building.

Preparation of a property prior to the bushfire season and/or in anticipation of a bushfire is beneficial even if your plan is to evacuate. Embers can travel up to several kilometres from a bushfire and fall into small spaces and crevices or land against the external walls of a building. Best practice recommends 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.

Table 9: Asset Protection Zone (APZ) technical requirements

OBJECT	REQUIREMENT
Fences within the APZ	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 less than 6 mm in thickness)	- Should be managed and removed on a regular basis to be maintained as low threat vegetation - Should be maintained at less than two tonnes per hectare (on average) - Mulches should be non-combustible such as stone, gravel, shells, rock or crushed mineral earth or wood mulch more than five millimetres in thickness.
Trees* (more than 6 m in height)	- 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 less than 15 per cent of the total APZ area - Tree canopies at maturity should be at least 5 m apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided the total canopy cover within the APZ does not exceed 15 per cent and is not connected to the tree canopy outside the APZ. Tree canopy cover – ranging from 15 to 70 per cent at maturity  15% 30% 70%
Shrub* and scrub* (0.5 m to 6 m in height). Shrub and scrub more than 6 m in height are to be treated as trees.	- Should not be located under trees or within three metres of buildings - Should not be planted in clumps more than five square metres in area - Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground cover* (less than 0.5 m in height. Ground cover more than 0.5 m in height is to be treated as shrub)	- 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 more than 100 mm in height.
Grass	- Grass should be maintained at a height of 100 mm 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	Within three metres of each wall or supporting post of a habitable building; the area is kept free from vegetation but can include ground cover, grass and non-combustible mulches as prescribed above.
Liquid petroleum gas cylinders	- Should be located on the side of a building farthest 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.

Notes:

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

Appendix 2 – Local Government Authority Firebreak Notice

City of Cockburn Fire Control Order - Effective from 10 May 2018

First and Final Notice

Pursuant to *Section 33* of the *Bush Fires Act 1954* owners or occupiers of land situated within the City of Cockburn are required by law to comply with the prescribed Fire Control Order here within.

Term	Definition
Authorised Officer	A person appointed by the City of Cockburn Chief Executive Officer as an authorised person/officer to exercise the powers and duties set out in the Local Government Act 1995, Bush Fires Act 1954 and Local Law(s).
Flammable Material	Any dead or dry grass, vegetation, substance, object, thing or material (except living flora including live and/ or habitat standing trees) that may or is likely to catch fire and burn or any other thing deemed by an Authorised Officer to be capable of combustion.
Maintained Grass	Soil covered land, planted with grasses or other durable plants, maintained green and less than 50mm in height.
Prohibited Burning Time	The time of each year where it is unlawful to set fire to the bush at any time. This time is normally from 1 December of each year until and including 31 March of the following year. This time may be amended, subject to prevailing seasonal conditions.
Restricted Burning Time	The time of each year where it is unlawful to set fire to the bush without a valid Permit to Set Fire To The Bush issued by an Authorised Officer. This period is normally from 1 April until and including 31 May and from 1 October until and including 30 November of any year. This time may be amended, subject to the prevailing seasonal conditions.
Unrestricted Burning Time	The time of each year where it is lawful to set fire to the bush at any time, in areas zoned rural under the Metropolitan Region Scheme. This time is normally from 1 June until and including 30 September. This time may be amended, subject to the prevailing seasonal conditions.
Firebreak Time	The time of each year where fire hazard reduction works must be maintained as specified in this Fire Control Order. This time is 1 November of each year until and including 15 April of the following year.
Structure	A building, as defined in the Building Codes of Australia (BCA) may be made up of a number of classes if it has a mixed use.

1. All Property (vacant or developed) - less than 4,047m²

[Collapse](#) 

To reduce the fire hazard on your land and to comply with the requirements of this Fire Control Order you are required to:

1.1 Have all flammable materials such as dry grass and weeds slashed, mown or trimmed down by other means to a maximum height of 50mm across the entire property for the duration of this firebreak time; and

1.2 Remove all dead vegetation.

2. All property (vacant or developed) - 4,047m² or greater

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To reduce the fire hazard on your land and to comply with the requirements of this Fire Control Order you are required to:

2.1 Construct a firebreak (as defined within section 3 of this order) immediately inside all external property boundaries, this includes those adjacent to roads, drains, rail reserves and any public open space reserves

2.2 Remove all dead vegetation surrounding and over all habitable structures to a radius of 3 metres except living trees, shrubs, maintained grass and gardens under cultivation.

3. Firebreak Specifications

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A firebreak is an area of land cleared of flammable material, installed to minimise the spread or extension of a fire and to provide suitable access for fire fighting vehicles. The standards of a compliant firebreak are as follows:

3.1 A firebreak must be constructed of bare earth, stone, or sealed surfaces and be clear of all flammable materials to create a 3 metre wide trafficable surface

3.2 Maintained grass may occupy a firebreak

3.3 Overhanging branches must be pruned to provide a 4 metre vertical clearance above the full width of the 3 metre firebreak surface

3.4 A firebreak must be a continuous trafficable surface for a fire fighting vehicle, clear of any obstructions and must not terminate in a cul-de-sac (dead end).

4. Additional Works

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Regardless of land size and location, the City of Cockburn or its Authorised Officer(s) may require you to undertake additional work(s) on your property to improve access and/or undertake further works where in the opinion of that Authorised Officer(s), these works would be conducive to preventing the outbreak and/or the spread or extension of a fire.

5. Fire Control Order Variations

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A variation will be considered where the owner and/or occupiers believe it is impractical to meet the compliance requirements of this Fire Control Order.

Approved structure's occupying a firebreak will not require a variation approval. However, a firebreak will be required to be installed as close as practical around the approved structure.

If approved, variations will be valid in perpetuity, unless a new variation has been approved or the property changes ownership.

The City of Cockburn reserves the right to review, amend or revoke an existing variation in writing at any time. Should a request to vary the Fire Control Order requirements on your property not be approved in writing, this Fire Control Order must be complied with as applicable in its entirety.

If you cannot comply with the above requirements you can complete the online firebreak variation application form.

[Firebreak Variation Application Form](#)

Approved: You must comply with the conditions of the approved variation.

Not approved: You must comply with the requirements of the Fire Control Order.

6. Burning

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During the declared prohibited burning time, owners and/or occupiers must not undertake any bush or garden refuse burning activities.

During the declared restricted burning time only, owners and/or occupiers may:

6.1 Apply for a permit to burn the bush for bush fire risk mitigation purposes, by following the conditions imposed on a permit to burn as issued by an Authorised Officer.

6.2 In areas zoned rural by the Metropolitan Region Scheme you may undertake burning of leaves, tree branches, and other dry vegetation in piles no larger than 1m³ in size, without a permit to burn, subject to the following conditions:

6.2.1 No flammable material (other than that being burned) is to be within 5 metres of the fire at any time while the fire is burning

6.2.2 The fire is lit between 6pm and 11pm and is completely extinguished before midnight on the same day

6.2.3 At least one person is present at the site of the fire at all times until it is completely extinguished

6.2.4 When the fire is no longer required, the person ensures that the fire is completely extinguished by the application of water or earth.

During the unrestricted burning time, owners and/or occupiers in areas zoned rural under the Metropolitan Region Scheme may burn garden refuse and set fire to bush on their land without a permit 'To Set Fire To The Bush'. Burning of the bush must be in accordance with all relevant State legislative requirements.

Burning of garden refuse in areas not zoned rural should not be undertaken within the City of Cockburn, unless approved by an Authorised Officer. Burning of household waste is prohibited in all areas of the City of Cockburn.

7. Penalties

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Failing to comply with this Fire Control Order will result in a penalty of up to \$5,000. A person in default is also liable whether prosecuted or not to pay the costs of performing the work directed by a City's Authorised Officer.

Any owner and/or occupier who engages a contractor to undertake works on their behalf is responsible to ensure that the works completed meet the requirements of this Fire Control Order.

Any Fire Control Order previously published by the City of Cockburn in the Government Gazette or in any Western Australian newsprint is hereby revoked.

By Order of Council

More information and contact

Please contact the City's Fire and Emergency Services for more information on firebreaks and burning permits on 08 9411 3444 or at ranercustomerservice@cockburn.wa.gov.au