



WESTERN
ENVIRONMENTAL

Bushfire Management Plan

Yanchep Activity Centre: Structure Plan
Renewal

Western Environmental Pty Ltd

(08) 6162 8980

PO Box 437, Leederville, WA 6903

enquiries@westenv.com.au

westenv.com.au

Bushfire Management Plan

Yanchep Activity Centre: Structure Plan Renewal

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Yanchep Beach Joint Venture
St Georges Square, Level 4/225 St
Georges Terrace, Perth WA 6000

Prepared by

Western Environmental Approvals Pty Ltd
Unit 5, 162 Colin Street
West Perth WA 6005
westenv.com.au

Internal Review

Author	Reviewed by	Approved by
		
Beau Eaton Senior Bushfire Consultant	Daniel Panickar Senior Principal Level 3 Accredited BPAD Practitioner - 37802	Daniel Panickar Senior Principal Level 3 Accredited BPAD Practitioner - 37802
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1. Introduction

1.1 Proposal Details

Yanchep Beach Joint Venture is seeking to progress a structure plan for Lots 2, 4, 6 and 9105 Toreopango Avenue and Lot 9103 Bracknell Street, Yanchep (Yanchep Activity Centre, hereafter referred to as the subject site, Figure 1). The proposed structure plan will result in an intensification of land use and involves the development of a mixed land use precinct (including commercial, mixed use, residential, service commercial, school, public open space and private open space cells; Figure 2). The development is proposed over an area of approximately 80 ha in Yanchep's city centre.

The subject site is within a designated bushfire prone area (Area 2) as per the *Western Australia State Map of Bush Fire Prone Areas* (DFES, 2024; Figure 3), which triggers bushfire planning requirements under *State Planning Policy 3.7 Bushfire* (SPP 3.7; WAPC, 2024a) and reporting to accompany submission of the structure plan in accordance with the associated *Planning for Bushfire Guidelines* (the Guidelines; WAPC, 2024b).

Western Environmental Approvals Pty Ltd (WEPL) was commissioned to prepare a Bushfire Management Plan (BMP) to support the structure plan. This BMP has been prepared by Senior Bushfire Consultant Beau Eaton and reviewed by Senior Principal Bushfire Consultant Daniel Panickar (FPAA BPAD Level 3 Certified Practitioner No. BPAD37802).

1.1.1 Site context

The subject site is located within the City of Wanneroo and is zoned Central City Area and Urban under the Metropolitan Region Scheme, and Urban Development under Local Planning Scheme 2. The subject site contains a mixture of unmanaged classifiable vegetation, parkland and vegetation maintained in a low threat state, and cleared areas. The subject site is bound by Toreopango Ave to the north, Saint Andrews Drive and residential housing to the east, Yanchep Beach Road to the south, and Splendid Park and Marmion Ave to the west.

A BMP was prepared in 2016 for an earlier version of the Yanchep Activity Centre Structure Plan. In 2025, WEPL prepared a new BMP with an updated bushfire assessment and advice to align with the revised Structure Plan design. This BMP represents the latest revision of the new BMP, with changes made to reflect the latest structure plan design dated 31 March 2026.

1.2 Purpose and Application of the BMP

This BMP has been prepared in accordance with SPP 3.7 and the Guidelines to support the assessment of the structure plan for the subject site submitted to the Western Australian Planning Commission (WAPC).

In addition, this BMP provides strategies and guidance to reduce the level of bushfire risk exposure for the subject site through implementation of a range of bushfire management measures in accordance with the Guidelines.

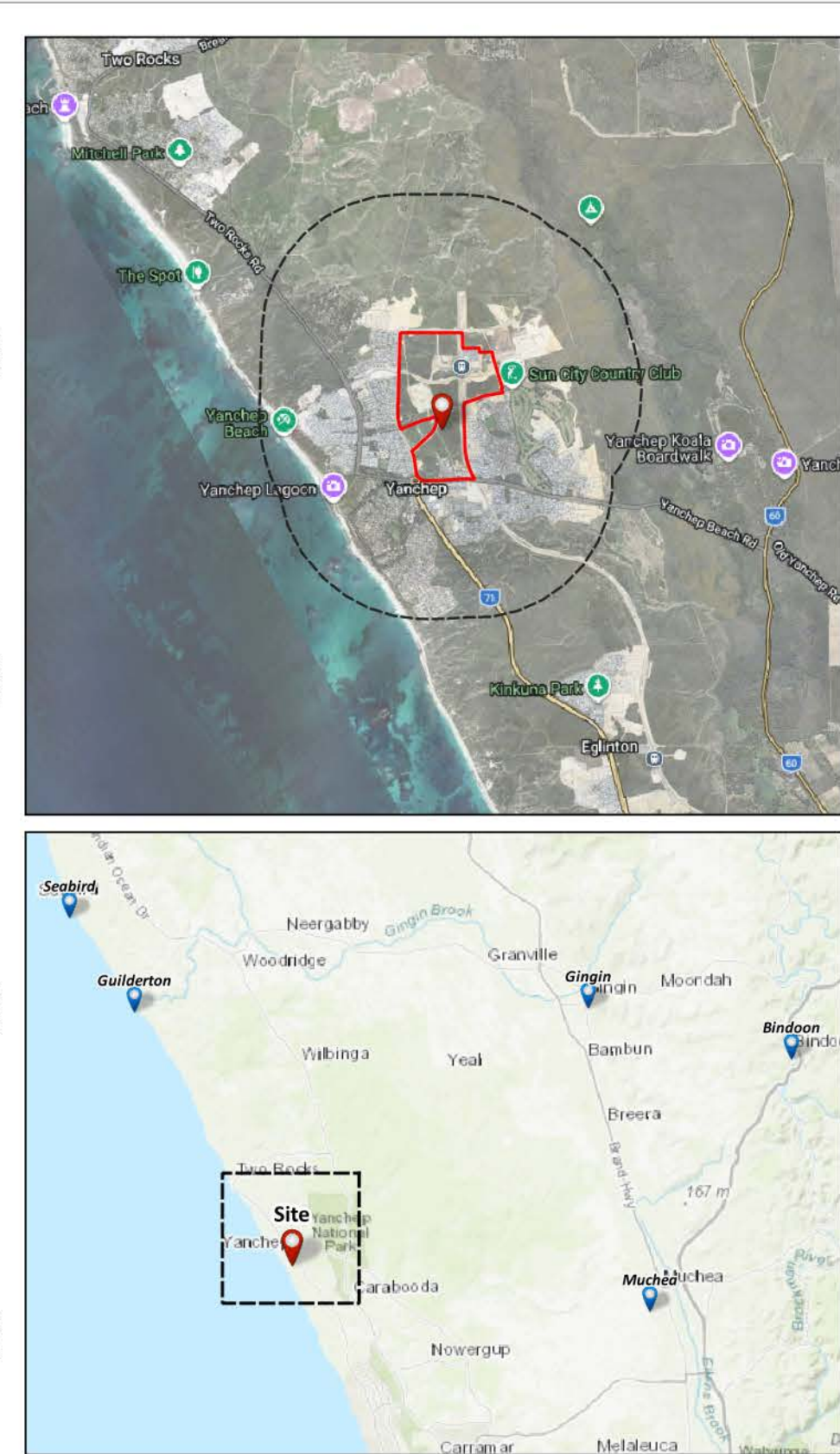
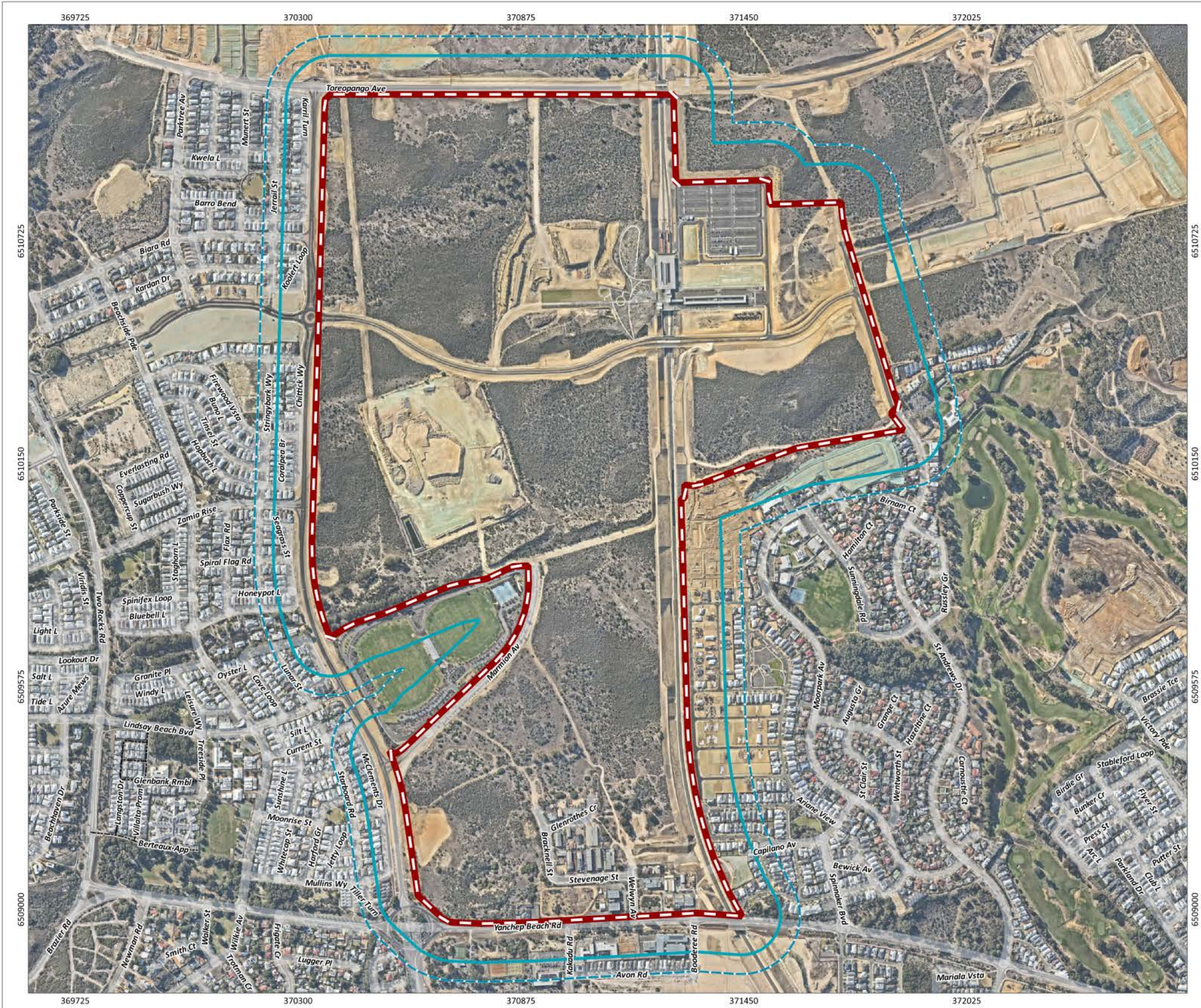


Figure 1: Site Overview

0

150

300

450

600 m

1:11,500

A3 COLOUR

PROJECT/REPORT NAME

Bushfire Management Plan

CLIENT

Yanchep Beach Joint Venture

PROJECT NUMBER

A24.204

VERSION

0

DRAWN BY / REVIEWED BY

SC/BE

DATE

11/5/2026

Legend

Subject Site

Buffer 100m

Buffer 150m

2 km Broader Landscape Assessment buffer

No	Description	Drawn	Approved	Date
A	Original issue	SC	BE	11/5/2026

NOTES

Cadastral boundary (LGATE-002). Base map ESRI Topo. Townsites (LGATE-248).

WESTERN ENVIRONMENTAL

Western Environmental Pty Ltd

08 6244 2310 | enquiries@westernenv.com.au

Level 3/25 Prowse St, West Perth WA 6005

westernenv.com.au

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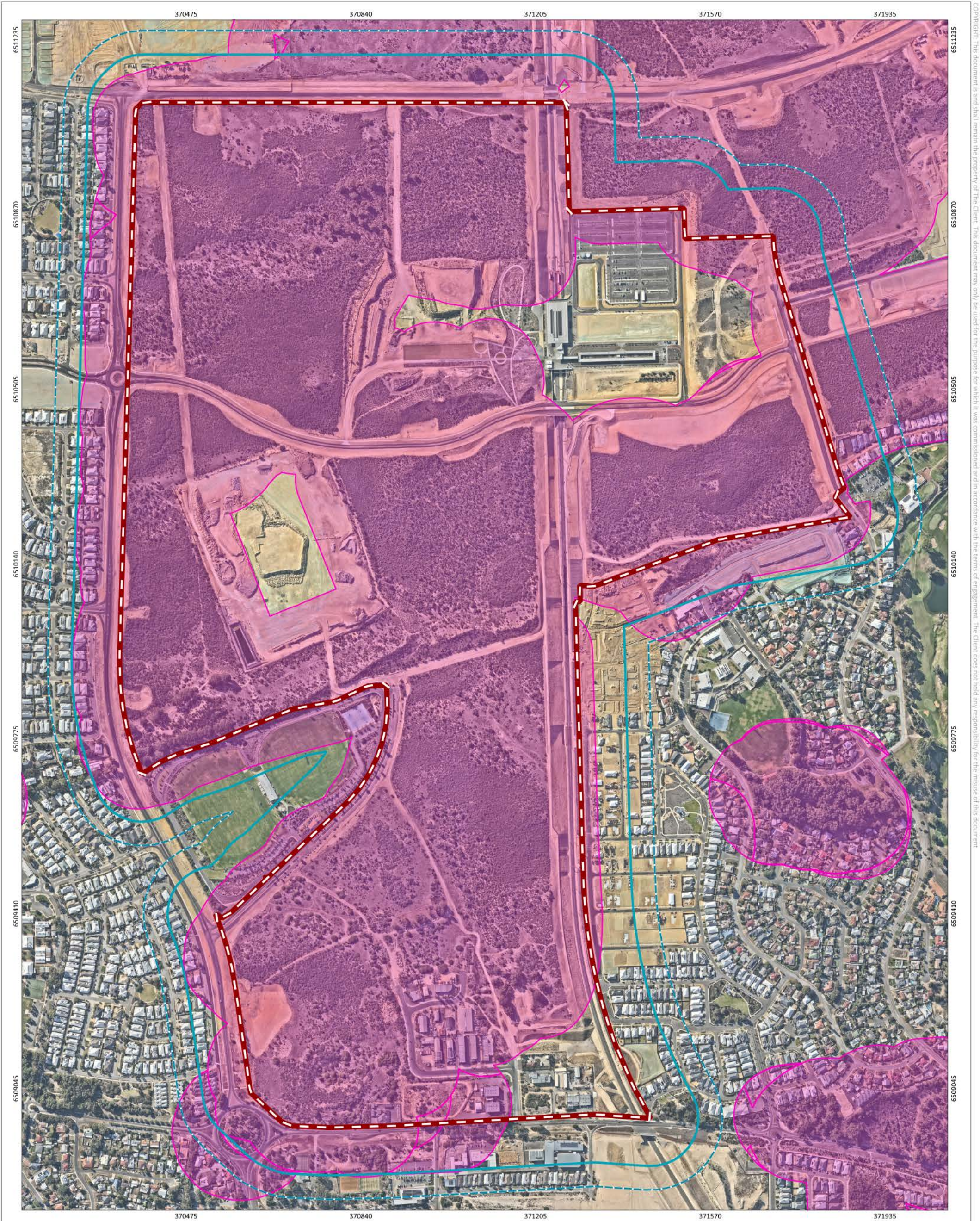


Figure 3: Bushfire Prone Areas

060

120

180

240 m

0

60

120

180

240 m

SCALE

1:7,300

SHEET SIZE

A3 COLOUR

COORDINATE REFERENCE SYSTEM

GDA2020 / MGA zone 50

DATA SOURCE

NEARMAP

PROJECT/REPORT NAME

Bushfire Management Plan
Lots 2, 4, 6 and 9105 Toreopango Avenue and
Lot 9103 Bracknell Street, Yancheop

CIENT

Yancheop Beach Joint Venture

PROJECT NUMBER

A24.204

VERSION

0

DRAWN BY / REVIEWED BY

SC/BE

DATE

11/5/2026

Legend

Subject Site

Buffer 100m

Buffer 150m

Bush Fire Prone Area Planning (OBRM-023)

Bushfire Prone Area 2

No	Description	Drawn	Approved	Date
A	Original Issue	SC	BE	11/5/2026

NOTES:

Cadestral boundary (LGATE-002) Label
corresponds to the vegetation association number.

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ENVIRONMENTAL

Western Environmental Pty Ltd

08 6244 2310 | enquiries@western.com.au

Level 3/25 Prowse St, West Perth WA 6005

western.com.au

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2. Environmental Considerations

SPP 3.7 policy objective 5.4 recognises the need to consider bushfire risk management measures alongside environmental, biodiversity and conservation values.

2.1 Native Vegetation - Modification and Clearing

A high-level desktop assessment has been undertaken for the subject site, reviewing the following datasets:

- Native Vegetation Extent (DPIRD-005) (DPIRD, 2023).
- Geomorphic Wetlands, Swan Coastal Plain (DBCA-019) (DBCA, 2025).
- Clearing Regulations - Environmentally Sensitive Areas (ESA) (DWER-046) (DWER, 2021).
- Threatened Ecological Communities (DBCA-038).
- Bush Forever Areas 2000 (DPLH-019).

The subject site intersects mapped native vegetation, as well as an ESA (Figure 2). The intersected ESA appears to be associated with a buffer for the potential occurrence of a threatened ecological community (TEC) that may occur in the site or surrounding vegetated areas. No wetlands, including conservation category wetlands, are known to occur in or near the subject site. The closest wetland is the Loch McNess conservation category wetland that occurs approximately 2 km east of the subject site.

Past iterations of the Yanchep City Structure Plan have had environmental management provisions issued by the Minister of Environment (CLE, 2023). The revised structure plan will be subject to similar environmental conditions that consider the environmental values to be impacted. This demonstrates environmental values have been, and will continue to be, considered as part of the Project. The mitigation measures proposed in this BMP are not anticipated to significantly impact native vegetation, conservation category wetlands, or ESA.

WEPL is not aware of any outstanding environmental approvals required for development to proceed.

2.2 Revegetation/Landscape Plans

The subject site in its current state is comprised of classifiable vegetation, cleared areas, and areas containing existing infrastructure (e.g. roads and buildings). Most of the subject site is proposed to be cleared ahead of development for various land use purposes, with several areas landscaped to be public or private open spaces (Figure 2). The public open space areas will be predominantly established as parklands with limited vegetation. The private open spaces will receive similar landscaping with one area dedicated as a botanical garden to be established as a well-maintained area showcasing a range of plants native to Yanchep. Both the public and private open space areas (including the botanical garden) will be managed as low threat vegetation as defined in AS 3959: 2018, exclusion 2.2.3.2 (f).

No revegetation is proposed, however, three areas have been designated for the retention of existing native vegetation, including Banksia and Tuart trees. The current design retains two patches of Banksia vegetation in the western and southern portions of the subject site, and one patch of Tuart trees in the northern portion, as shown in Figure 2. Noting that the landscaping and POS design are still in the early design stages, discussions with Yanchep Beach Joint Venture and the engaged landscape designer have confirmed the design intent as outlined in Sections 2.2.1 and 2.2.2 below.

2.2.1 Retained Banksia

Likely to comprise patches of retained Banksia trees with an understorey of native shrubs and grasses. These areas are anticipated to receive minimal management, with leaf litter left to accumulate and vegetation growth largely unmanaged. For the purpose of assessing bushfire risk, the retained vegetation has been conservatively classified as Class D Scrub as defined in AS 2959: 2018. While some areas proposed for Banksia retention were identified as Class C Shrubland during the site assessment, the adoption of a Class D Scrub classification accounts for the potential regrowth and increased fuel loads associated with unmanaged vegetation over time.

Other areas within the POS containing retained Banksia are proposed to be landscaped as recreational parkland comprising managed gardens and lawns. These landscaped areas are treated as low threat vegetation in accordance with AS 3959:2018, Exclusion 2.2.3.2(f).

2.2.2 Retained Tuart Trees

Occur as mostly isolated patches throughout the POS. Accordingly, retention of the understorey is not proposed, with the current landscaping intent favouring recreational parkland comprising managed lawns. As the post-development landscaping is proposed to comprise scattered Tuart trees over managed lawn, these areas have been treated as low threat vegetation and excluded in accordance with AS 3959:2018, Exclusion 2.2.3.2(f).

If future landscape or site plans result in changes to the retained vegetation or the form of vegetation in the POS (e.g. shrubs proposed under retained Tuart Trees), a reassessment of BAL ratings may be required. Revised BAL ratings will be undertaken at the subdivision stage as the development progresses, which will more accurately reflect the bushfire risk, assuming they're based on a more defined POS design and detailed landscaping plans.

3. Bushfire Assessment Results

3.1 Broader Landscape Assessment

A Broader Landscape Assessment (BLA) is required in accordance with SPP 3.7 and the Guidelines to determine compliance with Element 1: Location.

3.1.1 Assessment context

The subject site was identified to be within Area 2 of the Map of Bush Fire Prone Areas (OBRM-001; DFES, 2024). The following Broader Landscape Assessment (BLA) has been completed to assess the compliance of the proposed structure plan against Element 1 (Location) of the Guidelines. An overview of the BLA area is presented in Figure 1.

Step 1: Determine the BLA area

For the purposes of this desktop assessment, all areas within 2 km of the subject site boundary have been included in the BLA area (Figure 1).

Step 2: Assess and map the broader landscape

2.1: Assess and map vegetation

Using up to date aerial imagery, the structure of vegetation falling within the BLA area were assessed and categorised (Figure 4). The categories align with classified vegetation and exclusions under *Australia Standard (AS) 3959: Construction in Bushfire Prone Areas* (AS 3959) as per the following:

- Areas of low-threat vegetation and non-vegetated areas;
- Areas of unmanaged grassland (Class G Grassland); and
- Areas of all other types of classified vegetation.

Consideration has been given to any known revegetation and areas of environmental, biodiversity or conservational value in assigning categories to vegetation within the BLA area.

2.2: Assess and map aspects

The broader landscape area has been broken down into four quadrants depending on their aspect in relation to the subject site (Figure 4). The exposure of the proposed development to identified bushfire hazards has been assessed in relation to each of these aspects (Table 1).

Table 1: Description of Vegetation Within Each of the Map Quadrants

Aspect	Bushfire hazard description
Northeast	This quadrant is dominated by classified vegetation other than Class G Grassland. Some areas of unmanaged Grassland and non-vegetated areas are also present.
Southeast	This quadrant is predominantly covered by non-vegetated areas including a golf course and residential built-up areas. Some classified vegetation is present within this quadrant, however only a very slim isolated patch that is surrounded by residential development abuts the subject site.
Southwest	This quadrant is predominantly covered by non-vegetated areas including residential built-up areas, beach-front, and the ocean. Some classified vegetation and grassland are scattered throughout this quadrant, however none of these directly abut the site.
Northwest	This quadrant is predominantly covered by classified vegetation, with grassland and non-vegetated residential built-up areas scattered throughout. None of the classified vegetation or grassland areas directly abut the site.

2.3: Assess and map the predominant vegetation pattern

Using the vegetation assessment undertaken in Step 2.1, the predominant vegetation pattern was determined based on the following three categories (Figure 5):

- Cleared vegetation (e.g. residential or urban zoned and developed land);
- Mosaic pattern of vegetation (including Class G Grassland and vegetation within rural living precincts); or,
- Large tracts of classified vegetation (e.g. contiguous vegetation within reserves or national parks which facilitate fire runs at least 1 km long and 100 m wide).

The predominant vegetation pattern within the BLA area is large tracts of classified vegetation. The following breakdown of the vegetation patterns have been mapped in Figure 5:

- Cleared vegetation: 42.3 %
- Mosaic: 7.6 %
- Large tracts: 50.1 %



2.4: Assess and map road pattern and suitable destination(s)

The public road network surrounding the subject site was mapped and assessed to establish the level of vehicular access to the proposed LSP area. Potential escape routes to suitable destinations have been mapped and highlighted within Figure 6. In order to assess the complexity of these escape routes, the following details have been assessed and displayed:

- Main Roads WA road hierarchy.
- The location of intersections along each of the escape routes.
- The length of each of the escape routes to a suitable destination.

A short, and relatively direct route (containing limited intersections) from the subject site to two suitable destinations is possible, within a length of 0.8 km and 3.8 km respectively. These routes are mapped entirely through urban and non-vegetated areas.

It should also be noted that post development, a number of large areas within the subject site will have a Bushfire Hazard Level (BHL) of Low. These areas will also facilitate refuge as suitable destinations in the event of a landscape scale bushfire and require shorter distances of travel avoiding the need to travel past bushfire hazards.

Step 3: Establish the Broader Landscape Type (BLT)

Using the information gathered throughout Steps 1 and 2, the BLT has been determined using a points-based system as presented in Table 2 below.

Table 2: Determination of the Broader Landscape Type

Criteria	5 points	2 points	1 point	Points
Proximity of the planning proposal to a suitable destination is:	☐	☐	✓	1
	>10 km	1 – 10 km	<1 km	
The road pattern from the planning proposal to a suitable destination is:	☐	☐	✓	1
	Complex and indirect (cul-de-sacs, and/or multiple intersections)	Mixed road patterns	Simple and/or direct (limited intersections)	
The predominant vegetation pattern is:	✓	☐	☐	5
	Large tracts of vegetation (contiguous vegetation)	A mosaic pattern of vegetation (e.g. vegetation within rural living precincts)	Cleared vegetation (e.g. clearing for residential zoned urban lots)	
Exposure of the planning proposal to an identified external bushfire hazard (excluding Class G Grassland) is from:	☐	☐	✓	1
	Three or four aspects	Two aspects	From nil or one aspect only	
TOTAL POINTS:				8
Total points		Broader landscape type		
0 – 11 points		Broader landscape type A		✓
12 – 20 points		Broader landscape type B		☐

As per the above analysis, the subject site is within broader landscape type A.

3.2 Bushfire Attack Level Assessment Inputs

A bushfire assessment has been undertaken for the proposed structure plan in accordance with the Guidelines. Inputs to this assessment are detailed below.

3.2.1 Fire Danger Index

A blanket Fire Danger Index (FDI) 80 is adopted for Western Australia, as outlined in *Australian Standard AS 3959: 2018 Construction of Buildings in Bushfire Prone Areas* (SA, 2018).

3.2.2 Pre-Development Vegetation Classification and Slope under Vegetation

Vegetation and effective slope (i.e. slope under vegetation) within the subject site and surrounding 150 m (the assessment area) were assessed on 1/05/2025 in accordance with the Guidelines and AS 3959: 2018.

The pre-development classified vegetation and effective slope for the site from each of the identified vegetation plots are identified below in Table 3 and Figure 7.

Table 3: Pre-Development Classified Vegetation as per AS 3959:2018

Plot	Vegetation classification	Effective slope
1	Class A Forest	All upslopes and flat land (0 degrees)
2	Class D Scrub	Downslope >0 to 5 degrees
3	Class D Scrub	All upslopes and flat land (0 degrees)
4	Class C Shrubland	All upslopes and flat land (0 degrees)
5	Class G Grassland	All upslopes and flat land (0 degrees)
6	Excluded - clause 2.2.3.2 (e)	-
7	Excluded - clause 2.2.3.2 (f)	-

Photographs relating to each area and vegetation type are included in Appendix A.

3.2.3 Post-Development Assumptions

Post-development a majority of the vegetation within the site will be either cleared or landscaped and managed as low threat vegetation as defined in AS 3959: 2018, exclusion 2.2.3.2 (f). As described in Section 2.2, there will be two patches of Banksia and one patch of Tuart trees retained. The POS containing Tuart trees is proposed to have a managed lawn understorey and has therefore been considered low threat and mapped as exclusion 2.2.3.2 (f) post-development (refer to inset of Figure 8). The two retained Banksia patches are intended to be largely unmanaged and have been conservatively classified as Class D Scrub. The post-development vegetation classification is shown as an inset in Figure 8.

No clearing or management of vegetation outside of the subject site is proposed as part of the development.

3.3 Bushfire Attack Level Assessment Outputs

A Bushfire Attack Level (BAL) assessment has been undertaken in accordance with SPP 3.7, the Guidelines, AS 3959: 2018 and the bushfire assessment inputs in Section 3.1.

3.3.1 BAL Assessment

All land located within 100 m of the classified vegetation depicted in Figure 8 is considered bushfire prone and is subject to a BAL assessment in accordance with AS 3959: 2018.

A Method 1 BAL assessment (as outlined in AS 3959: 2018) has been completed for the proposed development and incorporates the following factors:

- Fire Danger Index (FDI) rating.
- Vegetation class.
- Slope under classified vegetation.
- Distance between proposed subdivision area and the classified vegetation.

Based on the identified BAL, construction requirements for relevant buildings/structures can then be assigned. The BAL rating gives an indication of the expected level of bushfire attack (i.e. radiant heat flux, flame contact, and ember penetration) that may be received by proposed buildings and subsequently informs the standard of construction required to increase building survivability.

3.3.2 Method 1 BAL Assessment

Table 4 and Figure 8 display the Method 1 BAL assessment (in the form of BAL contours) that has been completed for the proposed structure plan using the post-development vegetation classifications, in accordance with AS 3959: 2018 methodology.

Table 4: Method 1 BAL Calculation (BAL Contours)

Plot	Vegetation classification	Effective slope	Separation distances required (m)				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
1	Class A Forest	All upslopes and flat land (0 degrees)	<16	16-<21	21-<31	31-<42	42-<100
2	Class D Scrub	Downslope >0 to 5 degrees	<11	11-<15	15-<22	22-<31	31-<100
3	Class D Scrub	All upslopes and flat land (0 degrees)	<10	10-<13	13-<19	19-<27	27-<100
4	Class C Shrubland	All upslopes and flat land (0 degrees)	<7	7-<9	9-<13	13-<19	19-<100

Plot	Vegetation classification	Effective slope	Separation distances required (m)				
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
5	Class G Grassland	All upslopes and flat land (0 degrees)	<6	6-<8	8-<12	12-<17	17-<50
6	Excluded - clause 2.2.3.2 (e)	-	No separation distances required - BAL-LOW				
7	Excluded - clause 2.2.3.2 (f)	-	No separation distances required - BAL-LOW				

4. Identification of Bushfire Hazard Issues

The post-development BAL ratings are summarised as (Figure 8):

- One (1) future mixed use cell will be subject to a BAL-FZ rating.
- Six (6) cells will be subject to a BAL-29 rating. Each cell assigned this rating is associated with one of the two retained Banksia areas (classified as Class D Scrub).
- Two (2) cells will be subject to a BAL-19 rating. Each cell assigned this rating is associated with the retained Banksia in the southern portion of the subject site (classified as Class D Scrub).
- 24 cells will be subject to a BAL-12.5 rating.
- The remaining cells will be subject to BAL-LOW.

The cell exposed to BAL-FZ is the northern-most cell in the eastern portion of the subject site. An Asset Protection Zone (APZ) has been proposed for this cell that defines a minimum setback distance for future habitable buildings to ensure the radiant heat impact from a bushfire does not exceed 29 kW/m² (BAL-29) (refer to Figure 8 and Figure 9).

A reassessment of BAL ratings, through either a BMP addendum or revised BMP will be undertaken to support future stages of planning, and if changes to development design or classified vegetation within the assessment area which require a modified bushfire management response occur.

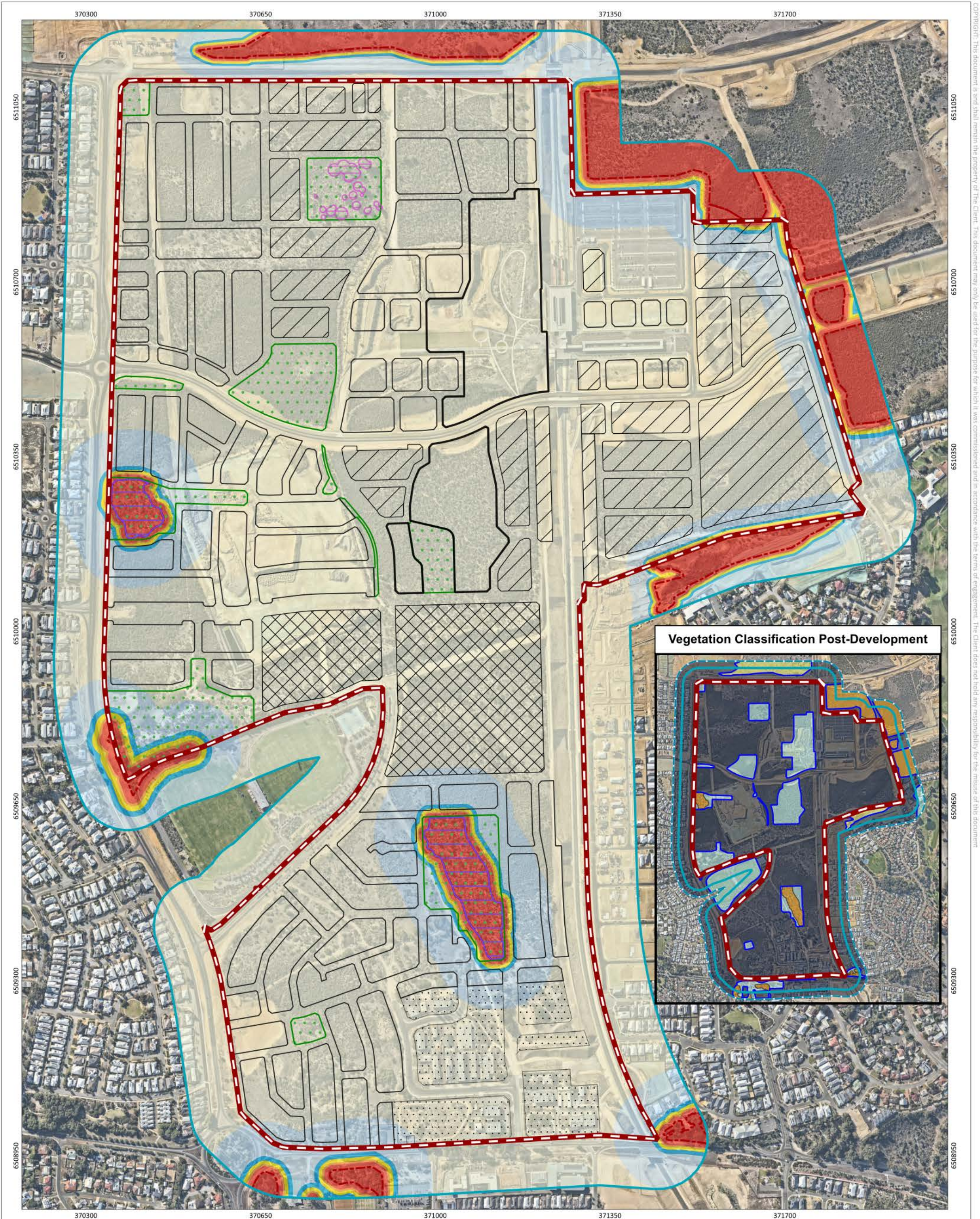


Figure 8: Bushfire Attack Level (BAL) Contours

N 0 60 120 180 240 m		PROJECT/REPORT NAME Bushfire Management Plan Lots 2, 4, 6 and 9105 Toreopango Avenue and Lot 9103 Bracknell Street, Yanchep		Subject Site Buffer 100m Bushfire Hazard Interface Distance		Botanic Garden / Private Open Space Mixed Use Public Open Space Residential School Service Commercial Retained Tuart Trees Retained Banksia Bushfire Attack Level (BAL) BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-LOW Vegetation Classification Class A - Forest Class C - Shrubland Class D - Scrub Class G - Grassland Excluded AS 3959: 2018 2.2.3.2 (e) Excluded AS 3959: 2018 2.2.3.2 (f)		<table><tr><th>No</th><th>Description</th><th>Drawn</th><th>Approved</th><th>Date</th></tr><tr><td>A</td><td>Original Issue</td><td>SC</td><td>BE</td><td>11/5/2026</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td colspan="5">NOTES:</td></tr><tr><td colspan="5">Cadastral boundary (LGATE-002) Label corresponds to the vegetation association number.</td></tr></table>		No	Description	Drawn	Approved	Date	A	Original Issue	SC	BE	11/5/2026																										NOTES:					Cadastral boundary (LGATE-002) Label corresponds to the vegetation association number.					WESTERN ENVIRONMENTAL Western Environmental Pty Ltd 08 6244 2310 enquiries@westernenv.com.au Level 3/25 Prowse St, West Perth WA 6005 westernenv.com.au	
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5. Assessment Against the Bushfire Protection Criteria

5.1 Compliance

The proposed structure plan is required to comply with policy measures 7.1 and 7.2 of SPP 3.7 and Bushfire Protection Criteria 5 of the Guidelines.

Table 5 outlines the Acceptable Solutions (AS) that are relevant to the proposal and summarises how the intent of each Bushfire Protection Criteria has been achieved through the application of bushfire risk management measures. No Outcomes-based approaches (OA) have been proposed for this structure plan. These management measures are depicted in Figure 9 where relevant.

Implementation of this BMP is expected to meet objectives 5.1-5.4 of SPP 3.7.

Table 5: Assessment Against the Bushfire Protection Criteria 5

Bushfire Protection Criteria 5	AS	OA	N/A
Element 1: Location			
A1.1 Broader Landscape Assessment	✓	☐	☐
As outlined in Section 3.1, the outcome of the Broader Landscape Assessment was a Broader Landscape Type A for the subject site. The proposed structure plan is considered compliant with A1.1.			
Element 2: Siting and design			
A2.1 Siting and design	✓	☐	☐
Post-development, all development cells will be subject to BAL ratings of $\leq$BAL-29. This is subject to an APZ being established over a portion of the mixed-use cell in the northeast of the subject site (refer to Figure 9) to ensure a BAL-rating of $\leq$BAL-29 for future habitable buildings can be achieved (discussed further in A2.2). All other cells achieve BAL ratings $\leq$BAL-29 without APZs being established. The proposed structure plan is considered to be compliant with A2.1.			
A2.2 Asset Protection Zone (APZ)	✓	☐	☐
The northern-most cell in the eastern portion of the subject site is exposed to a BAL-rating of BAL-FZ. As such, an APZ has been proposed to prescribe a minimum setback distance for future habitable buildings to ensure the radiant heat impact from a bushfire does not exceed 29 kW/m² (BAL-29) (Figure 9). The proposed APZ is sufficient for the potential radiant heat flux to not exceed 29kW/m² and will be managed in accordance with the requirements of 'Standards for Asset Protection Zones' (WAPC 2024b; Appendix B). The APZ can be contained within the boundaries of the lot or managed in perpetuity in a low fuel state. The proposed structure plan is considered to be compliant with A2.2.			

Bushfire Protection Criteria 5	AS	OA	N/A
A2.3 Clearing of native vegetation	✓	☐	☐
As discussed in Section 2, several native vegetation extents and an ESA intersect the subject site. Past iterations of the Yanchep City Structure Plan have had environmental management provisions issued by the Minister of Environment. The revised structure plan will be subject to similar environmental conditions. As such, environmental values - including the clearing of native vegetation - have been considered. The mitigation measures proposed in this BMP are not anticipated to significantly impact native vegetation, wetlands, or ESA. The proposed structure plan is considered to be compliant with A2.3.			
Element 3: Vehicular access	✓	☐	☐
A3.1 Public roads			
The subject site is accessible via several existing public roads, including Toreopango Ave, Marmion Ave, Yanchep Beach Rd, and St Andrews Dr. Additionally, several internal access roads will be constructed as part of the development. This includes two district distributor roads - one heading north to south-east connecting Toreopango Ave and Marmion Ave, and the other heading east to west connecting Marmion Ave and St Andrews Dr (Figure 9). The Guidelines do not prescribe values for the trafficable (carriageway/pavement) width of public roads as they should be in accordance with the class of road as specified in the IPWEA Subdivision Guidelines, Liveable Neighbourhoods, Austroad Standards and/or any applicable standard in the local government area. Proposed roads within the subject site will be designed according to Liveable Neighbourhoods. WEPL's assessment, however, has identified that the roads surrounding the development are bitumen with estimated width of the sealed surface achieving a minimum width of 6 m and therefore consider the existing road network would provide suitable access and egress for the community and emergency services personnel in the event of a bushfire. Vehicular access technical requirements in accordance with the Guidelines are detailed in Appendix B. The proposed structure plan is considered to be compliant with A3.1.			
A3.2 Access routes	✓	☐	☐
Multiple access routes from the subject site to more than two suitable destinations are available via the existing public network (Figure 9). Access to the site will be available from multiple access points connected to Toreopango Ave, Marmion Ave, Yanchep Beach Rd, and St Andrews Dr (Figure 9). Refer to A3.1 above for details regarding vehicular access technical requirements for public roads. The proposed structure plan is considered to be compliant with A3.2a.			
A3.3a No-through roads	☐	☐	✓
Not Applicable - The proposed road network within the subject site does not include no-through roads.			
A3.3b No-through road requirements	☐	☐	✓
Not Applicable - The proposed road network within the subject site does not include no-through roads.			
A3.4 Emergency access way	☐	☐	✓
Not Applicable - The proposed road network within the subject site does not include no-through roads. Therefore, emergency access via the proposed road network will be acceptable.			
A3.5a Perimeter roads	✓	☐	☐
The proposed structure plan design and existing public road network already include roads that separate proposed cells from permanent areas of classified vegetation. The exception to this is the cell that has had an APZ proposed to mitigate its exposure to BAL-FZ. A perimeter road is not considered necessary for this cell, as fire and emergency services can access the area via the three surrounding roads and proposed APZ. The proposed structure plan is considered to be compliant with A3.5a.			
A3.5b Fire service access route	☐	☐	✓

Bushfire Protection Criteria 5	AS	OA	N/A
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Not Applicable - Access to classified vegetation is provided via the existing and proposed road network.

A3.6 Battle-axe access legs	☐	☐	✓
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Not Applicable - no battle-axe access legs are proposed.

Element 4: Water supply	✓	☐	☐
A4.1 Water supply for structure plans			

Existing reticulated water is present in and around the subject site, with the proposed lots to be connected to this water supply. There are several existing hydrants located in the subject site, with many others located within 100 m of the subject site boundary (Figure 9). WEPL assumes the surrounding network of hydrants meet Water Corporation specifications given they are established and within the Perth metropolitan area.

The proposed structure plan is considered to be compliant with A4.1.

A4.2 Water supply for subdivision applications	☐	☐	✓
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Not applicable to structure plan applications.

A4.3 Water supply for existing habitable buildings	☐	☐	✓
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Not applicable - no existing habitable buildings are proposed to be retained.

Note: AS - Acceptable approach, OA - Outcomes-based approach, N/A - Not applicable.

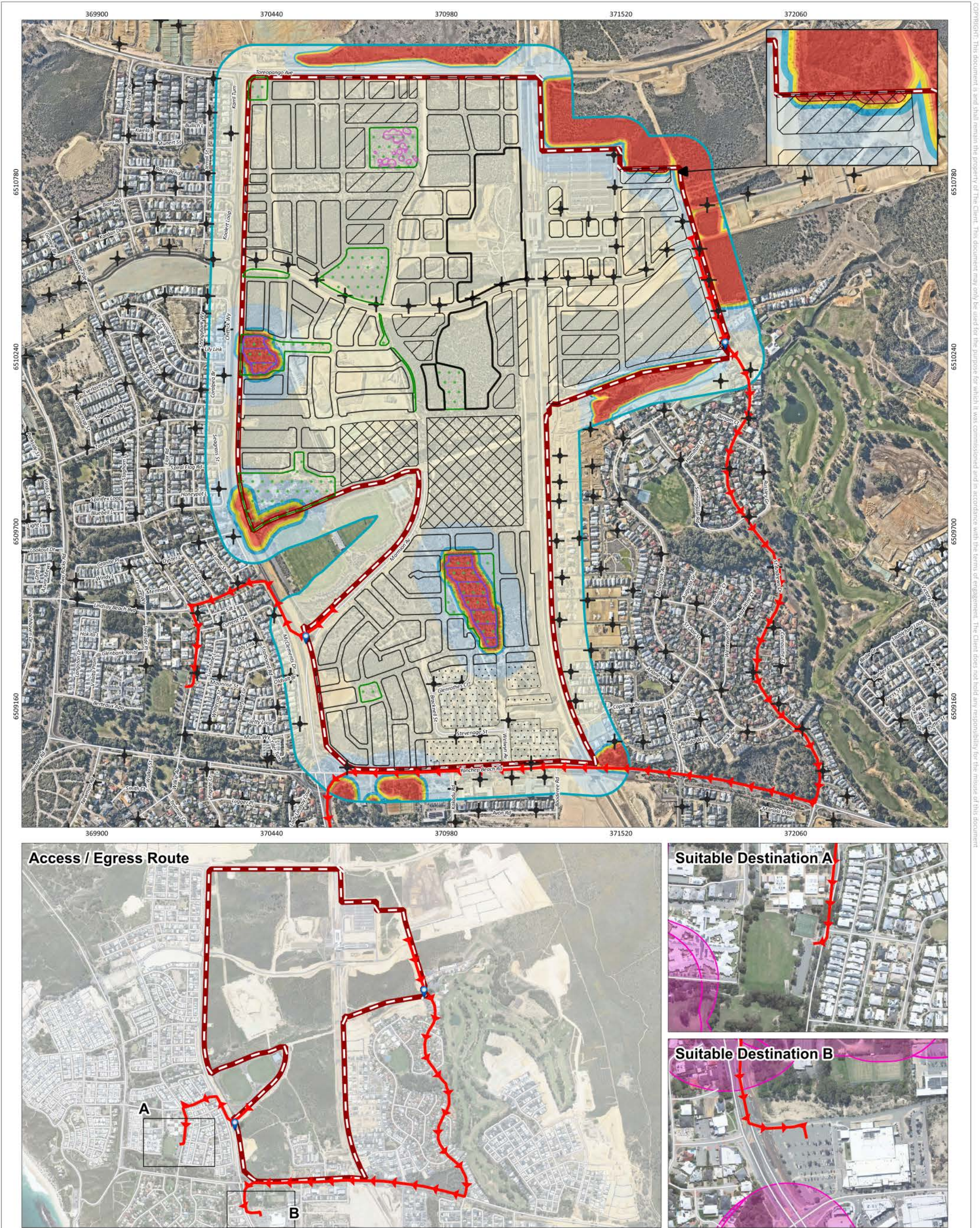


Figure 9: Spatial representation of the bushfire management strategies

0 100 200 300 400 m N		PROJECT/REPORT NAME Bushfire Management Plan Lots 2, 4, 6 and 9105 Toreopango Avenue and Lot 9103 Bracknell Street, Yanchep		Legend Subject Site Buffer 100m Asset Protection Zone (APZ) Distance Water Hydrant (WCORP-070) Access point Access / egress route Bushfire Prone Area 2 (OBRM-023) Bushfire Attack Level (BAL) BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-LOW Botanic Garden / Private Open Space Mixed Use Public Open Space Residential School Service Commercial Retained Tuat Trees Retained Banksia				<table><tr><th>No</th><th>Description</th><th>Drawn</th><th>Approved</th><th>Date</th></tr><tr><td>A</td><td>Original issue</td><td>SC</td><td>BE</td><td>11/5/2026</td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>	No	Description	Drawn	Approved	Date	A	Original issue	SC	BE	11/5/2026																									
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6. Responsibilities for Implementation and Management of Bushfire Management Measures

Implementation of the BMP applies to the developer, WAPC, the City of Wanneroo, and future landowners to ensure bushfire management measures are adopted and implemented on an ongoing basis. This BMP has been prepared as a strategic guide to demonstrate how development compliance will be delivered at future planning stages in accordance with the Guidelines. In this respect, management measures documented in Section 5 will be incorporated into development design as early as possible and confirmed through subdivision design. This will comprise of the following requirements:

- The subdivision design shall incorporate adequate hazard separation between areas of classified vegetation and future development sites to ensure the radiant heat impact does not exceed 29kW/m² (BAL-29).
- Staged subdivisions may require the provision of an asset protection zone to ensure retained vegetation on balance lots do not result in a radiant heat impact exceeding 29kW/m² (BAL-29).
- The public road network shall be designed to ensure all lots have public road access in two different directions to two different suitable destinations with an all-weather surface. No-through roads can be considered where they are less than 200 m in length from a proposed lot to an intersection where two-way access is provided.
- Emergency access ways can be considered where public road access in two different directions to two different suitable destinations is not achievable due to demonstratable site constraints.
- Perimeter roads shall be provided to separate areas of permanent bushfire hazards from future development sites.
- Battle-axe lots should be avoided and only considered where there are demonstrable site constraints. Battle-axe access legs greater than 50 m in length from a public road shall provide passing bays every 200 m and turnaround area for a Type 3.4 fire appliance.
- Evidence that a reticulated water supply can be provided for bushfire firefighting purposes. The water supply network and hydrant connections shall be provided in accordance with Water Corporation technical specifications.

Aside from the revision of this BMP or preparation of a BMP addendum to demonstrate compliance with the above requirements, there are no further items to implement, enforce or review at this stage of the planning process.

7. Conclusion

In the professional opinion of the author, the proposed structure plan satisfies the intent, aim and objectives of SPP 3.7 and the Guidelines and is recommended for approval.

8. References

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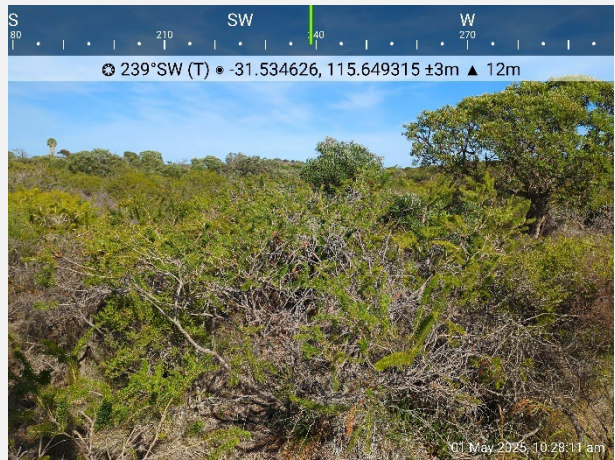
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Appendix A:

Classified vegetation photos

Plot 1	Class A Forest
Photo 1 Trees up to 15 m in height with an overstorey canopy cover exceeding 30%. The understorey is multi-tiered and contains a mixture of shrubs and grasses. The slope under this vegetation was assessed to be upslope/flat land.	
Plot 1	Class A Forest
Photo 2 Trees up to 15 m in height with an overstorey canopy cover exceeding 30%. The understorey is multi-tiered and contains a mixture of mixture of shrubs and grasses The slope under this vegetation was assessed to be upslope/flat land.	
Plot 1	Class A Forest
Photo 3 Trees up to 15 m in height with an overstorey canopy cover exceeding 30%. The understorey is multi-tiered and contains a mixture of mixture of shrubs and grasses The slope under this vegetation was assessed to be upslope/flat land.	

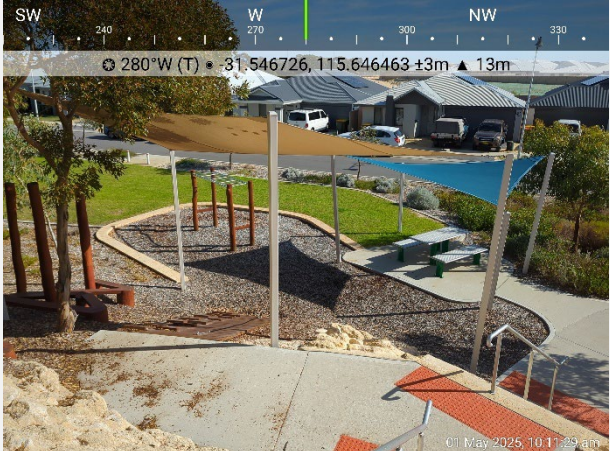
Plot 2	Class D Scrub
Photo 4 (Background) Dense shrubs ranging from 2 m - 5 m in height. The slope under this vegetation was assessed to be downslope 0 - 5 degrees. Drone photography was used due to restricted site access.	
Plot 2	Class D Scrub
Photo 5 Dense shrubs ranging from 2 m - 5 m in height. The slope under this vegetation was assessed to be downslope 0 - 5 degrees.	
Plot 3	Class D Scrub
Photo 6 Dense shrubs ranging from 2 m - 5 m in height. The slope under this vegetation was assessed to be upslope/flat land.	

Plot 3	Class D Scrub
Photo 7 Dense shrubs ranging from 2 m - 5 m in height. The slope under this vegetation was assessed to be upslope/flat land.	 Photo 7 shows a dense thicket of green shrubs and small trees on a slope. The vegetation is Class D Scrub. The photo includes a compass overlay at the top showing a bearing of 239°SW (T) and coordinates -31.534626, 115.649315 ±3m, with an elevation of 12m. The timestamp is 01 May 2025, 10:28:11 am.
Plot 3	Class D Scrub
Photo 8 Dense shrubs ranging from 2 m - 5 m in height. The slope under this vegetation was assessed to be upslope/flat land.	 Photo 8 shows a landscape with scattered shrubs and a dirt path. The vegetation is Class D Scrub. The photo includes a compass overlay at the top showing a bearing of 42°NE (T) and coordinates -31.535835, 115.634179 ±9m, with an elevation of 1m. The timestamp is 01 May 2025, 9:31:00 am.
Plot 3	Class D Scrub
Photo 9 Dense shrubs ranging from 2 m - 5 m in height. This area contained the occasional tree however fire behaviour is considered most likely to reflect Class D Scrub. The slope under this vegetation was assessed to be upslope/flat land.	 Photo 9 shows a landscape with shrubs and trees, with a residential area visible in the background. The vegetation is Class D Scrub. The photo includes a compass overlay at the top showing a bearing of 255°SW (T) and coordinates -31.546709, 115.646364 ±3m, with an elevation of 13m. The timestamp is 01 May 2025, 10:18:01 am.

Plot 4	Class C Shrubland
Photo 10 Shrubs less than 2 m in height with a foliage cover exceeding 30%. Height staff shown in photo demonstrates maximum height of 2 m. The slope under this vegetation was assessed to be upslope/flat land.	
Plot 4	Class C Shrubland
Photo 11 Shrubs less than 2 m in height with a foliage cover exceeding 30%. The slope under this vegetation was assessed to be upslope/flat land.	
Plot 5	Class G Grassland
Photo 12 Grassland vegetation with an average height greater than 100 mm. The overstorey contains isolated shrubs which comprise less than 10% of the overall canopy cover. The slope under this vegetation was assessed to be upslope/flat.	

Plot 5	Class G Grassland
Photo 13 (Foreground) Grassland vegetation with an average height greater than 100 mm. The overstorey contains isolated shrubs and trees which comprise less than 10% of the overall canopy cover. The slope under this vegetation was assessed to be upslope/flat.	
Plot 6	Excluded - clause 2.2.3.2 (e)
Photo 14 Non-vegetated area comprising residential buildings, roads, and footpaths. These non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018	
Plot 6	Excluded - clause 2.2.3.2 (e)
Photo 15 Non-vegetated area comprising roads, footpaths, and vacant cleared areas. These non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018.	

Plot 6	Excluded - clause 2.2.3.2 (e)
Photo 16 (Foreground) Non-vegetated area comprising roads and vacant cleared areas. These non-vegetated areas have been excluded in accordance with Clause 2.2.3.2 (e) of AS 3959: 2018.	
Plot 7	Excluded - clause 2.2.3.2 (f)
Photo 17 (Background) Maintained parkland areas. This vegetation is regarded as low-threat and has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959:2018.	
Plot 7	Excluded - clause 2.2.3.2 (f)
Photo 18 A single row of trees used as a windbreak or screen. This vegetation is regarded as low-threat and has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959: 2018.	

Plot 7	Excluded - clause 2.2.3.2 (f)
Photo 19 Maintained parkland areas. This vegetation is regarded as low-threat and has been excluded in accordance with Clause 2.2.3.2 (f) of AS 3959:2018.	

Appendix B:

Standards for Asset Protection Zones

(WAPC, 2024b)

The following standards have been extracted from the Planning for Bushfire Guidelines (WAPC, 2024b).

Every habitable building is to be surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:

- a. Width: the APZ is measured from the development site, and of sufficient size to ensure the radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29) in all circumstances.
- b. Location: the APZ should be contained solely within the boundaries of the lot, except in instances where:

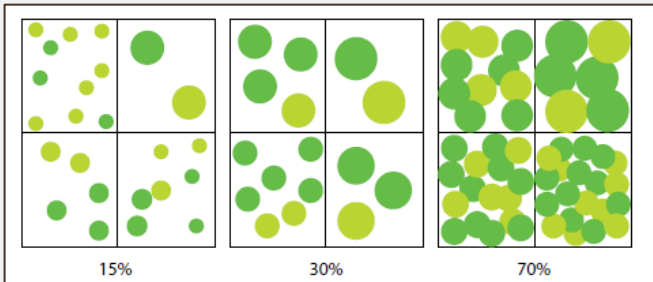
the vegetation on the adjoining lot(s) is, and will continue to be, low threat as per Clause 2.2.3.2 of AS 3959 or the APZ technical requirements, or an alternative standard on a local planning scheme, on an ongoing basis in perpetuity; or

the adjoining land is and will remain in perpetuity, non-vegetated.

- c. Management: the APZ is managed in accordance with the APZ technical requirements (below), or an alternative standard in a gazetted local planning scheme.

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 a 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.

Object	Requirement
	 Tree canopy cover – ranging from 15 to 70 per cent at maturity
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.
* Plant flammability, landscaping design and maintenance should be considered - refer to explanatory notes in the Guidelines.	

ADDITIONAL NOTES

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 homeowners to defend their property.

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.

Appendix C:

Vehicular access technical requirements (WAPC, 2024b)

Technical requirements	Perimeter Roads		Public Roads		Emergency Access Way3		Fire Service Access Route3		Battle-Axe and Private Driveways1	
Map of Bush Fire Prone Areas Designation	Area 2	Area 1	Area 2	Area 1	Area 2	Area 1	Area 2	Area 1	Area 2	Area 1
Minimum horizontal clearance (m)	12	8	See note 5		10	6	10	6	6	
Minimum vertical clearance (m)	4.5									
Minimum weight capacity (t)	15									
Maximum grade unsealed road2	See note 5		See note 5		1:10 (10% or 6 degrees)					
1:7 (14.3% or 8 degrees)										
1:10 (10% or 6 degrees)										
8.5										

NOTES

1. Driveways and battle-axe legs to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision where not required to comply with the widths in this Appendix or the Guidelines.
2. Dips must have no more than a 1 in 8 (12.5% - 7.1 degrees) entry and exit angle.
3. To have crossfalls between 3 per cent and 6 per cent.
4. For sealed roads only the maximum grade of no more than 1 in 5 (20 per cent) (11.3 degrees) for no more than 50 metres is permissible, except for short constrictions to 3.5 metres for no more than 30 metres in length where an obstruction cannot be reasonably avoided or removed.
5. As outlined in the Institute of Public Works Engineering Australasia (IPWEA) subdivision guidelines, Liveable Neighbourhoods, Austroads Standards Main Roads standard, supplement, policy or guideline and/or any applicable or relevant local government standard or policy.

