BUSHFIRE MANAGEMENT PLAN ADDENDUM – STAGE 7 OAKABELLA ESTATE, WELLARD

PREPARED FOR:

LWP WELLARD PTY LTD

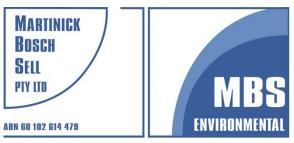


APRIL 2023

PREPARED BY:

Martinick Bosch Sell Pty Ltd 4 Cook Street West Perth WA 6005 Ph: (08) 9226 3166 Email: <u>info@mbsenvironmental.com.au</u> Web: <u>www.mbsenvironmental.com.au</u>





environmental and geoscience consultants

Oakabella Estate, Wellard Bushfire Management Plan Addendum - Stage 7

Distribution List:

Company	Contact name	Copies	Date
LWP Group Pty Ltd	Mitch Whalan, Development Manager	[01]	19 April 2023
Taylor Burrell Burnett	Farida Farrag	[02]	19 April 2023

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Final Report	Sue Brand	Kirsi Kauhanen	19 April 2023

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1. BACKGROUND INFORMATION

In December 2022, Martinick Bosch Sell Pty Ltd (MBS Environmental) prepared a bushfire management plan (BMP) for Stages 8, 9 and 10 of the Oakabella subdivision within the City of Kwinana. It has become apparent that it would have been appropriate to include updated information relating to Stage 7 to the east and north of Stage 8 (Figure 1). This document provides the information relating to Stage 7 in the form of an addendum to the Oakabella Stage 8 – 10 bushfire management plan. Accordingly, this document has been prepared by Sue Brand, an accredited Level 2 Bushfire Planning and Design (BPAD) practitioner with the Fire Protection Association Australia and should be read in conjunction with the Stage 8 – 10 BMP as most of the supporting information is also applicable to Stage 7.

1.1 **REVEGETATION AND LANDSCAPING**

Portions of the 50 m buffer that surrounds the Bollard Bulrush Swamp will be revegetated with vegetation similar to that present within the wetland. It is expected that revegetation and landscaping within the 50-m buffer adjacent to Bollard Bulrush Swamp in proximity to Stage 7 will be treated in the same manner as that proposed for Stages 8 – 10, namely revegetation of the 40-m area adjacent to the wetland boundary, with the final 10 m becoming low-threat vegetation as per AS 3959:2018.

1.2 VEGETATION CLASSIFICATION

The vegetation classification carried out for Stages 8 - 10 (Figures 5 - 10 in the Stage 8 - 10 BMP) are applicable to Stage 7.

1.3 **BUSHFIRE HAZARD ASSESSMENT**

The bushfire hazard assessment information for Stage 7 is the same as that provided for Stages 8 – 10.





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Legend St 7 boundary Stages 8 - 10			201 - 100 B
Stage Boundaries			Contract the
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Scale: 1: 1,800 Original Size: A3	Addendum - Stage 7	Figure 1	Martinick Bosch Sell Pty Ltd 4 Cook St
Aerial Photo Date: NearMap 30 August 2022 Grid: GDA94 / MGA zone 50 (EPSG:28350) 0 25 50 m	to Oakabella BMP Stages 8 - 10 LWP Wellard Pty Ltd	Location	West Perth WA 6005 Australia t: +61 8 9226 3166 info@mbsenvironmental.com.au www.mbsenvironmental.com.au
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1.4 BAL-ASSESSMENT

The BAL-assessment has been carried out based on the outcomes of discussions that occurred with the City of Kwinana in 2022 regarding an acceptable treatment within the wetland buffer, and which allows for the first 40 m of the 50-m wetland buffer will be revegetated, with the final 10 m of the buffer meeting the definition of low threat vegetation or non-vegetated. The presence of the Class D Scrub within the current wetland boundary and the planned revegetation within the first 40 m of the 50-m buffer represents an ongoing bushfire hazard and will result in several Lots within 100 m of that vegetation class being assigned a BAL-rating as a means of reducing the risk of damage in the event of a bushfire. Assuming the batter slope between the dual use path and the fire access track is installed and maintained as per Exclusion Clause 2.2.3.2 (f) of AS 3959:2018, Lots 117, 118, 119, 120, 148, 149, 150, 151, 152, 167, and 168 will be rated BAL-12.5, with Lots 146, 147, 174, 175, and 176 rated BAL-Low (Figure 2).

1.4.1 Asset Protection Zone

The asset protection zone for the Site is that area that provides the separation distance between the classified vegetation and building walls. It commences at the junction of the BAL-40 and BAL-29 zones, or the junction of the orange and yellow zones in Figure 2, and will extend to the building walls as that is the point where the potential radiant heat impact of a bushfire does not exceed 29 kW/m²; this point also demonstrates that bushfire risks on site can be managed.

1.4.2 Shielding

The shielding provisions of AS 3959:2018 indicate that where a building elevation is not exposed to the bushfire source, that elevation can be constructed to the next lower BAL-rating, noting that it cannot be lower than BAL-12.5, will apply to the wall including openings but will not apply to subfloors or roofs. As the maximum BAL-rating will be BAL-12.5, the provisions of this clause are not applicable.

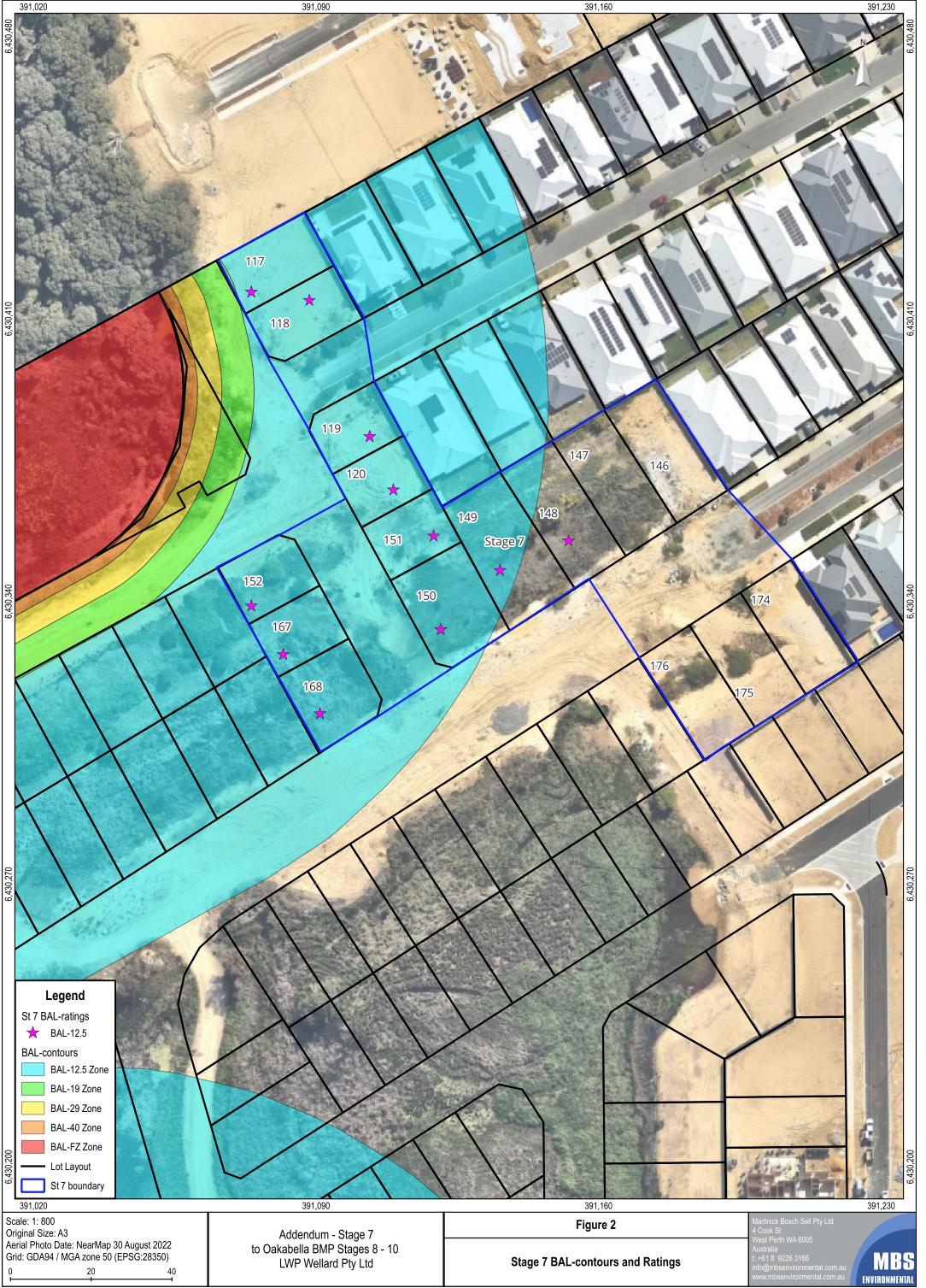
1.4.3 Other Bushfire Protection Measures

No other bushfire protection measures will be required for Stage 7.

1.5 IMPLEMENTATION, ROLES, AND RESPONSIBILITIES

The implementation schedule provided in the BMP, along with the designated roles and responsibilities will also apply to Stage 7.





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2. COMPLIANCE AND JUSTIFICATIONS

2.1 SPP 3.7 OBJECTIVES AND APPLICATION OF POLICY MEASURES

The intent of *State Planning Policy (SPP)* 3.7 *Planning in Bushfire Prone Areas* (Department of Planning and Western Australian Planning Commission, 2015) is to ensure that bushfire risks are considered in a timely manner and that planning documents demonstrate the appropriate application of the various policy measures. Table 1 summarises the intent and objectives of SPP 3.7 and provides evidence of how the proposed development of Stage 7 of the Oakabella Estate complies.

SPP Reference	Description	Evidence of Compliance
Intent	• Ensure that risks associated with bushfires are planned using a risk-based approach.	 Preparation of a BMP in accordance with SPP 3.7. Hazard assessment indicates risks associated with bushfire are manageable.
Objective 1	• Avoid any increase in the threat of bushfire to people, property, and infrastructure.	 Hazard assessment indicates risks associated with bushfire are manageable. Several Lots will be assigned a BAL-rating, with none higher than BAL-12.5 expected.
Objective 2	Reduce vulnerability to bushfire.	 Hazard assessment indicates risks associated with bushfire are manageable. Several Lots will be assigned a BAL-rating, with none higher than BAL-12.5 expected.
Objective 3	• Ensure that higher order strategic planning documents and proposals consider bushfire protection requirements at an early stage.	• The planning process has considered the risk of bushfire in an early stage, with this BMP addendum being prepared to supplement the BMP prepared by MBS in December 2022.
Objective 4	Achieve an appropriate balance between bushfire risk management and biodiversity conservation.	 Site environmental values have been considered during earlier stages of the planning approvals process. The Bollard Bulrush Swamp and its associated vegetation and buffer area will be retained on an ongoing basis.

 Table 1:
 SPP 3.7 Compliance Evidence

2.2 **BUSHFIRE PROTECTION CRITERIA**

Appendix 4 of the *Guidelines for Planning in Bushfire Prone Areas* (DPLH and WAPC, v1.4, 2021) provides details of the acceptable bushfire protection solutions that can be used to demonstrate how a location can be developed in bushfire prone areas. Table 2 demonstrates the Sites Compliance with Bushfire Protection Criteria; Figure 2 provides the Lot layout, along with assigned BAL-ratings.



Intent	Acceptable Solutions	Solution			
Element 1: Location	Element 1: Location				
Ensure that strategic planning	A1.1 Development Location				
proposals, subdivision and development applications are located in areas with the least	Bushfire hazard assessment is or will on completion be moderate or low.	The subdivision is in an area where the bushfire hazard level is manageable.			
possible risk of bushfire to facilitate the protection of people, property		 Several Lots will be assigned a BAL-rating, with none higher than BAL-12.5 expected. 			
and infrastructure.	BAL-rating is BAL-29 or lower.	Bushfire hazard assessment indicates manageable bushfire risk.			
		Several Lots will be assigned a BAL-rating, with none higher than BAL-12.5 expected.			
Element 2: Siting and Design of De	velopment				
To ensure that the siting and design	A2.1 Asset Protection Zone (APZ)				
of development minimises the level of bushfire impact.	Every habitable building is surrounded by, and every proposed lot can achieve an APZ depicted on plans that meets the following:	 The APZ coincides with the boundary between BAL-40 and BAL-29 zones (Figure 2) and includes roads and cleared areas. 			
	 Width — bushfire radiant heat does not exceed radiant heat of 29 kW/m² (BAL-29) as measured from any external wall or supporting post or column in all circumstances. 	 Subdivision design ensures width is suitable to ensure radiant heat does not exceed 29 kW/m² (BAL-29) as 			
	• Location — APZ contained solely within the boundaries of the Lot on which the building is situated, except in instances where the neighbouring lot(s) will	measured from any external wall or supporting post or column in all circumstances.			
	 be managed in a low-fuel state on an ongoing basis, in perpetuity. Management — the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones' (Schedule 1 on page 71 of the Guidelines). 	 Several Lots will be assigned a BAL-rating, with none higher than BAL-12.5 expected (Figure 2). 			
Element 3: Vehicular Access					
Not applicable — access will be via	A3.1 Public Roads (SP Sb Do)				
the existing and planned road network.	Public roads are to meet the minimum technical requirements in Table 6, Column 1 on page 76 of the Guidelines.	Public roads will be constructed in accordance with the technical requirements outlined in Column 1 of Table 6 on page 76 of the Guidelines.			

Table 2: Compliance with Bushfire Protection Criteria

Intent	Acceptable Solutions	Solution
All public roads will be through roads.	The trafficable (carriageway/pavement) width is to be in accordance with the relevant class of road in the Local Government Guidelines for Subdivisional Development (IPWEA Subdivision Guidelines), Liveable Neighbourhoods, Austroad standards and/or any applicable standards for the local government area.	
	A3.2a Multiple Access Routes (SP Sb Do)	
	Public road access is to be provided in two different directions to at least two different suitable destinations with an al-weather surface (two-way access).	The subdivision design includes several access/egress options away from bushfires that might occur within Bollard Bulrush Swamp, including perimeter and internal roads that lead to Johnson Road to the east.
	If the public road access is via a no-through road that cannot be avoided due to demonstrated site constraints, the road access is to be a maximum of 200 m from the subject lot(s) boundary to an intersection where two-way access is provided.	 The extent of the road in front of Lots 117 and 118 currently extends to the Oakabella site boundary; it is expected that in time this will connect with works occurring in the neighbouring subdivision being carried out by others. The length of the road from the subdivision boundary to the
		closest street is less than 30 m (Figure 1).
	A no-through road may exceed 200 m if it is demonstrated that an alternative access way cannot be provided due to site constraints and the following requirements are met:	Not applicable — the no-through road portion is less than 30 m.
	• The no-through road travels towards a suitable destination.	
	• The balance of the no-through road that is greater than 200 m from the subject site is wholly within BAL-Low or is in a residential built-out area (Figure 23 on page 81 of the guidelines).	
	A3.2b Emergency Access Way (SP Sb Do)	
	Where it is demonstrated that A3.2a cannot be achieved due to site constraints, or where an alternative design option does not exist, an emergency access way can be considered as an acceptable solution. An emergency access way is to meet all the following requirements:	Not applicable — accessway will be via the existing and planned road network.
	 Requirements in Table 6, Column 2 on page 76 of the guidelines. Provides a through connection to a public road. Be no more than 500 m. Must be signposted and if gated, gates must open the whole trafficable width and remain unlocked. 	



	 A3.3 Through-roads (SP Sb) All public roads should be through-roads. No-through roads should be avoided and should only be considered as an acceptable solution where: It is demonstrated that no alternative road layout exists due to site 	 The extent of the road in front of Lots 117 and 118 currently extends to the Oakabella site boundary; it is expected that
	should only be considered as an acceptable solution where:	,
	 constraints, and The no-through road is a maximum length of 200 m to an intersection providing two-way access unless it satisfies the exemption provisions in A3.2a. 	 in time this will connect with works occurring in the neighbouring subdivision being carried out by others. The length of the road from the subdivision boundary to the closest street is less than 30 m (Figure 1).
	A no-through road is to meet all the following requirements:	Not applicable — no no-through roads are planned.
	Requirements of a public road (Table 6, Column 1, Page 76).	
	• Turn-around area as shown in Figure 24 on page 81 of the Guidelines.	
	A3.4a Perimeter Roads (SP Sb)	
	A perimeter road is a public road and should be provided for greenfield or infill development where 10 or more lots are being proposed, including as part of a staged subdivision, with the aim of:	Perimeter roads are provided between the Bollard Bulrush Swamp 50 m buffer zone and Lots within Stage 7 (Figure 2).
	 Separating areas of classified vegetation under AS 3959 that adjoin the subject site from the proposed lots, and 	
	Removing the need for battle-axe lots that back onto areas of classified vegetation.	
	A perimeter road is to the meet the requirements contained in Table 6, Column 1 on page 76 of the Guidelines.	The perimeter road will be constructed in accordance with the requirements outlined in Column 1 of Table 6 on page 76 of the Guidelines.
	A perimeter road may not be required where:	Not applicable — a perimeter road has been designed as a
	The adjoining classified vegetation is Class G Grassland.	component of the proposed development.
	Lots are zoned for rural living or equivalent.	
	• It is demonstrated that it cannot be provided due to site constraints.	
	All lots have frontage to an existing public road.	
	A3.4b Fire Service Access Route (SP Sb)	
	Where proposed lots adjoin classified vegetation under AS 3959 (excluding Class G Grassland) and a perimeter road is not required in accordance with A3.4a, a fire service access route can be considered as an acceptable solution to provide	Not applicable — fire access will be via the existing and planned road network within the development area.



Intent	Acceptable Solutions	Solution
	firefighter access, where access is not available, to the classified vegetation. A fire access route is to meet all the following requirements:	
	Requirements in Table 6 Column 3 on page 76 of the Guidelines.	
	Be through-routes with no dead-ends.	
	Linked to the internal road system at regular intervals, every 500 m.	
	Must be signposted.	
	No further than 500 m from a public road.	
	 If gated, gates must open the required trafficable width and be locked by the local government and/or emergency services, if keys are provided for each gate. 	
	• Turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 m.	
	A3.5 Battle-axe Access Legs (Sb)	
	Where it is demonstrated that a battle-axe access leg cannot be avoided due to site constraints, it can be considered as an acceptable solution.	Not applicable — no battle-axe blocks are planned.
	There are no battle-axe technical requirements where the point of the battle-axe access leg joins the effective area of the battle-axe lot is less than 50 m from a public road in a reticulated water area.	
	In circumstances where the above condition is not met, or the battle-axe lot is in a non-reticulated water area, the battle-axe access leg is to meet all the following requirements:	Not applicable — no battle-axe blocks are planned.
	Requirements in Table 6, Column 4 on page 76 of the Guidelines.	
	• Passing bays every 200 m with a minimum length of 20 m and minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed driveway to be a minimum six metres).	
	A3.6 Private Driveways (Dd Do)	
	There are no private driveway technical requirements where the private driveway is:	Not applicable — no private driveways are planned.
	Within a lot serviced by reticulated water.	
	• No greater than 70 m in length between the most distant external part of the development site and the public road as measured as a hose lay.	
	 Accessed by a public road where the road speed limit is not greater than 70 km/h. 	



Intent	Acceptable Solutions	Solution
	In circumstances where all the above conditions are not met, or the private driveway is in a non-reticulated water area, the private driveway is to meet all the following requirements:	Not applicable — no private driveways are planned.
	 Requirements in Table 6, Column 4 on page 76 of the Guidelines. 	
	• Passing bays every 200 m with a minimum length of 20 m and minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed driveway to be a minimum six metres).	
	 Turn around areas as shown in Figure 28 on page 86 of the Guidelines and within 30 m of the habitable building. 	
Element 4: Water		
Ensure that water is available to	A4.1 Identification of Future Water Supply (SP)	
enable people, property, and infrastructure to be defended from bushfire.	Evidence that a reticulated or sufficient non-reticulated water supply for bushfire fighting can be provided at the subdivision and/or development application stage, in accordance with the specifications of the relevant water supply authority or the requirements of Schedule 2 on Page 90 of the Guidelines.	The subdivision will be connected to a reticulated water supply and will comply with Water Corporation specifications.
To achieve the intent, all applicable acceptable solutions must be addressed:	Where the provision of a strategic water tank(s) is required in a suitable area within a road reserve or a dedicated lot the location should be identified on the structure plan to the satisfaction of the local government.	Not applicable — subdivision will be connected to a reticulated water supply.
SP — Strategic planning proposal and structure plan where the lot	A4.2 Provision of Water for Firefighting Purposes (Sb Dd Do)	
layout is not known. Sb — Structure plan where the lot layout is known and subdivision	Where a reticulated water supply is existing or proposed, hydrant connection(s) should be provided in accordance with the specifications of the relevant water supply authority. Where these specifications cannot be met, then the following applies:	Hydrants will be installed in accordance with Water Corporation requirements.
 application. Dd — Development application for a single dwelling, ancillary dwelling, or minor development. Do — Development application for any other development that is not a single dwelling, ancillary dwelling, or minor development. 	 The provision of a water tank(s) in accordance with the requirements of Schedule 2 on page 90 of the guidelines. 	
	 Where the provision of a strategic water tank(s) is applicable, then the following requirements apply: 	
	 Land to be ceded free of cost to the local government for the placement of the tank(s). 	
	 The lot or road reserve where the tank is to be located is identified on the plan of subdivision. 	
	 Tank capacity, construction, and fittings provided in accordance with the requirements of Schedule 2 on page 90 of the Guidelines. 	



Intent	Acceptable Solutions	Solution
	 A strategic water tank is to be located no more than 10 minutes from the subject site (at legal road speeds). Where a subdivision includes an existing habitable building(s) that is to be retained, a water supply should be provided to this existing habitable building(s) in accordance with the requirements listed above. 	
Element 5: Vulnerable Tourism Land Uses		
Provide for bushfire protection for tourism land uses relevant to the characteristics of the occupants and/or the location, to preserve life and reduce the impact of bushfire on property and infrastructure. All applicable acceptable solutions must be addressed.	Every habitable building is surrounded by Asset Protection Zone (APZ) in accordance with Element 2: Siting and Design of Development — A2.1 Asset Protection Zone.	Not applicable — subdivision is a residential subdivision.
	 Habitable buildings are sited and designed to: Minimise clearing of existing vegetation. Provide hazard separation between classified vegetation and a development site that is managed in perpetuity to protect life, prevent the spread of, and manage the impacts of fire. 	Not applicable — subdivision is a residential subdivision.
	Suitable access/egress is provided for users of tourism sites.	Not applicable — subdivision is a residential subdivision.
	Adequate water is available for firefighting purposes in the event of a bushfire.	Not applicable — subdivision is a residential subdivision.



2.3 COMPLIANCE WITH RELEVANT DOCUMENTS

Sections 2.1 and 2.2 demonstrate how Stage 7 of the Oakabella Estate in Wellard complies with State Planning Policy 3.7 (Department of Planning and WA Planning Commission, 2015) and *Guidelines for Planning in Bushfire Prone Areas* (Department of Planning, Lands and Heritage (DPLH), and the WA Planning Commission (WAPC, V1.4, 2021). Site owners/occupiers must comply with relevant sections of the annual firebreak notice and bushfire information prepared by the City of Kwinana, such as total fire ban and hazard reduction programs.

2.4 COMPLIANCE STATEMENT

This BMP addendum has been prepared in accordance with the requirements of *State Planning Policy* 3.7 *Planning in Bushfire Prone Areas* (Department of Planning and Western Australian Planning Commission, 2015) and *Guidelines for Planning in Bushfire Prone Areas* (DPLH and WAPC, V1.4, 2021). The information contained in this document represents current site conditions based on a visit to the site on 15 September 2022 and associated planning.

Ausanibrand

Date: 19 April 2023 Accreditation Number: BPAD 36638 Accreditation Expiry Date: 30 April 2023

Signed:





3. **R**EFERENCES

Australian Standard, AS 3959:2018, Construction of Buildings in Bushfire-Prone Areas, Standards Australia, NSW.

Bushfires Act 1954 (WA)

Department of Planning, Lands and Heritage (DPLH), Town of Kwinana Local Planning Scheme No. 2, accessed September 2022 via: <u>https://www.wa.gov.au/system/files/2021-10/LPSC-kwinana2-schemetext.pdf</u>.

Department of Planning. Lands and Heritage (DPLH) and the Western Australian Planning Commission (WAPC), (V1.4, Dec 2021), *Guidelines for Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth, Western Australia.

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https://www.dpaw.wa.gov.au/images/documents/about/science/projects/waaudit/swan_coastal_plain02_p606-623.pdf, accessed August 2021.

