

Bushfire Management Plan Coversheet

Site address: Lot 168, 81 Quill Way Henderson

Site visit / date: Yes ☒ No ☐ 31 July 2025

Report author or reviewer: Kathy Nastov

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

BPAD accreditation number: 27794 Accreditation expiry – month / year August 2025

Bushfire Management Plan - version / date: V1.1 16 December 2025

If one or more of the following responses are yes, then these should be automatically referred to DFES.	Yes No	
	Yes	No
Strategic planning is required to address SPP 3.7 and the Guidelines	☐	☒
The application is a vulnerable land use	☒	☐

If one or more of the following responses are yes, and the decision-maker requires input from DFES, then the application can be referred.	Yes No	
	Yes	No
The BAL rating has been calculated by a method other than Method 1 as prescribed by AS 3959	☐	☒
An outcomes-based approach has been submitted to demonstrate compliance with the bushfire protection criteria	☐	☒

Note: If a subdivision or development application meets all the acceptable solutions and does not otherwise trigger a referral as listed above, seeking advice from DFES on SPP 3.7 or other matters is at the discretion of the decision-maker.

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

Dated signature of report author or reviewer:



16 December 2025



Bushfire Management Plan

(PREPARED FOR PLANNING APPLICATION ASSESSMENT PURPOSES)



Compiled in accordance with State Planning Policy 3.7 Bushfire and the Planning for Bushfire Guidelines

Lot 168, 81 Quill Way Henderson

City of Cockburn

**Development Application - Commercial/Industrial
Development and Vulnerable Land Use**

16 December 2025

Job Reference No: 240816

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DOCUMENT CONTROL

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Robert Engelhard	robert@scopepropertygroup.com.au	1.1		☐	☒
Limitations: The protection measures that will be implemented based on information presented in this Bushfire Management Plan are minimum requirements and they do not guarantee that buildings or infrastructure will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating. This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required protection measures (including bushfire resistant construction) and any other required or recommended measures, will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control. All surveys, forecasts, projections and recommendations made in this report associated with the proposed development are made in good faith based on information available to Bushfire Prone Planning at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations. Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents, arising out of the services provided by their consultants. Copyright © 2025 BPP Group Pty Ltd: All intellectual property rights, including copyright, in format and proprietary content contained in documents created by Bushfire Prone Planning, remain the property of BPP Group Pty Ltd. Any use made of such format or content without the prior written approval of Bushfire Prone Planning, will constitute an infringement on the rights of the Company which reserves all legal rights and remedies in respect of any such infringement.					
BMP (Master) Template v10.0					

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STATEMENT OF PURPOSE – THE ‘PLANNING’ BUSHFIRE MANAGEMENT PLAN

EXPLANATORY INFORMATION

SITE/USE PLANNING

This BMP is produced to present the information necessary for a planning proposal's assessment against the State's bushfire planning requirements. The developed information is to inform and assist decision-making authorities, planners, landowners/proponents and referral agencies in their implementation WA's State Planning Policy 3.7 Bushfire – and where relevant, any supplementary provisions of a local planning scheme or policy.

Policy Document Versions Applied in This BMP	State Planning Policy 3.7 Bushfire (SPP 3.7)	November 2024	Planning for Bushfire Guidelines (supporting SPP 3.7)	November 2024
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The Stated Intent of SPP 3.7 is to implement effective, risk based land use planning and development which in the first instance avoids bushfire risk, but where unavoidable, manages and/or mitigates the risk to people, property and infrastructure to an acceptable level. The preservation of life and the management of bushfire impact are paramount.

SITE OPERATIONS

This BMP is not an 'operational' BMP for property and operations management. Such a BMP would apply additional and more specific bushfire protection measures to more comprehensively reduce the level of risks associated with a bushfire event. These being the potential loss of life, injury, or destroyed or damaged assets which results in personal loss and economic loss.

However, this 'planning' BMP does establish certain responsibilities for the implementation and maintenance of the bushfire protection measures that are considered the minimum for bushfire planning decision making.

BUSHFIRE RESISTENT CONSTRUCTION

This 'planning' BMP is not required to consider the requirement to construct certain buildings, in designated bushfire prone areas, to the standard corresponding to the Bushfire Attack Level (BAL) they are subject to. This requirement is dealt with under the State Building Act 2011/Building Regulations 2012 and the referenced Building Code of Australia.

DETERMINED BUSHFIRE ATTACK LEVEL (BAL) RATINGS AND CONSTRUCTION – CAUTION!

For construction purposes a determined (not indicative) BAL rating is required to be known and a BAL Certificate produced for submission with a building application. This establishes the construction design and materials that are to be complied with in accordance with AS 3959 Construction in bushfire prone areas (as amended) and/or NS 300 NASH Standard Steel Framed Construction in Bushfire Areas (as amended).

This 'planning' BMP cannot necessarily determine a BAL rating that will apply to a future building. All variables required for that calculation may not be known at the assessed stage of planning. For example, actual location of a building footprint on a lot and/or any classified vegetation that will remain, at the time of construction, within the lot or on neighbouring lots.

This 'planning' BMP is only required to identify if a viable sized building can be located on a lot and be subject to a BAL rating not exceeding BAL-29, based on certain allowable assumptions. This is a planning requirement not a building requirement and a BAL contour map can be used to illustrate this information as an 'indicative' BAL rating.

Be aware that typically you cannot derive the determined BAL rating for a future building(s) on a specific lot from a BAL contour map (when presented in a BMP prepared for planning approval purposes). This is only possible in limited circumstances.

Planning assessment requirements are different to building assessment requirements. Refer to explanatory information above and Appendix B1 for additional information.

1 THE PLANNING PROPOSAL

1.1 Details, Plans and Maps

SUBJECT LAND AND PROPONENT (LANDOWNER)		
Address Details	Lot 168, 81 Quill Way Henderson	
Applicable Local Government	City of Cockburn	
Proponent	Scope Property Group	
Entity Commissioning Production of the BMP	Robert Engelhard – Scope Property Group	
THE PLANNING PROPOSAL STAGE AND TYPE		
Strategic Planning Document	☐	N/A
Structure Plan	☐	N/A
Subdivision Application	☐	N/A
Development Application	☒	Construction of a habitable building and/or a vulnerable use that is subject to bushfire planning requirements.
DESCRIPTION		
The proposal includes the construction of a Hotel, Mixed-Use buildings, Offices, Retail spaces, and a Tavern with associated parking. As the Hotel is classified as a vulnerable land use, a Bushfire Management Plan (BMP) has been prepared for the entire site and Development Application. However, it is only the Hotel that triggers the requirement to prepare a Bushfire Management Plan and demonstrate compliance with SPP 3.7, as the other proposed buildings are commercial (not vulnerable) and situated within BAL-12.5 or BAL-19 areas.		
EXPLANATORY INFORMATION		
Note: A habitable building is defined in the <i>Planning and Development (LPS) Regulations 2015</i> to mean: A permanent or temporary structure on land that: (a) Is fully or partially enclosed; and (b) Has at least one wall of solid material and a roof of solid material; and (c) Is used for a purpose that involves the use of the interior of the structure by people for living, working, studying or being entertained.		
The Primary Proposed Construction		
Type(s)	New Building(s)	
BCA Classification	Class 5 (office building - professionals)	Class 6 (building for sale of retail goods or supply of services)
	Class 7a (carparks)	Class 7b (warehouse/storage/wholesale)
	Class 10a (non-habitable building)	Class 1b (house/hostel)

Vulnerable Land Use Determination			
Applying the definition established in SPP 3.7:			
	A land use which is designed to accommodate people who are less physically or mentally able and likely to present evacuation challenges; and/or		☐
	A land use which due to the building design or use, or the number of people accommodated, likely to present evacuation challenges; and/or		☐
	A land use which involves visitors who are unfamiliar with the surroundings.		☒
Applying the guidance established in the Guidelines, Appendix B5 in determining whether a day use is vulnerable, consideration is to be given to:			
	The location and to the number of employees and visitors on-site at any one time; and		☐
	If the decision-maker considers that the preparation of a bushfire emergency plan is warranted, then the use should be considered vulnerable.		☐
<u>Assessment Supporting Details:</u> The development includes a hotel, which is classified as a vulnerable land use. All other proposed buildings within the development are not considered vulnerable land uses.			
Development Type for Assessment Against the Bushfire Protection Criteria			
Development Commercial and Industrial	Construction of or addition to, a habitable building for commercial or industrial uses. <i>[Guidelines s7]</i>		
Development Vulnerable Land Use - Tourism Land Uses and Day Uses	For the construction, and/or use of, or additions to a habitable building for a vulnerable tourism land use. <i>[Guidelines s8]</i>	Tourist and visitor accommodation.	☒
		Day Uses (no overnight stay)	☐
		Outdoor Events (may include overnight camping).	☐
		Caravan Park, nature based park and/or camping ground, with or without a habitable building(s).	☐
<u>Assessment Supporting Details:</u> None required.			

1.2 The Planning Proposal and its Requirement to Address Bushfire Risk

EXPLANATORY INFORMATION

For the subject planning proposal, the intent of this section is to:

- Identify the relevant statutory bushfire planning provisions that have established its requirement to address bushfire risk;
- Identify the relevant policy/guideline 'triggers' to apply SPP 3.7 Bushfire;
- Identify when a local government, as the decision maker, has established additional 'triggers' to apply defined bushfire planning assessments; and
- Identify the consideration of any relevant exemptions from application of SPP 3.7 Bushfire.

Relevant Terms

Development means the development or use of any land, including (a) any demolition, erection, construction, alteration of or addition to any building or structure on the land (b) the carrying out on the land of any excavation or other works (Planning and Development Act 2005, Part1, s.4; and

Habitable building means a permanent or temporary structure on land that:

- (a) is fully or partially enclosed; and
- (b) has at least one wall of solid material and a roof of solid material; and
- (c) is used for a purpose that involves the use of the interior of the structure by people for living, working, studying or being entertained;

Specified building means a structure of a kind specified in this Scheme as a kind of structure to which this Part applies in addition to its application to habitable buildings.

Development site means that part of a lot on which a building that is the subject of development stands or is to be constructed - Planning and Development (LPS) Regulations 2015, s.78A.

Construction of a building includes the erection, assembly or placement of a building but does not include the renovation, alteration, extension, improvement or repair of a building;

1.2.1 Applied Statutory Bushfire Provisions Requiring a Planning Application

A PLANNING AND A BUILDING APPLICATION IS TO BE SUBMITTED TO THE LOCAL GOVERNMENT FOR DETERMINATION

For the proposed development (construction and/or use) the local government is the decision maker. The local government determination will be made under:

- The Planning and Development Act 2005, its relevant subsidiary legislation (e.g. Regulations) and associated policies that establish the objectives and high-level guidance; and/or
- The local government's local planning scheme and associated policies that establishes objectives and guidance, specific to the jurisdiction, in addressing the requirements established by the above legislation and associated policy.

A BUILDING OR PLANNING APPLICATION REQUIRES A BAL RATING AND PLANNING APPROVAL

The proposed development is for building works subject to the Building Code of Australia and is located in a designated bushfire prone area (Map of Bushfire Prone Areas). One or more of the following applies.:

- The local government requires submission of a building permit application under the Building Act 2011 / Building Regulations 2012) including a bushfire attack level (BAL) assessment (and certificate). Applicable when the proposed development is a class of building subject to bushfire construction requirements (i.e. Classes 1, 2, 3 buildings and associated Class 10a, and certain Class 9 buildings under the Building Code of Australia).

✓

- The local government has a responsibility under the Planning and Development (LPS) Regulations 2015 to ensure strategic planning proposals, structure plans and development applications address SPP 3.7 and the Guidelines. - The local government, in accordance with its local planning scheme, is responsible to administer the relevant development controls, with due regard to SPP 3.7 and the Guidelines.	
WHERE PRE-DEVELOPMENT BUSHFIRE ATTACK LEVEL (BAL) OF RELEVANT BUILDINGS IS BAL-40 OR BAL-FZ The Deemed Provisions in Schedule 2 of the Planning and Development (Local Planning Schemes) Regulations 2015, Part 10A – Bushfire risk management, establish: - If the proposed development is: - The construction or use, or construction and use, of a single house or ancillary dwelling on a lot or lots with a total area of 1,100 m² or more; or - The construction or use, or construction and use, of - a habitable building other than a single house or ancillary dwelling; or - a specified building; and - Is not the use of a dwelling as hosted or unhosted short-term rental accommodation (STRA) which is specifically excluded; and - The <u>development site</u> is wholly or partly within a designated bushfire prone area (Map of Bushfire Prone Areas), requiring the developer to have prepared a BAL assessment for the development site; then - Where the <u>pre-development</u> (before the establishment of an APZ), calculated bushfire attack level of the development site <u>is BAL-40 or BAL-FZ</u>, then the <u>developer must have development approval</u> to commence any development on the development site.	-
<u>Assessment Supporting Details:</u> The pre-development BAL rating off all proposed buildings is BAL-12.5. The commercial buildings trigger no assessment under the Guidelines. The 'Hotel' component however represents a vulnerable land use, and the Guidelines require a Bushfire Management Plan be prepared in instances when the BAL rating exceeds BAL-LOW. A BMP is required to primarily address the vulnerable land use component of the proposal, noting the entire site must be considered.	

1.2.2 Applied Triggers to Apply State Planning Policy 3.7 Bushfire

EXPLANATORY INFORMATION

State Planning Policy 3.7 Bushfire (SPP 3.7) provides broad objectives and high-level guidance for how planning proposals and development applications within bushfire prone areas should be considered. Implementation is supported by more detailed instructions within the *Planning for Bushfire Guidelines*.

The following table identifies the guidance that has resulted in the planning proposal being required to apply SPP 3.7.

Inconsistent Information (as of December 2024):

- There are inconsistencies between the provisions of the applicable legislation (Planning and Development (LPS) Regulations 2015), the clauses of the associated policy (SPP 3.7 Bushfire) and its associated guidance (Planning for Bushfire Guidelines Nov. 2024).
- This has resulted in inconsistencies in the establishment of the 'triggers' to lodge proposals, plans and applications for planning approval sourced from these documents.

Until legislation/policy/guideline amendments are completed, the advice from WAPC/DPLH is that the decision maker should apply SPP 3.7 and the Guidelines as they deem necessary. (Source: Explanatory Note SPP 3.7, DPLH, 25/11/24)

Bushfire Prone Planning's Current Approach:

- To apply the 'triggers' for application of SPP 3.7/Guidelines in accordance with the current version of the Guidelines (Planning for Bushfire Guidelines, November 2024), in Sections 6, 7 and 8 - as this is best aligned with the current version (3 Nov 2024) of the LPS Regulations 2015; unless
- The relevant decision maker has determined, and confirmed in writing to the proponent, that SPP 3.7/Guidelines is to be applied.

SPP 3.7 AND THE GUIDELINES - ESTABLISHING THE NEED TO GIVE DUE REGARD TO SPP 3.7		APPLICABLE
1	THE LAND SUBJECT TO THE PLANNING PROPOSAL IS:	
	Designated bushfire prone and 'Area 1 (Urban)' on the Map of Bushfire Prone Areas (refer to Figure 1.4); or	No
	Designated bushfire prone and 'Area 2' on the Map of Bushfire Prone Areas (refer to Figure 1.4).	Yes
AND		
2	THE PLANNING PROPOSAL WILL:	
	Result in the intensification of development (or land use); or	Yes
	Result in an increase of visitors, residents or employees; or	Yes
	Adversely impact or increase the bushfire risk to the subject or surrounding site(s).	No
AND		
3	THE PLANNING PROPOSAL IS A:	
	(Source: SPP 3.7, Part 4) A <u>development application for construction and/or use of a habitable building (other than a single house or ancillary dwelling), for a vulnerable land use</u> and where the development site(s) has a BAL rating above BAL-LOW.	Currently not triggered by legislation - BUT – the relevant decision-maker has established the requirement to apply SPP 3.7

Assessment Supporting Details:

None required.

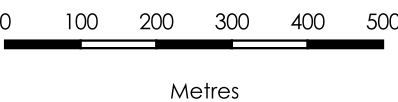
1.2.3 Identified Exemptions

EXPLANATORY INFORMATION	
The following situations provide for an exemption from the application of SPP 3.7/Guidelines. They are established by the stated sources and are presented below as: - Evidence they have been considered when relevant; and - Justification for the application of SPP 3.7/Guidelines despite a relevant exemption applying to part or all of the planning proposal.	
EXEMPTION SCENARIOS	APPLICABLE
(Source: LPS Regulations 2015 Part 10A - Bushfire risk management) Does not apply to land where there is no existing local planning scheme or where a local planning scheme has ceased to have legal effect.	No
(Source: Guidelines s1.2.1) For a structure plan or subdivision application, for proposed lot(s) that: - Are not designated as bushfire prone; - Or where there is no increase in the development potential and therefore no intensification of land use or bushfire risk, such as a boundary realignment, that does not restrict the ability to establish or maintain an APZ; and - does not restrict vehicular access/egress to any existing or future habitable building.	No
(Source: Guidelines s1.2.1) - For incidental non- habitable buildings or structures located not less than six metres from the habitable building, including but not limited to private garages, carports, patios, storage sheds, outbuildings, swimming pools, spa pools and fences.	No
(Source: Guidelines s1.2.1) - For a change of use, minor renovations, extensions, alterations, improvements or repair of an existing habitable building where: - The application does not result in an increase of occupants onsite; and/or - There is no increase in the bushfire risk, such as an extension being further away from the bushfire hazard, or the extension does not restrict vehicular access or the provision of water for the development.	No
<u>Assessment Supporting Details:</u> No exemptions can be applied.	

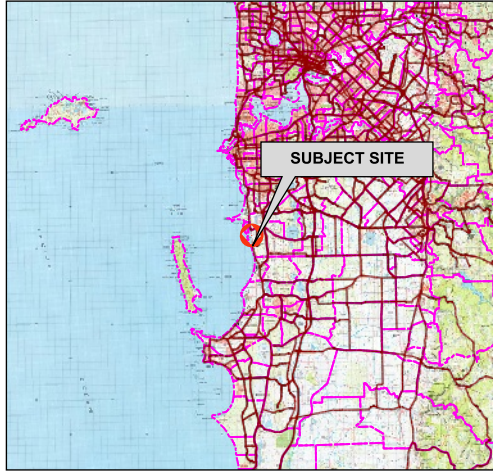
Figure 1.4
Bushfire Prone Area

Lot 168 on Diagram 076646, Area : 1.8472 ha
81 Quill Way
HENDERSON
CITY OF COCKBURN

- **LEGEND** -----
-  Subject Site
 -  Bushfire Prone Area 1
 -  Bushfire Prone Area 2



----- **LOCALITY** -----





AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: Tessa Ferreira 22-08-2025
SCALE (A3): 1 : 10000

1.3 Required 'Bushfire Planning' Assessments and Documents

INFORMATION PRESENTED IN THIS ‘PLANNING’ BMP (OR THE BEP) - PROVIDED TO ACCOMPANY THE PROPONENT’S PLANNING SUBMISSION						
The requirements are established by SPP 3.7 Part 4, Guidelines Section 1.2, 4.4, 5.5, 6.4, 7.2, 8.3 and A1.2. The green highlighted column identifies the required information for the subject planning proposal.		Strategic Planning Document		Structure Plan / Subdivision Application		Development Application
Required Information	Details	Map of Bushfire Prone Areas Designation				
		Area 1 (Urban)	Area 2	Area 1 (Urban)	Area 2	Areas 1 & 2
Environment - Identification of environmental, biodiversity or conservation values on subject site(s)	Presented in the BMP. Identifies how proposal siting and design avoids and/or minimises clearing of native vegetation in applying required bushfire protection measures.	BUSHFIRE PLANNING ASSESSMENTS ARE NOT REQUIRED	✓	✓	✓	✓
BLA - Broader Landscape Assessment (see note below)	Presented in the BMP. Considers subject site suitability based on exposure to bushfire hazards, potential for landscape scale bushfire, road network and suitable evacuation destinations.		✓	-	✓	-
BHL - Bushfire Hazard Level Assessment (pre-development)	Presented in the BMP. Can include detail of treatments required to achieve BHL of moderate and/or low.		✓	-	-	-
BAL - Bushfire Attack Level Assessment	Presented in the BMP in BAL contour map format as a requirement and in table format as an additional option.		-	✓	✓	-
	Presented in the BMP in table format and/or BAL contour map format – dependant on which is more efficient and effective at presenting the results (e.g. BAL contour map for multiple buildings).		-	-	-	✓
BPC - Assessment against the relevant Elements (E1 – E4) of the Bushfire Protection Criteria	Presented in the BMP. Strategic planning will necessarily focus on Element 1: Location. Can demonstrate compliance using acceptable solutions and/or an outcomes-based approach.		✓	✓	✓	✓
				Excluding E1		Excluding E1
BEP - Bushfire Emergency Plan	For vulnerable land uses only. Provided as a separate document or an addition / modification to an existing BEP or site Emergency Management Plan.		-	-	-	-
LMP – Landscape Management Plan	For vulnerable land uses only. Provided as a separate document or an addendum to the BMP.					
Note: Where a relevant planning proposal (e.g. subdivision) was previously assessed and approved under the SPP 3.7/Guidelines 2015, it is likely that a BLA will not be required. Also, if an application (e.g. subdivision) is compliant with a structure plan and/or a local planning scheme amendment, which were assessed and approved under the 2015 SPP/Guidelines, it is likely that a BLA will not be required. Confirmation from a relevant DPLH officer may be required (DPLH advice to BPP 20/2/2025).						

1.4 Other Documents Relevant to Preparing the BMP

EXPLANATORY INFORMATION					
This section identifies any known assessments, reports or plans that have been conducted and prepared previously, or are being prepared concurrently, and are relevant to the subject planning proposal. They may have implications for the assessment of bushfire hazard threats and the identification and implementation of the bushfire protection measures that are established by this BMP.					
RELEVANT DOCUMENTS					
Document	Relevant	Exists	To Be Concurrently Developed	Copy Provided by Proponent / Developer	Title
Structure Plan	No	No	No	N/A	-
Bushfire Management Plan	No	No	No	N/A	-
Preliminary bushfire advice (may include a BAL contour map)	No	No	No	N/A	-
Bushfire Emergency Plan	Yes	No	No	N/A	-
<u>Implications for the BMP:</u> It is required that under SPP 3.7 that a BEP be prepared for the proposed development. This will be prepared at a later stage.					
Bushfire Risk Report	No	No	No	N/A	-
Environmental Asset or Vegetation Survey	No	No	No	N/A	-
Landscape Management Plan	No	No	N/A	N/A	-
All planned landscaping is in small garden beds mostly surrounded by concrete and the landscaping is not large enough to warrant a landscaping management plan to address bushfire risk.					
Revegetation Plan	No	No	No	N/A	-

2 ENVIRONMENTAL CONSIDERATIONS – NATIVE VEGETATION

EXPLANATORY INFORMATION

Some bushfire prone areas also have high biodiversity values. SPP3.7 objective 5.4 prioritises the retention of native vegetation for biodiversity conservation, environmental protection and landscape amenity.

Clearing or modification of native vegetation for the purpose of land use or development is assessed under **State Planning Policy 2: Environment (SPP 2)**, **State Planning Policy 2.8: Bushland policy for the Perth Metropolitan Region (SPP 2.8)** and relevant environmental legislation. A key objective of these policies is to avoid development that may result in unacceptable environmental damage.

Any 'modification' or 'clearing' of vegetation to reduce bushfire risk is considered 'clearing' under the **Environmental Protection Act 1986** (EP Act) and requires a clearing permit under the **Environmental Protection (Clearing of Native Vegetation) Regulations 2004** (Clearing Regulations) – unless for an exempt purpose.

Clearing native vegetation is an offence, unless done under a clearing permit or the clearing is for an exempt purpose. Exemptions are contained in the EP Act or are prescribed in the Clearing Regulations (note: these exemptions do not apply in environmentally sensitive areas).

The **Department of Water and Environmental Regulation** (DWER) is responsible for issuing 'clearing' permits and the framework for the regulation of clearing. Approvals under other legislation, from other agencies, may also be required, dependent on the type of flora or fauna present.

Local Planning Policy or Local Biodiversity Strategy: Natural areas that are not protected by the above Act and Regulation (or any other National or State Acts) may be protected by a local planning policy or local biodiversity strategy. Permission from the local government will be required for any modification or removal of native vegetation in these Local Natural Areas (LNA's). Refer to the relevant local government for detail.

For further Information refer to [Native vegetation clearing permits | Western Australian Government](#), the Planning for Bushfire Guidelines (as amended) and the Bushfire and Vegetation Factsheet - WAPC, Dec 2021.

2.1 Biodiversity or Conservation Values Identified

EXPLANATORY INFORMATION

The required information, relevant to bushfire planning and informing the production of this BMP, is sourced and presented as indicated below.

Note that where a 'desktop' assessment has been conducted, this should not be considered a replacement for a full Environmental Impact Assessment. It is a summary of potential biodiversity or conservation values at the subject site, inferred from information contained in public available datasets and/or reports, which are only current to the date of last modification.

The information provided in the BMP should be considered indicative where the subject site has not previously been subject to a site-specific environmental assessment by an appropriate professional.

The required information is sourced from the environmental/planning consultant report developed for the subject site and provided to the bushfire consultant (details below when applicable).

The information it contains is not repeated in this BMP as it will accompany the planning submission. The implications for the subject planning proposal and this BMP are stated below when relevant.

No Report
Available /
Provided

The required information is sourced by the bushfire consultant as a 'desktop' assessment from publicly available data bases and/or a local government's local biodiversity strategy or local planning strategy.

When applicable, this information is presented on the following pages of this BMP.

Yes - Fully

IDENTIFICATION OF RELEVANT BIODIVERSITY OR CONSERVATION VALUES							
Dataset	Relevant to Subject Planning Proposal	Influence on Bushfire Threat Levels and / or Application of Bushfire Protection Measures	Information Source(s) Applied			Further Action Required by Proponent	
			WA Govt. Agency Dataset (ID)	Landowner or Developer Statements	Environmental Asset or Vegetation Survey Report		
Department of Biodiversity, Conservation and Attractions (DBCA) Datasets							
Conservation Category Wetlands and Buffer (geomorphic wetlands – relevant area)	N/A	No	☒	DBCA-019	☐	☐	None
RAMSAR Sites (wetlands of international importance)	N/A	No	☒	DBCA-010	☐	☐	None
Threatened and Priority Flora	N/A	No	Restricted Scale of Data Available (security)	DBCA-036	☐	☐	Confirm with relevant agency
Threatened Ecological Communities	N/A	No		DBCA-038	☐	☐	Confirm with relevant agency
Legislated Lands and Waters (national/conservation parks, nature/crown reserves, state forest)	N/A	No	☒	DBCA-011	☐	☐	None
Department of Planning, Lands and Heritage (DPLH) Datasets							
Bush Forever Areas 2000	N/A	No	☒	DPLH-019, 022 and MRS Bush Forever	☐	☐	None
Department of Water and Environmental Resources (DWER) Datasets							
Clearing Regulations – Environmentally Sensitive Areas	N/A	No	☒	DWER-046	☐	☐	None
Swan Bioplan Regionally Significant Natural Areas 2010	N/A	No	☒	DWER-070	☐	☐	None

ADDITIONAL INFORMATION

No environmental biodiversity or conservation values have been identified over the subject site.

Figure 2.1
Environmental Considerations Map
Lot 168 on Diagram 076646, Area : 1.8472 ha
81 Quill Way
HENDERSON
CITY OF COCKBURN

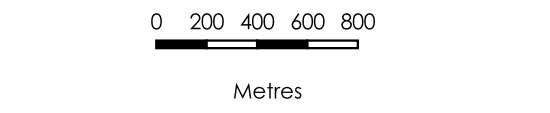


----- **LEGEND** -----

Subject Site
 Clearing Regulations

Environmentally Sensitive Areas
 Threatened Ecological Community

Geomorphic Wetlands Swan Coastal Plain
 Dampland
 Lake
 No Longer a Wetland
 Sumpland



----- **LOCALITY** -----

A small inset map showing the City of Cockburn with its street network. A red dot and a callout box labeled 'SUBJECT SITE' indicate the location of the subject site within the city's boundaries.

2.2 Response of the Planning Proposal to Protection of Native Vegetation

The protection of native vegetation is to be prioritised by avoiding areas that would require clearing or modification of native vegetation, specifically for the purpose of bushfire mitigation (BMP Manual, November 2024 DPLH).

SOLUTIONS APPLIED TO MINIMISE NATIVE VEGETATION REMOVAL / MODIFICATION	
Clearing and/or modification of native vegetation is proposed and necessary.	No
There is little or no native vegetation on the site that is required to be removed for the development. If native species are required to be removed, approval will be required.	
Conservation Response	
The proposal reserves native vegetation for conservation, recreation or environmental protection purpose. These can include ecological linkage, local natural area, waterway, or foreshore area or wetland buffer.	No
Siting / Design / Construction Responses	
Reduction in the proposed intensification of land use or development potential.	N/A
Containing or clustering areas of intensification of land use to reduce clearing requirements.	N/A
Consideration of locating proposed development to have greater initial vegetation separation distances from bushfire hazards by utilising non-vegetated interfaces.	N/A
Modification or redesign of the proposed areas of intensification of land use to avoid areas with high environmental, biodiversity or conservation values.	N/A
The proposal has applied a reduction in the intensification of land use or development potential (e.g. reduced lot yield or smaller building footprints), to ensure the retention of greater areas of native vegetation while achieving the required vegetation separation distances to limit exposure to unacceptable levels of potential bushfire impact.	N/A
The proposal situates required non-vegetated elements (e.g. footpaths, paved areas, roads, parking, open drainage channels, and major services delivery installed in common corridors), between bushfire hazards and elements at risk – to effectively achieve required vegetation separation distances with less vegetation clearing and/or modification.	N/A
The proposal applies building envelopes, and these have located to minimise the requirement to clear and/or modify native vegetation.	N/A
The proposal utilises the clustering habitable buildings to reduce requirements for native vegetation clearing and/or modification.	N/A
The proposal aligns roads and pathways to work around trees and other vegetation, preserving their ecological values.	N/A
The proposal establishes requirements for the construction of building(s) to satisfy the requirements corresponding to higher BAL ratings to ensure a reduced vegetation separation distance requirement.	N/A

2.3 Vegetation Management Plans with Implications for the BMP

EXPLANATORY INFORMATION

This section identifies the area(s) of land (supporting vegetation), within or near the subject site (i.e. onsite or offsite) to which one or more of the following scenarios and their corresponding management actions applies.

If none of these scenarios is relevant to the subject planning proposal, this is stated.

1. Area(s) subject to a **LANDSCAPE PLAN THAT RESULTS IN RELEVANT ELEMENTS AT RISK BEING EXPOSED TO A LOW BUSHFIRE THREAT LEVEL** from existing or planned area(s) of vegetation and establishes the following management actions:
 - (a) To apply landscaping design (including the modification and/or establishment of plants/shrubs/trees), that will enable the area(s) to be excluded from classification under AS 3959 BAL determination methodology;
 - (b) To actively manage the area(s) to maintain the low bushfire threat level in perpetuity. Thereby ensuring the applicable bushfire protection measures, applied in accordance with the BMP, remain effective;
 - (c) To achieve and maintain the low threat state through using a combination of mechanisms including:
 - (i) Minimising vegetation fuel loads through design and ongoing management;
 - (ii) Using low flammability and/or higher moisture content species;
 - (iii) Incorporating non-vegetated elements; and
 - (d) To identify the entity responsible for ensuring the landscape plan is complied with in perpetuity and when required, will contain written confirmation of their acceptance of the responsibility.
2. Area(s) subject to a **LANDSCAPE PLAN THAT RESULTS IN RELEVANT ELEMENTS AT RISK BEING EXPOSED TO A REDUCED BUSHFIRE THREAT LEVEL** from existing or planned area(s) of vegetation and establishes the following management actions:
 - (a) To apply landscaping design involving the removal and/or modification of existing vegetation that will enable the area(s) to be classified as a lower threat class under AS 3959:2018 BAL determination methodology;
 - (b) To actively manage the area(s) to maintain the reduced bushfire threat level in perpetuity. Thereby ensuring the applicable bushfire protection measures, applied in accordance with the BMP, remain effective;
 - (c) To identify the entity responsible for ensuring the landscape plan is complied with in perpetuity and when required, will contain written confirmation of their acceptance of the responsibility.
3. Area(s) subject to a **REVEGETATION PLAN THAT MAY RESULT IN RELEVANT ELEMENTS AT RISK BEING EXPOSED TO AN ADDITIONAL BUSHFIRE HAZARD AND/OR AN INCREASED BUSHFIRE THREAT LEVEL** from an existing area(s) of vegetation and establishes the following information:
 - (a) The location of the areas to be revegetated (as distinct from natural regeneration which is accounted for in the vegetation classification under AS 3959 BAL determination methodology); and
 - (b) A description of the planned design regarding density and species of plants/shrubs/trees to inform the bushfire consultant's classification of the vegetation under AS 3959:2018 BAL determination methodology.

Relevance of the Stated Scenarios
to the Subject Planning Proposal

Only Scenario 1 is relevant.

2.3.1 Landscape Management Plan – Low Bushfire Threat Level

PLANNED LANDSCAPING – LOW BUSHFIRE THREAT LEVEL	
The proposed development has (or required) a landscape plan that results in elements at risk being exposed to a low Bushfire Threat Level from existing or planned area(s) of vegetation.	No
<u>Assessment Supporting Details:</u> The development is classified as a vulnerable land use, which would typically require a Landscape Management Plan. However, as there are no areas of classified vegetation within the site requiring management, and the proposed landscaping is limited to small garden beds surrounded by carparks that present no bushfire risk. It would be open to the decision maker to determine that a Landscape Management Plan is not warranted for the purpose of the bushfire assessment in this instance.	

3 THE BUSHFIRE HAZARD – POTENTIAL IMPACT - LANDSCAPE AND VEGETATION DATA

3.1 Bushfire Attack Level (BAL) Assessment Summary (Contour Map Format)

EXPLANATORY INFORMATION

Caution! Future building works require a 'determined' BAL rating for building permit applications. When a BAL contour map is being used for planning assessment purposes, (as opposed to a building assessment purpose), the required 'determined' BAL rating typically is not able to be derived from the map (there are only limited scenarios where this is possible).

The BAL ratings identified from the map will more likely be only 'indicative' of what can be achieved – with planning compliance for this factor being achieved when BAL-29 is indicated.

Otherwise, an additional assessment of the site data for building application purposes is required, and potentially approval will need to be obtained for native vegetation modification and/or removal from the relevant authority.

Refer to Appendix B for additional information including interpretation of the BAL Contour Map.

3.1.1 BAL Determination Methodology and Location of Data and Results

LOCATION OF DATA & RESULTS					
BAL Determination Methodology		Location of the Site Assessment Data			Location of the Results
AS 3959:2018	Applied to Assessment	Classified Vegetation and Topography Map(s)	Calculation Input Variables		Assessed Bushfire Attack Levels and/or Radiant Heat Levels
			Summary Data	Detailed Data with Explanatory and Supporting Information	
Method 1 (Simplified)	Yes	Figure 3.1	Table 3.2	Appendix A1	Table 3.1 Table 3.3 / BAL Contour Map

3.1.2 BAL Ratings Derived from the Contour Map

Table 3.1: Indicative and determined BAL(s) for existing and/or proposed building works.

BUSHFIRE ATTACK LEVEL FOR EXISTING/PLANNED BUILDINGS/STRUCTURE ¹		
Building/Structure Description	Indicative BAL ²	Determined BAL ²
Hotel	N/A	BAL-19
Mixed-Use	N/A	BAL-12.5
Office	N/A	BAL-19
Social Hub	N/A	BAL-12.5
¹ The assessment data used to derive the BAL ratings is sourced from Table 3.1 and Figure 3.2 'BAL Contour Map'. ² Refer to the start of Section 3 for an explanation of indicative versus determined BAL ratings.		

3.1.3 Site Assessment Data Applied to Construction of the BAL Contour Map(s)

RELEVANT CLASSIFIED VEGETATION	
Identification of Classified Vegetation that is Relevant to the Production of the BAL Contour Map(s)	Relevant Vegetation Map
The relevant vegetation will be all areas of classified vegetation that exist at the time of the site assessment – both within the subject site (onsite) and external to the subject site (offsite).	Figure No.3.1
The relevant vegetation for the post-development BAL contour map will be any area of classified vegetation - both within the subject site (onsite) and external to the subject site (offsite) - that will remain at the intended end state of the subject development once earthworks, any clearing and/or landscaping and re-vegetation have been completed.	Figure No.3.2
Supporting Assessment Details: None required.	

Table 3.2: Calculation inputs applied to deriving the vegetation separation distances corresponding to different levels of potential radiant heat transfer.

DATA APPLIED TO CALCULATE THE SITE SPECIFIC VEGETATION SEPARATION DISTANCES CORRESPONDING TO POTENTIAL RADIANT HEAT TRANSFER LEVELS ¹												
Applied BAL Determination Method			METHOD 1 - SIMPLIFIED PROCEDURE (AS 3959:2018 CLAUSE 2.2)									
The Calculation Input Variables - Corresponding to the Applied BAL Determination Method ²												
Methods 1 and 2			Method 1		Method 2							
Vegetation Classification		FDI	Effective Slope		Site Slope	FFDI or GFDI	Flame Temp.	Elevation of Receiver	Flame Width	Fireline Intensity	Flame Length	Modified View Factor
			Applied Range	Measured								
Area	Class		degree range	degrees	degrees			K	metres	metres	kW/m	metres
1	(A) Forest	80	Upslope or flat 0	-	-	-	-	-	-	-	-	
2	(D) Scrub	80	Downslope >15-20	-	-	-	-	-	-	-	-	
3	(D) Scrub	80	Upslope or flat 0	-	-	-	-	-	-	-	-	
4	(C) Shrubland	80	Downslope >15-20	-	-	-	-	-	-	-	-	
5	(G) Grassland	80	Upslope or flat 0	-	-	-	-	-	-	-	-	
6	Excluded cl 2.2.3.2(e)	N/A	N/A	-	-	-	-	-	-	-	-	
7	Excluded cl 2.2.3.2(f)	N/A	N/A	-	-	-	-	-	-	-	-	
Note 1: The values used to indicate levels of potential radiant heat transfer (from fire in bushfire prone vegetation to exposed elements at risk), will be stated in subsequent tables as either as a bushfire attack level (BAL) and/or as kilowatts per square metre (kW/m2), as relevant to the application of the value and the type and use of the element at risk. Note 2: All data and information supporting the determination of the classifications and values stated in this table is presented in Appendix A. Where the values are stated as 'default' these are either the values stated in AS 3959:2018, Table B1 or the values calculated as intermediate or final outputs through application of the equations of the AS 3959:2018 BAL determination methodology. They are not values derived by the assessor.												

Table 3.3: Vegetation separation distances corresponding to the stated levels of potential radiant heat transfer.

THE CALCULATED (SITE SPECIFIC) VEGETATION SEPARATION DISTANCES CORRESPONDING TO THE STATED LEVEL OF POTENTIAL RADIANT HEAT TRANSFER (METRES) ¹									
Vegetation Classification		Maximum Radiant Heat Transfer (Flux)						10 kW/m ²	2 kW/m ²
		>40 kW/m ²	40 kW/m ²	29 kW/m ²	19 kW/m ²	12.5 kW/m ²	N/A ²		
		Bushfire Attack Levels							
Area	Class	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL12.5	BAL-LOW		
1	(A) Forest	<16	16-<21	21-<31	31-<42	42-<100	>100	-	-
2	(D) Scrub	<15	15-<21	21-<31	31-<43	43-<100	>100	-	-
3	(D) Scrub	<10	10-<13	13-<19	19-<27	27-<100	>100	-	-
4	(C) Shrubland	<10	10-<15	15-<22	22-<31	31-<100	>100	-	-
5	(G) Grassland	<6	6-<8	8-<12	12-<17	17-<50	>50	-	-
6	Excluded cl 2.2.3.2(e)	-	-	-	-	-	-	-	-
7	Excluded cl 2.2.3.2(f)	-	-	-	-	-	-	-	-
Note 1: The calculated results are illustrated in Figure 3.2 as a BAL Contour Map and/ or additional defining lines as necessary. All applied calculation input variables are presented in Table 3.2. A copy of the radiant heat calculator output for each area of classified vegetation is presented in Appendix A3.									
Note 2: The BAL-LOW rating does not represent a maximum level of radiant heat transfer. The rating is applied when the separation distance is at least 100m from all classified vegetation except Grassland, for which 50m applies.									

Figure 3.1
Classified Vegetation & Topography (Existing)
Lot 168 on Diagram 076646, Area : 1.8472 ha
81 Quill Way
HENDERSON
CITY OF COCKBURN

----- **LEGEND** -----

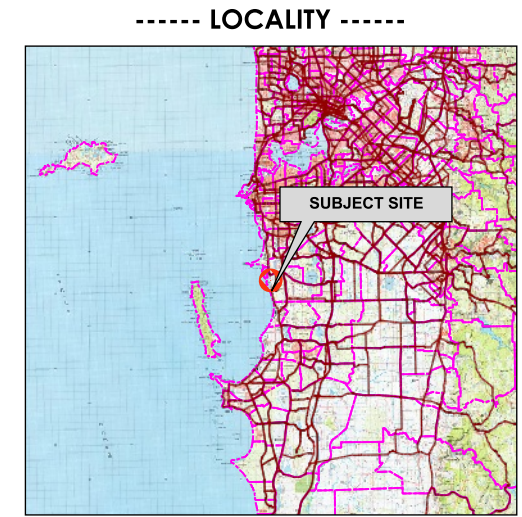
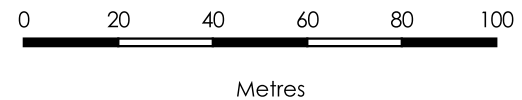
- Subject Site
- Cadastral
- Photo and Direction
- Hydrants
- 150m Assessment Area
- 100m Assessment Area

Buildings

- Hotel
- Mixed-Use
- Office
- Social Hub

Classified Vegetation

- Forest
- Shrubland
- Scrub
- Grassland
- Excluded 2,2,3,2 (e)
- Excluded 2,2,3,2 (f)



AERIAL IMAGERY: Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: Tessa 16-12-2025
SCALE (A3): 1 : 1600

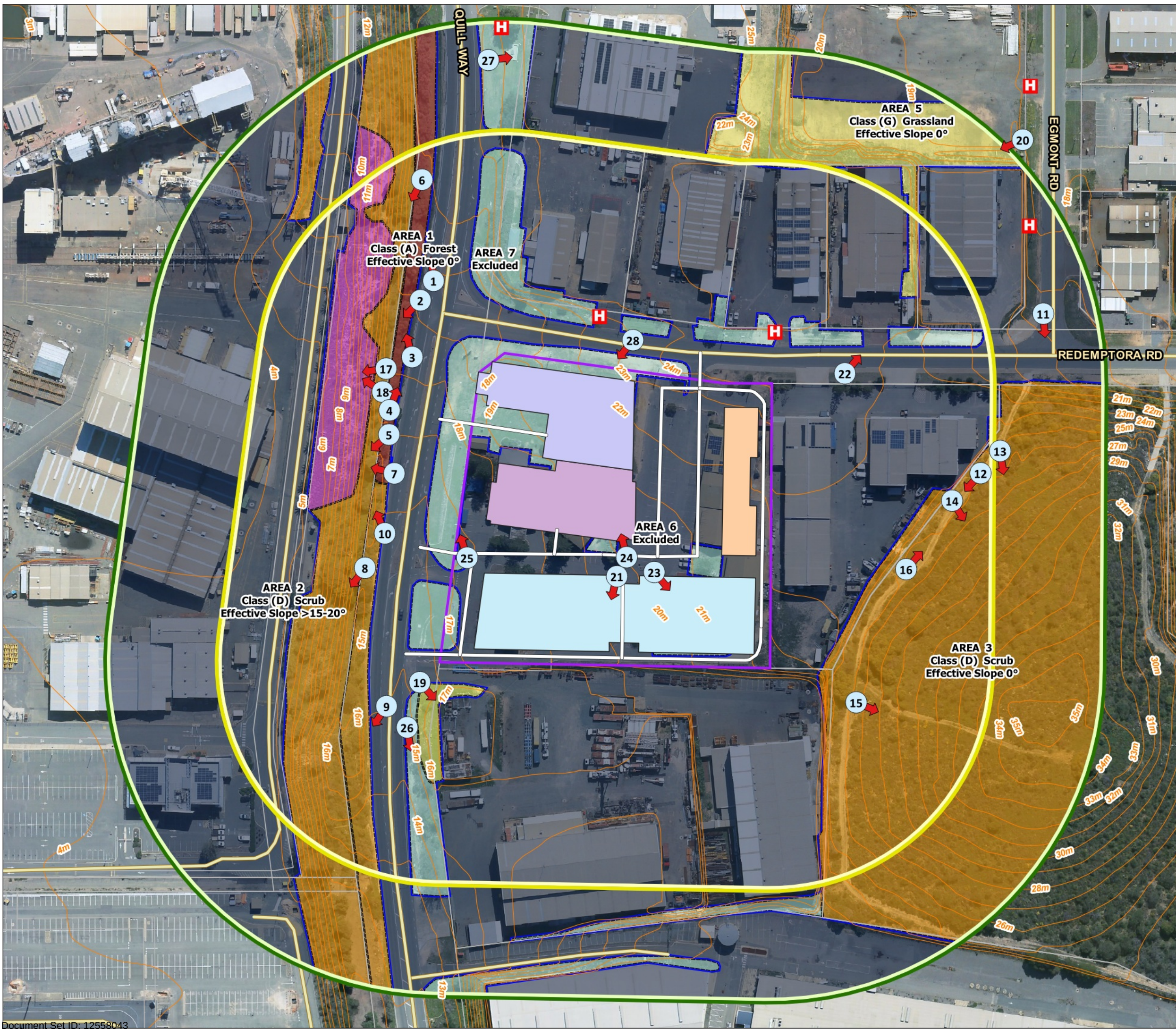
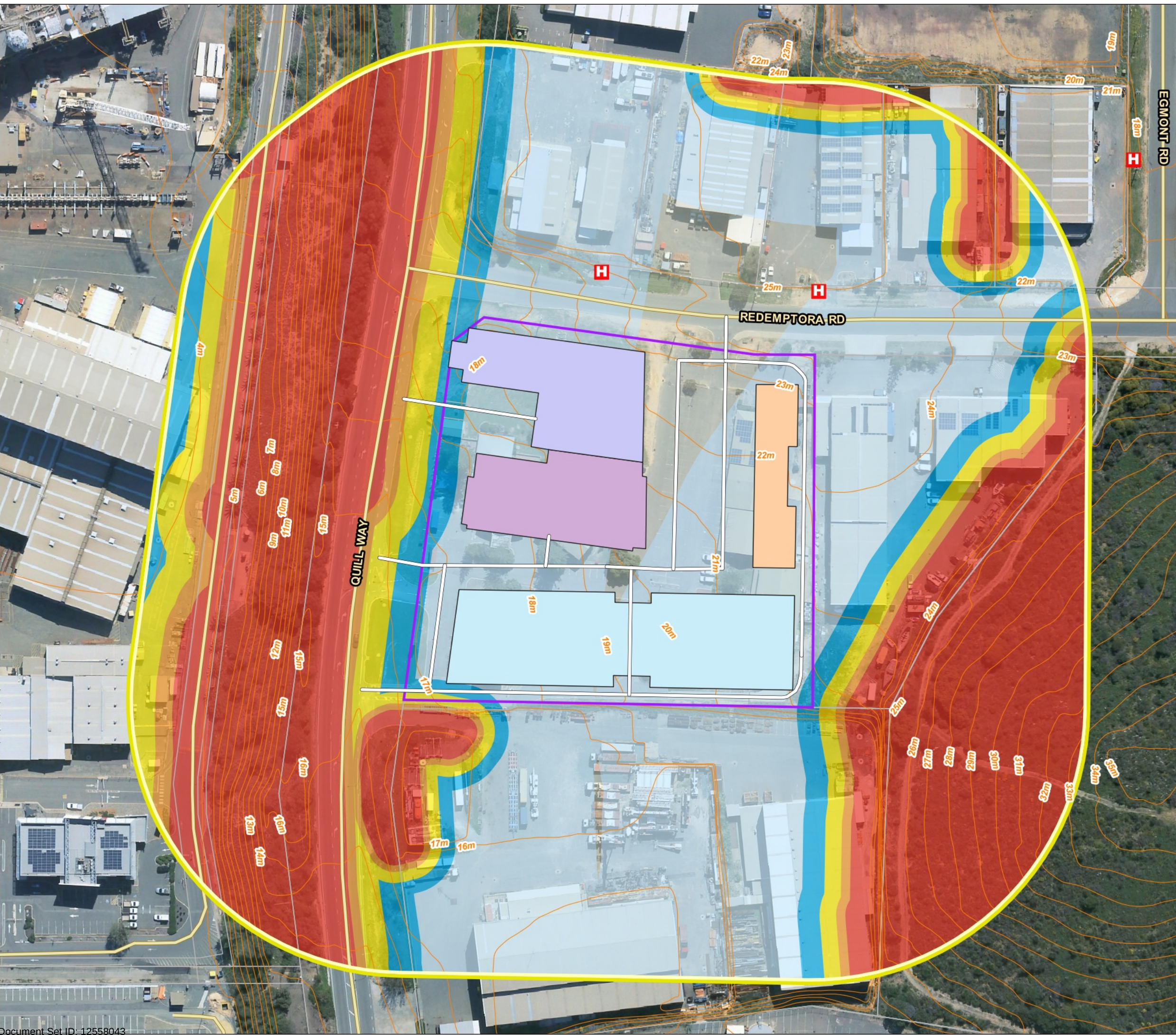


Figure 2
BAL Assessment Map

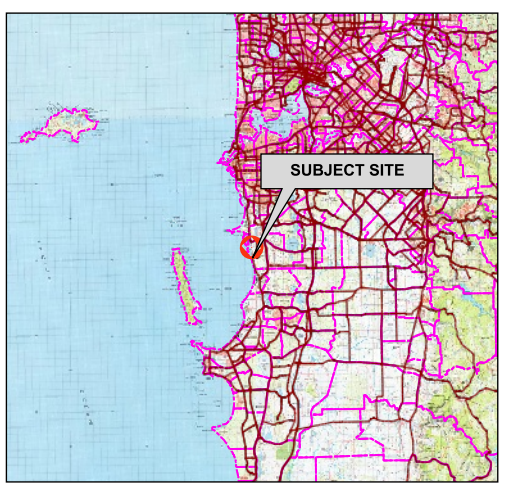
Lot 168 on Diagram 076646, Area : 1.8472 ha
81 Quill Way
HENDERSON
CITY OF COCKBURN



- **LEGEND** -----
- Subject Site
 - Cadastral
 - Hydrants
 - 100m Assessment Area
- Buildings**
- Hotel
 - Mixed-Use
 - Office
 - Social Hub
- Bushfire Attack Levels**
- BAL-FZ
 - BAL-40
 - BAL-29
 - BAL-19
 - BAL-12.5
 - BAL-LOW



----- **LOCALITY** -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: Tessa 16-12-2025
SCALE (A3): 1 : 1300

240816_Fig 3-2_BAL_81 Quill Way.qgz

4 IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

EXPLANATORY INFORMATION

Section Intent

1. To function as a concise initial reference point informing decision makers of key bushfire hazard issues specific to the planning proposal. This is achieved by providing context regarding:
 - (a) How the identified bushfire prone vegetation contributes to the level of risks to persons/property and infrastructure. With injury/death, damage/loss, and service disruption being the relevant risks associated with a bushfire event (i.e. 'bushfire risk'); and
 - (b) How likely the application of the relevant deemed to comply bushfire protection measures (i.e. the acceptable solutions of the BPC), will contribute to mitigating this bushfire risk to an acceptable or tolerable level.
2. To inform decision makers of any bushfire hazard issues that, in the opinion of the bushfire consultant, are likely to require specific consideration and are additional to a 'standard' review of the submitted BMP.
3. When necessary, to provide the bushfire consultant a location in the BMP where matters can be noted that would either not be considered or only be partially considered, under the assessments conducted in accordance with SPP 3.7/Guidelines. These include matters that would potentially reflect poorly on their professional integrity if ignored.

Achieving the Intent

1. Identify when environmental constraints are likely to limit a proposal's ability to apply effective bushfire protection measures that reduce bushfire hazard threat levels and/or persons/property exposure to those threats.
2. Identify if bushfire hazard threats and the level of those threats is significantly greater or lower than implied by the bushfire assessment methodologies applied in accordance with the Guidelines.
3. Stating when an outcomes-based approach has been applied as a justifiable alternative to compliance with the applicable acceptable solutions, and if the approach:
 - (a) Delivers an equivalent or lower level of residual bushfire risk than that intended to be derived from the application of those acceptable solutions; or
 - (b) Delivers higher level of residual risk and justifies why this can and should be tolerated.
4. Identifying when compliance with the BPC requires the establishment of vegetation management responsibilities - including formal management agreements when necessary – for vegetation on land adjoining a lot that is part of a planning proposal, but that land does or could have different legal ownership.
5. Identify other relevant issues as necessary. This may include the possible development, by the bushfire consultant, of required and/or recommended additional bushfire protection measures for consideration by the decision maker.

4.1 Environmental Considerations

BUSHFIRE PRONE VEGETATION WITHIN THE SUBJECT SITE (refer to detail in Section 2)		
Identified As	Relevance to the Planning Proposal	Implications for the Planning Proposal's Ability To Comply With The Bushfire Protection Criteria
Protected Vegetation	None	No Change
Required Removal of Native Vegetation	None	No Change
Planned Retention of Unprotected Native Vegetation	None	No Change
Planned Revegetation with Native Vegetation	None	No Change
<u>Assessment Supporting Details:</u> None required.		

4.2 Bushfire Assessment – Bushfire Attack Level (BAL)

BUSHFIRE ATTACK LEVEL ASSESSMENT – IDENTIFIED ISSUES	
The following issues regarding the ability of current or future development sites to be located within a lot and subject to a radiant heat impact not exceeding 29 kW/m ² (BAL-29) may have been addressed in the BMP. When applicable to the subject planning proposal this is identified and discussed.	
For a lot(s) of land that are part of this planning proposal, compliance with the BPC requires the establishment of ongoing vegetation management responsibilities on adjoining land that has, or could in the future, different legal ownership. This has created the requirement develop a formal agreement(s) with a third party(s) to manage vegetation in a modified and/or low threat state in perpetuity. Evidence of the agreement is provided in this BMP.	X
The planning proposal is for a staged subdivision. Classified vegetation within a subsequent stage of a subdivision requires removal or modification to ensure that proposed lots within the current stage of the subdivision achieve a development site with a radiant heat impact not exceeding 29 kW/m ² (BAL-29). This has created the requirement to establish a responsibility for the developer of the subsequent stage	X
Area(s) of land within a lot(s) are subject to BAL-40/FZ but sufficient area remains for a development site(s). At the discretion of the decision maker, this may require considering the application of building envelopes or restrictive covenants, to ensure the location of future buildings within a lot cannot be subject to BAL-40/FZ.	X

4.3 Ability to Comply with the Bushfire Protection Criteria (Relevant Elements Only)

IMPLICATIONS OF THE ENVIRONMENTAL CONSIDERATIONS AND BUSHFIRE ASSESSMENTS FOR THE PLANNING PROPOSAL'S ABILITY TO COMPLY WITH THE BUSHFIRE PROTECTION CRITERIA (BPC) VIA ACCEPTABLE SOLUTIONS AND/OR OUTCOMES (refer to detail in Section 5)					
Relevant Element of the BPC	Relevant Acceptable Solution	Implication Level	Ability to Comply	Outcomes-Based Approach Applied	Description/Comments (as required)
BPC- E2: Siting and Design	A2.2a: Siting and Design	Significant Positive	Currently Compliant	N/A	Not required
BPC- E3: Vehicular Access	A3.1 Public roads	Significant Positive	Currently Compliant	N/A	Not required
	A3.2a Access routes	Significant Positive	Currently Compliant	N/A	Not required

5 ASSESSMENT AGAINST THE BUSHFIRE PROTECTION CRITERIA (BPC)

EXPLANATORY INFORMATION

State Planning Policy 3.7 Bushfire (SPP 3.7) establishes policy outcomes (cl. 6) that "specify the role of planning and development in contributing to the overall objectives" of the policy. These policy outcomes are also incorporated within the four Elements of the bushfire protection criteria.

A planning proposal in a designated bushfire prone area is required to demonstrate that compliance with the bushfire protection criteria can be achieved.

The Planning for Bushfire Guidelines (Guidelines) establishes two pathways to demonstrate compliance with the bushfire protection criteria:

1. The deemed to comply pathway in which compliance with all relevant acceptable solutions associated with each Element, for a specific planning stage or use, is able to be demonstrated; or
2. When all relevant acceptable solutions cannot be fully achieved, the alternative pathway which utilises either the outcomes-based approach (established in SPP 3.7 cl. 6) alone, or a combination of the outcomes-based approach and the acceptable solutions (as established in the Guidelines s. 2.2.1).

Assessment of the planning proposal utilising the deemed to comply pathway is presented in this section of the BMP.

Notes:

1. *The additional primary bushfire protection measure of bushfire construction requirements that are to apply to certain classes of habitable buildings in WA (corresponding to their assessed Bushfire Attack Level) - is implemented through the process of applying the Building Code of Australia (Volumes 1 and 2 of the National Construction Code) in accordance with WA building legislation – not through any planning legislation].*
2. *The requirement to prepare a Bushfire Emergency Plan (BEP) for vulnerable land uses is an additional bushfire protection measure established by SPP 3.7. This is to be produced as a separate standalone operational document. However, some requirements identified in the BEP may necessarily incorporated into this BMP and the responsibilities it creates.*

5.1 Local Government Variations to Apply

EXPLANATORY INFORMATION

1. Local governments may add to or modify the acceptable solutions contained within the Guidelines, through regional or local variations that form part of a local planning strategy and/or local planning scheme to recognise special local or regional circumstances that reinforce the SPP 3.7 objectives and outcomes (via a scheme amendment or special control area).

This could include acceptable solutions that address topography, vegetation or climate to the satisfaction of the Western Australian Planning Commission (WAPC) that the modifications comply with the corresponding SPP 3.7 objectives and outcomes. (Planning for Bushfire Guidelines, s. 3.4, 2024).

2. Under the relevant state legislation (LPS Regulations 2015), SPP 3.7 does not apply to hosted or unhosted short-term rental accommodation. However, the local government under its Local Planning framework (i.e. Strategy / Scheme and Policy as applicable), may require that certain bushfire protection measures or variations to the measures (the bushfire protection criteria), established by SPP 3.7 and the Guidelines, are to be applied.

Endorsed regional or local variations to the acceptable solutions apply to the assessments against the Bushfire Protection Criteria for the planning proposal?

No

The proposed land use for hosted or unhosted short-term rental accommodation, and the local government requires certain bushfire protection measures, contained within the BPC, to be applied, that under the LPS Regulations 2015, would otherwise not be required?

No

5.2 Assessment Summary

HOW THE REQUIRED BUSHFIRE PLANNING OUTCOMES OF SPP 3.7 ARE ACHIEVED FOR THE PLANNING PROPOSAL		
DEVELOPMENT – VULNERABLE LAND USES (TOURISM AND DAY USES)		
The Bushfire Protection Criteria (BPC) Elements and Acceptable Solutions	Compliance Pathway Applied and Assessment Outcome	
	Deemed to Comply	Outcomes-Based Approach
	Requires Compliance with All Applicable Acceptable Solutions	Expert Opinion Identifies Achieving the Required SPP 3.7 Outcomes can be Demonstrated ¹
E2: SITING AND DESIGN Outcome: Ensure siting and design solutions (a) manage or mitigate the bushfire risk to people, property and infrastructure; and (b) avoid, or where unavoidable, minimises the clearing of native vegetation.	Fully Compliant	Not Required
A2.1a Siting and design	Fully Compliant	
A2.1b Siting in an area with a radiant heat impact exceeding 29 kW/m ² (BAL-40 or BAL-FZ)	Not Applicable	
A2.2 Asset Protection Zone (APZ)	Not Applicable	
A2.3 Clearing of native vegetation	Fully Compliant	
A2.4 Landscape management plan	Not Applicable	
A2.5 Onsite shelter (safer building) - schools	Not Applicable	
E3: VEHICULAR ACCESS Outcome:	Fully Compliant	Not Required
A3.1 Public roads	Fully Compliant	
A3.2a Access routes	Fully Compliant	
A3.2b Access routes for a day use with no overnight accommodation	Not Applicable	
A3.3a No-through roads	Not Applicable	
A3.3b No-through roads technical requirements	Not Applicable	
A3.4 Emergency access way	Not Applicable	
A3.5 Onsite shelter	Not Applicable	
A3.6 Fire service access route	Not Applicable	
A3.7 Internal vehicular access & private driveways	Fully Compliant	
A3.8 Signage	Fully Compliant	
E4: WATER SUPPLY	Fully Compliant	Not Required

A4.1 Water supply	Fully Compliant	
Note 1: Assessment details addressing the criteria established by SPP 3.7 cl. 7.5, are provided in the following section when this compliance pathway is applied.		

5.3 BPC 8.2: Development – Vulnerable Land Uses (Tourism and Day Uses) - Acceptable Solutions Assessment

5.3.1 Element 2: Siting and Design

ELEMENT 2: SITING AND DESIGN (DEVELOPMENT –VULNERABLE LAND USES (TOURISM USES AND DAY USES)

All details of acceptable solution requirements are established in the Planning for Bushfire Guidelines (Guidelines) – WA Department of Planning, Lands and Heritage (DPLH, as amended). When relevant, the 'Bushfire Management Plan Guidance for the Dampier Peninsula' (DPLH, 2021 Rev B), is also referenced.

EXPLANATORY INFORMATION

(Additional Information in Appendix B3 of BMP)

The APZ and the Planning Assessment

The assessment is a 'planning assessment' being conducted for planning approval purposes. This is not an assessment conducted for building approval purposes.

The acceptable solutions and required assessment are aligned with the following bushfire planning policy and guidance which must be given due regard:

SPP 3.7 Bushfire, Policy Objectives, cl. 5.5 states – “Prioritise the retention of native vegetation for biodiversity conservation, environmental protection and landscape amenity.

SPP 3.7 Bushfire, Policy Outcomes, cl. 6.2 - establishes that clearing of native vegetation is to be avoided or minimised in managing or mitigating bushfire risk.

The Guidelines, Appendix B2, B.2.1 states - “clearing or modification of native vegetation to reduce the radiant heat impact below 29 kW/m² is generally not supported.”

To comply with the relevant acceptable solutions, the subject planning proposal must demonstrate that the required minimum sized asset protection zone (APZ) can be installed, to the required technical requirements, surrounding a habitable or specified building and applying the APZ location constraints and allowances established by the Guidelines.

The required minimum dimensioned APZ is that which ensures that the relevant existing and/or proposed buildings works will be subject to the BAL-29 level of radiant heat exposure. The only exceptions to this will be when a lower level of radiant heat exposure is a requirement of an acceptable solution, or a protection measure established by the application of the outcomes-based approach (e.g. 10 kW/m²) in which case this is stated in the assessment and the responsibilities checklist.

Note that the derivation of 'determined' BAL ratings for future building works, to be used in building permit applications, is not an intended outcome of this planning assessment. However, in limited situations, these may be able to be determined.

Important APZ Installation Information

An approved BMP, unless stated otherwise, is only approving the installation of an APZ comprised of the minimum dimensions that ensures the radiant heat impact of a bushfire (on building works) does not exceed 29 kW/m² (BAL-29).

The 'minimum' dimensions of the approved APZ are also the 'maximum' approved dimensions when installation of the APZ will require the modification/removal of native vegetation. Installing a larger dimensioned APZ - to lower the determined BAL rating of specific building works - will need additional approval from the relevant authority (refer to the relevant local government) when modification/removal of native vegetation is required.

Refer to the bushfire protection measure implementation checklist in Section 6 for the dimensions applicable to this planning proposal.

State Planning Policy 3.7 Bushfire - Outcomes to be Achieved	
O2	SPP 3.7, 6.2: 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.
E2	Statement for Compliance with Element E1 – The Deemed to Comply Pathway
	The planning proposal is fully compliant with all applicable acceptable solutions and therefore achieves the required outcomes of this element.
	Alternative Pathway Applied to Achieve SPP 3.7 Outcomes
	N/A
ACCEPTABLE SOLUTIONS - ASSESSMENT STATEMENTS	
Check Box Legend: ☒ Relevant & met ☒ Relevant & not met ☐ Not relevant	
A2.1a Siting and design	Applicable: Yes Compliant: Yes
☒ ☐ ☐	Every habitable building achieves a radiant heat impact not exceeding 29 kW/m ² (BAL-29).
☐ ☐ ☐	A2.1a is not applicable to the subject planning proposal as it cannot be complied with and an alternative acceptable solution A2.2a (dealing with the same protection measure), is provided and establishes a higher level of radiant heat impact that will be considered for planning approval, if it can be satisfactorily demonstrated that the allowable constraints apply to the subject development site.
<u>Assessment Supporting Details:</u> All habitable buildings can achieve a BAL-12.5	
A2.1b Asset Protection Zone (APZ)	Applicable: No Compliant: -
☐ ☐ ☐	A2.1b is not applicable to the subject planning proposal because it is a requirement associated with the compliant application of A2.1a. Given A2.1a is not applicable to the subject planning proposal, A2.1b is also not applicable.
Where a habitable building(s) cannot be wholly within an area with a radiant heat impact not exceeding 29 kW/m ² (BAL-29) in its pre-development state, an indicative APZ is to be provided and meet the following requirements for width, location and management:	
☐ ☐ ☐	APZ Width: The APZ, when measured from the development site (or any external wall or supporting post or column), is of sufficient size to ensure the radiant heat impact of a bushfire does not exceed 29 kW/m ² (BAL-29) to any part of the building, in all circumstances.
☐ ☐ ☐	APZ Location – Option 1: The indicative 'Planning BAL-29' APZ can be contained solely within the boundaries of the lot.
☐ ☐ ☐	APZ Location – Option 2: The indicative 'Planning BAL-29' APZ cannot be contained solely within the boundaries of the lot. However, the relevant vegetation on the adjoining land / lot(s) is, and will continue to be, on an ongoing basis in perpetuity, low threat as per: - Clause 2.2.3.2 of AS 3959 (including non-vegetated land such as a sealed or unsealed road, or a water body); or - The requirements of the Guidelines Appendix B.2, Table 9 – APZ technical requirements; or

- The alternative standard in the local planning scheme (when it exists).

☐ ☐ ☒ **APZ Management:** The APZ is (or can and will be) managed in accordance with the requirements established in the Guidelines, Appendix B.2 or the alternative standard in the gazetted local planning scheme (when it exists).

Assessment Supporting Details:

A2.1b is not applicable because the habitable buildings can be wholly within an area with a radiant heat impact not exceeding 29 kW/m² (BAL-20) in its pre-development state.

A2.2a Siting in an area with a radiant heat impact exceeding 29 kW/m² (BAL-40 or BAL-FZ)

Applicable:

No

Compliant:

-

☒ ☐ ☐ A2.2a is not applicable to the subject planning proposal because A2.1a can be complied with.

☐ ☐ ☒ The habitable building(s) or structure(s) is sited with a radiant heat impact exceeding 29 kW/m² (i.e. BAL-40 or BAL-FZ) and is unable to establish an APZ in accordance with A2.1b. However, meeting **all** of the following established requirements allows consideration for approval.

☐ ☐ ☒ There are no bushfire construction standards required under the BCA; and

☐ ☐ ☒ There are demonstrated site characteristics and/or environmental values that prevent the achievement of a radiant heat impact not exceeding 29 kW/m² (BAL-29); and

☐ ☐ ☒ It is acknowledged within the bushfire management plan that it is understood that in the event of a bushfire it is possible the building or structure will be damaged or destroyed; and

☐ ☐ ☒ The vegetation immediately surrounding the building(s) or structure(s) can and will be managed as defendable space in accordance with Appendix B.2, Table 9 – APZ technical requirements.

Assessment Supporting Details: None required.

A2.2b Asset Protection Zone (APZ)

Applicable:

No

Compliant:

-

☒ ☐ ☐ A2.2b is not relevant to the subject planning proposal because A2.2a is not applicable.

☐ ☐ ☒ The provision of an APZ with width and location requirements in accordance with acceptable solution A2.1b (to result in BAL-29 exposure), cannot be achieved for the subject planning proposal. Instead, the vegetation immediately surrounding the habitable building, to the extent possible within the lot, is to be managed as defendable space in accordance with Appendix B.2, Table 9 – APZ technical requirements.

Assessment Supporting Details: None required.

A2.3 Clearing of native vegetation

Applicable:

Yes

Compliant:

Yes

☒ ☐ ☐ The development avoids, or where unavoidable, minimises the clearing of native vegetation.

Assessment Supporting Details: No native vegetation is required to be removed or managed.

A2.4 Landscape management plan

Applicable:

No

Compliant:

-

- ☐ ☐ ☒ A landscape management plan has been prepared to identify ongoing onsite vegetation management.

Assessment Supporting Details: There are development application situations where this acceptable solution is unlikely to serve a purpose and would not contribute meaningfully to the reduction of bushfire risk or therefore the required outcomes of SPP 3.7. Consequently, it is an unnecessary acceptable solution.

The development is classified as a vulnerable land use, which would typically require a Landscape Management Plan. However, as there are no areas of classified vegetation within the site requiring management, and the proposed landscaping is limited to small garden beds surrounded by carparks that present no bushfire risk, a Landscape Management Plan is not considered necessary in this instance.

A2.5 Onsite shelter (if required)

Applicable:

No

Compliant:

-

- ☐ ☐ ☒ An onsite shelter is proposed. It will comply with A3.5 Onsite shelter and can and will meet all the relevant following established requirements.
- ☐ ☐ ☒ An onsite shelter building(s) is proposed for which there is sufficient separation distance from the bushfire prone vegetation to avoid exposure to a radiant heat flux exceeding 10 kW/m² (applying an assumed flame temperature of 1200 K).
- ☐ ☐ ☒ The building(s) identified as suitable for onsite shelter is (or can and will be) designed in accordance with Building Code of Australia and the ABCB Design and Construction of Community Bushfire Refuges Handbook.
- ☐ ☐ ☒ An open space area is proposed to function as an onsite shelter. There is sufficient separation distance between the open space area and the bushfire prone vegetation to avoid exposure to a radiant heat flux exceeding 2 kW/m² (applying an assumed flame temperature of 1200 K).
- ☐ ☐ ☒ Pedestrian paths to any onsite shelter(s) are (or can and will be) provided and clearly signposted.

Assessment Supporting Details: None required.

5.3.2 Element 3: Vehicular Access

ELEMENT 3: VEHICULAR ACCESS (DEVELOPMENT –VULNERABLE TOURISM LAND USES AND DAY USES)					
All details of acceptable solution requirements are established in the Planning for Bushfire Guidelines (Guidelines) – WA Department of Planning, Lands and Heritage (DPLH, as amended). When relevant, the 'Bushfire Management Plan Guidance for the Dampier Peninsula' (DPLH, 2021 Rev B), is also referenced. The technical construction requirements for access types and components are established in the Guidelines Appendix B.3, Table 10 (certain information is copied and presented in Appendix C of this BMP). The local government will advise the proponent where different requirements are to apply and when any additional specifications such as those for signage and gates are to apply. These are included as an appendix if requested by the local government. Note: The following understanding of what constitutes a 'road', and the stated definitions can be important considerations for assessments against an acceptable solution for Element 3. - Guidelines Appendix B3: Vehicular Access, identifies a 'road' as being either a public road (that includes a no-through road) or a perimeter road. All other access types (i.e. emergency access ways, fire service access routes, battle-axes and private driveways) are considered a different class of access i.e. they are not 'roads'. - SPP 3.7 defines 'no-through road' as "a cul-de-sac or dead end road". - SPP 3.7 defines 'two-way access' as "vehicular access from a site in two different directions to at least two different suitable destinations". This allows for required access to potentially be provided by an emergency access way.					
O3	State Planning Policy 3.7 Bushfire - Outcomes to be Achieved				
	SPP 3.7, 6.3: 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.				
E3	Statement for Compliance with Element E1 – The Deemed to Comply Pathway				
	The planning proposal is fully compliant with all applicable acceptable solutions and therefore achieves the required outcomes of this element.				
	Alternative Pathway Applied to Achieve SPP 3.7 Outcomes				
	N/A				
ACCEPTABLE SOLUTIONS - ASSESSMENT STATEMENTS					
Check Box Legend:		☒ Relevant & met	☒ Relevant & not met	☐ Not relevant	
A3.1 Public roads		Applicable:	Yes	Compliant:	Yes
☒	☐	☐	Public roads meet (or can and will meet) the technical requirements for minimum vertical clearance (4.5 metres) and minimum weight capacity (15 tonnes - includes bridges, culverts).		
☒	☐	☐	Public roads meet (or can and will meet) the technical requirement <u>recommended</u> in the Guidelines in Appendix B3, B3.1 for a minimum horizontal clearance of 6 metres.		

☒ ☐ ☐	Public road technical requirements for minimum horizontal clearance, gradients and curves should be in accordance with the class of road as specified in the Public Works Engineering Australasia (IPWEA) subdivision guidelines, Liveable Neighbourhoods, Austroads Standards, any applicable or relevant Main Roads standards, supplements, policies and any applicable or relevant local government standards or policies. The assessment conducted for the bushfire management plan indicates that it is likely that the proposed development can and will comply with the requirements. However, the applicable class of road, the associated technical requirements and subsequent proposal compliance, will need to be confirmed with the relevant local government and/or Main Roads WA.
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Assessment Supporting Details: All public roads can and will comply with the above requirements

A3.2a Access routes	Applicable:	Yes	Compliant:	Yes
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☐ ☐ ☒	A3.2a is not applicable to the subject planning proposal because it is for a day use and will not provide any overnight accommodation. Therefore A3.2b is the applicable acceptable solution.
☐ ☐ ☒	The subject site is in Area 1 (Urban) (Map of BPA). Public road access, with all-weather surfaces, is to be provided to at least one suitable destination.
☒ ☐ ☐	The subject site is in Area 2 (Map of BPA). Public road access, with all-weather surfaces, is provided in two different directions, to at least two different suitable destinations.

Assessment Supporting Details: Public road access is available to the site via sealed public road Quill Way and Redemptora Road. This links with the broader road network and provides access to non-bushfire prone areas/"suitable destinations" within the Henderson Industrial Area. These roads provide two-way public road connection/access to the site to at least two different suitable destinations to the North, South and East of the site.

A3.2b Access routes for a day use with no overnight accommodation	Applicable:	No	Compliant:	-
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☒ ☐ ☐	A3.2b is not applicable to the subject planning proposal because it is not a day use and provides overnight accommodation. Therefore A3.2a is the applicable acceptable solution.
☒ ☐ ☒	The subject site is in Area 1 (Map of BPA). Public road access, with all-weather surfaces, is (or can and will be) provided in one direction to a single suitable destination.
☐ ☐ ☒	The subject site is in Area 2 (Map of BPA). Public road access, with all-weather surfaces, is (or can and will be) provided in two different directions, to at least two different suitable destinations.
☐ ☐ ☒	The subject site is in Area 2 (Map of BPA). Public road access, with all-weather surfaces, is (or can and will be) provided in one direction to a single suitable destination. The Guidelines establish this as an acceptable solution when the following established requirements can be met:
☐ ☐ ☒	It is demonstrated that secondary access (including an emergency access way), cannot be provided due to site constraints; and
☐ ☐ ☒	The vulnerable land use (tourism use or any day use) is within a residential built out area; or
☐ ☐ ☒	The required Bushfire Emergency Plan (BEP) provides for:

- Closure during days forecasted to be an extreme or catastrophic fire danger rating and/or days a total fire ban is declared; and
- For the early evacuation of patrons and staff; or

☐ ☐ ☒ The required Bushfire Emergency Plan (BEP) provides for non-operation during the bushfire season.

Assessment Supporting Details: None required.

A3.3a No-Through Roads

Applicable:

No

Compliant:

-

- ☐ ☐ ☒ A3.3a is not applicable to the subject planning proposal because the subject site is in Area 1 (Urban) (Map of BPA), for which there is no limitation on no-through road lengths.
- ☒ ☐ ☐ The subject site is in Area 2 (Map of BPA) but A3.3a is not applicable to the subject planning proposal because access to the subject site is via a private driveway from a public road providing two-way access.
Consequently, vehicular access to the subject site does not have a no-through road component.
- ☐ ☐ ☒ The subject site is in Area 2 (Map of BPA); Access to the subject site is via a no-through public road that does not exceed the established maximum of 200 metres in length from the subject site boundary to an intersection where two-way access is provided.
- ☐ ☐ ☒ The subject site is in Area 2 (Map of BPA); Access to the subject site / lot(s) is via a no-through public road that exceeds the established maximum of 200 metres in length from the proposed lot(s) boundary to an intersection where two-way access is provided.
It is demonstrated that there are site constraints and/or that there are no alternative design options to achieve the 200 metre maximum length.
Compliant two-way access within 200 metres from the proposed lot(s) boundary will be established through the provision (or existence) of a compliant emergency access way through the application of acceptable solution A3.4: Emergency Access Way.
- ☐ ☐ ☒ The subject site is in Area 2 (Map of BPA); Access to the subject site is via a no-through public road that exceeds the established maximum of 200 metres in length from the proposed lot(s) boundary to an intersection where two-way access is provided.
However, the additional road length can be considered to satisfy the acceptable solution as the following three established requirements can be met:
- ☐ ☐ ☒ 1. It is demonstrated that that an alternative access, including an emergency access way, cannot be provided due to site constraints; and
- ☐ ☐ ☒ 2. The no-through road travels towards a suitable destination; and
- ☐ ☐ ☒ 3. The balance of the no-through road that is greater than 200 metres from the subject site is:
- Wholly within a residential built-out area; or
 - Wholly within an area designated Area 1 (Urban) on Map of BPA; or
 - Potentially subject to radiant heat levels from adjacent bushfire prone vegetation not exceeding 12.5 kW/m² / BAL-LOW (Guidelines Figure 29).
- ☐ ☐ ☒ The subject site is in Area 2 (Map of BPA) but A3.3a is not applicable to the subject planning proposal as the identified single access route to a suitable destination satisfies the relevant 'access' acceptable

solution A3.2b (for a day use that will not provide any overnight accommodation and satisfies the two-way access exception conditions – refer to the A3.2b assessment).

Compliant access can be via a no-through road - irrespective of length – because the requirement for an “intersection within 200 metres of the subject lot boundary from which two-way access is available”, is not relevant to a compliant single access route to one suitable destination.

Note to decision makers:

DPLH officer level advice has been received by BPP stating their agreement with the above interpretation of the relevant acceptable solutions and that consideration of the relative level of risk for the different use scenarios is incorporated into those acceptable solutions.

The intended risk outcome is to ensure that the residual level of risk to 'vulnerable' persons can be considered as equally acceptable or tolerable for both compliant overnight stay and day use only scenarios.

The application of this approach is identified in the DPLH SPP 3.7 Explanatory Note (25/11/2024), Part 3 where it is identified risk levels are being considered “... specific bushfire protection criteria for day uses ... have been introduced. This acknowledges the lesser risk and increased opportunities for businesses approved for development to close on days with an extreme or catastrophic fire danger rating.”

Assessment Supporting Details: None required.

A3.3b No-through roads technical requirements

Applicable:

No

Compliant:

-

- ☒ ☐ ☐ A3.3b is not applicable to the subject planning proposal because the assessment against A3.3a has established that vehicular access to the site does not have a no-through road component.
- ☐ ☐ ☒ The no-through road meets (or can and will meet) the public road technical requirements for minimum vertical clearance (4.5 metres) and minimum weight capacity (15 tonnes - includes bridges, culverts).
- ☐ ☐ ☒ The no-through road meets (or can and will meet) the public road technical requirement recommended in the Guidelines in Appendix B3, B3.1 for a minimum horizontal clearance of 6 metres.
- ☐ ☐ ☒ The no-through road (i.e. public road) technical requirements for minimum horizontal clearance (excluding perimeter road), gradients and curves should be in accordance with the class of road as specified in the Public Works Engineering Australasia (IPWEA) subdivision guidelines, Liveable Neighbourhoods, Austroads Standards, any applicable or relevant Main Roads standards, supplements, policies and any applicable or relevant local government standards or policies.
- ☐ ☐ ☒ The turnaround area/head meets (or can and will meet) the design requirements established by the Guidelines, Figure 30.

Assessment Supporting Details: None required

A3.4 Emergency access way

Applicable:

No

Compliant:

-

- ☒ ☐ ☐ A3.4 is not applicable to the subject planning proposal because it has been assessed as compliant with A3.2a and 3.2b (and A3.3a and A3.3b when applicable), and an emergency access way is not required.
- ☐ ☐ ☒ A3.4 is applicable to the subject planning proposal because an emergency access way currently exists and has been part of the subject planning proposal's ability to comply with A3.2a.

Consequently, it will apply with regard to meeting (or being able to meet), the specified technical requirements and ongoing management requirements, rather than its installation.

- ☐ ☐ ☒ The requirements established for acceptable no-through road access to the subject site in A3.2 and A3.3 cannot be achieved. An emergency access way (EAW) is provided as the alternative access and can be considered as an acceptable solution, when the following established requirements are met:
- ☐ ☐ ☒ It is demonstrated that site constraints prevent the requirements of A3.2 and A3.3 being met; and
- ☐ ☐ ☒ The access way is no more than 500 metres in length, provides a through connection to a public road connecting to a public road network; and
- ☐ ☐ ☒ The access way meets the technical requirements (Guidelines Appendix B3, Table 10) for minimum horizontal clearance (Map of BPA Area 1 (Urban) = 6 metres and Area 2 = 10 metres), minimum vertical clearance (4.5 metres), minimum weight capacity (15 tonnes - includes bridges, culverts) and minimum inner radius of road curves (8.5 metres); and
- ☐ ☐ ☒ The access way meets the technical requirements (Guidelines Appendix B3, Table 10) for crossfalls and gradients for different surfaces and dips; and
- ☐ ☐ ☒ The access way will be signposted and, if gated, gates will open for the whole carriageway width and remain unlocked; and
- ☐ ☐ ☒ The proponent has obtained consent from the local government, that it will accept care, control and management responsibilities for the emergency access way.

Assessment Supporting Details: None required

A3.5 Onsite shelter

Applicable:

No

Compliant:

-

- ☒ ☐ ☐ A3.5 is not applicable to the subject planning proposal because the proposal has been assessed as compliant with the relevant part of A3.2, A3.3 (if applicable) and A3.4 (if required), providing two-way access and an onsite shelter is not required.
- ☐ ☐ ☒ The proposed development has a capacity of up to a maximum of 50 guests and employees at any one time and the requirement for compliant two-way access cannot be achieved. Consequently, an onsite shelter will be provided in accordance with A2.5.
- ☐ ☐ ☒ The proposed development has a capacity of up to a maximum of 50 guests and employees at any one time and the requirement for compliant two-way access cannot be achieved and the bushfire practitioner considers an onsite shelter not necessary.
An outcomes-based approach may be prepared to determine the level of relevant risks to persons and property and whether adequate protection measures can be implemented to result in an acceptable or tolerable level of residual risk.
- ☐ ☐ ☒ The proposed development has a capacity greater than 50 guests and employees at any one time, the requirement for compliant two-way access cannot be achieved and/or the bushfire practitioner considers an onsite shelter not necessary.
An outcomes-based approach may be prepared to determine the level of relevant risks to persons and property and whether adequate protection measures can be implemented to result in an acceptable or tolerable level of residual risk.

Assessment Supporting Details: None required

A3.6 Fire service access route

Applicable:

No

Compliant:

-

- ☐ ☐ ☒ A3.6 is not applicable to the subject planning proposal because the proposed lots only adjoin Class G Grassland (classified under AS 3959) or adjoin classified vegetation that is not Class G Grassland but for which firefighter access is currently available.
- ☐ ☐ ☒ The proposed lots adjoin classified vegetation that is not Class G Grassland (classified under AS 3959). A fire service access route is to be provided for firefighter access to this vegetation. It can and will meet the following established requirements:
- ☐ ☐ ☒ The access route is a through-route with no dead-ends, no further than 500 metres from a public road and will be signposted; and
- ☐ ☐ ☒ The access route meets (or can and will meet) the technical requirements (Guidelines Appendix B3, Table 10) for minimum horizontal clearance (Map of BPA Area 1 (Urban) = 6 metres and Area 2 = 10 metres), minimum vertical clearance (4.5 metres), minimum weight capacity (15 tonnes - includes bridges, culverts) and minimum inner radius of road curves (8.5 metres); and
- ☐ ☐ ☒ The access route meets (or can and will meet) the technical requirements (Guidelines Appendix B3, Table 10) for crossfalls and gradients for different surfaces and dips; and
- ☐ ☐ ☒ When gated, gates will open the whole carriageway width and can be locked by the local government and/or the emergency services, when keys are provided for each gate; and
- ☐ ☐ ☒ The proponent has obtained consent from the local government, that it will accept care, control and management responsibilities for the fire service access route (unless it is a Crown reserve managed by another entity).

Assessment Supporting Details: A FSAR is intended to be an unobstructed accessway which travels along an area of classified vegetation adjoining a proposed subdivision. The FSAR provides fire crews with an accessway adjoining the vegetated area which is unobstructed by boundary fences and therefore more practical than accessing firebreaks on separate properties.

For a single lot development application a FSAR does not serve a purpose, is not and would not contribute meaningfully to the reduction of bushfire risk or therefore the required outcomes of SPP 3.7.

A3.7 Internal vehicular access and private driveways

Applicable:

Yes

Compliant:

Yes

- ☐ ☐ ☒ A3.7 is not applicable to the subject planning proposal because the proposal does not contain internal vehicular access and private driveways longer than 70 metres.
- ☒ ☐ ☐ There are internal vehicular access and private driveways longer than 70 metres and the subject site meets (or can and will meet) all the following established requirements:
- ☒ ☐ ☐ The private driveway meets (or can and will meet) the technical requirements (Guidelines Appendix B3, Table 10) for minimum horizontal clearance (6 metres) or where not required to comply with the Guidelines width, it meets the requirements of the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision; and

☒ ☐ ☐	The private driveway meets (or can and will meet) the technical requirements (Guidelines Appendix B3, Table 10) for minimum vertical clearance (4.5 metres), minimum weight capacity (15 tonnes - includes bridges, culverts) and minimum inner radius of road curves (8.5 metres); and					
☒ ☐ ☐	The private driveway meets (or can and will meet) the technical requirements (Guidelines Appendix B3, Table 10) for the gradients of different surfaces and dips; and					
☒ ☐ ☐	Passing bays are (or can and will be) installed 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 will be a minimum 6 metres; and					
☒ ☐ ☐	The turnaround area/head meets (or can and will meet) the design and location (within 30m of main habitable building) requirements established by the Guidelines (refer to Figures 30 and 38).					
<u>Assessment Supporting Details:</u> The proposed accessways (as per Figure 1.2) will be compliant with the Guidelines.						
<table border="1"> <tr> <td>A3.8 Signage</td> <td>Applicable:</td> <td>Yes</td> <td>Compliant:</td> <td>Yes</td> </tr> </table>		A3.8 Signage	Applicable:	Yes	Compliant:	Yes
A3.8 Signage	Applicable:	Yes	Compliant:	Yes		
☒ ☐ ☐	Signage can and will be provided within the subject site, advising of where each access route travels to and the distance and general information on what to do in the event of a bushfire.					
<u>Assessment Supporting Details:</u> The BEP will be prepared at a later stage to accompany this BMP. The BEP will identify the evacuation routes to ensure the client is aware of the local access options.						

5.3.3 Element 4: Water Supply

ELEMENT 4: WATER SUPPLY (DEVELOPMENT –VULNERABLE TOURISM LAND USES AND DAY USES)			
All details of acceptable solution requirements are established in the Planning for Bushfire Guidelines (Guidelines) – WA Department of Planning, Lands and Heritage (DPLH, as amended). When relevant, the 'Bushfire Management Plan Guidance for the Dampier Peninsula' (DPLH, 2021 Rev B), is also referenced.			
O4	State Planning Policy 3.7 Bushfire - Outcomes to be Achieved		
	SPP 3.7, 6.4: Ensure that sufficient water is available and accessible for emergency services, to enable people, property and infrastructure to be defended from bushfire.		
E4	Statement for Compliance with Element E1 – The Deemed to Comply Pathway		
	The planning proposal is fully compliant with all applicable acceptable solutions and therefore achieves the required outcomes of this element.		
	Alternative Pathway Applied to Achieve SPP 3.7 Outcomes		
	N/A		
ACCEPTABLE SOLUTIONS - ASSESSMENT STATEMENTS			
Check Box Legend: ☒ Relevant & met ☒ Relevant & not met ☐ Not relevant			
A4.1 Water supply		Applicable:	Yes
		Compliant:	Yes
☒	☐	☐	Evidence is provided that a reticulated water supply, available for firefighting purposes, exists or can be provided. Hydrant connection(s) will be provided in accordance with the specifications established by the relevant water supply authority (refer also to hydrant location information in Appendix D of this BMP).
☐	☐	☐	The provision of or the specifications of a reticulated water supply cannot be met. Evidence is provided that a sufficient, sustainable and accessible non-reticulated water supply, dedicated to firefighting purposes, can and will be provided in accordance with the specifications established in the Guidelines, Appendix B4: Water Supply.
☐	☐	☐	The planning proposal is for a vulnerable land use development (not camping ground). For <u>each habitable building</u> a water supply, dedicated to firefighting purposes, will be stored in tanks at 10,000 litres of water per 500 m ² of floor area up to 50,000 litres in total.
☐	☐	☐	The planning proposal is for a 'camping ground' vulnerable land use development. The required water supply dedicated to firefighting purposes is to be determined at the discretion of the local government and this will be complied with. Evidence is provided of the determined requirements and is presented as an Addendum in this BMP.
☐	☐	☐	The above ground water supply tank(s), dedicated to firefighting purposes (and tank stand(s) when applicable), will be constructed of non-combustible material and as necessary, will comply with AS/NZS 3500.1 (as amended). This includes not using the same water supply for both domestic use and firefighting purposes. If a combined use tank(s) is to be used, it will separate the storage compartments in accordance with the provisions of the standard (i.e. internal installation of double partition walls).

- | | | | |
|--------------------------|--------------------------|----------------------------------|--|
| ☐ | ☐ | ☒ | The outlet connection fitting for the water supply tank(s), dedicated to firefighting purposes, will have a full flow valve and a 50 mm male camlock coupling. |
| ☐ | ☐ | ☒ | All above-ground, exposed water supply pipes and fittings will be metal and positioned facing away from the source of bushfire hazard and/or shielded against potential bushfire impact – to allow access by emergency services. |
| ☐ | ☐ | ☒ | The planned provision of the water supply tank(s) will consider locations relative to the bushfire hazard. Location of the tank(s) and management of vegetation will ensure vegetation will not exist over or against the tank(s) and that sufficient separation exists to limit the potential bushfire impact.
Due consideration will also be given to the provision of sufficient separation from vegetation and/or shielding for the protection of firefighters accessing the water supply. |
| ☐ | ☐ | ☒ | An unobstructed, hardened ground surface, for emergency services vehicle access, can and will be installed within 4 metres of the water supply outlet (refer to Figure 39, Guidelines). |
| ☐ | ☐ | ☒ | It is proposed for a water supply tank outlet(s) is to be remote from the tank, the local government and DFES will have been consulted regarding the application and location. The determined requirements are presented as an Addendum in this BMP. |
| ☐ | ☐ | ☒ | Planned below ground water supply tank(s), dedicated to firefighting purposes, will have at least a 200 mm diameter access hole – or a suitable inspection opening - to allow tankers or emergency services vehicles to refill direct from the tank, with the outlet location clearly marked on the surface. As necessary, the tanks(s) will comply with AS/NZS 3500.1 (as amended). |
| ☐ | ☐ | ☒ | The planning proposal intends that a suitable static water supply is to be provided by a dam or river that complies with the DFES guidelines for acceptable sources of water for firefighting purposes.
Evidence is provided that: <ul style="list-style-type: none"> • Demonstrates that the water level will be maintained above the top of the highest fire brigade suction point; and • Approval has been obtained from the decision maker in consultation with the emergency services and is presented as an Addendum in this BMP. |
| ☐ | ☐ | ☒ | The BPC Explanatory Notes in Appendix B.4: Water Supply introduce additional measures as best practice but voluntary. The following measure is adopted by the planning proposal:
The subject site is in a non-reticulated area. Pumping equipment is installed and will be powered by means other than the electricity network such as an appropriately powered and capacity petrol/diesel or onsite generator/electricity, driven pump, and be shielded against potential bushfire impact. |
| ☐ | ☐ | ☒ | The BPC Explanatory Notes in Appendix B.4: Water Supply introduce additional measure as best practice but voluntary. The following measure is adopted by the planning proposal:
The subject site will have a <u>reticulated</u> water supply but is in an area designated as Area 2 on the Map of BPA and/or the local government area has known issues with water supply or pressure.
Water supply tank(s) and fittings dedicated to firefighting purposes (noting that combining drinking and firefighting uses of water is not recommended and may be contrary to relevant provisions), that satisfy the construction and design requirements established in the Guidelines, Appendix B4: Water Supply, will be provided. |
| ☐ | ☐ | ☒ | The BPC Explanatory Notes in Appendix B.4: Water Supply introduce additional measure as best practice but voluntary. The following measure is adopted by the planning proposal: |

The subject site is serviced by reticulated water. However, the distance from the public road (along which the fire hydrant is located) to the farthest part of the habitable building is greater than 70 metres, exceeding the reach of a hose reel. A water supply tank will be installed within the lot.

Assessment Supporting Details:

Hydrants are available on Redemptora Road indicated on Figure 1.2

[Refer to additional technical requirement information contained in Appendix D]

6 RESPONSIBILITY CHECKLISTS

EXPLANATORY INFORMATION

This section of the BMP sets out the responsibilities of the relevant entity or person for:

- The initial implementation of the required bushfire protection measures and their timing; and
- The ongoing maintenance of the required bushfire protection measures to ensure their continued effectiveness.

Note: Protection measures that may be recommended by the bushfire consultant in the BMP section titled 'Additional Recommended Bushfire Protection Measures' are not be included in the Responsibility Checklists. Their application is at the discretion of the decision maker and/or the proponent.

6.1 Bushfire Protection Measures - Implementation Checklist

TABLE 6.1 PROPONENT/LANDOWNER RESPONSIBILITIES PRIOR TO SALE/OCCUPANCY/OPERATION	
No.	IMPLEMENTATION OF BUSHFIRE PROTECTION MEASURES Measures Established Under SPP 3.7 / Guidelines
1	Construct the private driveways / internal vehicular access to comply with the technical requirements stated and/or referenced in Section 5.3 of the BMP at Element 3: Vehicular access, A3.6 Internal vehicular access and private driveways
2	A purchaser, occupier and/or operator of the site must be made aware of the existence of this approved BMP and provided with access to a copy and be informed of their ongoing responsibilities it contains.
3	The development is a 'vulnerable use', produce a Bushfire Emergency Plan (BEP) for site operations and complete all relevant actions contained within the 'Site Preparation Procedure'.
4	The development is a 'vulnerable use'. Ensure the required signage is provided within the subject site, advising of where each access route travels to and the distance and general information on what to do in the event of a bushfire. Comply with the site specific requirements developed in the BMP at Element 3: Vehicular access, A3.7.
IMPLEMENTATION OF BUSHFIRE PROTECTION MEASURES Measures Established by the Building Code of Australia (Vol. 1 and 2 of the National Construction Code)	
5	Inform builders engaged to construct dwellings/additions and/or other relevant structures on the lot of the existence of this approved Bushfire Management Plan (BMP). The BMP identifies that the development site is within a designated bushfire prone area and states the indicative (or determined) BAL rating(s) that may (or will) be applied to buildings/structures. A BAL assessment report may be required to confirm determined ratings and will be required when stated ratings are only indicative. BAL certificates will need to be produced to accompany building applications.

The BMP may also establish, as a 'Required Additional Bushfire Protection Measure', that bushfire construction requirements to be applied must be those corresponding to a specified higher BAL rating.

Compliance with the current Building Code of Australia (Volumes 1 and 2 of the National Construction Code), will require certain bushfire resistant construction requirements be applied to residential buildings in bushfire prone areas (i.e., Class 1, 2 and 3 and associated Class 10a buildings and decks) and certain Class 9 buildings. Other classes of buildings may also be required to comply with these construction when established by the relevant authority or if identified as a 'Required Additional Bushfire Protection Measure' bushfire protection measure within the BMP.

The deemed to satisfy solutions that will meet the relevant bushfire performance requirements are found in AS 3959 – Construction of Building in Bushfire Prone Areas (as amended) and the NASH Standard - Steel Framed Construction in Bushfire Areas (as amended).

6.2 Bushfire Protection Measures - Maintenance Checklist

TABLE 6.2 LANDOWNER/OCCUPIER – MAINTENANCE OF BUSHFIRE PROTECTION MEASURES	
No.	MAINTENANCE OF BUSHFIRE PROTECTION MEASURES Measures Established Under SPP 3.7 / Guidelines
1	Annually review and enact the following maintenance responsibilities established in this approved BMP for the development site prior to the bushfire season.
2	The site's use is a 'vulnerable use', and a Bushfire Emergency Plan (BEP) will be produced for site operations. Complete all relevant actions contained within the 'Site Preparation Procedure' annually prior to the bushfire season.
3	Maintain the private driveways / internal vehicular access to comply with the technical requirements stated and/or referenced in Section 5.3 of the BMP at Element 3: Vehicular access, A3.6 Internal vehicular access and private driveways
4	The sites use is a 'vulnerable use'. Maintain the required signage within the subject site, advising of where each access route travels to and the distance and general information on what to do in the event of a bushfire. Comply with the site specific requirements developed in the BMP at Element 3: Vehicular access, A3.7.
5	When the property changes ownership or occupancy, to assist with the ongoing maintenance of the implemented bushfire protection measures, ensure that the relevant person(s) is aware of the BMP, and the responsibilities it contains. Provide access to a copy of the BMP and the Bushfire Emergency Plan (BEP).
MAINTENANCE OF BUSHFIRE PROTECTION MEASURES Measures Established by a Local Government's Section 33 Notice Under the Bush Fires Act 1954	
6	Maintain the required firebreaks, providing emergency access within the lot, to the stated specifications established by the City of Cockburn Fire Control Order.
MAINTENANCE OF BUSHFIRE PROTECTION MEASURES Measures Established by the Building Code of Australia (Vol. 1 and 2 of the National Construction Code)	
7	Prior to any future building work, inform the builder of the existence of this approved Bushfire Management Plan (BMP). The BMP identifies that the development site is within a designated bushfire prone area and states the indicative (or determined) BAL rating(s) that may (or will) be applied to buildings/structures. A BAL assessment report may be required to confirm determined ratings and will be required when stated ratings are only indicative. BAL certificates will need to be produced to accompany building applications. The BMP may also establish, as a 'Required Additional Bushfire Protection Measure', that bushfire construction requirements to be applied must be those corresponding to a specified higher BAL rating.

Compliance with the current Building Code of Australia (Volumes 1 and 2 of the National Construction Code), will require certain bushfire resistant construction requirements be applied to residential buildings in bushfire prone areas (i.e., Class 1, 2 and 3 and associated Class 10a buildings and decks) and certain Class 9 buildings. Other classes of buildings may also be required to comply with these construction when established by the relevant authority or if identified as a 'Required Additional Bushfire Protection Measure' bushfire protection measure within the BMP.

The deemed to satisfy solutions that will meet the relevant bushfire performance requirements are found in AS 3959 – Construction of Building in Bushfire Prone Areas (as amended) and the NASH Standard - Steel Framed Construction in Bushfire Areas (as amended).

APPENDIX A: DETAILED BAL ASSESSMENT DATA AND SUPPORTING INFORMATION

A1: BAL Assessment Inputs Common to the Method 1 and Method 2 Procedures

A1.1: FIRE DANGER INDICES (FDI/FDI/GFDI)

When using Method 1 the relevant FDI value required to be applied for each state and region is established by AS 3959:2018, Table 2.1. Each FDI value applied in Tables 2.4 – 2.7 represents both the Forest Fire Danger Index (FFDI) and a deemed equivalent for the Grassland Fire Danger Index (GFDI), as per Table B2 in Appendix B. When using Method 2, the relevant FFDI and GFDI are applied.

The values may be able to be refined within a jurisdiction, where sufficient climatological data is available and in consultation with the relevant authority.

Relevant Jurisdiction:	WA	Region:	Whole State	Method 1	Applied FDI:	80
				Method 2	Applied FFDI:	N/A
					Applied GFDI:	N/A

A1.2: VEGETATION ASSESSMENT AND CLASSIFICATION

Vegetation Types and Classification

In accordance with AS 3959:2018 Clauses 2.2.3 and C2.2.3.1, all vegetation types within 100 metres of the 'site' (defined as "the part of the allotment of land on which a building stands or is to be erected"), are identified and classified. Any vegetation more than 100 metres from the site that has influenced the classification of vegetation within 100 metres of the site, is identified and noted. The maximum excess distance is established by AS 3959: 2018 Clause 2.2.3.2 and is an additional 100 metres.

Classification is also guided by the Visual Guide for Bushfire Risk Assessment in WA (WA Department of Planning February 2016) and any relevant FPA Australia practice notes.

Modified Vegetation

The vegetation types have been assessed as they will be in their natural mature states, rather than what might be observed on the day. Vegetation destroyed or damaged by a bushfire or other natural disaster has been assessed on its expected re-generated mature state. Modified areas of vegetation can be excluded from classification if they consist of low threat vegetation (refer to Appendix B) and that any required active management can be expected to continue in perpetuity, and this can be adequately justified.

The Influence of Ground Slope

Where significant variation in effective slope exists under a consistent vegetation type, these will be delineated as separate vegetation areas to account for the difference in potential bushfire behaviour, in accordance with AS 3959:2018 Clauses 2.2.5 and C2.2.5.

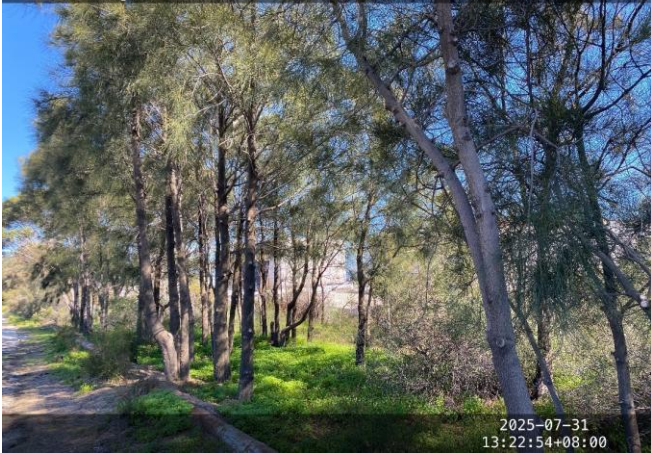
THE INFLUENCE OF VEGETATION GREATER THAN 100 METRES FROM THE SUBJECT SITE

Vegetation area(s) within 100m of the site whose classification has been influenced by the existence of bushfire prone vegetation from 100m – 200m from the site:

None

Assessment Statement:

No vegetation types exist close enough, or to a sufficient extent, within the relevant area to influence classification of vegetation within 100 metres of the subject site.

VEGETATION AREA 1									
Classification	A. FOREST								
Types Identified	Open forest A-03								
Exclusion Clause	N/A								
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees					
Justification Comments:	This small section of roadside verge is classified as Class A Forest. It comprises a dense stand of Allocasuarina (Sheoak) trees forming a well-established canopy layer. The trees are closely spaced, providing significant canopy connectivity, with an understorey dominated by grasses and minimal mid-storey development. Despite its limited extent, the vegetation exhibits the structural characteristics of forest, with a continuous canopy.								
Post Development Assumptions:	Vegetation reasonably expected to remain as is in perpetuity.								
DIRECTION 354 deg(T) 32.15418°S 115.77035°E ACCURACY 14 m DATUM WGS84  2025-07-31 13:23:14+08:00 PHOTO ID: 1 DIRECTION 224 deg(T) 32.15431°S 115.77021°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:22:54+08:00 PHOTO ID: 2 <tr><td colspan="5"> DIRECTION 345 deg(T) 32.15443°S 115.77017°E ACCURACY 6 m DATUM WGS84  2025-07-31 13:22:41+08:00 PHOTO ID: 3 DIRECTION 21 deg(T) 32.15465°S 115.77006°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:21:59+08:00 PHOTO ID: 4 </td></tr>					DIRECTION 345 deg(T) 32.15443°S 115.77017°E ACCURACY 6 m DATUM WGS84  2025-07-31 13:22:41+08:00 PHOTO ID: 3 DIRECTION 21 deg(T) 32.15465°S 115.77006°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:21:59+08:00 PHOTO ID: 4				
DIRECTION 345 deg(T) 32.15443°S 115.77017°E ACCURACY 6 m DATUM WGS84  2025-07-31 13:22:41+08:00 PHOTO ID: 3 DIRECTION 21 deg(T) 32.15465°S 115.77006°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:21:59+08:00 PHOTO ID: 4									

VEGETATION AREA 2									
Classification	D. SCRUB								
Types Identified	Closed scrub D-13		Open scrub D-14						
Exclusion Clause	N/A								
Effective Slope	Measured	d/slope 18 degrees	Applied Range (Method 1)	Downslope >15-20 degrees					
Justification Comments:	The area of vegetation is classified as Class D Scrub and occurs on a short but steep bank. The vegetation is less than 6 metres in height, as shown by the adjacent fence line in the site photos. It is composed predominantly of native species, including Rottneest Pine (<i>Callitris preissii</i>) and various Acacia species, with a grassy understorey. The canopy is relatively open, with patches of shrubs and grasses contributing to the overall fuel structure.								
Post Development Assumptions:	Vegetation reasonably expected to remain as is in perpetuity.								
DIRECTION 228 deg(T) 32.15470°S 115.77006°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:21:52+08:00 PHOTO ID: 5 DIRECTION 207 deg(T) 32.15371°S 115.77027°E ACCURACY 9 m DATUM WGS84  2025-07-31 13:24:35+08:00 PHOTO ID: 6 <tr><td colspan="5"> DIRECTION 284 deg(T) 32.15491°S 115.77008°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:21:09+08:00 PHOTO ID: 7 DIRECTION 217 deg(T) 32.15524°S 115.76998°E ACCURACY 6 m DATUM WGS84  2025-07-31 13:20:22+08:00 PHOTO ID: 8 </td></tr>					DIRECTION 284 deg(T) 32.15491°S 115.77008°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:21:09+08:00 PHOTO ID: 7 DIRECTION 217 deg(T) 32.15524°S 115.76998°E ACCURACY 6 m DATUM WGS84  2025-07-31 13:20:22+08:00 PHOTO ID: 8				
DIRECTION 284 deg(T) 32.15491°S 115.77008°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:21:09+08:00 PHOTO ID: 7 DIRECTION 217 deg(T) 32.15524°S 115.76998°E ACCURACY 6 m DATUM WGS84  2025-07-31 13:20:22+08:00 PHOTO ID: 8									

VEGETATION AREA 3				
Classification	D. SCRUB			
Types Identified	Closed scrub D-13		Open scrub D-14	
Exclusion Clause	N/A			
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees
Justification Comments:	This vegetation area is composed of two areas of vegetation that are classified as Class D Scrub. • Roadside verge to the west of the subject site: This area consists of a narrow strip of vegetation along the roadside, composed of a mix of native species with a disturbed understorey dominated by European grasses. The vegetation is less than 6 m in height (see fence line in photos), with limited canopy development and a discontinuous structure typical of degraded scrub. • Reserve to the east of the subject site: This larger section of remnant native vegetation forms part of a designated reserve and exhibits a <i>Bulga scrub structure</i>. It comprises a variety of native species, including grass trees (<i>Xanthorrhoea</i> spp.), acacias, grevilleas, and melaleucas. While most of the vegetation is under 2 m in height and would ordinarily be consistent with shrubland, some sections contain taller plants exceeding this threshold. Applying the precautionary principle, the vegetation has been conservatively classified as Class D Scrub.			
Post Development Assumptions:	Vegetation reasonably expected to remain as is in perpetuity.			

DIRECTION 214 deg(T) 32.15585°S 115.77009°E ACCURACY 14 m DATUM WGS84  2025-07-31 13:18:36+08:00	DIRECTION 338 deg(T) 32.15511°S 115.77005°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:20:43+08:00
PHOTO ID: 9	PHOTO ID: 10

DIRECTION 175 deg(T) 32.15420°S 115.77317°E ACCURACY 3 m DATUM WGS84  2025-07-31 13:42:03+08:00	DIRECTION 221 deg(T) 32.15488°S 115.77286°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:33:18+08:00
PHOTO ID: 11	PHOTO ID: 12

DIRECTION 172 deg(T) 32.15488°S 115.77286°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:33:20+08:00	DIRECTION 148 deg(T) 32.15504°S 115.77273°E ACCURACY 6 m DATUM WGS84  2025-07-31 13:33:50+08:00
PHOTO ID: 13	PHOTO ID: 14
DIRECTION 113 deg(T) 32.15585°S 115.77226°E ACCURACY 4 m DATUM WGS84  2025-07-31 13:35:29+08:00	DIRECTION 42 deg(T) 32.15532°S 115.77251°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:34:21+08:00
PHOTO ID: 15	PHOTO ID: 16

VEGETATION AREA 4				
Classification	C. SHRUBLAND			
Types Identified	Low shrubland C-12			
Exclusion Clause	N/A			
Effective Slope	Measured	d/slope 18 degrees	Applied Range (Method 1)	Downslope >15-20 degrees
Justification Comments:	This vegetation is on a short but steep bank and is a section composed primarily of tussock grasses interspersed with patches of low native shrubs. Height is under 2m, consistent with shrubland classification.			
Post Development Assumptions:	Vegetation reasonably expected to remain as is in perpetuity.			
DIRECTION 262 deg(T) 32.15452°S 115.77008°E ACCURACY 6 m DATUM WGS84  2025-07-31 13:22:19+08:00 DIRECTION 303 deg(T) 32.15457°S 115.77009°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:22:09+08:00				
PHOTO ID: 17			PHOTO ID: 18	

VEGETATION AREA 5				
Classification	G. GRASSLAND			
Types Identified	Dense sown pasture G-25		Tussock grassland G-22	
Exclusion Clause	N/A			
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees
Justification Comments:	Patches of gasses around the edge of industrial lots that are greater than 100mm in height. Classified under the precautionary principle.			
Post Development Assumptions:	Vegetation reasonably expected to remain as is in perpetuity or be managed to low threat.			

DIRECTION 138 deg(T) 32.15579°S 115.77022°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:17:34+08:00	DIRECTION 247 deg(T) 32.15355°S 115.77317°E ACCURACY 7 m DATUM WGS84  2025-07-31 13:40:48+08:00
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PHOTO ID: 19	PHOTO ID: 20
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VEGETATION AREA 6				
Classification	N/A			
Types Identified	N/A			
Exclusion Clause	2.2.3.2 (e) Non-vegetated area			
Effective Slope	Measured	N/A	Applied Range (Method 1)	N/A
Justification Comments:	Non vegetated areas include sealed public roads, private driveways, carpark, and buildings.			
Post Development Assumptions:	Non vegetated areas are reasonably expected to remain non-vegetated in perpetuity.			
DIRECTION 194 deg(T) 32.15528°S 115.77117°E ACCURACY 16 m DATUM WGS84  2025-07-31 13:15:21+08:00				
DIRECTION 41 deg(T) 32.15452°S 115.77223°E ACCURACY 15 m DATUM WGS84  2025-07-31 13:31:09+08:00				
PHOTO ID: 21			PHOTO ID: 22	

VEGETATION AREA 7				
Classification	N/A			
Types Identified	N/A			
Exclusion Clause	2.2.3.2 (e) Non-vegetated areas and (f) Low threat vegetation - minimal fuel condition.			
Effective Slope	Measured	N/A	Applied Range (Method 1)	N/A
Justification Comments:	Low threat vegetation includes managed, reticulated lawns, and garden beds and yards with native and non-native species managed to a minimal fuel state.			
Post Development Assumptions:	Low threat vegetation is reasonably expected to remain in a low threat state in perpetuity.			
DIRECTION 140 deg(T) 32.15532°S 115.77131°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:15:36+08:00 PHOTO ID: 23				
DIRECTION 346 deg(T) 32.15523°S 115.77115°E ACCURACY 4 m DATUM WGS84  2025-07-31 13:15:52+08:00 PHOTO ID: 24				
DIRECTION 343 deg(T) 32.15525°S 115.77042°E ACCURACY 5 m DATUM WGS84  2025-07-31 13:16:41+08:00 PHOTO ID: 25				
DIRECTION 171 deg(T) 32.15588°S 115.77019°E ACCURACY 4 m DATUM WGS84  2025-07-31 13:17:47+08:00 PHOTO ID: 26				



PHOTO ID: 27



PHOTO ID: 28

A1.3: EFFECTIVE SLOPE

EXPLAINING THE ASSESSMENT METHODOLOGY APPLIED BY BUSHFIRE PRONE PLANNING

DEFINITION: Effective slope is "the slope under that classified vegetation which most influences the bushfire attack" (AS 3959:2018, Clause 1.5.11).

"The effective slope under the classified vegetation is not the same as the average slope for the land surrounding the site of the proposed building. The effective slope is that slope which most significantly influences bushfire behaviour" (AS 3959:2018, Clause CB4).

The slope is described as upslope, flat or downslope when viewed from an exposed element (e.g., building) and looking towards the vegetation. It is measured in degrees.

[Note: Additional relevant guidance provided by AS 3959:2018 and NSW RFS, Planning for Bushfire Protection (2019) is incorporated into the applied assessment methodology and is presented at the end of this explanation.]

COMPOUND SLOPES UNDER VEGETATION AND DETERMINING SLOPE SIGNIFICANCE

Non-Linear Slopes: When the slope of ground under the vegetation out to the distance to be assessed (100 m or further if necessary), is not a straight line or nearly straight line slope, then it is made up of several different slopes i.e., it is a compound slope. The different slope angles and lengths must be factored into the determination of the effective slope value to be applied. Different slopes will potentially influence the bushfire rate of spread and intensity, both increasing and decreasing it.

Significant Slope: The AS 3959:2018 bushfire attack level determination methodology, with default inputs, models a fully developed bushfire. Therefore, a 'significant' slope is one that will significantly influence bushfire behaviour. To be 'significant' the length of the slope must be 'sufficient' to support a fully developed fire on that slope. The angle of a significant slope could be the determined effective slope for the area of classified vegetation if it is the one that 'most influences the bushfire attack'.

Sufficient Slope Length: Is a slope that will, as a minimum, allow the entire flame depth (flaming zone) of a fully developed fire (100m flame width) to exist on that slope.

The expected flame depth of a fully developed bushfire is a function of the length of time the flaming phase will exist on a section of the fuel bed (the 'residence time') and the bushfire's 'rate of spread'. For a given rate of spread, longer residence times result in greater flame depths. Greater flame depths are correlated with greater flame temperatures and greater flows of radiant heat.

The primary factors that will increase the residence time are:

- Heavier fine fuel loads of grass, leaf litter, twigs, bark etc less than 6mm in width and existing within the surface and near surface layers (and elevated fuel layers when contiguous with the base layers); and
- A greater percentage of larger fine fuels within the fuel load.

The primary factors that increase the rate of spread (apart from fire weather factors), include finer fuels, drier fuels, horizontal continuity of fuel and steeper upward ground slope in the direction of fire travel.

Example values:

- Residence Time: Grassfire 5 – 15 seconds, Forest fire 25 -50 seconds.
- Rate of Spread: Grassfires of a few km/hr are considered fast moving, 5-10 km/hr is common and fastest in the order of 25km/hr. Forest fire typically recorded in metres/hour with 1-1.5 km/hr being considered fast moving and fastest in the order of 3-4 km/hr.
- Flame Depth: More typically, a few metres for grasses to tens of metres for forest fires.

An Isolated Slope: For scenarios where there is a single significant slope (based on the above criteria) additional consideration would need to be given to the time and distance consumed by a bushfire still in its 'developing' phase. This will require due consideration be given to how it is potentially ignited i.e., from a single or multiple points, as this will influence the time and distance required to fully develop. For such scenarios, a normally significant slope may not be sufficiently long. It may be necessary to determine the potential bushfire impact more accurately by

justifying the application of a lesser effective slope, or a lower threat vegetation classification, or calculating a reduced head fire width (using short fire run modelling).

Determined Effective Slope: Only a 'significant' slope can potentially be the effective slope by itself. In which case, for a defined area of classified vegetation area, the worst significant slope under that vegetation is to apply.

The table below presents Bushfire Prone Planning's considerations applied to assessing short and/or compound slopes in determining the effective slope.

Slope Length (m)	Considered a Significant Slope	Considerations in Determining the Effective Slope
< 5	No	Where these short slopes exist as part of a compound slope under an area of classified vegetation, they can be ignored as they will not influence the fire behaviour in that vegetation.
5-20	Will Vary	These slopes will have a range of influence on fire behaviour from very little to a degree of influence that must be accounted for to some extent by the effective slope value that is applied (i.e., with a greater length - apply to a greater extent). But the actual slope of these shorter slopes is less likely to be applied as it is not a 'significant' length.
20-30	Possibly - Likely	The same considerations applied to the 5-20m slope lengths should be applied here. However, more justification would need to be presented to support an assessment of not 'significant'. For these slope lengths, consideration must be given more broadly to the potential level of risks associated with a bushfire event in this location. The risk level will be a function of the bushfire hazard threat levels (direct attack mechanisms) within the immediate and broader assessment area as influenced by local topography, vegetation extents and types and the exposure and vulnerability of persons and/or buildings/structures to these threats. Higher consequent risk levels require greater precaution meaning these length slopes should be considered 'significant', and vice versa. Consider the potential for a bushfire on adjoining or nearby land be a source of ignition and/or pre-heating to vegetation on the subject slope. Consider if vegetation on the slope is likely be ignited by a single ignition point or is multipoint ignition possible from bushfire an adjoining slopes or the surrounding area. Single point ignition will require a fire to travel further before being fully developed (DFES considers less than 100m fire runs may be considered a short fire run for forest, woodland and scrub vegetation classifications, RFS NSW applies 150m). Isolated slopes of this length are less likely to be considered significant as compared to when part of a compound slope.
>30	Yes	Likely to always be a significant slope unless isolated (i.e., exists alone) – in which case, justifying the application of a lesser effective slope, or a lower threat vegetation classification, or calculating a reduced head fire width, are approaches that may justifiably be applied.

BPP Approach - Slope Variation Within Areas of Vegetation

When multiple 'significant' slope lengths with large differences in degrees of effective slope (or different applicable slope ranges when AS 3959:2018 Method 1 is applied), exists under a single vegetation classification, these will be delineated as separate vegetation areas of classified vegetation to account for the difference in potential bushfire behaviour and impact, in accordance with AS 3959:2018 clauses 2.2.5 and C2.2.5.

Effective Slope Variation Due to Multiple Development Sites

When the effective slope, under a single area of bushfire prone vegetation, will vary significantly relative to multiple proposed development sites (exposed elements), then the effective slopes corresponding to each of the different

locations, are separately identified. The relevant (worst case) effective slope is determined in the direction corresponding to the potential directions of fire spread towards the subject building(s).

AS 3959:2018 EFFECTIVE SLOPE DETERMINATION - GUIDANCE

The Standard presents a broad set of guidance statements that indicate the intent of deriving an effective slope value for use in calculations, rather than detailing the 'in the field' determination process. These include:

- Highlighting the importance of the value by stating "The slope of the land under the classified vegetation has a direct influence on the rate of fire spread, the severity of the fire and the ultimate level of radiant heat flux" (Clause C2.2.5). [Note: A common rule of thumb is that for every 10 degrees of upslope, a fire will double its rate of spread if moving in the direction of the prevailing wind].
- "It may be necessary to consider the slope under the classified vegetation for distances greater than 100 m in order to determine the effective slope for that vegetation classification) ... (i.e. the vegetation within 100 m) (Clause C2.2.5).
- "Where there is more than one slope within the classified vegetation, each slope shall be individually assessed, and the worst case Bushfire Attack Level shall apply" (Clause 2.2.5).

NSW RFS 2019, PLANNING FOR BUSHFIRE PROTECTION - APPENDIX A1.5 - ADDITIONAL DETERMINATION GUIDANCE

- "In identifying the effective slope - it may be found that there are a variety of slopes covering different distances within the vegetation. The effective slope is considered to be the slope under the vegetation which will most significantly influence the bushfire behaviour for each aspect. This is usually the steepest slope. In situations where this is not the case, the proposed approach must be justified".
- "Vegetation located closest to an asset may not necessarily be located on the effective slope".

SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

The effective slopes determined from the site assessment are recorded in Table 3.2 of this Bushfire Management Plan.

A1.4: SEPARATION DISTANCE

Measuring

The separation distance is the distance in the horizontal plane between the receiver (building/structure or area of land being considered) and the edge of the classified vegetation (AS 3959:2018, clause 2.2.4)

The relevant parts of a building/structure from which the measurement is taken is the nearest part of an external wall or where a wall does not exist, the supporting posts or columns. Certain parts of buildings are excluded including eaves and roof overhangs.

The edge of the vegetation, for forests and woodlands, will be determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk (AS 3959:2018, clause C2.2.5).

Measured Separation Distance as a Calculation Input

If a separation distance can be measured because the location of the building/structure relative to the edge of the relevant classified vegetation is known, this figure can be entered into the BAL calculation. The result is a determined BAL rating.

Assumed Separation Distance as a Calculation Input

When the building/structure location within the lot is not known, an assumed building location may be applied that would establish the closest positioning of the building/structure relative to the relevant area of vegetation.

The assumed location would be based on a factor that puts a restriction on a building location such as:

- An established setback from the boundary of a lot, such as a residential design code setback or a restrictive covenant; or
- Within an established building envelope.

The resultant BAL rating would be indicative and require later confirmation (via a Compliance Report) of the building/structure actual location relative to the vegetation to establish the determined BAL rating.

Separation Distance as a Calculation Output

With the necessary site specific assessment inputs and using the AS 3959:2018 bushfire modelling equations, the range of separation distances that will correspond to each BAL rating (each of which represents a range of radiant heat flux), can be calculated. This has application for bushfire planning scenarios such as:

- When the separation distance cannot be measured because the exact location of the exposed element (i.e., the building, structure or area), relative to classified vegetation, is yet to be determined.

In this scenario, the required information is the identification of building locations onsite that will correspond to each BAL rating. That is, indicative BAL ratings can be derived for a variety of potential building/structure locations; or

- The separation distance is known for a given building, structure or area (and a determined BAL rating can be derived), but additional information is required regarding the exposure levels (to the transfer of radiant heat from a bushfire), of buildings or persons, that will exist at different points within the subject site.

The calculated range of separation distances corresponding to each BAL rating can be presented in a table and/or illustrated as a BAL Contour Map – whichever is determined to best fit the purpose of the assessment.

For additional information refer to the information boxes in Section 3 'Bushfire Attack Levels (BAL) - Understanding the Results and Section 3.2. 'Interpretation of the BAL Contour Map'.

SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

the subject development/use the applicable separation distances values are derived from calculations applying the assessed site data. They are an output value, not an input value and therefore are not presented or justified in this appendix.

The derived values are presented in Section 3, Table 3.1 and illustrated as a BAL contour map in Figure 3.2.

APPENDIX B: GUIDANCE – BUSHFIRE ATTACK LEVELS AND ASSET PROTECTION ZONES

B1: Bushfire Attack Level (BAL) - Understanding the Results

UNDERSTANDING A BAL RATING

The potential transfer (flux/flow) of radiant heat from a bushfire to a receiving object is measured in kW/m². The AS 3959:2018 Bushfire Attack Level (BAL) determination methodology establishes the ranges of radiant heat flux that correspond to each bushfire attack level. These are identified in increasing levels of flux as BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40 and BAL-FZ.

The bushfire performance requirements for certain classes of buildings are established by the Building Code of Australia (Vol. 1 & 2 of the NCC). The BAL will establish the bushfire resistant construction requirements that are to apply in accordance with AS 3959:2018 - *Construction of buildings in bushfire prone areas* and the NASH Standard – *Steel framed construction in bushfire areas (NS 300 2021)*, whose solutions are deemed to satisfy the NCC bushfire performance requirements.

DETERMINED BAL RATINGS

A BAL can only be classed as 'determined' for an existing or future building/structure when:

1. The building/structure final design and position on the lot are known and the stated separation distance from classified bushfire prone vegetation exists and can justifiably be expected to remain in perpetuity; or
2. The building/structure will always remain subject to the same BAL regardless of:
 - (a) The retention of all existing classified vegetation either onsite or offsite; and
 - (b) Its design or position on the lot - including, as relevant and necessary, accounting for any regulatory or enforceable building setbacks from lot boundaries (i.e. R-codes, restrictive covenants and defined building envelopes).

A BAL Certificate can be issued for a determined BAL. If the BMP derives determined BAL(s), the BAL Certificate(s) required for submission with building applications can be provided, using the BMP as the supporting assessment data.

INDICATIVE AND CONDITIONAL BAL RATINGS

An indicative BAL indicates the highest BAL rating that exists for the applied set of assessment parameters (which may vary resulting in the inability to be considered 'determined').

A conditional BAL establishes the BAL rating that will be considered as a 'determined' rating once the stated required conditions are approved by the relevant authority and confirmed as being met.

The possible variables of the 'conditions' include:

- The future development sites being either identified accurately or modified; and/or
- Classified vegetation being modified or removed to establish the required vegetation separation distances.

A BAL Certificate cannot be issued for an indicative or conditional BAL rating.

B4: BAL /APZ and Planning vs Building Approval Requirements

BAL RATINGS AND APZ DIMENSIONS - PLANNING VERSUS BUILDING APPROVAL REQUIREMENTS

Statement: It is not the purpose of this 'planning' BMP to derive a 'determined' BAL rating that will apply to an existing or future habitable or specified building to establish its bushfire resistant construction requirements in accordance with the Building Code of Australia (although in limited situations this can be done – refer to Appendix B1).

Planning Applications: To be compliant, a planning proposal must demonstrate it will be possible to install the required minimum sized asset protection zone (APZ), to the required technical requirements, surrounding a habitable or specified building, while applying APZ location constraints and allowances established by the Guidelines.

The Minimum Sized APZ: Is one whose dimensions ensure the potential radiant heat impact on the relevant buildings does not exceed 29 kW/m² from fire in any surrounding types of classified vegetation. This is the upper limit of the range of radiant heat flux corresponding to the BAL-29 rating. The dimensions of this 'BAL-29 APZ' will vary dependent on the site specific conditions.

Building Permit Applications: Require a determined BAL rating for proposed buildings works (stated on a BAL Certificate). The lower the BAL rating the greater the size of the corresponding APZ that would need to be installed and maintained in a low bushfire threat state to ensure the building's exposure to bushfire threats continues to be matched to the bushfire resistant construction applied.

APZ Dimensions: A larger APZ, potentially requiring the modification/removal of additional native vegetation, is required to subject a building to a lower BAL rating. However, bushfire planning policy does not support such an approach as evidenced by the following guidance to which due regard must be given:

SPP 3.7 Bushfire, Policy Objectives, cl. 5.5 states – "Prioritise the retention of native vegetation for biodiversity conservation, environmental protection and landscape amenity."

SPP 3.7 Bushfire, Policy Outcomes, cl. 6.2 - establishes that clearing of native vegetation is to be avoided or minimised in managing or mitigating bushfire risk.

The Guidelines, Appendix B2, B.2.1 states "clearing or modification of native vegetation to reduce the radiant heat impact below 29 kW/m² is generally not supported."

Additional Assessment and Reporting: The implication of the planning policy's guidance is if developers/landowners desire to lower the BAL rating to which future building works are subjected – by modification or removal of native vegetation greater than the BAL-29 dimensioned APZ - additional site assessment and reporting would be required to be submitted to the relevant authority for approval to modify/remove that vegetation.

Consequently, the determination of a BAL rating for building permit application purposes is likely to require a separate assessment as:

- It will potentially have implications regarding the obtaining of approvals for native vegetation modification and/or removal – the retention of which is an objective of State Planning Policy 3.7 Bushfire; and/or
- The precise location of a future building/structure within a lot and relative to any bushfire hazard may not be known at the time of producing this BMP.

Dimensions of the APZ to be Installed and Maintained by the Landowner: The dimensions of the APZ that will be the responsibility of a landowner to implement and maintain around a habitable or specified building (to align the building bushfire resistance to its level of exposure to flames, radiant heat and embers), will be those corresponding to the building's 'determined' BAL rating and the site specific conditions.

The dimensions of the 'BAL-29 APZ' identified in this BMP for planning assessment purposes, will not necessarily be the APZ that is to be implemented and maintained by a landowner in perpetuity.

B2: BAL Contour Map Interpretation

THE BAL CONTOUR MAP

Caution! Future building works require a 'determined' BAL rating for building permit applications. When a BAL contour map is being used for planning assessment purposes, (as opposed to a building assessment purpose), the required 'determined' BAL rating typically is not able to be derived from the map (there are only limited scenarios where this is possible).

The BAL ratings identified from the map will more likely be only 'indicative' of what can be achieved – with planning compliance for this factor being achieved when BAL-29 is indicated.

Otherwise, an additional assessment of the site data for building application purposes is required, and potentially approval will need to be obtained for native vegetation modification and/or removal from the relevant authority.

The Bushfire Attack Level (BAL) contour map, when used, is a diagrammatic representation of the results of the bushfire attack level assessment that has been conducted. It presents different coloured contours extending out from the different areas of classified vegetation.

Each contour represents a set range of radiant heat, corresponding to the BAL rating as defined by the AS 3959:2018 BAL determination methodology. When an exposed element (building, person or other defined element), is fully or partly located within a specific contour, it is potentially subject to the corresponding level of radiant heat transfer.

The width of each coloured BAL contour is dependent on both the BAL rating it represents, and the relevant site specific calculation inputs and will vary. It represents the minimum and maximum vegetation separation distances that correspond to each BAL rating for that site.

For post development BAL contour maps, the areas of classified vegetation applied to the production of the BAL contours, are those that will remain at the intended end state of the subject development once earthworks, clearing and/or landscaping and/or re-vegetation have been completed.

B3: The Asset Protection Zone (APZ)

THE APZ – DESCRIPTION, DIMENSION AND TECHNICAL REQUIREMENTS

DESCRIPTION AND PURPOSE

An asset protection zone (APZ) is an area surrounding a habitable or specified building that is not vegetated and/or supports retained or planted vegetation that can be considered to present a low bushfire threat as a result of flammability and/or moisture content characteristics and/or minimal fuel loads (either naturally or as a result of continual maintenance).

The primary objectives of establishing an APZ are to ensure:

1. A reduction in the exposure of the building/structure to bushfire direct attack mechanisms (threats) of flame contact, radiant heat transfer and ember attack, by establishing appropriate separation from each area of classified vegetation. [The required APZ dimensions will be dependent on site specific conditions and the use of the site and are measured from the nearest part of an external wall and/or supporting posts of building parts without external walls]; and
2. A reduction in the exposure of the building/structure to bushfire indirect attack mechanisms (threats) by:
 - Preventing surface fire spreading to the building/structure;
 - Minimising the potential for tree strike; and
 - Limiting the potential for consequential fire to impact the building/structure by eliminating, reducing and/or shielding consequential fire fuels. These fuels include accumulated debris, stored combustible/flammable items and constructed combustible items. Consequential fire, typically ignited by embers, is the primary cause of building loss in a bushfire event; and
3. To provide a defensible space for firefighting activities.

DIMENSIONS

Established by the Guidelines

No APZ dimensions are established by the Planning for Bushfire Guidelines, DPLH/WAPC (as amended). The Guidelines are intended to inform the application of State bushfire planning policy. For planning approval purposes, it only needs to be demonstrated that a BAL-29 dimensioned APZ can be appropriately established, surrounding a building/structure for the specific development site conditions.

For certain vulnerable land uses, evidence of the ability to implement a larger APZ may be required to inform planning decisions. These include dimensions corresponding to radiant heat impact levels of 10 kW/m² and/or 2 kW/m² and calculated using a flame temperature of 1200 K rather than 1090 K.

Established by the 'Determined' BAL Rating

The dimensions of the APZ that will be the responsibility of a landowner to implement and maintain around a habitable or specified building - to align the building's bushfire resistance construction level, to its level of exposure to flames, radiant heat and embers - will be those corresponding to the building's 'determined' BAL rating.

This rating will account for the relevant physical characteristics of a specific site and the applicable building's separation distance from classified vegetation, the type of vegetation it is exposed to and the slope of the ground supporting that vegetation.

Variations to these dimensions (i.e. vegetation separation distances) will only exist as the result of either:

- A requirement presented within an associated Bushfire Management Plan to increase the size of the APZ as part of a required additional protection measure; or
- A directive of the relevant Local Government through their annual notice, issued under s.33 of the Bushfires Act 1954 (see below), that results in a larger dimension.

Established by the Relevant Local Government

To satisfy the local governments requirements, a required APZ dimension may be stated in the notice issued annually by the relevant local government under s.33 of the Bushfires Act 1954 (e.g. Bushfire Risk Reduction Notice or Firebreak and Hazard Reduction Notice etc).

For certain vegetation/sites, based on environmental considerations, a maximum allowable dimension may be established, typically that corresponding to a BAL-29 rating for the relevant building – which will vary in response to the site specific conditions.

The existence of any such restrictions is information that would need to be sought from the relevant local government planning department.

TECHNICAL REQUIREMENTS

Established by the Guidelines

The relevant technical requirements for an APZ are established in the Planning for Bushfire Guidelines (DPLH/WAPC) (as amended), Appendix B2: Siting and design and available online at [Planning WA - SPP 3.7 Bushfire](#)

Established by the Relevant Local Government

Refer to the notice issued annually by the relevant local government under s33 of the Bushfires Act 1954 (e.g. Bushfire Risk Reduction Notice or Firebreak and Hazard Reduction Notice etc). It may state technical requirements that vary from and/or are additional to those established by the Guidelines to be complied with. Refer to the ratepayer notice and/or the local government's website for the current version.

The local government's technical requirements may be established by their gazetted local planning scheme.

B5: Vegetation Excluded from Classification – Ensure Continued Low Threat Status

MAINTAINING THE LOW THREAT STATUS OF EXCLUDED VEGETATION

When applying AS 3959:2018 BAL determination methodology, vegetation adjoining or adjacent to the subject site can be excluded from classification based on being a 'low bushfire threat'. To maintain this status, certain requirements must continue to be met in accordance with the below extract from AS3959:2018. Refer to the 'Classified Vegetation and Topography Map' for the relevant low threat areas associated with the subject site.

Determination of 'low threat' vegetation is based on factors such as - proximity to the subject site / small areas of vegetation / low flammability / higher moisture content / low fuel load.

Aside from a naturally occurring low fuel load, vegetation maintained in a minimal fuel condition through active management can be excluded. The associated key requisite is that the active management can be expected to continue in perpetuity, and this can be adequately justified.

Acceptable forms of justification typically involve supportable evidence or the existence of an enforceable mechanism. Examples of enforceable mechanisms include:

- Requirements established by a Section 33 (Bush Fires Act 1954) notice issued by a local government;
- An appropriate and enforceable agreement between relevant parties (which may involve additions to land titles); and
- For public open space or crown land, written evidence that the land manager e.g. local government or a State Government department, agrees to maintain the designated area of land in a low threat state in perpetuity.

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AS 3959:2018

2.2.3.2 Exclusions—Low threat vegetation and non-vegetated areas

The following vegetation shall be excluded from a BAL assessment:

- (a) Vegetation of any type that is more than 100 m from the site.
- (b) Single areas of vegetation less than 1 ha in area and not within 100 m of other areas of vegetation being classified vegetation.
- (c) Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other or of other areas of vegetation being classified vegetation.
- (d) Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified vegetation.
- (e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.
- (f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks.

NOTES:

- 1 Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm).
- 2 A windbreak is considered a single row of trees used as a screen or to reduce the effect of wind on the leeward side of the trees.

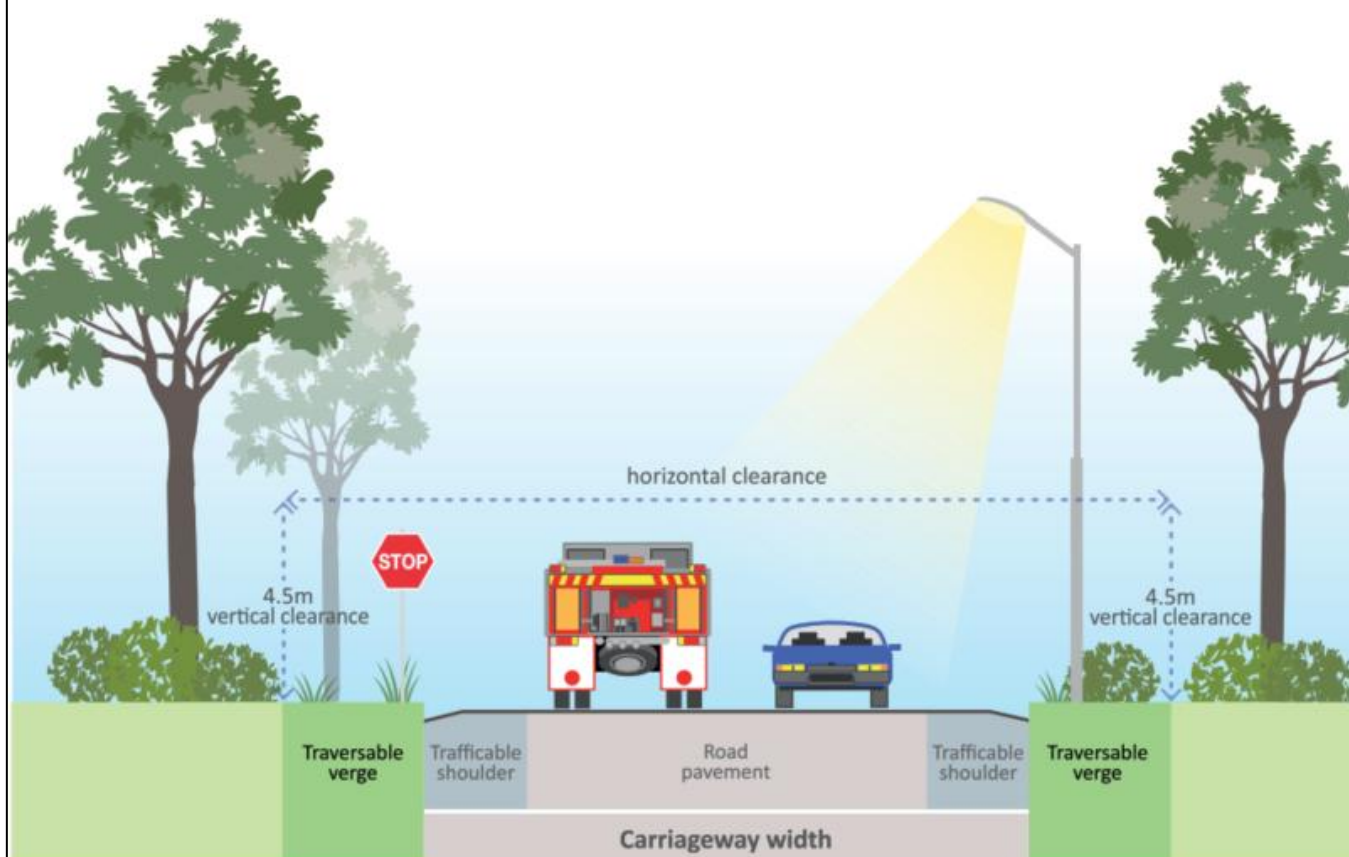
APPENDIX C: GUIDANCE - TECHNICAL REQUIREMENTS FOR VEHICULAR ACCESS

The relevant technical requirements are established in the Planning for Bushfire Guidelines (DPLH/WAPC) (as amended), Appendix B3: Vehicular access and available online at [Planning WA - SPP 3.7 Bushfire](#)

The following excerpts are presented here as a quick reference to applicable terminology and design requirements applied in the assessment against the bushfire protection criteria, Element 3: Vehicular access in this BMP.

C1: Road Component Terminology

Figure 26: Area encompassing horizontal clearance and vertical clearance



Horizontal clearance: The carriageway width (including the road pavement and trafficable shoulder) and traversable verge that provides for the movement and parking of vehicles and area required by emergency services to operate. Infrastructure and vegetation within the traversable verge should be frangible, however, non-frangible items can occur providing they do not restrict vehicular movement in the event of an emergency.

C2: Vehicular Access Technical Requirements

Table 10: Vehicular access technical requirements

	1		2		3		4		5	
TECHNICAL REQUIREMENTS	PERIMETER ROADS		PUBLIC ROADS		EMERGENCY ACCESS WAY ³		FIRE SERVICE ACCESS ROUTE ³		BATTLE-AXE & PRIVATE DRIVEWAYS ¹	
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 (metres)	12	8	See note 5		10	6	10	6	6	
Minimum vertical clearance (metres)	4.5									
Minimum weight capacity (tonnes)	15									
Maximum grade unsealed road ²	See note 5		See note 5		1:10 (10% or 6°)					
1:7 (14.3% or 8°)										
1:10 (10% or 6°)										
8.5										
Maximum grade sealed road ^{2,4}										
Maximum average grade sealed road										
Minimum inner radius of road curves (metres)										

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.

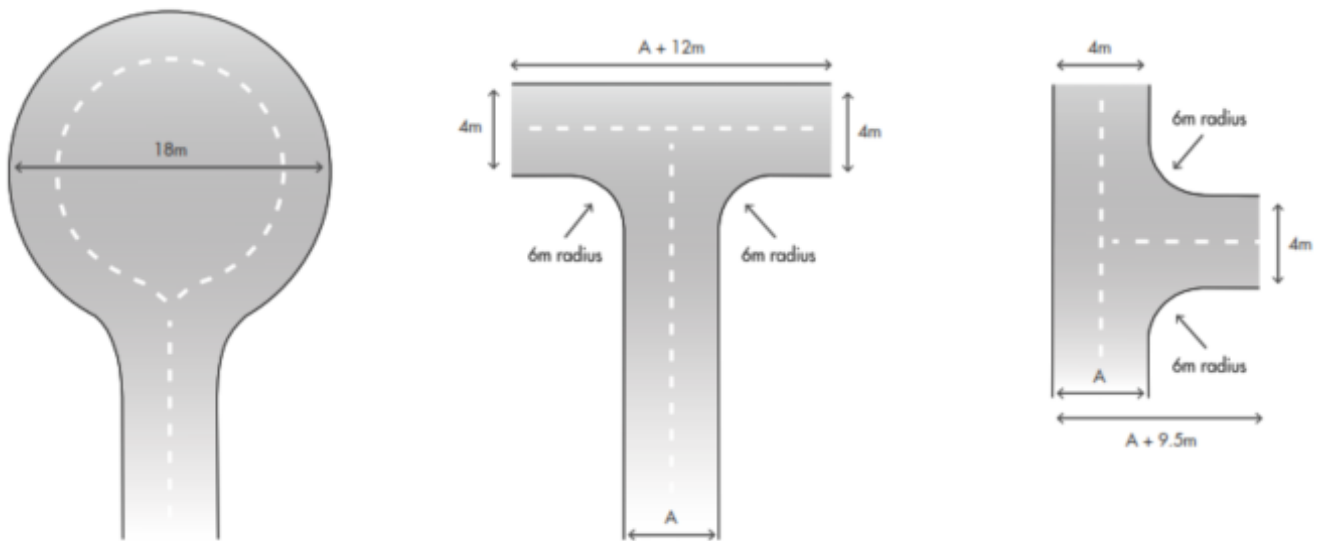
² Dips must have no more than a 1 in 8 (12.5% - 7.1 degrees) entry and exit angle.

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.

Figure 30: Design requirements for a turn-around area



APPENDIX D: GUIDANCE - TECHNICAL REQUIREMENTS FOR FIREFIGHTING WATER SUPPLY

The relevant technical requirements are established in the Planning for Bushfire Guidelines (DPLH/WAPC) (as amended), Appendix B4: Water supply and available online at [Planning WA - SPP 3.7 Bushfire](#)

The information provided in this appendix is additional to that provided in the Guidelines. It includes:

- For reticulated water supply, the hydrant location specifications established by the WA Water Corporation (Design Standard DS 63), as dependant on land use type and relevant to bushfire planning assessments (highlighted). Note: the maximum distance from a hydrant to the rear of a lot/building is generally interpreted as not applicable to large lot sizes where the maximum distance becomes an impractical limitation i.e., typically rural residential areas; and
- Images of example installations of acceptable water supply tanks and outlet fittings.

D1: Hydrant Location in Reticulated Areas

Design Standard DS 63
Water Reticulation Standard



2.2.1.5 Appurtenances

c. Hydrants

Hydrants shall be screw-down hydrant with built-in isolation valve and installed only on DN100 or larger pipes. Hydrants shall be located:

- so that the maximum distance between a hydrant and the rear of a building envelope, (or in the absence of a building envelope the rear of the lot) shall be 120m;
- so that spacing (as measured by hose-run) between hydrants in non-residential or mixed use areas shall be maximized and no greater than 100m;
- so that spacing (as measured by hose-run) between hydrants in residential areas with lots per dwelling <10,000m² shall be maximized and no greater than 200m;
- so that spacing between hydrants (as measured by hose-run) in rural residential areas where minimum lots per dwelling is >10,000 m² (1ha) shall be maximized and no greater than 400m;
- centrally along the frontage of a lot to avoid being under driveways, unless the lot features a frontage 6m or less, in which case it shall be placed to the side opposite the driveway;
- at lots that have the widest frontage in the local area;
- where appropriate at the truncation of road junctions or intersections so that they can serve more than one street and can be readily located;
- on both sides of the major roads at staggered intervals where there are mains on both sides of the road;
- at major intersections on dual multi-lane roads, where two hydrants are to be sited on diagonally opposite corners;
- hydrants should be located at least 20m from traffic calming devices i.e. median slow points or chokers, chicanes, mini traffic circles, and intersection 'pop-outs' to ensure traffic is not impeded;
- in a position not less than 10m from any high voltage main electrical distribution equipment such as transformers and distribution boards, liquefied petroleum gas or other combustible storage
- directly on top of the main using a tee unless proved to be impractical

