Bushfire management plan / statement addressing the bushfire protection criteria coversheet

Site address: Wellington National Park WA

Site visit: Yes x No

Date of site visit (if applicable): Day 29 Month November Year 2024

Report author or reviewer: Anthony Rowe

WA BPAD accreditation level (please circle):

Not accredited | Level 1 BAL assessor | Level 2 practitioner | Level 3 practitioner x

If accredited please provide the following.

BPAD accreditation number: 36690 Accreditation expiry: Month December Year 2025

Bushfire management plan version number: 3

Bushfire management plan date: Day 12 Month June Year 2025

If one or more of the following are selected, then these should be automatically referred to DFES	YES	NO
Strategic planning is required to address SPP 3.7 and the Guidelines		x
The application is a vulnerable land use	x	

None of the Above

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

None of the Above

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:

Signature of report author or reviewer  Date 16/06/2025

Bushfire Management Plan

TREE VILLAGE - Wellington National Park
in partnership with DBCA

June 2025

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LIMITATIONS STATEMENT

This Bushfire Management Plan ('BMP') in support of a tourist accommodation and recreation facility at the Wellington National Park in partnership with DBCA. The site is crown land located within the Shire of Collie (north of the Collie River), and the Shire of Dardanup (south of the Collie River).

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Version Control

Wellington National Park in partnership with DBCA			
Version	**Date**	**Author**	
V1	08 January 2025	Anthony Rowe	Draft
V2	12 February 2025	Anthony Rowe	Draft - Building class
V3	12 June	Anthony Rowe	Submission

Disclaimer

In undertaking this work, the authors have made every effort to accurately apply the available information at the time of writing following the instructions of the regulatory authorities and applying best practice as described by the Fire Protection Association Australia. Any conclusions drawn or recommendations made in the report are made in good faith, and the consultants take no responsibility for how this information and the report are subsequently used.

Envision Bushfire Protection accepts no liability for a third party's use of, or reliance upon, this specific report.

Envision Bushfire Protection accepts no liability for the inaction of the owner to provide or maintain the bushfire protection measures identified in this report. Vegetation is dynamic, building materials may distort, and the accumulation and the location of flammable materials near the building may affect the potential for damage or loss of a building to occur.

Failure to maintain the property and/or building to these standards may compromise an insurance policy if currently covering any of your assets or those of any third party that may be consequentially affected due such failure. If not insured, and if you are seeking insurance, this report may not influence the decision of any insurer not to offer cover.

Importantly the measures contained in this report cannot guarantee human safety or an absence of harm or that the building will not be damaged or would survive a bushfire event on every occasion. This is due to the unpredictable nature of fire behaviour (knowledge in this field continues to develop) and the unpredictable nature of extreme weather conditions.

It follows the requirements listed in the Guidelines and the templates providing investigation guidance prepared by the Department of Planning Lands and Heritage. It is applicable to the authorisation required under the Planning and Development Act 2005. It does not obviate the need to gain authorisations under other legislation, or establish priority over other legislation such as, but not limited to, the State Environment Protections Act 1986, the aboriginal cultural Heritage Act 2021 and the Federal Environment Protection and Biodiversity conservation Act 1999.

The scope of the advice has been to assess the proposal for compliance with the policy measures described in State Planning Policy 3.7 Bushfire.

Client relationship

I was engaged to provide expert bushfire safety and planning advice. My relationship with the client is a standard commercial contract, and no private, personal, or other matter has influenced the content of the BMP or my findings.

STATEMENT OF CONFORMITY – PLANNING AND DEVELOPMENT ACT 2005

Anthony Rowe Level 3 - BPAD36690

Principal Bushfire Consultant I Town Planner

BPAD Accredited Practioner Level 3

PIA Registered Practicing Planner

The signatory declares that this Bushfire Management Plan meets the requirements of State Planning Policy 3.7 Bushfire (2024), and the Planning for Bushfire Guidelines (2024).

SUMMARY

Preface

The applicant is proposing a tourist recreation facility and accommodation (elevated tree top walk, zip-line activities, and elevated accommodation) within the Wellington National Park, at the Wellington Dam and near to the kiosk.

The site is within a declared bushfire prone area and zoned Reserve State Forest and Reserve Drainage.

The tree walk and glamping are located in the Shire of Collie whereas the zip-line crossing the Collie River is located in both the Shire of Collie and the Shire of Dardanup

The proposal is development that is required to be assessed for its compliance with State Planning Policy 3.7 *Bushfire* (2024) and the bushfire protection criteria described in the Planning for Bushfire Guidelines (2024).

The intent of the SPP3.7 is:

> *"To implement effective, risk-based land use planning and development which in the first instance avoids the 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.".*

The proposed development is classed as a 'vulnerable' land use because visitors and guests at the facility may be unfamiliar with the locality.

The development, including the accommodation, has no bushfire construction standard under the BCA (NCC 2022). The ticket box and storage (sheds) will use shipping containers.

The Bushfire Management Plan (BMP) has been prepared together with a Bushfire Emergency Plan (BEP). Shelter at the site is not available and pre-emptive closure and evacuation will be required.

This assessment (BMP) has followed the Department of Planning Lands and Heritage (DPLH) *BMP Development Application Template.* The headings below follow the investigations required by DPLH template and the findings (Manual 2024).

1. Proposal details (addressed in Section 1)

The development site is located around the Wellington Dam kiosk (Shire of Collie). The tree walk and glamping tents (2) are located east of the kiosk and the zip-line tour across the face of the Wellington Dam and immediate gulley is south of the kiosk. This crosses the Collie River from the City of Collie into the Shire of Dardanup.

The works are mostly elevated and utilise existing tracks to minimise disturbance to vegetation. The ticketing office (container) and two storage containers are to be located on an existing lay down area.

The buildings and works are proposed as a tolerable loss for the purpose of minimising disturbance to native vegetation otherwise required for an Asset Protection Zone (APZ).

The proposed glamping tents do not have a bushfire construction standard under the Building Act 2011. They do not have amenities for an extended stay and are considered a low inertial for cancellation (bushfire threat). They are classed as a short stay accommodation.

Free camping is already provided at the Wellington Dam at, at Potters George. The nature based short stay, as proposed, is not a new use in the area, people are accommodated overnight.

The zip-line tour and tree top walks (private recreation) are day uses and will comprise elevated cables and bases that are expected to be a tolerable loss.

The use of shipping containers for the ticket office and storage, whilst fire resistant, do not have insulation to provide tenability inside, nor will they ensure any materials inside will not be damaged. They are not to be used for shelter and will be a tolerable loss.

The proposal will rely upon the public toilets and the kiosk for refreshments (amenities). The return to full operation after a fire would be dependent on the replacement of the proposal (anticipated), the return to operation of the public toilets and kiosk, the removal of damaged and destroyed items, and any works required to make the locality safe.

Routes to the Wellington Dam are lines by trees and the routes may be closed for a extended period until determined safe from tree fall.

The site has two way access (utilising the public access to the Wellington Dam kiosk). Access to the site is from the north by Wellington Dam Road (top of the dam wall), through forest (10 km) to the Coalfields Road and either east to the township of Collie (26 km) or west to the township of Bunbury (47 km). Access to and egress from the site is also from the south by Falcon Road, at the base of the dam wall, that leads 13 km through forest, to Pile Road and the town of Dardanup (24 km) and onto the to the township of Bunbury.

The Eaton Recreation Centre (in the Shire of Dardanup towards Bunbury) is identified by DFES/Department of Communities for regional evacuation.

The site has access to a reticulated water supply.

2. Environmental considerations (addressed in Section 2)

The site is within forest which is an intrinsic attraction (unavoidable).

The proposal has been designed to minimise the clearing of native vegetation.

The proposed buildings (containers) will occupy a disturbed former lay down area or are elevated, utilising existing trees or towers for the zip-line base established at rock outcrops.

The proponent acknowledges the 'Suspended Tree Walk' is sited in an area where prescribed burning may occur requiring closure of the facility for periods of time to implement the mitigation measures.

3. Bushfire assessment results (addressed in Section 3)

A Bushfire Attack Level assessment following Method 1 AS 3959:2018, and the DPLH *Visual guide for bushfire risk assessment in Western Australia*, and using an FFDI of 80, has been undertaken.

The development is entirely within BAL FZ.

4. Identification of bushfire hazard issues (addressed in Section 4)

The identified bushfire hazard is surrounding forest which is an extreme bushfire hazard and flame immersion of the proposal is anticipated.

The proposal seeks to avoid human harm (consequence) through evacuation, but accepts asset and operation loss, being the cost of replacement and cost of loss of operation for up to 12 months.

The proposal is a tolerable loss, APZs are not provided to protect any of the buildings or structures which are also not to be defended.

The two way access will be used to evacuate in the opposite direction and pre-emptive closure will occur on total Fire Ban Days and from the day before, when a forecast is a Fire Behaviour Index (FBI) greater than 75.

The preparation of the Bushfire Emergency Plan is a risk treatment provided for the safety of guests. It provides for seasonal preparation and importantly through receiving alerts (mobile phone) and actively monitoring daily conditions, maximising the time for (early) evacuation, when it is safe to do so.

5. Assessment against the bushfire protection criteria (addressed in Section 5)

The proposal was compared with Bushfire Protection Criteria 8: Development – Vulnerable tourism land uses, and day uses.

The proposal is able to comply with the applicable Acceptable Solutions

Acceptable Solutions

Element 1

This is not applicable to Vulnerable tourism land uses (accommodation) and day uses

Element 2 requires a development does not exceed BAL 29 by an APZ established within the site

An exception is provided for development that does not require bushfire construction under the BCA; that development may be located within BAL 40 - BAL FZ if it is proposed as a tolerable loss.

The proposal does not involve buildings that require bushfire construction under the BCA,

The proponent acknowledges the buildings and structures will be damaged or destroyed in a bushfire event.

Element 3 of the Guidelines requires access to a through road.

The site is located on a through road arrangement with access north and south. The access route is through forest and enclosed topography. Pre-emptive evacuation (closure FBI 75 +) or early evacuation is required.

A contingency is available for open shelter at the Wellington Dam wall that is > 134 m from forest, that is < 2 kWm^2 (at 1200 K flame temperature - calculation) and BAL Low Figure 6.

The Wellington Dam straddles the gulley and has a vehicle service (removable bollards) that provides to a vehicle access either end (and intern pedestrian access). An area is available atop the dam on the service road that is more than 134 m from the closest classified vegetation (Forest), which is upslope from the dam at the sides, water to the east, and the masonry wall toe to the west.

Element 4 requires either a connection to a reticulated supply or an onsite solution, tank or dam.

The site will have access to the water supply servicing the kiosk. The proposal is expected to be a low water user and does not require water for defence. The proposal is accepted as a tolerable loss.

5.1 Additional Bushfire Management Strategies (addressed in section 5.2)

Additional Bushfire Management Strategies (risk treatments in addition to those addressed in Element 5) includes the Bushfire Emergency Plan (Attachment 1).

The Bushfire Emergency Plan has been prepared in compliance with the State Government's (WAPC) Bushfire Emergency Plan (BEP) Manual - November 2024.

The BEP includes measure to avoid harm and provide comfort if shelter as a last resort is taken atop the Wellington Dam wall.

5.2 Spatial representation of the bushfire management strategies (Figure EX 1)

The key features demonstrating compliance with the bushfire protection measures are identified on the *Spatial representation of the bushfire management strategies*.

These actions are reflected in the following *Responsibilities for implementation and management of the bushfire measures.*

6. Responsibilities for implementation and management of the bushfire measures

The Owner responsibilities (Guidelines 4.6.3) identify the bushfire management measures necessary to achieve compliance with the bushfire protection criteria are provided at **section 6** in this BMP and summarised in Figure 6.

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1. PROPOSAL DETAILS

1.1 Introduction

The applicant is proposing a tourist recreation facility (day use) and accommodation within the Wellington National Park, at the Wellington Dam and near to the kiosk.

The site is within the administrative areas of the Shire of Collie and Shire of Dardanup (Figure 1) and is within a declared bushfire prone area (Figure 2).

The proposed development is classed as a 'vulnerable' land use because guests at the accommodation may be unfamiliar with the locality.

Site and Proposal Description (Table 1)

Address	Wellington National Park, Coalfields Rd, Worsley
Local Government Area	Shire of Collie, north of Collie River (Tree Walk, Glamping (2), zip-line tour, zip-line (across the Wellington dam face) Shire of Dardanup south of Collie River (zip-line base)
Local Planning Scheme Zone	Zoned Reserve State Forest and Reserve Drainage.
Bushfire Season	1 December – 12 May (precise dates may vary annually)
Lot size	53 ha leased area – Crown land
Land description site	The site is within National Park comprising Forest on steep slopes up to 20.0^0.
Road Access	Access to the site is from the north by Wellington Dam Road (top of the dam wall) to the Coalfields Road and east to the township of Collie (26 km) or west to the township of Bunbury (47 km). Access to the site from the south is from the Falcon Road, at the base of the dam wall, that leads by Pile Road to the town of Dardanup (24 km).
Water supply	The site has access to a reticulated water supply, that supplies the kiosk
Tele communications	The site is within the Telstra 4G network.
Emergency services	The nearest fire brigade is: Wellington Mills Volunteer Bush Fire Brigade Wellington Mills Road, Wellington Mills

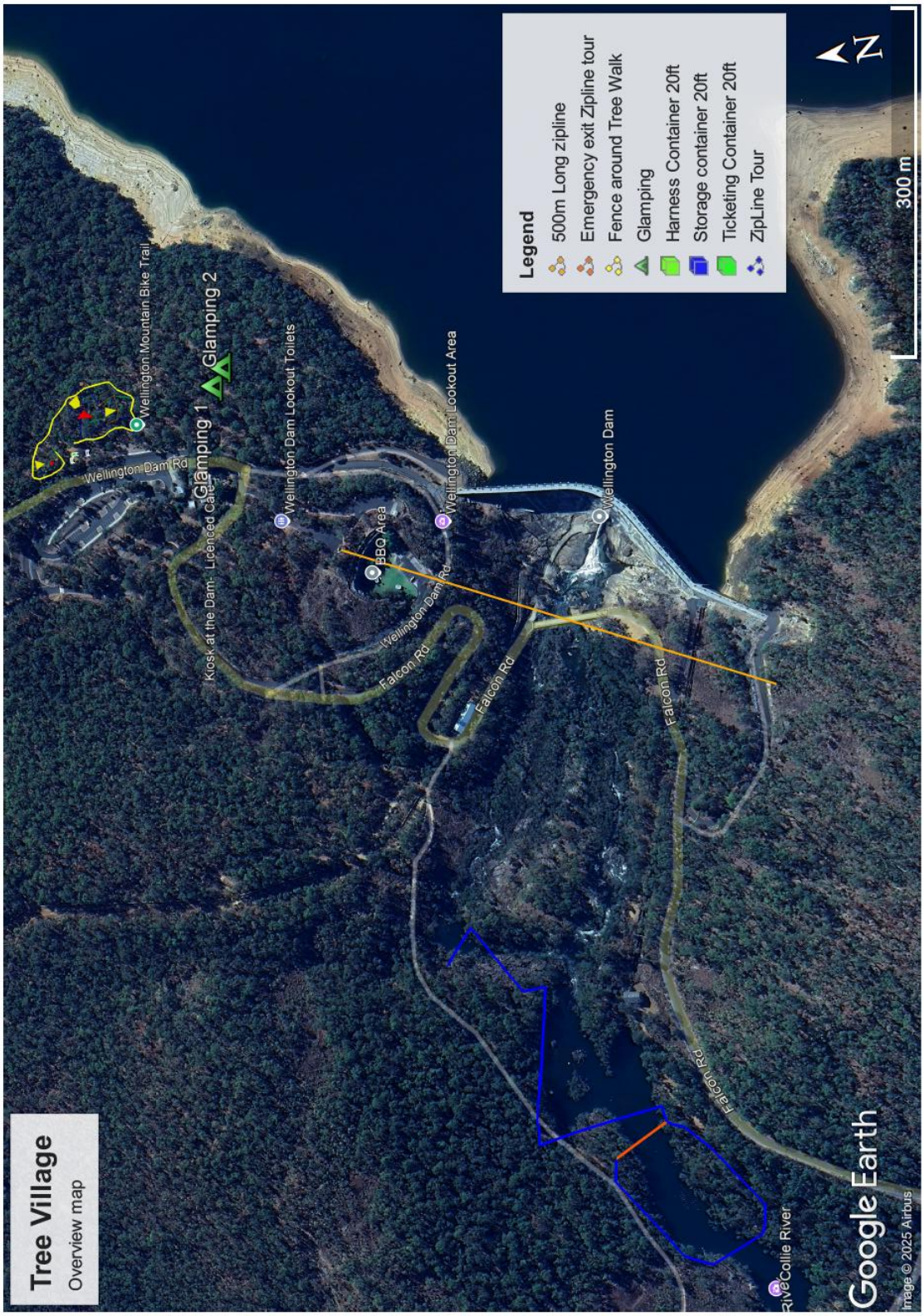

Plate 1a Development Concept

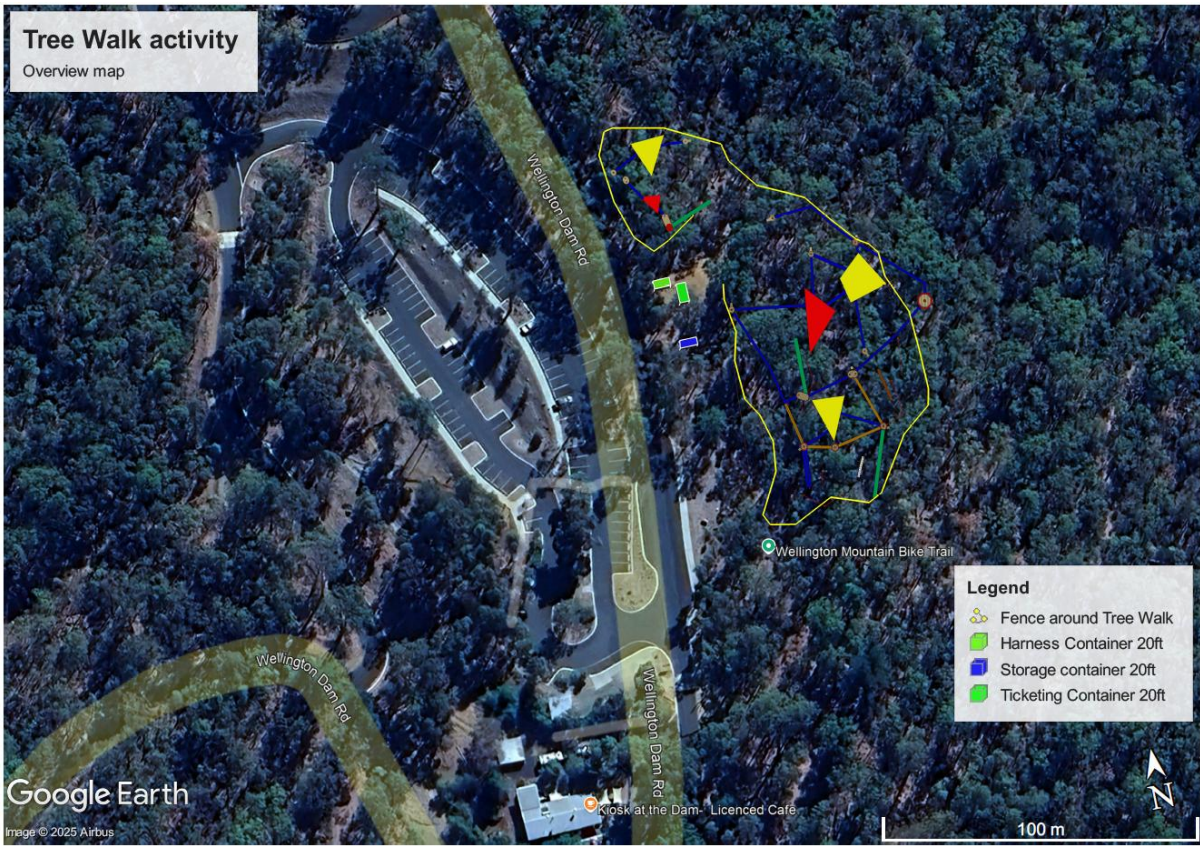

Plate 1b Area Tree Walk area (Aerial position)

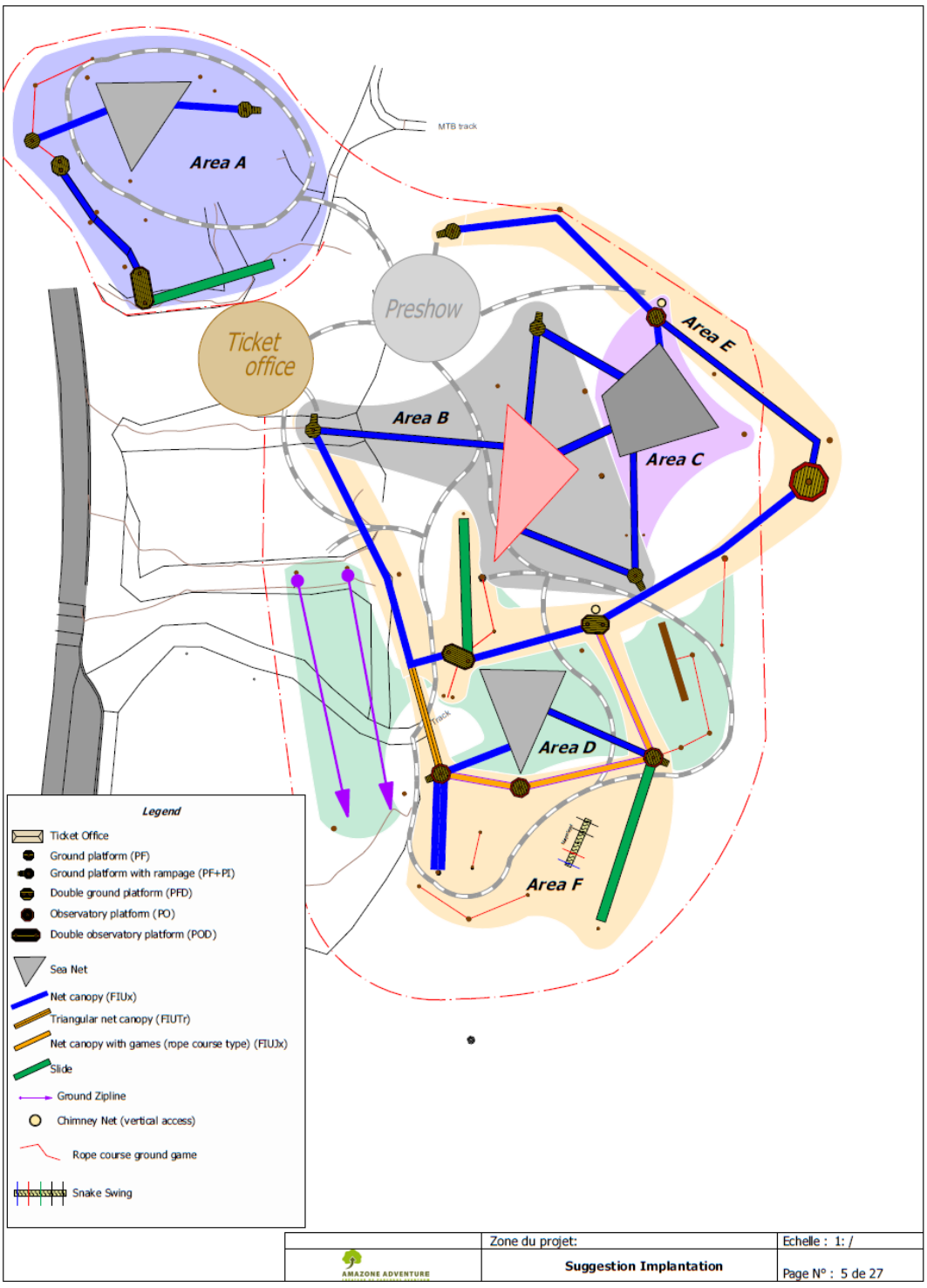

Plate 1c Area Tree Walk area

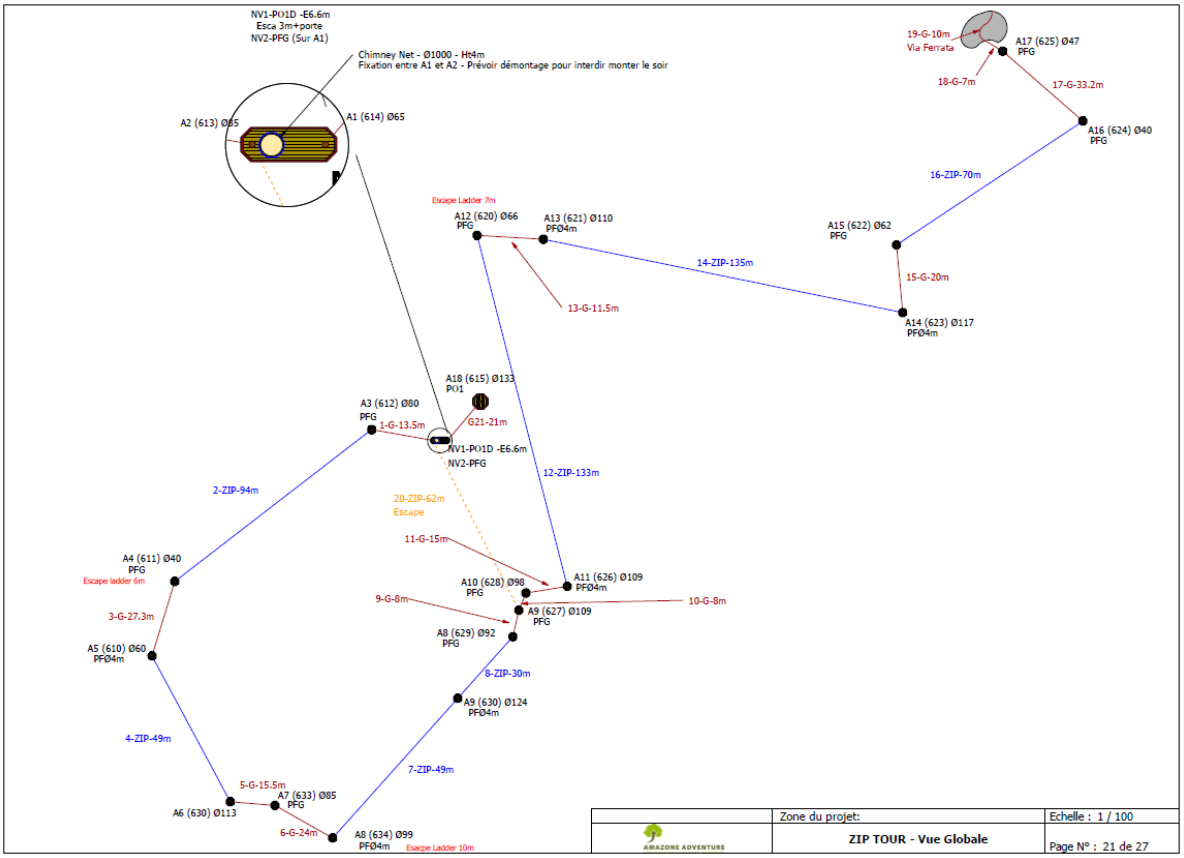

Plate 1d: Zip-line Tour (Aerial position)

Plate 1e: Zip-line (Aerial position)

Plate 1f: Zip-line base

Plate 1g: Accommodation - Glamping (Aerial position)

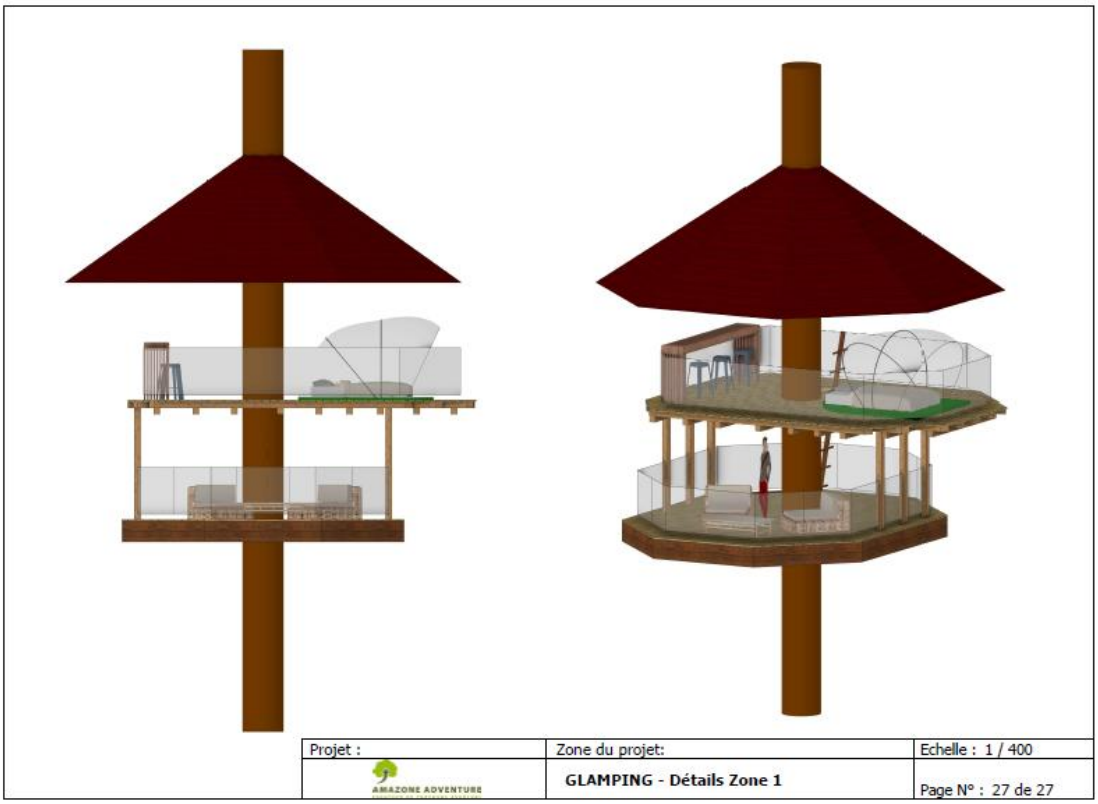

Plate 1h: Glamping style 1

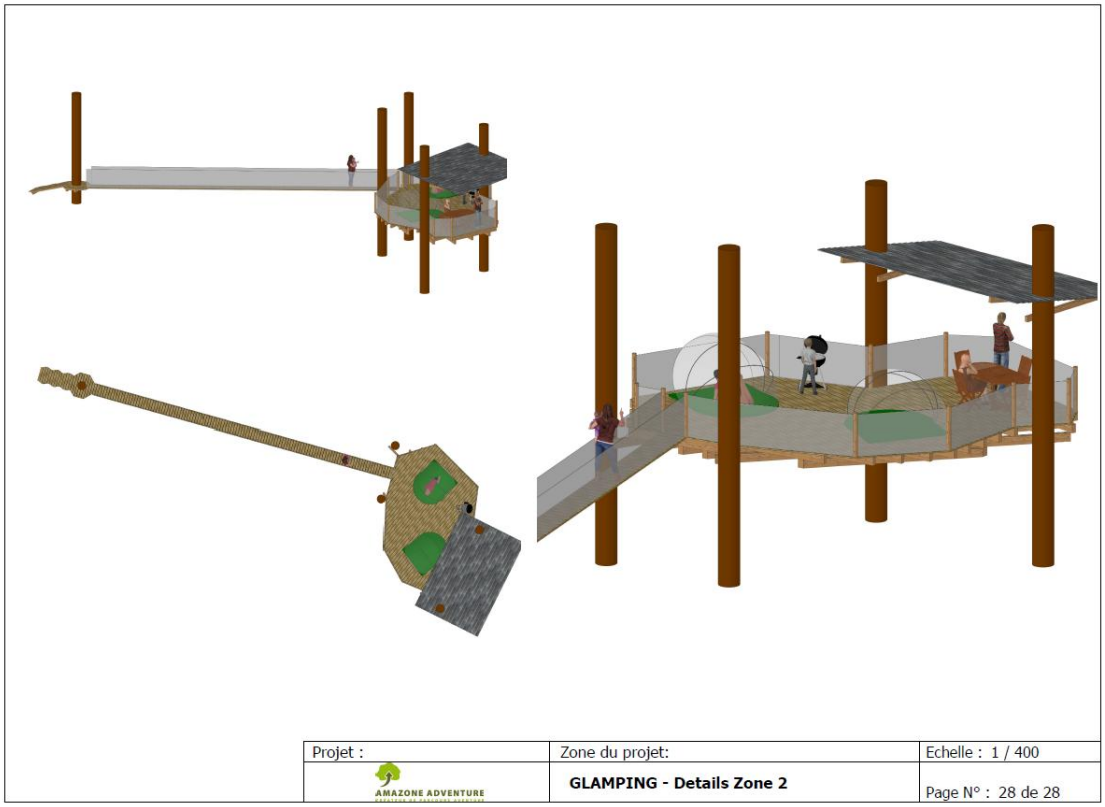

Plate 1i: Glamping style 2

1.2 Regulatory Compliance Requirements

Planning and Development Act 2005

On 7 December 2015, the State Government first introduced by Gazette, a state map of Bushfire Prone Areas by order under the Fire and Emergency Services Act 1998 and introduced development controls in Bushfire Prone Areas through the Planning and Development Act 2005. These controls were revised (operational 18 November 2024) introducing State Planning Policy 3.7 Bushfire, the Planning for Bushfire Guidelines, and amendments under Part 10A Schedule 2 of the Planning and Development (Local Planning Scheme) Regulations 2015.

The State Bushfire Map has now been divided into Area 1, within the Perth Peel and Bunbury metropolitan areas, with the remainder being Area 2.

The proposal constitutes a 'vulnerable land use' (SPP3.7 s.7.4) to be assessed by SPP 3.7 (not an exempted land use) and the development application is to be accompanied by a bushfire management plan and bushfire emergency plan.

State Planning Policy 3.7 Bushfire (2024).

SPP 3.7 is arranged with a Policy Intent, policy objectives and policy outcomes achieved through compliance with the bushfire protection criteria, assigned to a level and class of development through acceptable solutions or an outcome approach. The assigned level and class of development is provided in the Planning for Bushfire Guidelines.

Key aspects from SPP 3.7, as a design brief, include:

SPP Policy Intent

"To implement effective, **risk-based land use planning and development** which in the first instance avoids the 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."

The objectives of this policy serve as a vision that constitutes outset design considerations (guiding the project brief). The outcomes within the Bushfire Protection Criteria represent risk treatments design detail that is consistent with the objectives.

The objectives and the project brief are:

"5.1 Avoid the bushfire risk in the first instance, but where unavoidable, manage and/or mitigate the risk to people, property and infrastructure, to ensure the risks are acceptable and appropriate to the land use and the location."

The site is inherently an extreme risk (within a forest area), but it augments the public attraction at the Wellington Dam.

"5.2 Improve the bushfire resilience of communities through the provision of appropriate community infrastructure, for use by emergency services and the community in the event of a bushfire. "

The proposal is to minimise demand upon emergency services. The structures ae to be a tolerable loss. Evacuation and pre-emptive closure are proposed. Vehicle egress is available in the opposite direction.

"5.3 Ensure development is resilient to increasingly severe and more frequent bushfires compounded by climate change."

The buildings are to be designed to an annual bushfire frequency (certain), but replaceable and accepted as a tolerable loss. The proposal will use the public amenities and the kiosk. The return to operation of these facilities will affect the full return to operation of the proposed development.

"5.4 Prioritise the retention of native vegetation for biodiversity conservation, environmental protection and landscape amenity."

The proposal is to use disturbed areas for the use of walking trails, the placement of infrastructure, to support elevated activity, and the placement of shipping containers (modified) for the ticket office and storage.

Building Act 2011

The *Building Act 2011* applies the National Construction Code 2019, and the construction standards described in AS 3959:2018, only to the construction of class 1, 2, 3, and 10a, buildings.

The glamping structures are not habitable buildings because no walls are proposed, and the bed is a tent on a deck that is an elevated platform.

The proposed glamping accommodation is not subject to bushfire construction standards in the NCC 2022 (BCA). The accommodation can be accepted as a tolerable loss under the Guidelines (2024).

2. ENVIRONMENTAL CONSIDERATIONS

2.1 Native Vegetation – Modification and Clearing

A fundamental consideration in the assessment of development under SPP 3.7 is to avoid instances where bushfire risk management measures would conflict with or be limited by other biodiversity management measures.

Conservation class legislation

The ability to implement bushfire risk management measures may be affected by a number of conservation class vegetations: described below.

Environment Protection Act 1986 and Environmental Protection (clearing native vegetation) Regulation 2004

It is an offense to clear native vegetation without the authority of a permit or an exemption. The act of clearing native vegetation, requires a permit from either the Department of Water and Environmental Regulation (DWER) or the Department of Mines, Industry Regulation and Safety (DMIRS), unless an exemption applies.

Exemptions include:

Environment Protection Act 1986

- Clearing required by local government Section 33 *Bushfire Act 1954.*
- **Clearing in accordance with the terms of a subdivision approval.**
- Clearing in accordance with a permit under the *Bush Fires Act 1954* (prescribed burning) and clearing by a bushfire control officer.

Environmental Protection (clearing native vegetation) Regulation 2004 (exemptions do not apply in Environmentally Sensitive Areas, and clearing > than 5 ha)

https://www.der.wa.gov.au/your-environment/environmentally-sensitive-areas

- Clearing to the extent necessary to construct an approved building.
- Clearing that is for fire hazard reduction burning.
- Clearing to maintain an area cleared in the last ten years.

(WA) Biodiversity Conservation Act 2016 and Bio-diversity Conservation Regulations 2018

The *Biodiversity Conservation Act, 2016*, replaces the *Wildlife Conservation Act, 1950*, and the *Sandalwood Act, 1929*, it became operational with the *Bio-diversity Conservation Regulations 2018*, on 1 January 2019.

The Act provides for listing species, threatened ecological communities (TECs), key threatening processes, and critical habitats. It introduces criteria for listing species 'endangered', 'critically endangered' or 'vulnerable,' to align with the Environment Conservation and Biodiversity Conservation Act 1999 (Cth).

The *Biodiversity Conservation Act 2016* recognises that activities approved under the *Environment Protection Act 1986* do not require further approval include clearing of native vegetation that is either exempt or done under the authority of a clearing permit or done in accordance with an implementation decision under Part IV of the *Environment Protection Act 1986*.

Commonwealth Environment Protection Biodiversity Conservation Act 1999

The Commonwealth Environment Protection Biodiversity Conservation Act 1999 provides for the protection of matters of national environmental significance. National environment law does not generally regulate fire prevention measures taken by state and territory governments, but no specific exemptions are provided.

In accordance with the Department of Planning Lands and Heritage template (BMP Complex) a review of the listed databases has been undertaken as part of this assessment. The purpose is to identify whether restrictions or other specific considerations may apply that would affect the possible implementation of any bushfire protection initiatives/risk treatments.

This however is not a comprehensive assessment. Not all ecological details are publicly available and many of the items are not described at a site-specific level, that would enable specific items to be identified on the site.

This BMP therefore does not preclude the requirement or influence the considerations required to be separately taken, in gaining the required authorisations under the conservation class legislation identified above.

Table 2: Ecological database assessment.

Is the land affected by:	**Yes/No/NA**	**If yes - describe**
Conservation Wetland or buffer (DBCA-019 DBCA-017)	No	
RAMSAR Wetland (DBCA-010)	No	
Threatened and Priority Flora (DBCA-036)	No	
Threatened and Priority Fauna (DBCA-037)	Yes	Carnaby's Cockatoo Areas requiring investigation as feeding habitat in the Jarrah Forest IBRA Region (DBCA-056)
Threatened Ecological Communities (DBCA-038)	No	
Bush Forever (COP-071)	No	
Environmentally Sensitive Area (DWER-046)	No	
Regionally Significant Natural Areas (DWER-070)	No	
Conservation Covenant (DPIRD-023)	N/A	
Does the proposal require the removal of restricted vegetation?		**~~Yes~~** **No**

Other approvals

This BMP may identify works that will require a further approval under other legislation. The authorisation under the Planning and Development Act, for which this documentation is being produced, does not subvert the requirements for approval under other Federal or State legislation.

Native Vegetation – Modification and Clearing

SPP 3.7 Bushfire prioritises the retention of native vegetation unless unavoidable.

Objective 5.4

Prioritise the retention of native vegetation for biodiversity conservation environmental protections and landscape amenity

Outcome 6.2

Ensure siting and design solutions:

• *avoid, or where unavoidable, minimise the clearing of native vegetation*

The proposal attempts to minimise disturbance to native vegetation by prioritising existing cleared areas at structure base points and the placement of containers. Existing tracks and trails will be utilised to minimise clearing for pedestrian access to the assets.

2.2 Re-vegetation/Landscape Plans

Areas that are disturbed during construction are proposed to be rehabilitated, up to the space required for inspection (safety) and maintenance.

No revegetation is proposed that may increase the threat of bushfire.

3. BUSHFIRE ASSESSMENT

3.1 Bushfire Attack Level Assessment (Inputs)

The following assessment has applied the methodologies described in AS 3959-2018, the Guidelines, and has used the Fire Protection Association Australia accredited practitioner methodology for the preparation of Bushfire Attack Level (BAL) assessments.

All vegetation within 150 m (context) of the subject building has been classified following Clause 2.2.3 (AS 3959:2018) to determine the predominant vegetation affecting the behaviour at the locality. The Bushfire Attack Level is determined by the **predominant** vegetation within 100 m of the site boundary (for subdivision), or around the development site (building envelope) or the external face from a habitable building.

The classifications of vegetation used in AS 3959:2018 are based on foliage cover, measured as a percentage of a hectare and by the fuel (vegetation) height.

> ***Foliage cover**: The portion of the ground that would be shaded by foliage when the sun is shining directly overhead, expressed as a percentage for each stratum or identifiable layer of vegetation*
>
> AS 3959:2018

Table 3: Bushfire fuel descriptions

Layer/ Stratum	Description	Hazard
Bark	Tight/fine – course/ribbon	Spotting and ember attack potential associated with forest
Canopy	Trees taller than 6 m (forest)	Influences the flame height
Elevated fuel	Trees and Shrubs up to 6 m	Influences the flame height
Near surface	Grasses and shrubs taller than 100 mm and up to 2 m	Influences the rate of spread and canopy ignition
Surface	On ground material, leaves, twigs, bark	Influences the rate of spread

From CFA (Vic) Overall fuel assessment guide 2010

AS 3959:2018 prescribes six categories of Bushfire Attack Level (BAL): BAL LOW, BAL 12.5, BAL 19, BAL 29, BAL 40, and BAL FZ. In addition, BAL FZ describes only performance solutions where the separation from classified vegetation (on completion) is less than 10 m. The BAL level is used for determining the siting of development (to be less than BAL 40) and in turn the construction standard that is equivalent to the BAL at the proposed building location.

This assessment has followed the guidance of AS 3959:2018. This includes:

- A recognition of excluded vegetation types described at cl.2.2.3.2 (e) and (f), but the underlying vegetation should still be classed e.g. an orchard may be excluded but not the grassland within it.
- A separate plot is applied if there is a variation in the slope greater than 5.0^0
- For various vegetation classes a representation that is less than 10%, does not constitute the predominant class. Foliage cover referred to in AS 3959:2018 for various classes is based on the foliage cover for that class as a percentage of a ha. (shadow cast is not representative of foliage cover).
- The measurement point and the most influential vegetation class (presenting the highest BAL at the building) is used for the determination of the BAL at the building (Figure 2.2 AS 3959:2018).
- Consideration of the predominant vegetation is to consider the likelihood of regeneration.
- Orchards, and single tree rows (planted in a row less than 10 m wide) is determined by underlying the near surface fuel.

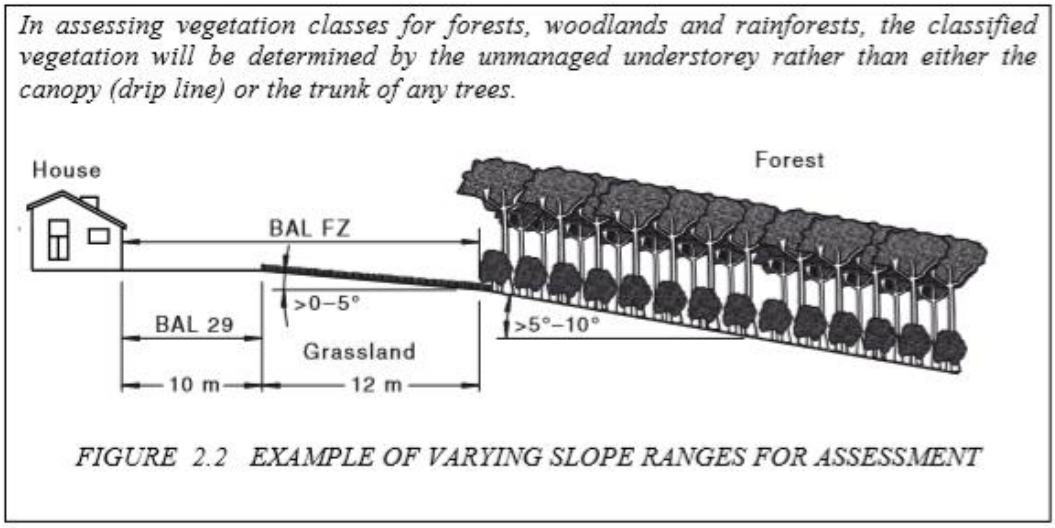

Plate 2: Effective Slope and measurement taken from AS 3959:2018

Effective slope under each vegetation plot was assessed in accordance with the methodology detailed in AS 3959:2018 Construction of buildings in bushfire prone areas (AS 3959) (Standards Australia, 2018 Bushfire Fuels). Slope data was measured on site and cross referenced with Landgate elevation data.

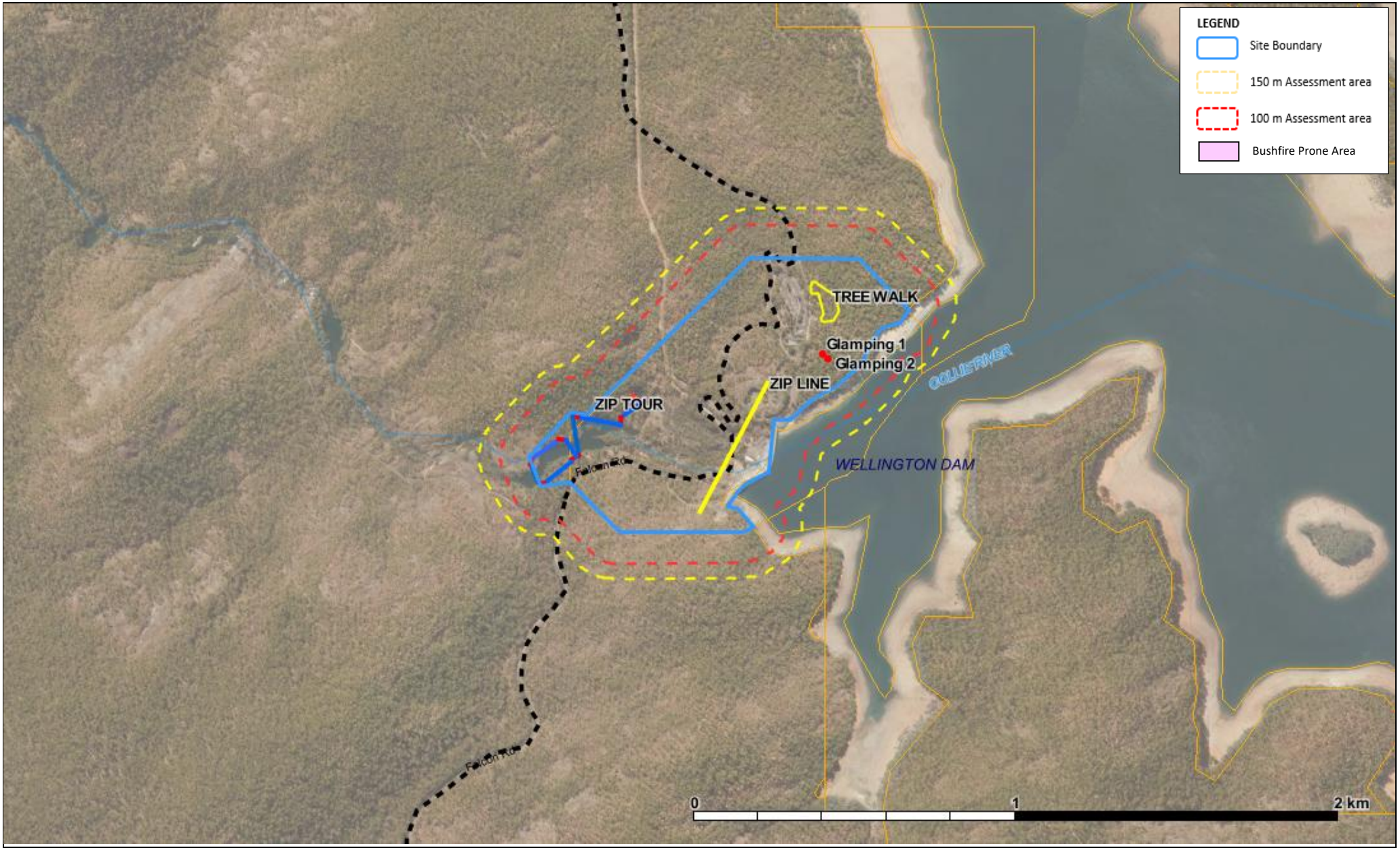

Figure 1: Location

N

Assessment Date: 29/11/2024
Prepared: Anthony Rowe I Accreditation Level: BPAD L3
Accreditation Number: 36690 Accreditation I Expiry: Dec 2025
FPAA FIRE MAP 2025 I GDA 1994 MGA Zone 50

envision bushfire protection

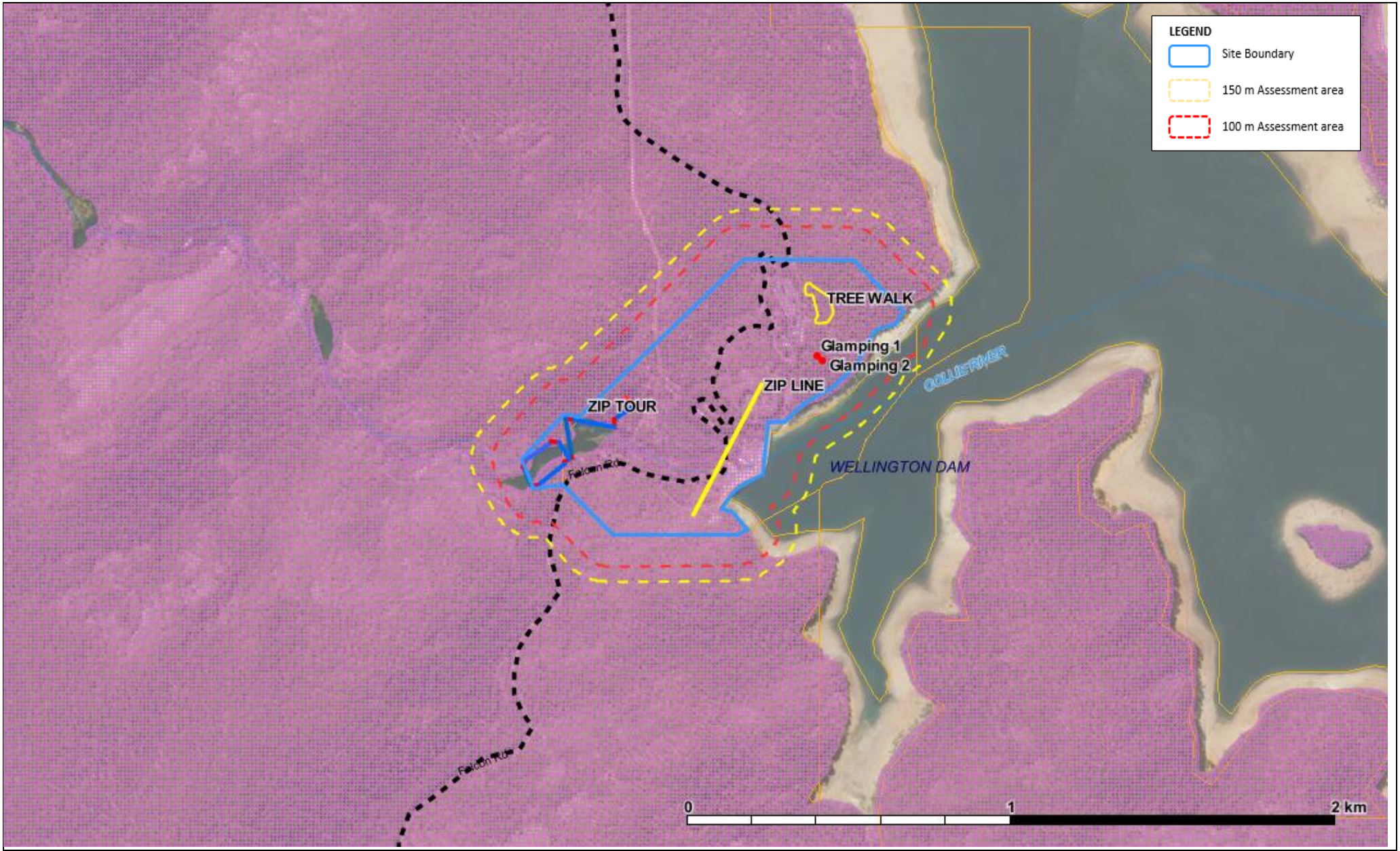

Figure 2: Location – Bushfire Prone Area	N	Assessment Date: 29/11/2024 Prepared: Anthony Rowe I Accreditation Level: BPAD L3 Accreditation Number: 36690 Accreditation I Expiry: Dec 2025 FPAA FIRE MAP 2025 I GDA 1994 MGA Zone 50		envision bushfire protection

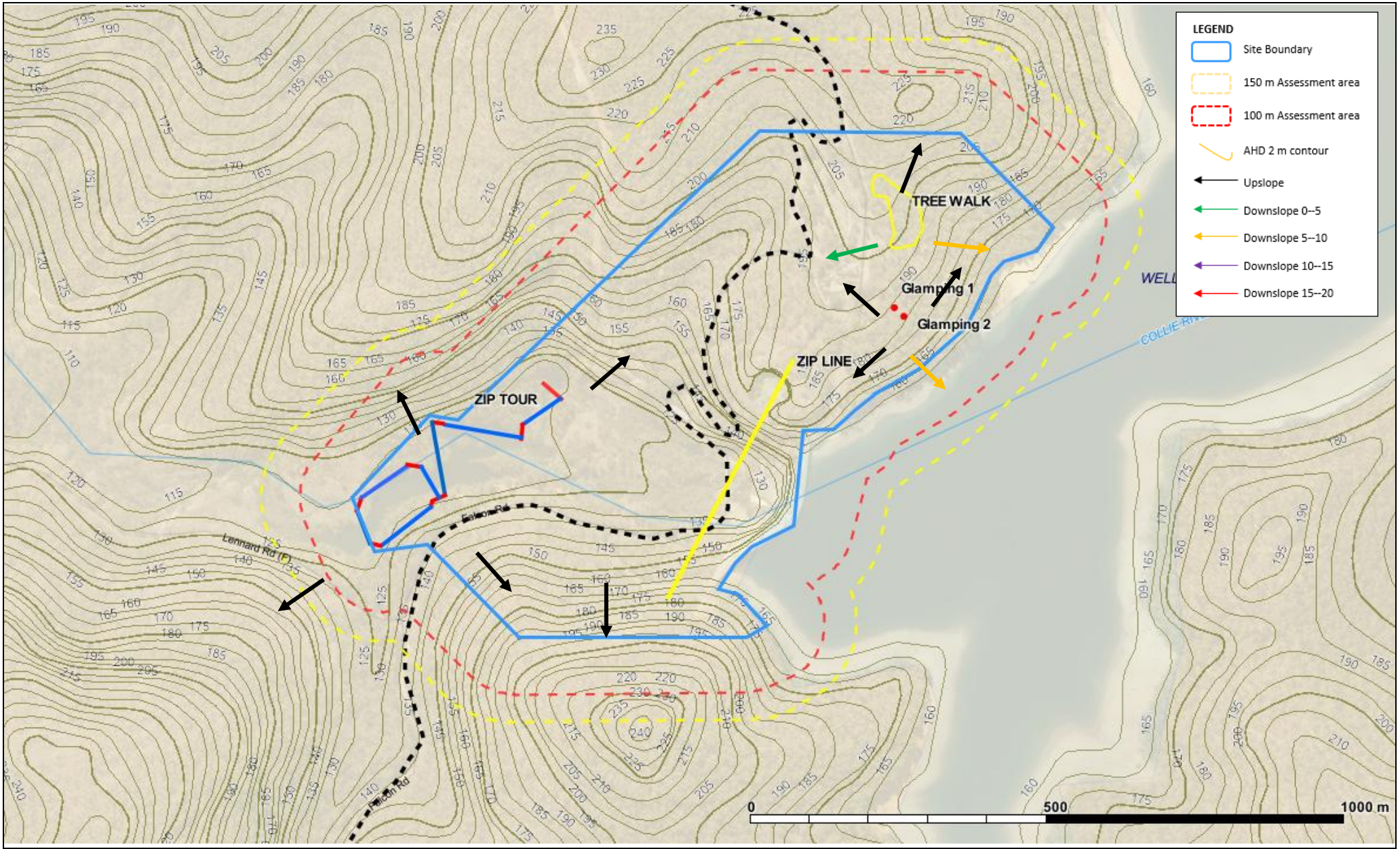

Figure 3: Topography

N

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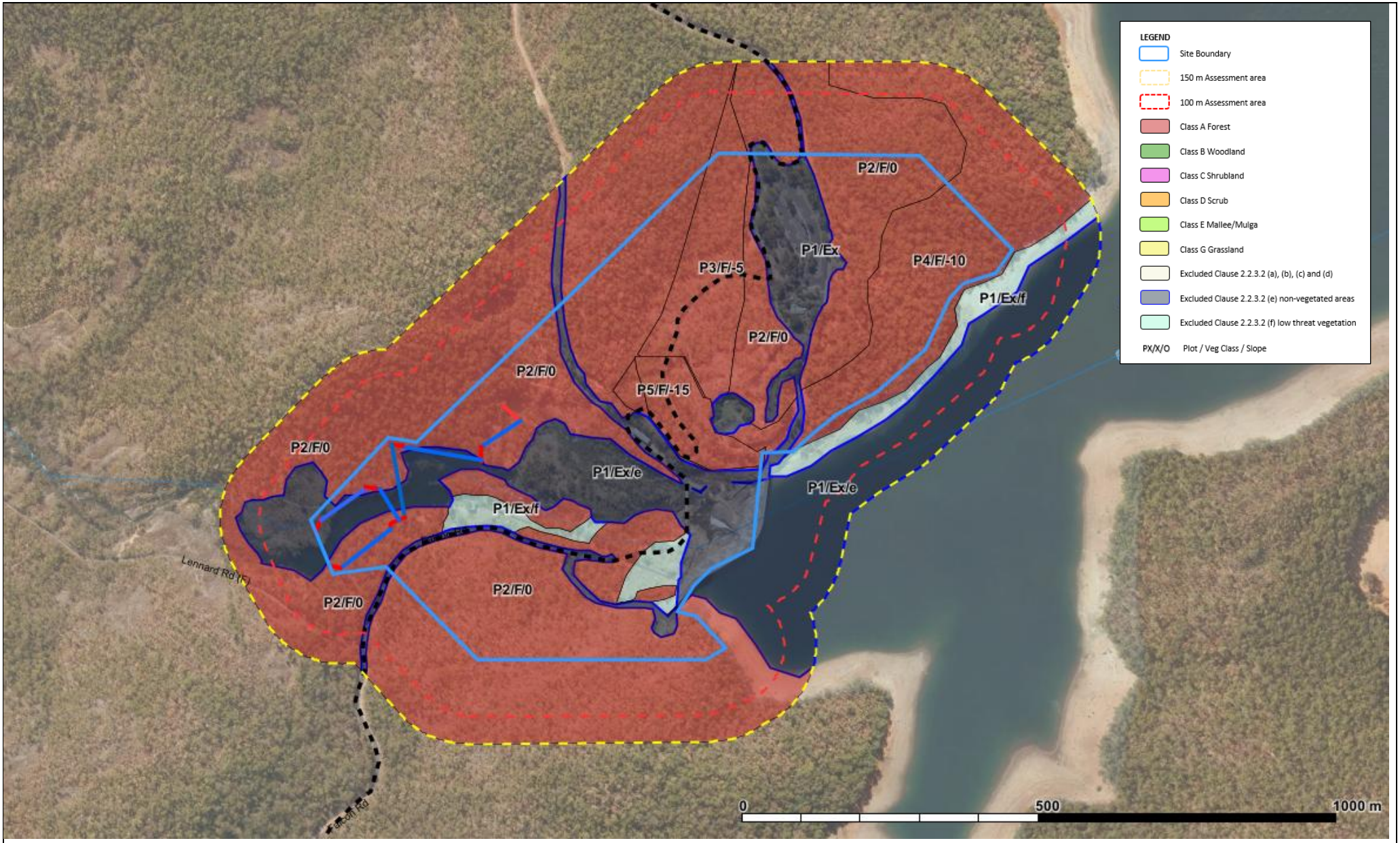

Figure 4a: Vegetation Classification

N

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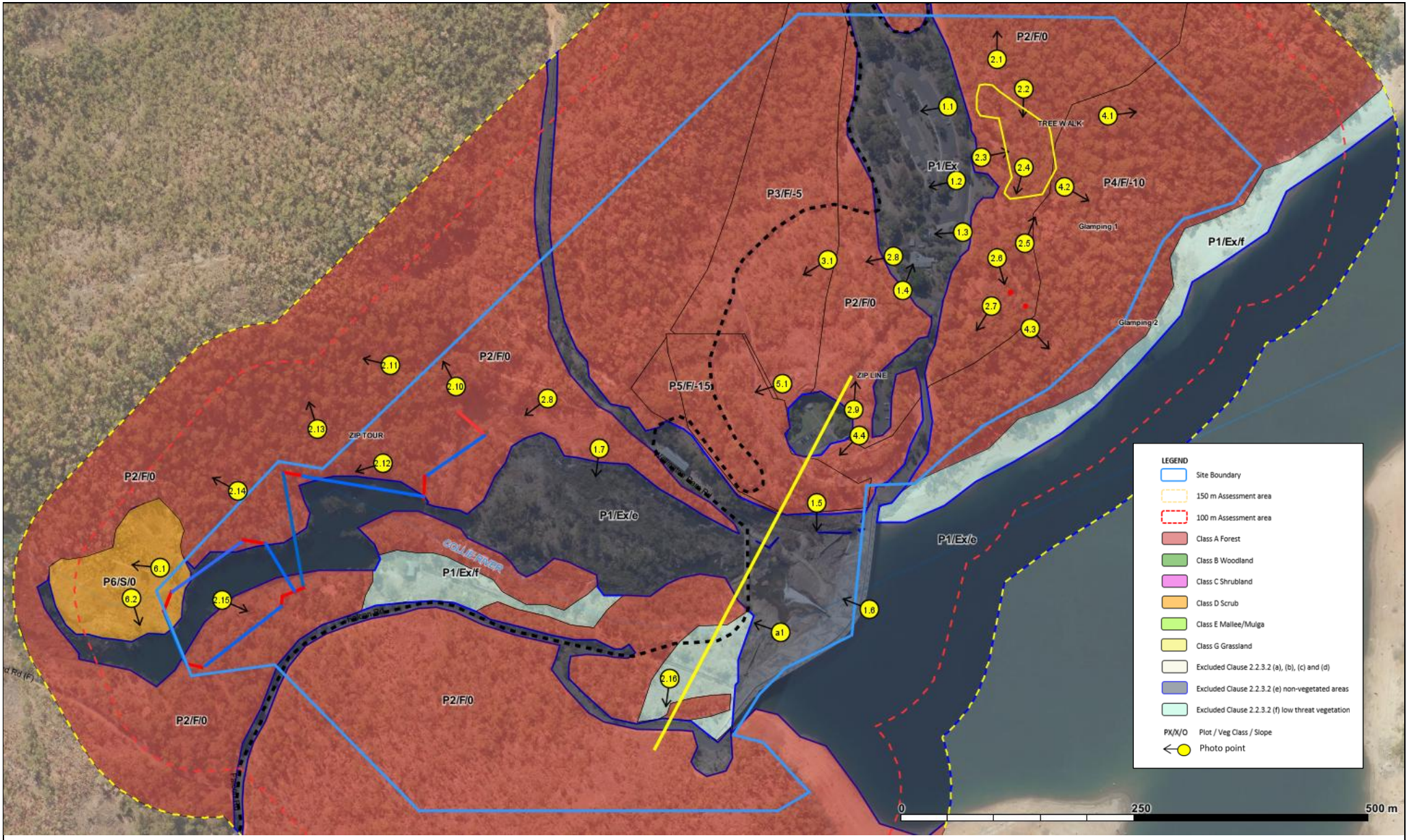

Figure 4b: Vegetation Classification (enlarged to show photo locations

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PLOT: 1				
Vegetation Classification		**Slope**		
Excludable - 2.2.3.2(f) Low Threat Vegetation		No applicable		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓	✓	✓	✓
Moderate				
High				
Very High				
Extreme				
Vegetation Description (AS 3959)				
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, maintained lawns,….cultivated gardens, vineyards, nature strips and windbreaks.				
Post development				
Excluded				

Photo 1.1 Kiosk/Wellington Dam carpark (north)

Photo 1.2 Kiosk/Wellington Dam carpark (south)

Photo 1.3 Kiosk

Photo 1.4 Garden south of Kiosk

PLOT: 1				
Vegetation Classification		**Slope**		
Excludable - 2.2.3.2(f) Low Threat Vegetation		No applicable		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓	✓	✓	✓
Moderate				
High				
Very High				
Extreme				
Vegetation Description (AS 3959)				
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, maintained lawns,….cultivated gardens, vineyards, nature strips and windbreaks.				
Post development				
Excluded				

Photo 1.5 Wellington Dam

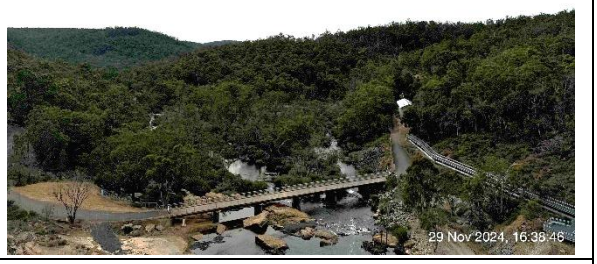

Photo 1.6 view to valley rocky base and waterway (toward the zip-line tour)

Photo 1.7 Rocky out crop river floor, bound by forest.

PLOT: 2				
Vegetation Classification		**Slope**		
Class A Forest - Open forest A-03		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low				
Moderate	✓			
High		✓		✓
Very High			✓	
Extreme				
Vegetation Description (AS 3959)				
Trees up to 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.				
Post development				
Forest retained.				

Photo 2.1

Photo 2.2 Into tree walk existing track/trails to be used

Photo 2.3 Cleared area for ticket office and storage containers

Photo 2.4 view south from tree walk

PLOT: 2				
Vegetation Classification		**Slope**		
Class A Forest - Open forest A-03		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low				
Moderate	✓			
High		✓		✓
Very High			✓	
Extreme				
Vegetation Description (AS 3959)				
Trees up to 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.				
Post development				
Forest retained.				

Photo 2.5 View north from glamping

Photo 2.6 Glamping tree location

Photo 2.7 View south from glamping

Photo 2.8 View south east from kiosk, Plot 3 beyond

PLOT: 2				
Vegetation Classification		**Slope**		
Class A Forest - Open forest A-03		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low				
Moderate	✓			
High		✓		✓
Very High			✓	
Extreme				
Vegetation Description (AS 3959)				
Trees up to 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.				
Post development				
Forest retained.				

Photo 2.9 View north from zip-line rock base

Photo 2.10 View north from zip-line tour base

Photo 2.11 View from zip-line tour upslope (from east)

Photo 2.12 zip-line tour existing tracks (view to west)

PLOT: 2				
Vegetation Classification		**Slope**		
Class A Forest - Open forest A-03		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low				
Moderate	✓			
High		✓		✓
Very High			✓	
Extreme				
Vegetation Description (AS 3959)				
Trees up to 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.				
Post development				
Forest retained.				

Photo 2.13 View from zip-line tour upslope (north) from central

Photo 2.14 View from zip-line tour upslope (north) from west

Photo 2.15 View to southern side (Shire Dardanup)

Photo 2.16 Southern zip-line base (Shire Dardanup)

PLOT: 3				
Vegetation Classification		**Slope**		
Class A Forest - Open forest A-03		Downslope 0-5		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low				
Moderate	✓			
High		✓		✓
Very High			✓	
Extreme				
Vegetation Description (AS 3959)				
Trees up to 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.				
Post development				
Forest retained				

Photo 3.1 View north into down slope, west of kiosk

PLOT: 4				
Vegetation Classification		**Slope**		
Class A Forest - Open forest A-03		Downslope 5-10		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low				
Moderate	✓			
High		✓		✓
Very High			✓	
Extreme				
Vegetation Description (AS 3959)				
Trees up to 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.				
Post development				
Forest retained				

Photo 4.1 East of tree walk (north)

Photo 4.2 East of tree walk (central)

Photo 4.3 East of Glamping

Photo 4.4 South of Kiosk

PLOT: 5				
Vegetation Classification		**Slope**		
Class A Forest - Open forest A-03		Downslope 10-15		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low				
Moderate	✓			
High		✓		✓
Very High			✓	
Extreme				
Vegetation Description (AS 3959)				
Trees up to 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.				
Post development				
Forest retained				

Photo 5.1

PLOT: 6				
Vegetation Classification		**Slope**		
Class C Shrubland - Closed heath C-10		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low			✓	✓
Moderate	✓	✓		
High				
Very High				
Extreme				
Vegetation Description (AS 3959)				
Found in wet areas and/or affected by poor soil fertility or shallow soils. Shrubs 1 m -2 m high. Wet heaths occur in sands adjoining dunes of the littoral (shore) zone. Montane heaths occur on shallow or water-logged soils.				
Post development				
Shrubland retained				

Photo 6.1

Photo 6.2

POTENTIAL BUSHFIRE IMPACT - Outputs

Determined Bushfire Attack Level

The determined BAL is the present BAL level at the position of the proposed development without bushfire protection measures.

Table: 2 – Recorded distances for the nearest building elevation to a plot class > 0 m

Plot no.	Vegetation Classification	Effective slope	Distance (m) for BAL 29	Separation provided	BAL
1	Excluded	N/A	0	0	N/A – no effect on assets
2	Forest	Flat/Upslope	21 m	0[1] m	BAL – FZ
3	Forest	Downslope 0-5	27 m	37[3] m	BAL - 40
4	Forest	Downslope 5-10	33 m	0 [2&5] m	BAL – FZ
5	Forest	Downslope 10-15	42 m	0[3] m	BAL – FZ
6	Shrubland	Flat/Upslope	9	0[4]m	BAL - FZ

Closest Asset Legend

1. All assets
2. Tree top walk
3. Zip-line
4. Zip-line Tour
5. Glamping

Note the slopes are relative to the asset, many of which are located on a steep valley where the vegetation is on ground rising from the position of the asset. Rising ground is treated as Flat for AS 3959 (Plot 2 is a large area).

The BAL represents the distance to the Plot from the nearest asset. The highest BAL Level is to apply.

There is no APZ or separation proposed for any asset. Flame immersion (BAL FZ) is expected.

All assets are classed as BAL FZ.

Indicative Bushfire Attack Level

The Indicative Bushfire Attack level is the expected BAL at buildings upon completion, after the bushfire management strategies have been implemented.

All assets will remain classed as BAL FZ.

An area centre of the Wellington Dam wall (on the road way) has been identifies as greater than 134 m from forest (upslope to the dam wall -BAL Low method 1) that is calculated Method 2 with an FDI of 80 and a flame temperature of 1200K to be < 2kWm^2 – suitable for open shelter as a shelter of last resort.

Method 2 - Inputs

- FDI 80
- Flame Temperature 1200K
- Forest upslope
- Separation 134 m

NBC Bushfire Attack Assessment Report V4.1

AS3959 (2018) Appendix B - Detailed Method 2

Print Date: 16/06/2025 **Assessment Date:** 12/06/2025

Site Street Address:	Wellington Dam, Wellington DAM		
Assessor:	Anthony Rowe; Envision Bushfire Protection		
Local Government Area:	WA	**Alpine Area:**	No

Equations Used

Transmissivity: Fuss and Hammins, 2002
Flame Length: RFS PBP, 2001/Vesta/Catchpole
Rate of Fire Spread: Noble et al., 1980
Radiant Heat: Drysdale, 1985; Sullivan et al., 2003; Tan et al., 2005
Peak Elevation of Receiver: Tan et al., 2005
Peak Flame Angle: Tan et al., 2005

Run Description:	Method 2		
Vegetation Information			
Vegetation Type:	Forest		
Vegetation Group:	Forest and Woodland		
Vegetation Slope:	0 Degrees	**Vegetation Slope Type:**	Downslope
Surface Fuel Load(t/ha):	25	**Overall Fuel Load(t/ha):**	35
Vegetation Height(m):	8	Only Applicable to Shrub/Scrub and Vesta	
Site Information			
Site Slope	0 Degrees	**Site Slope Type:**	Downslope
Elevation of Receiver(m)	3	**APZ/Separation(m):**	134
Fire Inputs			
Veg./Flame Width(m):	36.6	**Flame Temp(K):**	1200
Calculation Parameters			
Flame Emissivity:	95	**Relative Humidity(%):**	25
Heat of Combustion(kJ/kg	18600	**Ambient Temp(K):**	308
Moisture Factor:	5	**FDI:**	80
Program Outputs			
Level of Construction:	BAL LOW	**Peak Elevation of Receiver(m):**	9.8
Radiant Heat(kW/m2):	1.01	**Flame Angle (degrees):**	82
Flame Length(m):	19.8	**Maximum View Factor:**	0.013
Rate Of Spread (km/h):	2.4	**Inner Protection Area(m):**	134
Transmissivity:	0.714	**Outer Protection Area(m):**	0
Fire Intensity(kW/m):	43400		

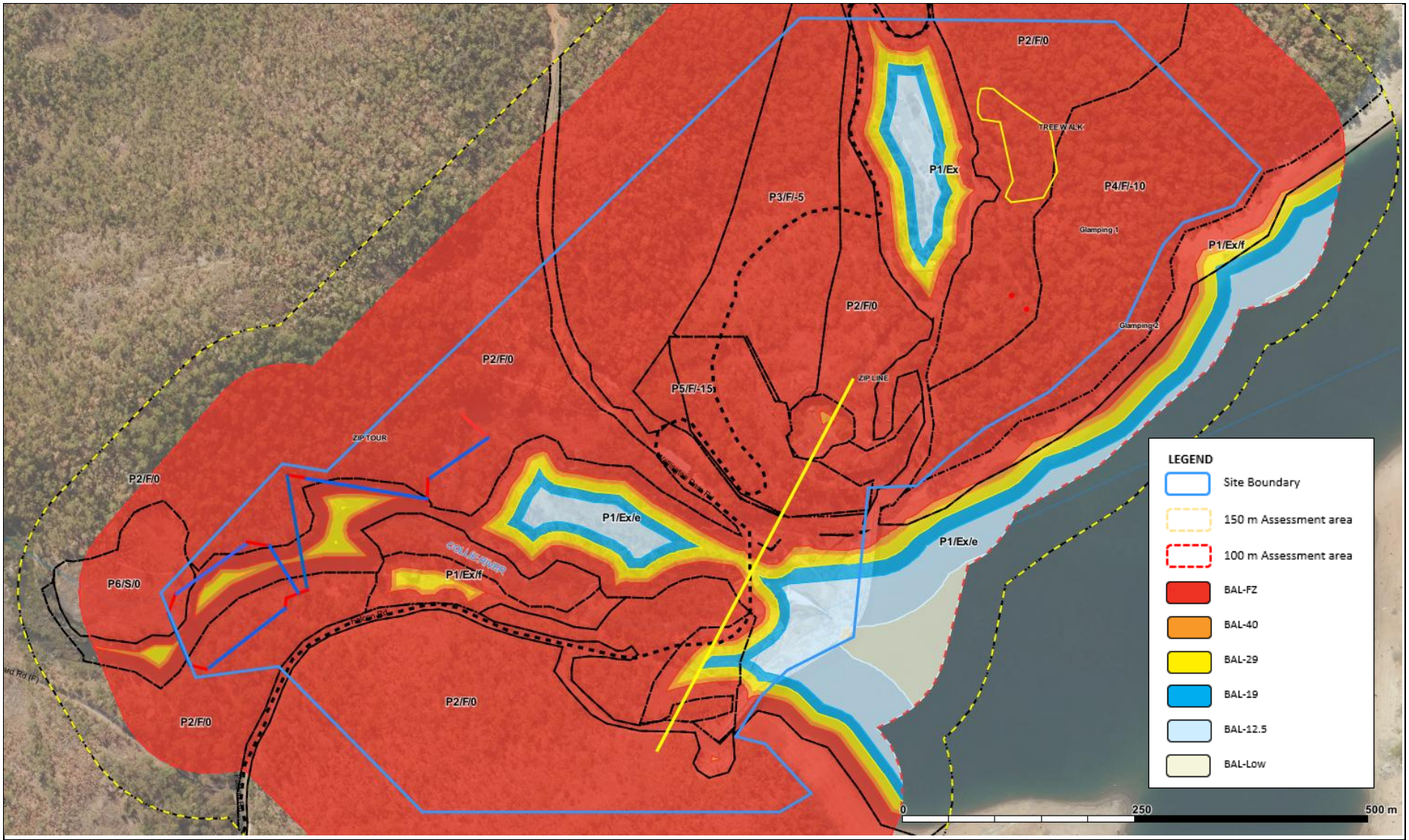

Figure 5: BAL Contour Post Development Scenario

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4. IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

The purpose of SPP 3.7 and its policy intent is to preserve life and reduce the impact of bushfire on property and infrastructure through effective risk-based land use planning. Importantly, it is risk-based and not a prohibition; the provisions in SPP3.7 and the Guidelines are not to be applied inflexibly as affirmed by the West Australian Administrative Tribunal (WASAT)

> *SPP 3.7 does not require that there be no increase at all in the threat of bushfire to people property or infrastructure. Rather, as is seen in clause 2 of SPP 3.7, the intention of the policy is to 'implement effective, risk-based land use planning and development to preserve life and* ***reduce the impact of bushfire on property and infrastructure'****.* (emphasis added) [1]

Risk for the purpose of SPP 3.7 (section 4) is determined using the methodologies in AS 3959:2018. AS 3959 is site specific, the nature of the risk and context consideration that may exacerbate or reduce the risk includes considerations for access to and from the site and water to support active suppression at the site, explicitly by emergency services. This is addressed in the Bushfire Protection Criteria (minimum compliance criteria) which represents the acceptable risk treatment in response to the Bushfire Attack Level at the site, the available access to the site and water for Emergency service fire suppression.

Applicants are encouraged to strive for the lowest practical risk, notwithstanding the achievement of compliance; however, it is only the compliance matters that must be achieved for approval. SPP 3.7 is not retrospective; applicants may wish to volunteer improvements to existing buildings or provide additional resources for fire suppression independent to the requirements for Emergency Services.

These should be informed by an As Low as Reasonably Practical (ALARP) approach for the applicants' consideration.

This BMP has used the methodology (applicable principles) from the National Emergency Risk Assessment Guidelines 2020 (NERAG), and a risk treatment approach has been further categorised (as an orderly method) into the National (USA) Fire Protect Association (NFPA) treatment that are also adopted by the Australian Building Construction Board.

The National Emergency Risk Assessment Guidelines 2020 (NERAG) is an adaption of the Australian Standard *AS/NZS ISO 31000:2018 Risk management – principles and guidelines,* making it applicable to all natural disasters.

The following table shows the author's alignment of SPP3.7 with the NERAG methodology.

NERAG	Scale response
Scope and Objective	SPP 3.7 Policy Intent
Risk identification	Bushfire
Risk Analysis	Bushfire Behaviour (contributing attributes) Climate (local) Existing mitigations (controls) relied upon
Risk Evaluation	Cumulative risk: Likelihood (risk of ignition): Inherit fuels, history, external activities. Consequence: Social (human harm - minimising exposure evacuate or shelter)

[1] Harmanis Holdings No. 2 Pty Ltd and Western Australian Planning Commission [2019] WASAT 43 (Harmanis). Not once the determination is made that the development is unavoidable (Policy Intent)

	Economic (Asset threat – managing the fire, sources and building resistance)
Risk Treatments	Bushfire Protection Criteria Bushfire Emergency Evacuation Plan (Additional) As Low as reasonably practical measures (ALARP) addressing: – Minimising Ignition – Minimising exposure – Managing (reducing) the fire effects[2].
Communication	Bushfire Management Plan Bushfire Emergency Evacuation Plan

The risk treatments aligning the Policy Intent with the NFPA 550 (2012)[3] and its risk treatment methods is illustrated in the following table.

SPP 3.7	NFPA	Impact Mitigation
	Prevent Ignition	Nullify potential externalities
Preserving life	Manage the exposed	Evacuation
		Shelter
Property and assets	Manage the fire	Vegetation management (APZ)
		Building construction
		Fire suppression

Scope and objective

The intent of this policy is to implement effective, risk-based land use planning and development to preserve life (social) and reduce the impact of bushfire on property and infrastructure (Economic).

Risk Evaluation values Note: Community scale risk measures as used in NERAG 2020, are not applicable for site specific consequence, or operator duty of care and liability, the following objectives have been applied.

Consequence	Social	Economic
Catastrophic	Fatality.	Extensive loss, extended closure until facility is rebuilt.
Major	Major or Multiple injuries resulting in temporary disability or ill health, Extended lost time for recovery.	Partial loss, partial closure until isolated items are rebuilt.
Moderate	Injury or illness requiring medical or psychological treatment, lost injury time.	Disruption only for evaluation, repairs required to a primary building but not closure.

2

[3] Guide to the fire safety concepts tree. Quincy: National Fire Protection Association, 2012.

Minor	Minor injury, first aid treatment required. No lasting impact.	Disruption only for evaluation, damage to incidental structures.
Insignificant	No treatment.	Disruption only occurred during the fire event.

Risk Identification

The risks associated with a bushfire include:

- extreme heat (flame immersion, accumulated embers, and radiant heat – fatal and property destroying),
- convective heat potentially fatal), strong winds (blown object blunt force injuries, or the opening of the building envelope to expose and ignite flammable materials inside),
- ember attack (particle injuries small burns, eye injury, penetration of gaps to ignite flammable materials inside a building - heavy
- smoke (obscured vision, trips, falls, collision and respiratory impacts (fatal), and
- trauma (bushfires are terrifying).

Risk Analysis

4.3.1 Bushfire Behaviour

Bushfire behaviour, as it increases in intensity and speed of travel, can exceed human control measures and when this occurs the risk increases to humans and property. Bushfire behaviour is a result of climate, topography, and the availability of bushfire fuel (vegetation).

- Climate (drought and season) & weather (temperature, humidity, wind, atmospheric instability).

  Wind

  Bushfires are influenced by the wind direction and the speed. The wind direction generally determines the direction of the fire and wind speed, along with ground slope, generally determines the speed a fire will travel over ground. As wind strength increases it increases the availability of oxygen allowing the fire intensity to increase.
  Atmospheric conditions determine the potential for the uplift of embers and particles that can be distributed by the prevailing wind direction well ahead of the fire, up to 9 km, to create spot fires that can advance the location of the fire front.

  Fire Danger Index FDI

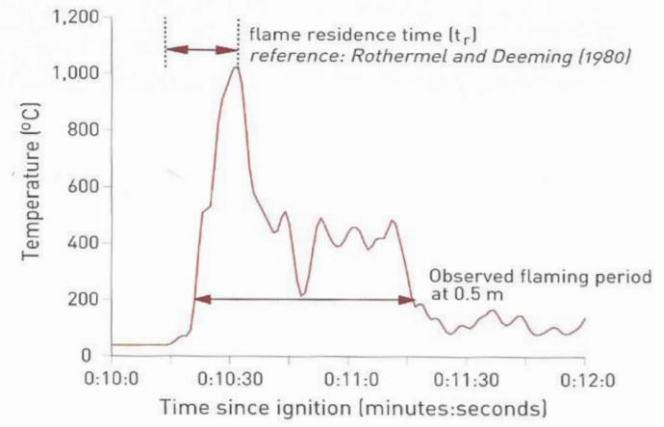
  FDI is an indicator of potential fire intensity and behaviour based upon weather conditions; temperature, humidity, and wind speed, together with climate measures, drought factor representing the dryness of the ground fuels.
  The FDI is an indicator of the potential for house loss and fatalities.
  The FDI is used as a basis for determining the required design performance of a building.

- Topography (slope of the ground, aspect) – fire travels faster uphill, (flame length doubles for every slope increase of 10^0) and in some conditions may determine the direction of the fire. The landform can also channel and increase the windspeed in steeper valleys and create turbulence and erratic behaviour where it crosses valleys and ridge lines, including eddies/vortexes that run a fire up the lee side of a slope.
- Vegetation (horizontal and vertical structure, flammability, mass, and availability). Measured as a vegetation classification, or an exclusion, in AS 3959 (Method 1). The arrangement of fuel has a greater effect upon the intensity of a fire than just its mass; its exposure to oxygen is referred to as its availability in a bushfire.

It is assumed that a bushfire will achieve a steady-state and be fully developed to maximum intensity over a 100 m (minimum) fire run. Grass fires travel faster (GFDI) than a forest canopy fire, but a forest canopy fire can eject a higher level of embers and also eject them over a greater distance. Crown fires occur when the ground fire is intense, and conversely, when ground fuels are managed, the resultant fire intensity may not be sufficient to involve the crown or sustain a fire.

Grass fires are fast moving and influenced by the wind direction. Forest fires are characterised by the high fuel mass and have the highest fire line intensity requiring the largest separations to reduce radiant heat. Forest fires, if of sufficient size, continuity, and intensity can eject embers in advance of the fire front up to 5 km (and greater distances but rare).

A firefront peak (flame) residency and flaming time was identified by project Vesta to be 2 minutes up to 1100^0c before the temperature quickly decays to 500^0c before again tapering down to less than 200^0c and fading.



Project Vesta flame residency temperature profile for forest.[4]

Ember attack is the cause of the highest building loss, either finding gaps and flammable materials within a building or igniting flammable materials near a building that can expose the building to direct flame contact.

Radiant heat is the cause of most fatalities.

Studies by the CSIRO[5] in a review of 260 bushfires between 1901 -2011, has found that 78% of all fatalities (773 civilian fatalities) occur within 30 m of a forest, and 88% of fatalities 'within a structure' occur within 30 m of a forest. It has also found that if a building/ house survives that people will survive. *Generally, a house is large enough to maintain tenability, but tenability is a critical factor and is an important consideration in designing spaces for refuge.*

Fuel reduction initiatives such as slashing and controlled burns are intended to reduce the fuel availability to a level where the intensity of the fire remains controllable.

Climate

The nearest weather station to the site is at Collie. The site is within an area described as having a Mediterranean climate of dry summers and mild, wet winters. The majority of rainfall is between May and September. The prohibited burning period is from mid-December to mid-March.

The Bushfire Danger Season has traditionally been between November and April each year, but recent climatic conditions have caused fire danger conditions to be present either side of this period.

Severe bushfire conditions FDI 50+, occur mostly between January and March.

[4] Australian Building Codes Board 2019, *Handbook: Bushfire Verification Method*, Commonwealth of Australia and States and Territories 2019, published by the Australian Building Codes Board.
[5] Blanchi. R, Leonard. J, Haynes. K, Opie. K, James. M, Kilinc. M, Dimer de Oliveira. F, van den Honert.R, 2012, '*Life and House Loss Database Description and Analysis – Final Report*', CSIRO and Bushfire CRC

Bushfires generally travel in the direction of the prevailing wind with the fire intensity also affected by the slope and fuel. The direction of the prevailing wind conditions can affect the options for evacuation.

The wind roses below (Plates 5 and 6) for February (averaged) recorded at 9 am and 3 pm. Extreme and Catastrophic conditions occur mostly from the east in the mornings and in the afternoon, may either be from the north west or the south east (BoM Collie). A bushfire can however come from any direction.

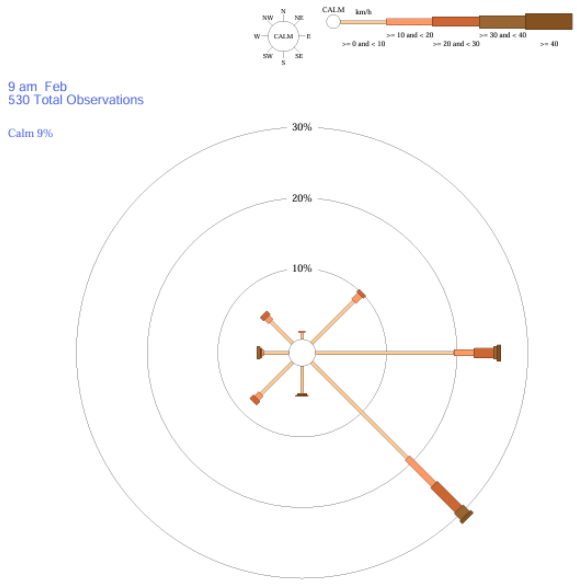


Plate 3: BoM weather data, prevailing wind directions as at 9am

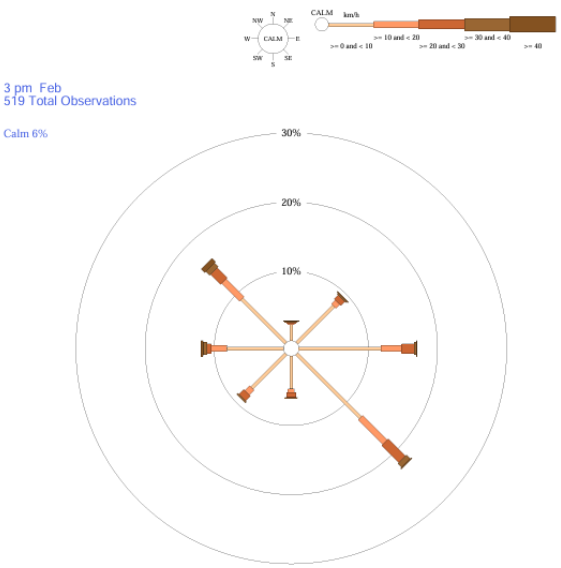


Plate 4: BoM weather data, prevailing wind directions as at 3 pm

Site Context

The following plates provide a visual context of the surrounding vegetation, slope and fire activity within 2 Km of the site.

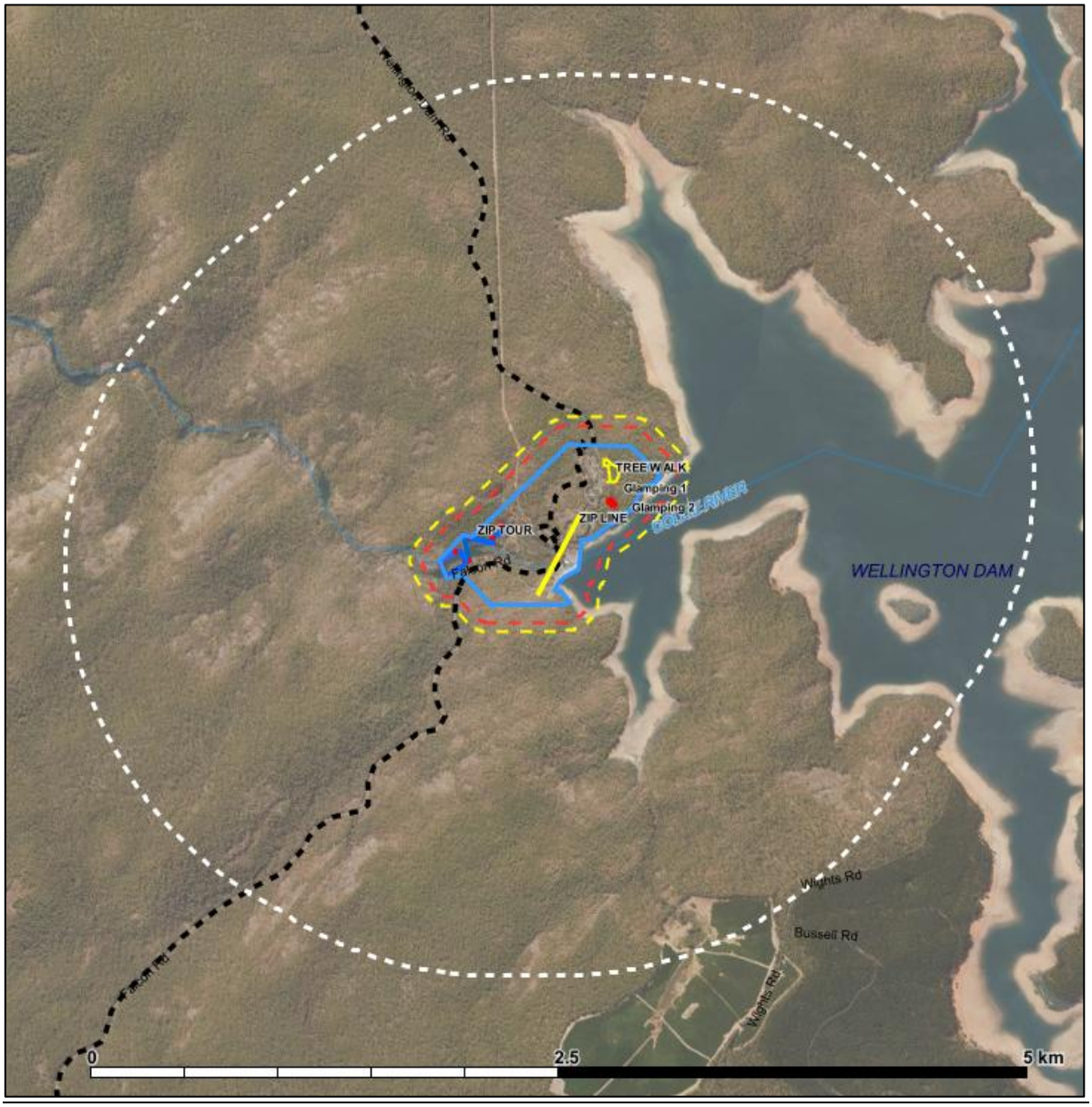


Plate 5: Illustrates the surrounding area within 2 km is forest (immediate to the site). The site may potentially be affected by flame contact if in the path of a fire front. It may also be affected by ember attack from contiguous forest within 5 km from the site. Forest is contiguous for > 2 km from the site. Evacuation routes are 10 km through forest either taken north or south. A firefront is unlikely to penetrate the site from the east due to the Wellington Dam waters.

Topography

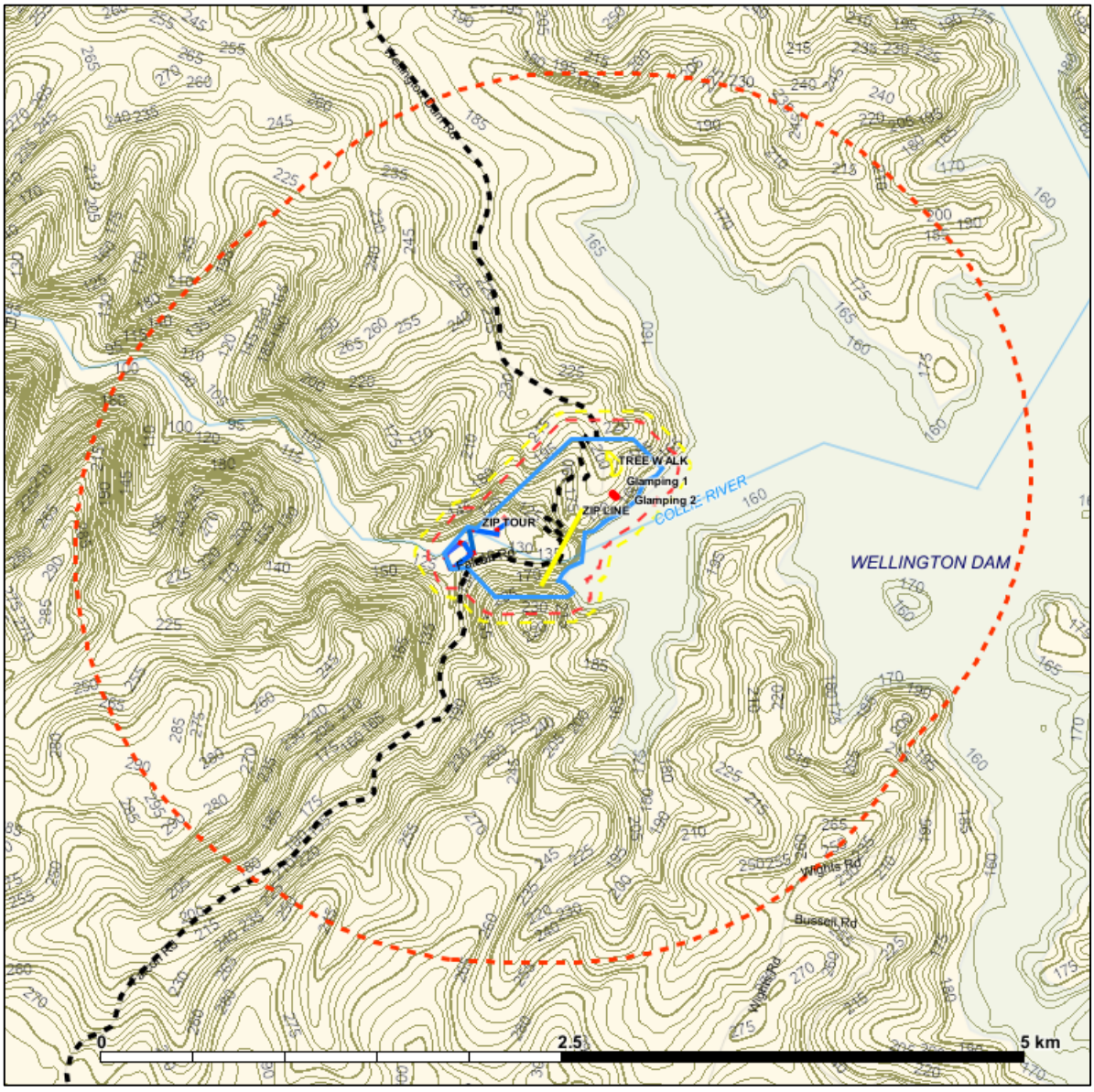


Plate 6: *Illustrates the topography in the surrounding 2 km area. The landform may channel winds into the valleys contributing to erratic behaviour.*

Fire History

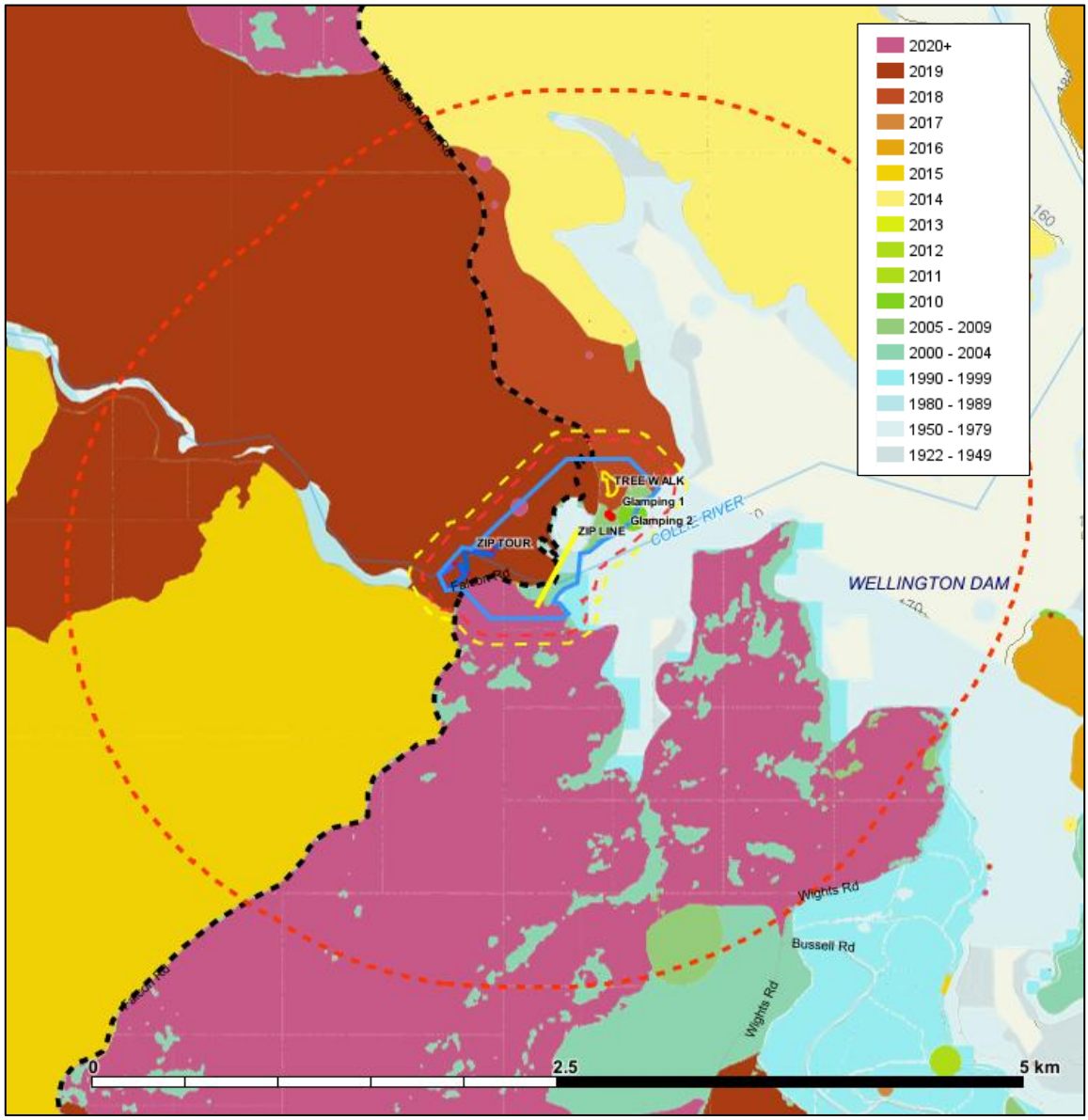


Plate 7: The fire history is indicative of activity and does not distinguish between controlled and uncontrolled fires. It illustrates an active level of management around the site.

The site is within extended contiguous forest area on steep channels that runs from the west of the site. The site is potentially affected by extreme (forest) bushfire conditions.

Risk Evaluation

The risks associated with a bushfire include:

- extreme heat (flame immersion, accumulated embers, and radiant heat – fatal and property destroying),
- convective heat potentially fatal), strong winds (blown object blunt force injuries, or the opening of the building envelope to expose and ignite flammable materials inside),
- ember attack (particle injuries small burns, eye injury, penetration of gaps to ignite flammable materials inside a building - heavy
- smoke (obscured vision, trips, falls, collision and respiratory impacts (fatal), and
- trauma (bushfires are terrifying).

Risk identification

The proposed development is subject to unavoidable flame contact exposure of occupants to fatal conditions, and the destruction of assets (accepted as a tolerable loss.

The access from the site may be affected by bushfire.

Fire suppression resources are ineffective.

Existing controls

Functions that presently reduce the risk of bushfire and promote safety are listed as follows. The proposal does not adversely change the effectiveness level of any of the items listed.

The residual risk is the risk remaining following the application of existing risk controls. The existing controls ameliorate the impact of a bushfire or provide opportunity to reduce the consequence for visitors and assets at the site.

Offsite

- Administration of the *Bush Fires Act 1954*, fuel reduction private land management - reduces the level of ignition and incidence of landscape bushfire.
- Public lands management (DBCA)- reduces the spread and intensity of bushfire.
- Emergency service coordination.
- Emergency warnings/Telecommunications – early warning and information on the fire location, to leave early and avoid the bushfire.
- Maintenance of public roads and traffic management.
- Local fire brigade and landscape fire suppression administration and resources – prevention of a fire reaching the site, attending to ignitions that may save buildings (not to be relied upon due to competing priorities).

Likelihood

The likelihood of a bushfire affecting the site is considered 'likely'. Nearby fuel reduction initiatives will reduce the intensity of a bushfire, increasing the opportunity for control, but it does not eliminate the possibility of a fire affecting the site.

Consequence

The option to minimise exposure to harm from bushfire is to evacuate.

The development site will be exposed to extreme (fatal) conditions and should be evacuated to a safe destination outside of the site.

The site offers options to evacuate in the opposite direction; away from an approaching fire.

Risk treatments

Minimising Exposure

The Bushfire Emergency Plan is a complementary risk treatment that describes the seasonal preparations, the methods for daily vigilance of a threat, and clear roles and responsibilities that maximise an early and effective response to a bushfire event, maximising the time to evacuate guests to a safe destination.

Evacuate when advised to evacuate.

The site should be evacuated when the FBI is 75+ (forecast on the previous day) or a fire (contained) that is nearby with a potential to flare up.

Evacuation from the site is available and should be taken in the opposite direction to an approaching fire.

If it is unsafe to leave, the centre of the Wellington Dam is more than 100 m from Classified vegetation and has a determined Bushfire Attack Level - BAL Low (for shelter as a last resort)

Asset Protection

The assets are not to be defended in a bushfire. The assets are accepted as a tolerable loss.

This is classed as a major consequence. The cost will include the replacement of assets as well as the loss of income until restoration can be achieved. The site is also dependent upon the amenity of the locality, the operation of the kiosk and the public amenities.

The proposed facility may be unable to operate for up to 12 months; reliant upon the restoration of the public assets, a road condition clear of fallen trees, an operational kiosk and public toilets.

Temporary facilities may be required to provide the amenities of the kiosk and the public toilets at the facility, until the public functions are repaired or replaced

Consequence: Catastrophic

- Loss of income 12 months
- Cost of replacement of assets

5. BUSHFIRE PROTECTION MEASURES

5.1 Planning for Bushfire Guidelines (2024) (the Guidelines)

The Bushfire Protection Criteria in the Guidelines is divided into 8 classifications, each with four elements – location, siting and design, vehicular access, water. Each element aligns to an Outcome listed in SPP 3.7, at Section 6 Policy Outcome.

The applicable classification is Bushfire Protection Criteria 8: Development – Vulnerable tourism land uses and day uses.

Each element is provided with an Acceptable Solution that satisfies the element and SPP3.7 outcome. Compliance with all applicable Acceptable Solution is a demonstration of compliance with the Outcome and SPP 3.7. Where an Acceptable Solution is not achieved an alternative bushfire risk management measure of not less a standard than the Acceptable Solution may satisfy the outcome of the policy.

Consideration is also to be given to the explanatory statement (Preamble to Bushfire Protection Criteria 8) and Appendix B.5 Vulnerable Land Uses.

Table 2: Bushfire Protection Criteria assessment.

Bushfire Protection Criteria 8: Development – Vulnerable tourism land uses and day uses.

Demonstrated Compliance (DC)	A	Acceptable solution compliant	OB	Outcomes-based approach	C	Conditioned at section 6 BMP

Bushfire Protection Criteria	ACCEPTABLE SOLUTIONS	DC	Proposed Bushfire Management Strategies
Element 1: location **O1 -** Avoid broader landscapes that present an unacceptable bushfire risk to life, property and infrastructure	**Area 1 (Urban):** Not applicable. **Area 2:** Not applicable.		
Element 2: Siting and Design **O2 -** Ensure siting and design solutions: • manage or mitigate the bushfire risk to people, property and infrastructure; and • avoid, or where unavoidable, minimises the clearing of native vegetation.	**A2.1a Siting and design** Every habitable building achieves a radiant heat impact not exceeding 29 kW/m² (BAL-29).	See A2.2a	The development is located within BAL FZ, it does not require BCA approval and is classed as a tolerable loss.
	A2.1b Asset Protection Zone (APZ) Where a habitable building cannot be wholly within an area with a radiant heat impact not exceeding 29 kW/m2 (BAL-29) in its predevelopment state, an APZ is to be provided and meet the following requirements: **Width** – the APZ is to be measured from the development site, and of sufficient size to ensure the radiant heat impact of a bushfire does not exceed 29 kW/m² (BAL-29) in all circumstances. **Location** – the APZ is to be contained solely within the boundaries of the lot, except in instances where: – the vegetation on the adjoining lot(s) is, and will continue to be, low threat as per Clause 2.2.3.2 of AS 3959 or the requirements of Appendix B.2, Table 9 – APZ technical requirements, or an alternative standard in a local planning scheme, on an ongoing basis in perpetuity; **or** – the adjoining land is and will remain in perpetuity, non-vegetated. **Management** – the APZ is managed in accordance with the requirements of Appendix B.2, Table 9 – APZ technical requirements, or an alternative standard in a gazetted local planning.	See A2.2a	The development is located within BAL FZ, it does not require BCA approval and is classed as a tolerable loss.
	A2.2a Siting within 40 kW/m² (BAL-40) and/or more than 40 kW/m² (BAL-FZ)	A	The development does not require bushfire construction standards under the BCA

Bushfire Protection Criteria	ACCEPTABLE SOLUTIONS	DC	Proposed Bushfire Management Strategies
	The siting of a habitable building or structure, with a radiant heat impact exceeding 29 kW/m2 (BAL-40 or BAL-FZ) should only be considered where: – 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.**		The ticket office and store are shipping containers, not permanent, or a class1-3 (requiring bushfire construction), and Glamping does not require BCA approval. The Zip line is not a habitable building requiring BCA approval. The intrinsic attraction of the development is an intimacy with the natural environment. It is acknowledged the ticket office and storage, the glamping tents (2) and the zip-line tour and zip-line will likely be damaged or destroyed.
	A2.2b Asset Protection Zone (APZ) Where the provision of an APZ in accordance with acceptable solution A2.1b cannot be achieved, then the vegetation immediately surrounding the habitable building is to be managed as defendable space in accordance with Appendix B.2, Table 9 – APZ technical requirements.	See A2.2a	It is acknowledged the ticket office and storage, the glamping tents (2) and the zip-line tour and zip-line will likely be damaged or destroyed.
	A2.3 Clearing of native vegetation The development avoids, or where unavoidable, minimises the clearing of native vegetation.	A	No clearing of native vegetation is proposed other than to facilitate the position of the ticket office and store (a cleared area has been chosen. Limited clearing to facilitate the Zip line base, anchors may be required.
	A2.4 Landscape management plan A landscape management plan is to be prepared to identify on-going on-site vegetation management.	A	The proposal will retain existing native vegetation close to the assets. No revegetation or rehabilitation areas are proposed. The proponent acknowledges elements including the 'Suspended Tree Walk' is sited in an area where DBCA prescribed burning may occur requiring closure of the facility for periods of time to implement the mitigation measures.

Bushfire Protection Criteria	ACCEPTABLE SOLUTIONS	DC	Proposed Bushfire Management Strategies
	A2.5 On-site shelter (if required) Where an on-site shelter is proposed, to comply with A3.5 On-site shelter, it is to meet all the following requirements: – where a building is to function as an on-site shelter, there is to be sufficient separation distance from the predominant bushfire prone vegetation to avoid exposure to a radiant heat flux exceeding 10 kW/m2 (with an assumed flame temperature of 1200 K); **or** – where an open space area is to function as an on-site shelter, there is to be sufficient separation distance from the bushfire prone vegetation to avoid exposure to a radiant heat flux exceeding 2 kW/m^2 (with an assumed flame temperature of 1200 K); **and** – buildings identified as suitable for on-site shelter, to be designed in accordance with *Building Code of Australia and the ABCB Design and Construction of Community Bushfire Refuges Handbook* and located within an area of 10 kW/m2; **and** – pedestrian paths to any on-site shelter should be provided and be clearly signposted.	N/A	The site has through road access north and south. Shelter on site is not advocated; the emphasis is upon the ability to evacuate occupants in a bushfire event. A place of **last resort** is identified centrally on the Wellington Dam wall, if neither evacuation route is safe. It has sufficient separation distance (> 134 m) from the bushfire prone vegetation to avoid exposure to a radiant heat flux exceeding 2 kW/m^2 (with an assumed flame temperature of 1200 K). Measures are proposed in the BEP to aid comfort and avoid harm if shelter is taken, but evacuation may be delayed until a route is declared safe. The occupants are expected to be able bodied and have arrived by private vehicle.
Element 3: Vehicular Access **O3 -** Ensure the design and capacity of vehicular access and egress provide: • for efficient and effective evacuation to a suitable destination(s) and/or • as a contingency measure for vulnerable land uses, an on-site shelter, where demonstrated appropriate, as a last resort option.	**A3.1 Public roads** Public roads are to meet the technical requirements in Appendix B.3, Table 10.	A	Access to the site is by sealed road from the south or north that are compliant with the IPWEA road standard for rural roads. Falcon Road, at the base of the dam wall, is a bridge that is a constricted portion, it is across a low threat area, rock ravine, with open visibility for the staging of passing. Appendix B.3, Table 10, Column 2 provides for constrictions (see notes).
	A3.2a Access routes		
	Area 1 (Urban): Public road access is to be provided to at least one suitable destination.	NA	

Bushfire Protection Criteria	ACCEPTABLE SOLUTIONS	DC	Proposed Bushfire Management Strategies
	Area 2: Public road access should be provided in two different directions to two different suitable destinations, with an all-weather surface.	A	Access to the site is from the north by Wellington Dam Road (level with the top of the dam wall) to Coalfields Road and east to the township of Collie (26 km) or west to the township of Bunbury (47 km). Access to the site is from the south is from Falcon Road, at the base of the dam wall, that leads by Pile Road to the town of Dardanup (24 km) and onto the township of Bunbury. The Eaton Recreation Centre is identified by DFES/Department of Communities for regional evacuation
	A3.2b For a day use with no overnight accommodation Public road access in two different directions to two different suitable destinations to be provided, except in the following circumstances: – where the tourism land use is within a residential built out area; **or** – **where a bushfire emergency plan provides for closure during days forecasted to be an extreme or catastrophic fire danger rating and a total fire ban; and for the early evacuation of patrons and staff; or** – where a bushfire emergency plan provides for non-operation during the bushfire season; **and** – where it is demonstrated that secondary access (including an emergency access way) cannot be achieved.	A	The site has access to a through road and the potential to evacuate in the opposite direction to an approaching fire and destinations outside of the fire ground. Shelter on site is proposed only as a last resort. The facility (Zip Line and day uses) will be closed (including the accommodation) on days when the FBI (BoM) is forecast to exceed 75 (Extreme /Catastrophic).
	A3.3a No-through roads **Area 1 (Urban):** No limitation on no-through road lengths.		
	Area 2: If the public road access to the subject site is via a no-through road which cannot be avoided due to demonstrated site constraints, the public road access is to be a maximum of 200 metres from the proposed lot(s) boundary to an intersection where two-way access is provided. The no-through road may exceed 200 metres if it is demonstrated that an alternative access, including an emergency access way, cannot be provided due to site constraints and the following requirements are met: – the no-through road travels towards a suitable destination; **and**	N/A	The site has access to a through road.

Bushfire Protection Criteria	ACCEPTABLE SOLUTIONS	DC	Proposed Bushfire Management Strategies
	– the balance of the no-through road that is greater than 200 metres from the subject site is wholly within BAL-LOW, or is within a residential built-out area, or is within Area 1 (Figure 29).		
	A3.3b No-through road requirements A no-through road is to meet all the following requirements: – requirements of a public road (Appendix B.3, Table 10, Column 2); **and** – turn-around area/head (Figure 30).	N/A	
	A3.4 Emergency access way *Where it is demonstrated that A3.2 and A3.3 cannot be achieved due to site constraints or where an alternative design option does not exist, an emergency access way can be considered as an acceptable solution*. An emergency access way is to meet the following requirements: – the requirements of Appendix B.3, Table 10, Column 3; – provides a through connection to a public road; – be no more than 500 metres in length; – the proponent obtaining consent from the local government, that it will accept care, control and management for the access way; **and** – must be signposted and, if gated, gates must remain unlocked.	N/A	
	A3.5 On-site shelter Where A3.2, A3.3a and A3.4 (if required), cannot be achieved, and the proposed development has a capacity of up to a maximum of 100 guests and employees at any one time, an on-site shelter is to be provided in accordance with A2.5. *Where A3.2, A3.3a and A3.4 (if required), cannot be achieved and more than 100 guests and employees are proposed, and/or the bushfire planning practitioner considers an on-site shelter not necessary, an outcomes-based approach can be prepared*.	N/A	Shelter on site is not a primary response. An open shelter area < 2kWm^2 has been identified atop the Wellington Dam wall, in the centre on the vehicle service road. Figure 5 illustrates the centre of the Wellington Dam wall is BAL Low and may provide an opportunity for survival. The bushfire emergency response is to evacuate in the opposite direction to an approaching fire.
	A3.6 Fire service access route *Where proposed lots adjoin classified vegetation under AS 3959 (excluding Class G Grassland), a fire service access route is to be provided*	N/A	An FSAR is only required as an alternative access where a perimeter road would be required i.e. greater than 10 lots and facing classified vegetation excluding grassland.

Bushfire Protection Criteria	ACCEPTABLE SOLUTIONS	DC	Proposed Bushfire Management Strategies
	to provide firefighter access, where access is not available to the classified vegetation. A fire service access route is to meet all the following requirements: – requirements of Appendix B.3, Table 10, Column 4. – be through-routes with no dead-ends; – must be signposted; – no further than 500 metres from a public road; – the proponent obtaining consent from the local government that it will accept care, control and management; **and** – if gated, gates must open the whole carriageway width and can be locked by the local government and/or the emergency services, if keys are provided for each gate.		
	A3.7 Internal vehicular access and private driveways Internal vehicular access and private driveways longer than 70 metres should meet all the following requirements: – requirements of Appendix B.3, Table 10, Column 5. – passing bays every 200 m with a minimum length of 20 metres and a minimum additional carriageway width of 2 metres (that is, the combined carriageway width of the passing bay and constructed private driveway to be a minimum 6 metres); **and** – turn-around areas (Figure 30).	NA	The ticket office and storage containers are immediately east to the roadway (within 70 m of the roadway). The facility will utilise public roadways, no private driveways are proposed. In an emergency pedestrian gathering/time will be required (this has been anticipated in the BEP). The facility is to be serviced from the existing car park in the area immediately adjacent to Wellington Dam Road (to its west).
	A3.8 Signage Signage to be provided within the subject site, advising of where each access route travels to and the distance and general information signs on what to do in the event of a bushfire.	C	Directional signage will be provided to assist the evacuation of guests; it should be displayed at the office and at the exit of the facility. All guests will be returned to the ticket office to receive instructions on the destination and the route. The vehicle evacuation route is to be undertaken in the opposite direction to an approaching bushfire.

Bushfire Protection Criteria	ACCEPTABLE SOLUTIONS	DC	Proposed Bushfire Management Strategies
Element 4: Water **O4 -** Ensure that sufficient water is available and accessible for emergency services, to enable people, property and infrastructure to be defended from bushfire.	**A4.1 Water supply** Where a reticulated water supply is existing or proposed, a hydrant connection(s) should be provided in accordance with the specifications of the relevant water supply authority. Where these specifications cannot be met, a water tank(s) should be provided in accordance with the requirements of Appendix B.4, Table 11 – Water supply dedicated for bushfire firefighting.	A	The site has access to the reticulated water supply, that services the kiosk

5.2 Bushfire Management Strategies

Further bushfire management strategies to those addressed under the bushfire protection criteria are addressed in this instance by the Bushfire Emergency Plan (BEP).

The principles of Emergency Management (listed below) that may apply to the proposal can be divided across the BMP and BEP working in unison – the BMP determines the suitability of the location and the options available (evacuation or shelter), and the BEP describes the management actions. The two align with emergency management principles as follows:

- Prevention – avoidance and mitigation works undertaken in advance i.e. (Planned Asset Protection Zone).
- Preparation – education, procedures, training i.e. seasonal maintenance APZ and building (BMP authorisation maintained), and regular review of (BEP) requirements, contacts, responsibilities, and warning systems
- Response – actions taken in an event for saving lives (primary) - early evacuation if safe or shelter as a last resort with survival procedures described (BEP).
- Recovery – return and restoration procedures described (BEP).

5.2.1 Vulnerable Development Bushfire Emergency Plan (SPP 3.7 s.7.4)

The proposed BEP (Attachment 1) follows the State Government's (WAPC) *Bushfire Emergency Plan (BEP) Manua*l - November 2024. Further, the BEP has been developed to be consistent with the Australian Standard AS 3745-2010, and the Planning for Emergencies in facilities, as required by OHWS legislation.

The BEP (Attachment 1a) incorporates the requirements listed in the Supporting Analysis *Bushfire Emergency Plan (BEP) Manua*l, and Attachment 1b the BEP following the *Bushfire Emergency Plan (BEP) Manua*l (template) and an Emergency Evacuation diagram.

The BEP advocates pre-emptive evacuation on days with an FDI greater than 75, and the primary action of evacuation when the site is threatened by bushfire, if the safe route is available. If a safe route is not available open shelter at the centre of the Wellington Dam wall has been identified as the shelter of last resort.

5.3 Spatial representation of the bushfire management strategies

Further to the assessment against the bushfire protection criteria, the key features demonstrating compliance should be represented spatially in the *Spatial representation of the bushfire management strategies*. It represents the required bushfire risk management measures that must be implemented and maintained.

The Spatial representation of the bushfire management strategies is provided in Figure 6.

6. RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES

The responsibilities for implementation and management of the bushfire measures, summarises the key measures identified to achieve or maintain compliance with the bushfire protection measures following SPP 3.7 Bushfire (2024).

The details contained within the planning application authorised by the responsible decision maker are enforceable under section 214 of the *Planning and Development Act 2005*. The items addressed in the listed responsibilities for implementation and management of the bushfire measures form part of the planning authorisation and where there is conflict supersede the detail of the planning application.

1. The adoption of the Bushfire Emergency Evacuation Plan *Note: supervisors at the Zip-line Tour and the Zip-line will maintain contact with the office throughout the bushfire season (two way radio) and in a bushfire event will return guests to the office to receive evacuation instructions.*	Compliant prior to operation and ongoing
2. The facility will be closed on days with a Fire Behaviour Index (75+) is published by the Bureau of Meteorology	Ongoing
3. Directional signage (way finding) will be provided throughout the facility to assist the pedestrian return of guests to the ticket office. *All guests will return to the ticket office to receive instructions on Evacuation (destination and the route) or to assemble and move to the shelter space.*	Installed prior to operation and ongoing

Advisory Notes:

The landowner is responsible for availing themselves of any promotions and information to assist owners in preparing for and responding to a bushfire event as may be made by the City/Shire or the Department Fire and Emergency Services.

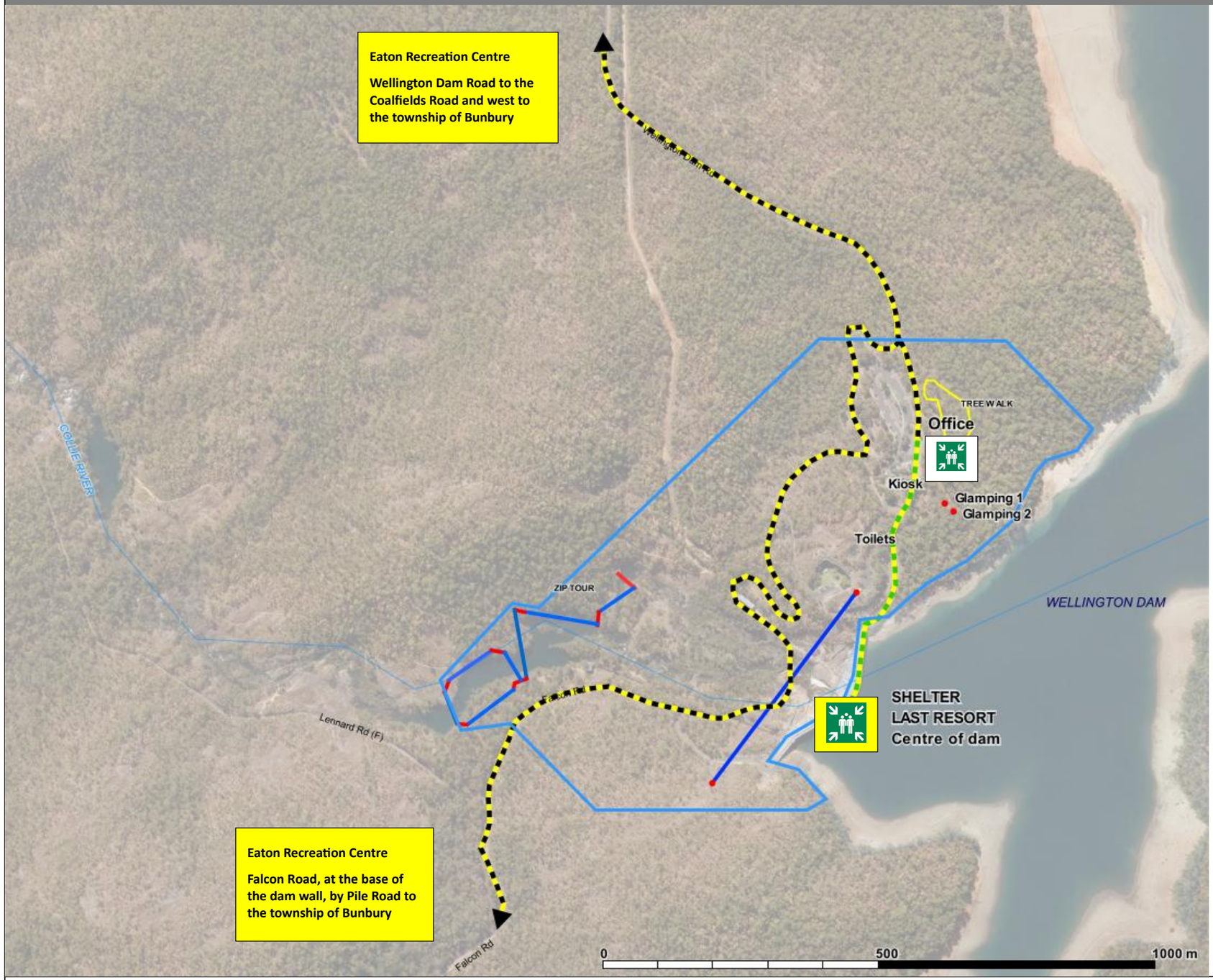
The proponent acknowledges the proposed assets are treated as a tolerable loss, they are not to be defended or used for shelter. It is understood in the event of a bushfire it is possible any building or structure will be damaged or destroyed.

The proponent acknowledges the 'Suspended Tree Walk' is sited in an area where DBCA prescribed burning occurs that may require closure of the facility for periods of time to implement these mitigation measures.

Acknowledgment - Proponent

The proponent acknowledges the responsibilities as listed above and the requirement to ensure that should the land transfer to a new owner, that the new owner is aware of the BMP and their ongoing responsibility.

Figure 6: Spatial Representation of Bushfire Management Strategies – Wellington Dam Tree village and Zip line



Responsibilities for implementation and management of the bushfire measures

1. The adoption of the Bushfire Emergency Evacuation Plan

   Note: supervisors at the Zip-line Tour and the Zip-line will maintain contact with the office throughout the bushfire season (two way radio) and in a bushfire event will return guests to the office to receive evacuation instructions.

2. The facility will be closed on days with a Fire Behaviour Index (75+) is published by the Bureau of Meteorology (http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml)

3. Directional signage (way finding) will be provided throughout the facility to assist the pedestrian return of guests to the ticket office.

   All guests will return to the ticket office to receive instructions on Evacuation (destination and the route) or assemble to move to the shelter space.

Advisory Notes:

The proponent acknowledges the proposed assets are treated as a tolerable loss, they are not to be defended or used for shelter. It is understood in the event of a bushfire it is possible any building or structure will be damaged or destroyed.

The proponent acknowledges the 'Suspended Tree Walk' is sited in an area where prescribed burning occurs that may require closure of the facility for periods of time to implement these mitigation measures.

Site Boundary

Assembly Area

Evacuation to Offsite destinations

N

Shelter of Last resort

Evacuation to Shelter of last resort

Date: 12 June 2025
Prepared by: Anthony Rowe
BPAD Accreditation Number 36690
BPAD Accreditation Level 3

envision bushfire protection

ATTACHMENT 1 – Bushfire Emergency Plan

BUSHFIRE EMERGENCY EVACUATION DOCUMENTS

SUPPORTING ANALYSIS

Wellington National Park Wellington Dam

12 June 2025

This document has been prepared in compliance with the WAPC Bushfire Emergency Plan (BEP) Manual

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BACKGROUND

This Bushfire Emergency Plan (BEP) has been prepared to accompany development applications for a vulnerable land use, zip line and short stay accommodation at Wellington National Park Wellington Dam.

The proposed land use is classed as vulnerable because the visitors may be unfamiliar with the area, or bushfire, and require supervision for their safety. The priority is human safety.

This Bushfire Emergency Plan has been prepared by an accredited Level 3 bushfire planning practitioner.

This BEP has also been prepared having regard to:

- City of Collie Emergency Management suite at: https://www.collie.wa.gov.au/services/emergency-services/
- Western Australia Community Evacuation in Emergencies Guideline (SEMC 2023)
- AS 3745-2010 – Planning for emergencies in facilities

ESTABLISHING THE MANAGEMENT STRUCTURE

PREPARATION MANAGEMENT

Emergency Management Team (EMT)

The Emergency Management Team shall comprise of the owners of the facility.

The Emergency Management Team is responsible for implementing the BEP at the facility.

Broadly this involves:

- developing an evacuation procedure,
- practicing the evacuation procedure, and training employees

The EMT is also responsible for annually reviewing the accuracy of the BEP, updating any contact information, ensuring the capability of staff to fulfill their roles and ensuring the buildings and grounds are prepared for the coming bushfire season (see preparations)

The Emergency Management Team is responsible for establishing the Emergency **Control Organisation (ECO).**

The Emergency Evacuation Plan must be reviewed annually, ensuring all information, procedures, contact details and any attached publications (e.g., DFES) are current.

EVENT (RESPONSE) MANAGEMENT

Emergency Control Organisation (ECO) and training requirements

The ECO is staff present at the facility at the time of the bushfire event.

Holders of specific roles within the ECO should receive relevant training for their allocated role.

Note: an individual may take multiple roles

- The Chief Warden (day manager) (White hat)
    - to maintain awareness of fire danger and incident alerts
    - to determine the safety to evacuate and the direction to be taken
    - to communicate with emergency services
- Area Warden (Red hat)
    - to alert and gather visitors
- Traffic Warden (Yellow hat)
    - to manage the vehicles exiting the site
- Communications Warden (Yellow hat)
    - Assist/relieve the Chief Warden to monitor public announcements, track the fire's progress, and convey destination routes to visitors.
- First Aid Warden (Green hat)
    - Basic first aid with an emphasis upon respiratory distress and burn management.
    - Ensuring the first aid kit is maintained (stocked) fit for purpose at all times.

Monitoring for a Bushfire Event

It is the responsibility of the Chief Warden to ensure guests are alerted to conditions where the risk is elevated and of any bushfire likely to threaten the facility.

- The Chief Warden is responsible for checking the DFES Alerts and Warnings web page https://www.emergency.wa.gov.au at regular intervals
- The Chief Warden is responsible for advising guests to evacuate and maintaining contact with guests during any evacuation.

On days where the forecast FDR is Extreme or Catastrophic guests staying at the accommodation should be advised to confine travel to townships.

SUPPORTING ANALYSIS

STEP 1: FACILITY DETAILS, SITE ANALYSIS AND LOCAL CHARACTERISTICS

The emergency plan applies to the Wellington Dam Tree Village and Zipline.

The Bushfire Management Plan dated **12 June 2025** articulates bushfire safety measures that include:

Risk Evaluation

The risks associated with a bushfire include:

- extreme heat (flame immersion, accumulated embers, and radiant heat – fatal and property destroying),
- convective heat potentially fatal), strong winds (blown object blunt force injuries, or the opening of the building envelope to expose and ignite flammable materials inside),
- ember attack (particle injuries small burns, eye injury, penetration of gaps to ignite flammable materials inside a building - heavy
- smoke (obscured vision, trips, falls, collision and respiratory impacts (fatal), and
- trauma (bushfires are terrifying).

Risk identification

The proposed development is subject to unavoidable flame contact exposure of occupants to fatal conditions, and the destruction of assets (accepted as a tolerable loss).

The access from the site may be affected by bushfire.

Pedestrian access is available to the dam wall; its centre is greater than 100 m from classified vegetation.

Risk Treatments

The site should be evacuated when the FBI is 75+ (forecast on the previous day)

Evacuate from the site when advised to evacuate.

Evacuate to the centre of the Willington Dam if it is unsafe to leave

The assets are not to be defended in a bushfire. The assets are accepted as a tolerable loss.

The proponent acknowledges the 'Suspended Tree Walk' is sited in an area where prescribed burning area that may require closure of the facility for certain periods of time to implement these mitigation measures.

Offsite Evacuation

Access to the site is from the north by Wellington Dam Road to the Coalfields Road and east to the township of Collie (26 km) or west to the township of Bunbury (47 km).

Day visitors are expected to return home towards Bunbury.

Access to the site from the south is from the Falcon Road, at the base of the dam wall, that leads by Pile Road to the town of Dardanup (24 km).

The nominated evacuation centre for Dardanup is the Eaton Recreation Centre at 18 Recreation Drive in Eaton (Shire of Dardanup)

STEP 2: PRIMARY AND SECONDARY EMERGENCY PROCEDURES

The primary action in response to bushfire threat is to evacuate before the fires arrival when safe to do so.

The evacuation transportation arrangements are by private vehicles.

Both the north and south routes are through forest in steep terrain providing poor expansive views to avoid fire and risking entrapment.

The required safe evacuation time (RSET) is the time from alarm, to gather people from around the facility and reach a safe point, on travel to a suitable destination. The Available Safe Evacuation time (ASET) is the time before the fire line reaches the site. Evacuating in the opposite direction to an approaching fire maximises the ASET, and the opposite direction should be taken, or having sufficient time to go no closer than 5km to the fire position, in going around the fire.

Where the RSET exceeds the ASET then shelter as a last resort on site (centre of the Wellington Dam) may be a safer option.

The Trigger to evacuate.

In a bushfire event, announcements will be made via electronic media and online, regarding bushfire incidents and potential threats to the site.

- Facility closure, where forecast conditions will exceed Extreme Fire Danger Index
- Monitor the DFES Alerts and Warnings web page **https://www.emergency.wa.gov.au**
  The On-site Manager as Chief Warden is responsible for monitoring this site at regular intervals during the bushfire season

Evacuation should be undertaken upon:

- Emergency WA public advice – Watch and Act or Emergency warnings
- if directly advised to leave by DFES or the police
- If isolated smoke or a fire is seen nearby, and the route is confirmed to be safe

STEP THREE: IDENTIFY AN OFF-SITE SHELTER (FOR EVACUATION)

Offsite Shelter Checklist

The following questions will assist the individual in developing or reviewing the Emergency Evacuation Plan to identify an off-site location. For an appropriate off-site location	
If there are occupants with support needs that require a similar facility to support them, is the off-site location suitable?	Yes ☐ No ☒
Comment: Guests with support needs may attend the facility but would have a carer or family member in attendance with them to provide the required support.	
Is the off-site location in an area away from the effects of a bushfire?	Yes ☒ No ☐
Comment: The site straddles the City of Collie and the Shire of Dardanup – the nominated emergency evacuation facility is at Eaton in the Shire of Dardanup	
Are there amenities (toilets, food, water etc.) available at the off-site location? (if applicable)	Yes ☒ No ☐
Comment: The Eaton Recreation Centre at 18 Recreation Drive in Eaton is a Community Services nominated emergency evacuation facility	
Can the off-site location accommodate the number of occupants?	Yes ☒ No ☐
Comment: The Eaton Recreation Centre is the nominated facility, but it is expected most visitors will return to their homes.	
Does the route to the off-site location require transporting through bushfire affected areas or areas that may be affected by an approaching bushfire?	**Yes** ☒ **No** ☐
Comment: The route passes through forest in steep land providing only restricted views for 17 km north and 15 km south. Once on the plain, and within grassland/pasture the views are expansive and the road network options enable the fire position to be avoided. Early evacuation is required, and advice is to be sought from emergency services to confirm the evacuation destination and the availability of a safe route in a bushfire event.	
Has the owner of the off-site location advised that they are happy to accommodate occupants if evacuation from a bushfire emergency occurs?	Yes ☒ No ☐
Comment: The Eaton Recreation Centre is the nominated facility but may not be available in an isolated event that affects few people. It is expected most visitors will return to their homes	

Consider the following questions to assist in planning transport arrangements.	
Do you have your own transport for all occupants? If no what transport provider will you use?	Yes ☐ No ☒
Comment: Visitors will have their own transport	
Are private vehicles to be used?	Yes ☒ No ☐
Comment: Visitors will have their own transport	
If using private vehicles will there be sufficient vehicles to transport all the occupants, will they be available when you need them, and will there be drivers available? If no, consider another mode of transport	Yes ☒ No ☐
Comment: Visitors will have their own transport	
Will there be sufficient vehicles to transport all occupants?	Yes ☒ No ☐
Comment: All visitors will arrive by private transport	
Have occupants with support needs been considered when determining transport types and necessary timing to evacuate?	Yes ☒ No ☐
Is disabled transport required, and is this sufficient to move the number of occupants from the facility?	NA
Do you require ambulances? If yes, St John Ambulance Australia needs to be consulted.	Yes ☐ No ☒
Comment: Occupants with support needs including those that may need transport for their needs, are expected to arrive with their carer by private transport retained on site.	
Is a community bus available?	Yes ☐ No ☒
Will community buses be available when you need them and will drivers be available?	NA
Comment: All visitors will arrive by private transport	
Are other means of transport available?	Yes ☐ No ☒
Comment: All visitors will arrive by private transport.	
Do you need any other type of special transport?	Yes ☐ No ☒

STEP FOUR: IDENTIFY AN ON-SITE SHELTER

Onsite Shelter Checklist

The following questions will assist the individual in developing or reviewing the Emergency Evacuation Plan to identify an on-site building. For an appropriate building, the answers to the below questions should receive a 'yes'.	
Is the property well maintained and kept free from a build-up of fuel and leaf litter in gutters and around buildings?	Yes ☒ No ☐
Comment: The proposal is an Eco tourism experience, intimate with forest, steep land and potential extreme bushfire behaviour.	
Is there a building on-site that is away from bushland and is unlikely to be impacted by bushfire?	Yes ☐ No ☒
Comment: Early evacuation is required. An open space is available located in the centre of the Wellington Dam wall which is more than 100 m from classified vegetation and is BAL Low. It should only be contemplated if there is no safe route to evacuate from the fire path.	
Is the building constructed in a manner that minimises bushfire attack with appropriate Asset Protection Zones?	Yes – as a last resort
Comment: The centre of the Wellington Dam wall which is more than 100 m from classified vegetation and is BAL Low	
Can the building accommodate the number of occupants and visitors?	Yes – as a last resort
Comment: The centre of the Wellington Dam wall is a large open space	
Is there ease of accessibility to the building, and is it easily identifiable?	Yes – as a last resort
Comment: The centre of the Wellington Dam wall is prominent, and a popular pedestrian walk from an immediate carpark, from the Wellington Weir Kiosk and the proposed development.	
Is there access to amenities (toilets, food, water, etc.) away from the effects of a bushfire?	Yes – as a last resort
Comment: Public toilets are located close to the northern extent of the Wellington Dam but will not be accessible within the bushfire event affecting the site.	

ACTIONS JUST PRIOR AND DURING THE BUSHFIRE SEASON

ACTIONS PRIOR TO THE BUSHFIRE SEASON

Annual review should include:

- Review of Emergency Evacuation Plan
- Review contact
- Review accessibility in office
- Ensure awareness and training of staff, to receive alarm, effectively gather visitors, account for visitors, determine the safest route or shelter as a last resort, oversee evacuation from the site or gathering of visitors and assembly, and the issue of emergency equipment.
- Check the provision of emergency equipment available for each visitor
  - Water bottled, 1L per person
  - face masks, 1 per person
  - enclosed goggles, 1 per person
- Two way radios for each staff member are in working order

ONGOING ACTIONS DURING THE BUSHFIRE SEASON

- Monitor conditions

  Forecasts

  - Bureau of Meteorology – Western Australia Fire Danger Ratings
    http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml

  Vigilance for started fires

  - Emergency WA website (emergency.wa.gov.au)
  - Department of Fire and Emergency Services
  - Information line – 13 33 37
  - ABC local radio 684 am
- Keep records of employees and visitors;
- Update contact details of the emergency management team and employees.

BUSHFIRE EMERGENCY EVACUATION PLAN

NAME OF FACILITY	Wellington Dam - Tree Village and Zip-line
ADDRESS	Wellington National Park Wellington
PREPARED BY	Anthony Rowe, L3 BPAD 36690
OWNER/OPERATOR	
DATE	12 June 2025
VERSION NUMBER	1

Document Control

Version	Date	Details	Undertaken by
1	12/06/2025	Draft – client review	Anthony Rowe

Emergency Management Team

Name	Role	Contact Details
Manager	Chief warden	

Contents

FACILITY DETAILS

This plan is for the Wellington Dan Tree village and Zip line at the Wellington Dam

The plan outlines procedures for both **evacuation** and **shelter-as a last resort** to enhance the protection of occupants from the threat of a bushfire.

The primary action to follow in a bushfire emergency is to:

Evacuate

The secondary action to follow in a bushfire emergency is

Shelter in an open space (centre of the Wellington Dam (BAL Low))

NAME OF CONTACT PERSON			
POSITION / ROLE OF CONTACT PERSON			
PHONE NUMBER			
FACILITY TYPE	Tourist Day use (Zip line and bike trails) Tourist accommodation	NUMBER OF BUILDINGS	Office Two treehouse glamping structures Elevated Tree walk Zipline base structures
NUMBER OF OCCUPANTS WITH SUPPORT NEEDS		0	
Total visitors		TBA	
Total staff		TBA	

INHERENT BUSHFIRE RISKS

The emergency plan applies to the Wellington Dam Tree village and Zipline.

The Bushfire Management Plan dated **12 June 2025** articulates bushfire safety measures that include:

Risk Evaluation

The risks associated with a bushfire include:

- extreme heat (flame immersion, accumulated embers, and radiant heat – fatal and property destroying),
- convective heat potentially fatal), strong winds (blown object blunt force injuries, or the opening of the building envelope to expose and ignite flammable materials inside),
- ember attack (particle injuries small burns, eye injury, penetration of gaps to ignite flammable materials inside a building - heavy
- smoke (obscured vision, trips, falls, collision and respiratory impacts (fatal), and
- trauma (bushfires are terrifying).

Risk identification

The proposed development is subject to unavoidable flame contact exposure of occupants to fatal conditions, and the destruction of assets (accepted as a tolerable loss).

The access from the site may be affected by bushfire.

Pedestrian access is available to the dam wall; its centre is greater than 100 m from classified vegetation.

Risk Treatments

The site should be evacuated when the FBI is 75+ (forecast on the previous day)

Evacuate from the site when advised to evacuate.

Evacuate to the centre of the Willington Dam if it is unsafe to leave

The assets are not to be defended in a bushfire. The assets are accepted as a tolerable loss.

The proponent acknowledges the 'Suspended Tree Walk' is sited in an area where prescribed burning occurs that may require closure of the facility for periods of time to implement the mitigation measures.

Offsite Evacuation

Access to the site is from the north by Wellington Dam Road to the Coalfields Road and east to the township of Collie (26 km) or west to the township of Bunbury (47 km).

Day visitors are expected to return home. towards Bunbury.

Access to the site from the south is from Falcon Road, at the base of the dam wall, that leads by Pile Road to the town of Dardanup (24 km).

The nominated evacuation centre for Dardanup is the Eaton Recreation Centre at 18 Recreation Drive in Eaton (Shire of Dardanup).

RESPONSIBILITIES

The following outlines who has responsibility for implementing emergency procedures in the event of a bushfire.

Role	Responsibility
Chief Warden (white hat)	• to maintain awareness of fire danger and incident alerts – Daily - check www.emergency.wa.gov.au for any warnings or alerts – Monitor conditions on High plus FDR days – Local ABC Radio 684 am – Emergency.wa.gov.au • to determine the safety to evacuate and the direction to be taken • to communicate with emergency services
Area Warden (red hat)	• to alert visitors. • to gather visitors to the assembly area until evacuated • to distribute safety equipment/water and direct visitors to the centre of the Wellington Dam • to maintain two way radio communication with the Chief Warden
Traffic Warden (yellow hat)	• to manage the vehicles exiting the site
Communications Warden (yellow hat)	• Assist/relieve the Chief warden to monitor public announcements, track the fire's progress, and convey destination routes to visitors.
First Aid Warden (Green hat)	• Basic first aid with an emphasis upon respiratory distress and burn management. • Ensuring the first aid kit is fit for purpose at all times and replenished.

EMERGENCY CONTACTS

Name of Organisation	Office / Contact	Contact details
Fire / Police / Ambulance	Fire or Emergency	**000**
Department of Fire & Emergency Services	Emergency Information	**13 33 37 (13 DFES)**
Emergency WA	Warnings and incidents	**www.emergency.wa.gov.au**
Bureau of Meteorology	Weather information	**1300 659 213**

PREPAREDNESS

ACTIONS TO BE SCHEDULED AND TAKEN PRIOR THE BUSHFIRE SEASON

CHECKLIST – ongoing, prior to and during the bushfire season		
BUSHFIRE SEASON: COMMENCES 1 OCTOBER AND CONCLUDES 31 MAY OF EVERY YEAR (UNLESS OTHERWISE ADVISED)		
Action	**Frequency**	**Responsibility**
Emergency Management Team to complete just prior to the bushfire season (by November 30 each year)		
1. Review of Emergency Evacuation Plan	Annually	EMT
2. Review contact.		
3. Ensure awareness and training of staff: – to monitor and receive alarm; – to effectively gather visitors; – to account for visitors; – determine the safest route or shelter as a last resort; – oversee evacuation from the site or gathering of visitors and assembly, and – the issue of emergency equipment.		
4. Check accessibility of Emergency Evacuation Plan in office		
5. Check the provision of emergency equipment available for each visitor: – bottled water, 1L per person; – face masks (P2 type), 1 per person; and – enclosed goggles, 1 per person. – 4 @20 kg fire extinguishers kept in office		
6. Two way radios for each staff member are in working order		

To be monitored regularly during the bushfire season between 1 December and 12 May each year by the Emergency Management Team (on duty manager).		
1. Monitor conditions	Daily throughout the fire season	Chief warden
2. Keep records of employees and visitors;		
3. Update contact details of the emergency management team and employees.		
4. Check emergency equipment is available.		

REQUIRED EQUIPMENT

1. First Aid equipment (list attached) to be stored at the office.
2. A battery power AM/FM radio is to be kept and serviceable at the office.
3. Two way radios to communicate between office and field staff.
4. Personal Protective Equipment (PPE)
   - Goggles (preferably heat resistant) enclosed type
   - Face Mask - P2 type.
5. Bottled water 1L per visitor
6. 4 @ 20 kg Fire extinguisher kept in office.
7. Driver evacuation pamphlets

AWARENESS

PRE-EMPTIVE PROCEDURES and

EMERGENCY RESPONSE[1]

Monitoring for bushfires – During the Bushfire Season

Receiving a warning of an approaching fire is enhanced by actively monitoring communications over the internet (i.e. Emergency WA) and ABC radio and observing the environment.

Forecasts

- Bureau of Meteorology – Western Australia Fire Danger Ratings
  http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml

Vigilance for started fires

- Emergency WA website (emergency.wa.gov.au)
- Department of Fire and Emergency Services
  - Information line – 13 33 37
- Local radio
  - ABC local radio 684 am

Mobile Phone

When a fire has started and you may be affected an alert is sent to Mobile phones.

Self-awareness

Do not only rely on public advice or mobile phone alerts. It may take time for a fire to be reported. If you see smoke or smell smoke, contact 000, to verify. If concerned the site will be affected take the safest option, commence evacuation if certain the route is safe, or take shelter on site as a precaution, until confirmation (all clear or the route is safe for evacuation)

FORECAST ANNOUNCEMENTS	Frequency	Officer
Days forecast High Fire Danger rating		Chief Warden
• Bureau of Meteorology – Western Australia Fire Danger Ratings http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml	Previous day	
• Emergency WA website	Mid-morning Mid-afternoon	
Days forecast Extreme Fire Danger rating		Chief Warden
• Bureau of Meteorology – Western Australia Fire Danger Ratings http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml	Previous day	
• Emergency WA website (for started fires)		
• Alert supervisors and guests of the conditions, to be prepared to evacuate if advised.	Hourly	

[1] The Awareness and response have been combined to avoid repletion.

Days forecast Extreme (FDI 75+) and Catastrophic Fire Danger rating		Chief Warden
• Bureau of Meteorology – Western Australia Fire Danger Ratings http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml	Previous day	
Pre-emptively evacuate the facility.		
• Bureau of Meteorology – Western Australia Fire Danger Ratings http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml and Emergency WA website.	Mid afternoon	
Determine when safe to return		
ADVICE RECEIVED (a fire has started and an alert issued by an emergency service authority)		
Advice		
• Prepare to Evacuate, alert guests of the conditions, to be prepared to evacuate if advised.	On receipt of advice	Chief Warden
Watch and Act		
• Determine safe available time to evacuate > 40 minutes • Field staff (two way radio) advised to assemble visitors at the office • Assemble all visitors at office for instruction • Ensure all visitors are accounted for • Commence evacuation of visitors by private vehicles • Ensure all visitors are evacuated • Advise the local emergency service that all persons have been evacuated • Maintain situational awareness – when safe to return	On receipt of advice	Chief Warden
• Ensure all site buildings (Office) have all doors and windows closed prior to leaving the site.		Area Warden
Emergency Warning		
• Determine safe available time to evacuate < 40 minutes • Field staff (two way radio) advised to assemble visitors at the office • Ensure all visitors are accounted for • Advise the local emergency service (DFES by dialling 13 33 37) that shelter will be taken on site. • If time permits park vehicles in the centre of the carpark • Move visitors to the centre of the Wellington Dam wall • Issue emergency equipment to each visitor • Maintain calm and wait until the fires passing • Maintain situational awareness • If Emergency Assistance is required call 000	On receipt of advice	Chief Warden

EMERGENCY PROCEDURE LOCATION AND TRANSPORT DETAILS

Evacuation Destination if the route north is safe

The following destinations and routes may be available in a bushfire event however current public advice from Emergency WA should always be followed to ensure you use the safest evacuation route to the safest destination.			
Primary off-site location			
Name of venue	The **Eaton Recreation Centre** north route by Wellington Dam Road to the Coalfields Road		
Address of venue	18 Recreation Drive Eaton		
Nearest cross street		Map reference	MPJC+JF Eaton
Venue phone number	08 9724 0400		
Primary route to location	From Wellington Dam Road turn left onto Coalfields Road to the Australind Roelands Link, left onto Forrest Highway, turn right onto Eaton Drive and right onto Recreation Drive.		
Primary transportation arrangements			
Number of vehicles required:	All visitors will arrive by private vehicle		
Name of organisation providing transportation:	visitor provided		
Contact phone number:	visitors phone numbers requested prior to departure		
Time required for transportation to arrive:	Present at site		
Estimated travelling time to destination:	40 minute from alert to last evacuating vehicle, 35 minute travel time		

Evacuation Destination if the route south is safe

The following destinations and routes may be available in a bushfire event however current public advice from Emergency WA should always be followed to ensure you use the safest evacuation route to the safest destination.			
Primary off-site location			
Name of venue	The Eaton Recreation Centre south route by Falcon Road, at the base of the dam wall, that leads by Pile Road to the town of Dardanup (24 km).		
Address of venue	18 Recreation Drive Eaton		
Nearest cross street		Map reference	MPJC+JF Eaton

Venue phone number	
Primary route to location	Take Falcon Road, at the base of the dam wall, that leads onto Pile Road. Take right onto Henty Road, turn left onto South Western Highway, right onto Hynes Road, left onto Forrest Road turn right onto Eaton Drive and right onto Recreation Drive.
Primary transportation arrangements	
Number of vehicles required:	All visitors will arrive by private vehicle
Name of organisation providing transportation:	visitor provided
Contact phone number:	visitors phone numbers requested prior to departure
Time required for transportation to arrive:	Present at site
Estimated travelling time to destination:	40 minutes from alert to last evacuating vehicle, 30 minute travel time

SECONDARY ACTION – Shelter in place as a Last resort

Shelter should be taken when:

- Prevented from evacuation due to road closure or other hindrances. •
- Fire in close proximity and considered too dangerous to leave.

Shelter-in-place is defined as the advice given to the community to remain in their location; this may be an open space, building, indoors or other suitable place of shelter, and usually additional advice is provided from emergency services as to how to take actions to reduce exposure to the hazard.

The centre of the Wellington Dam wall is more than 100 m from classified vegetation and is located in BAL low.

Visitors should be assembled at the centre of the dam wall and wait until the all clear is given.

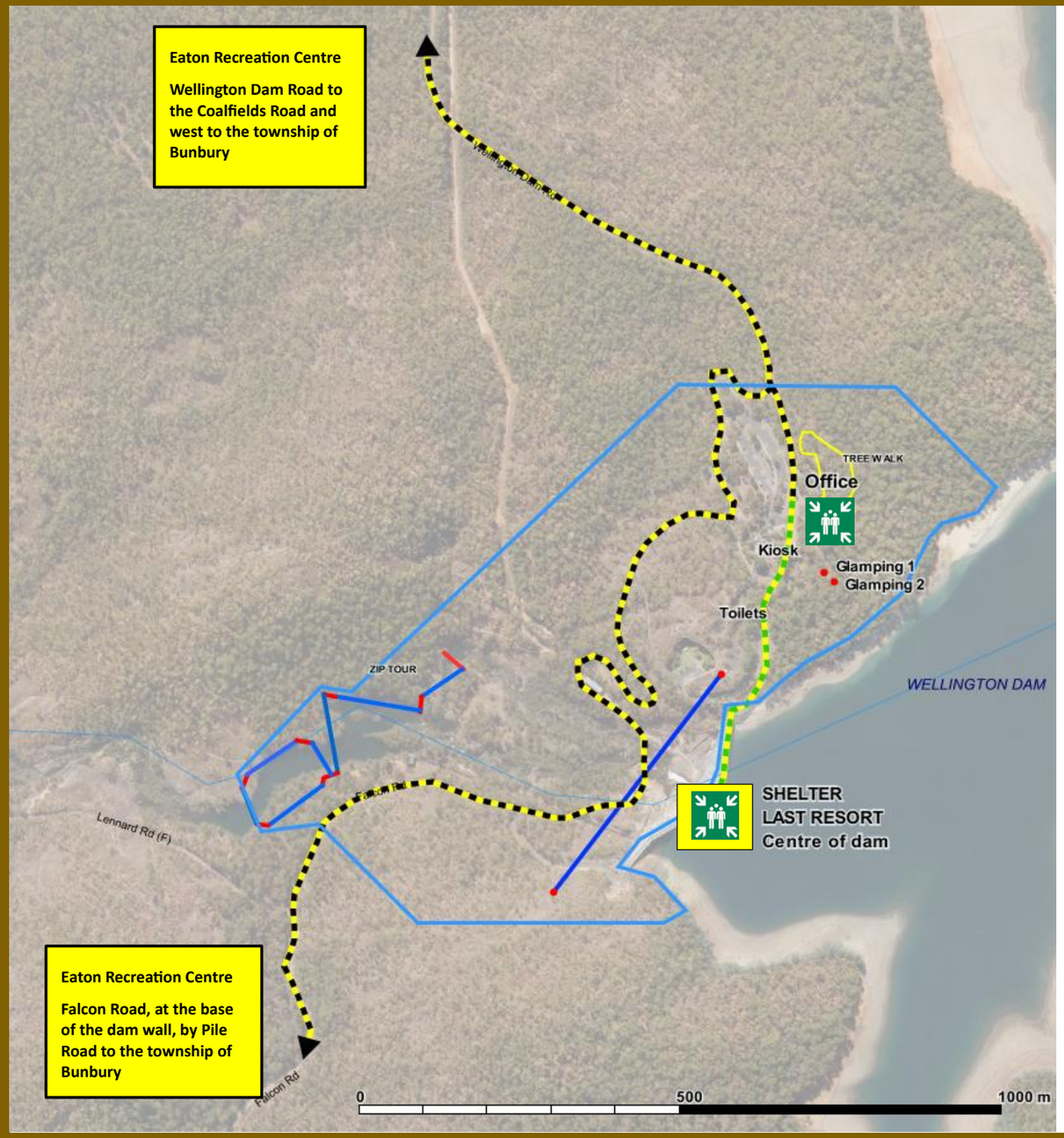
Emergency equipment should be issued.

Amenities (toilets) are located at the north of the dam but should not be accessed until the fire has passed.

RECOVERY

Action	Responsible Person
If Shelter on site is taken All occupants are to be accounted for Ensure the safety of all people and seek medical assistance for those requiring it.	**Chief Warden and first aid warden**
Inform the police/emergency services on the condition of visitors and if any assistance is required When the **All Clear** is given and a safe route identified evacuate the day visitors by vehicle if undamaged. When safe check vehicles for damage. If vehicles are damaged inform police/emergency services for assistance to evacuate	**Chief Warden**
Do not enter areas heavily damage for risk of tree fall, stay in open area until evacuated. Inspect the Office and grounds when safe Extinguish any small fires smouldering objects. Monitor grounds for up to 24 hours after the fires passing.	**Area Warden**
If the facility is undamaged publish the date when the accommodation will reopen	**EMT and Chief Warden**
Review the BEP for effectiveness, make note of weaknesses and amend as necessary. – assess the severity of the event; – would the actions taken be sufficient to ensure the safety of guests and staff in an extreme event; – were there any unexpected problems not accounted for in the existing emergency plan; – update the emergency plan to include any learnings from the event.	**EMT and Chief Warden**

BUSHFIRE EMERGENCY RESPONSE PLAN



Warning levels and actions

ADVICE - prepare to evacuate

Alarm /Trigger

An incident is active but there is no immediate threat to lives or homes.

Response:

The Chief Warden will take the following information into consideration when determining if and when to evacuate:

- The severity of the bushfire incident.
- Approximate time for the bushfire to impact the facility.
- Have vehicles on site ready for evacuation.

If the decision is made to evacuate, follow the procedure under Watch and Act.

WATCH AND ACT- Evacuate

Alarm /Trigger

There is a possible threat to lives or homes. Take action now to protect yourself – Evacuate

Response

- Determine safe available time to evacuate > 40 minutes
- Field staff (two way radio) advised to assemble visitors at the office
- Assemble all visitors at the office for instruction
- Ensure all visitors are accounted for
- Commence evacuation of visitors by private vehicles
- Ensure all visitors have evacuated
- Advise the local emergency service that all persons have been evacuated

OFFSITE EVACUATION DESTINATION

Eaton Recreation Centre at 18 Recreation Drive, Eaton **north** by Wellington Dam Road to the Coalfields Road and west towards the township of Bunbury (47 km).

or

Eaton Recreation Centre at 18 Recreation Drive, Eaton **south** is from the Falcon Road, at the base of the dam wall, that leads by Pile Road to the township of Bunbury (24 km).

Day visitors may return home.

EMERGENCY

Alarm /Trigger

There is a threat to lives and homes. You may be in danger and need to take immediate action – too late to leave – take shelter.

Response

- Determine safe available time to evacuate < 40 minutes
- Field staff (two way radio) advised to assemble visitors at the office
- Ensure all visitors are accounted for
- Advise the local emergency service (DFES 13 33 37) that shelter will be taken on site.
- If time permits park vehicles in the centre of the carpark
- Move visitors to the centre of the Wellinton Dam wall
- Issue emergency equipment to each guest
- Maintain calm and wait until the fires passing
- Maintain situational awareness
- If Emergency Assistance is required call 000

WHAT TO EXPECT IN A BUSHFIRE

- The sky will turn black thick with smoke.
- The fire front will arrive accompanied by strong winds and a roaring noise.
- Objects may get blown against the building.
- Embers will be blown across the site.
- The firefront (peak fire) may last up to five minutes.
- Burning objects will remain after the fire front passes.

ALL CLEAR

- When safe check vehicles for damage.
- If vehicles are damaged inform police/emergency services for assistance to evacuate
- When the All Clear is given and a safe route identified evacuate the visitors by vehicle if undamaged.

- Do not enter areas heavily damaged for risk of tree fall, stay in open area until evacuated.
- Inspect the office and grounds when safe
- Extinguish any small fires and smouldering objects.

INFORMATION SOURCES

Local ABC radio	684 am
DFES information line	13 33 37
Emergency WA	www.emergency.wa.gov.au
Police	000

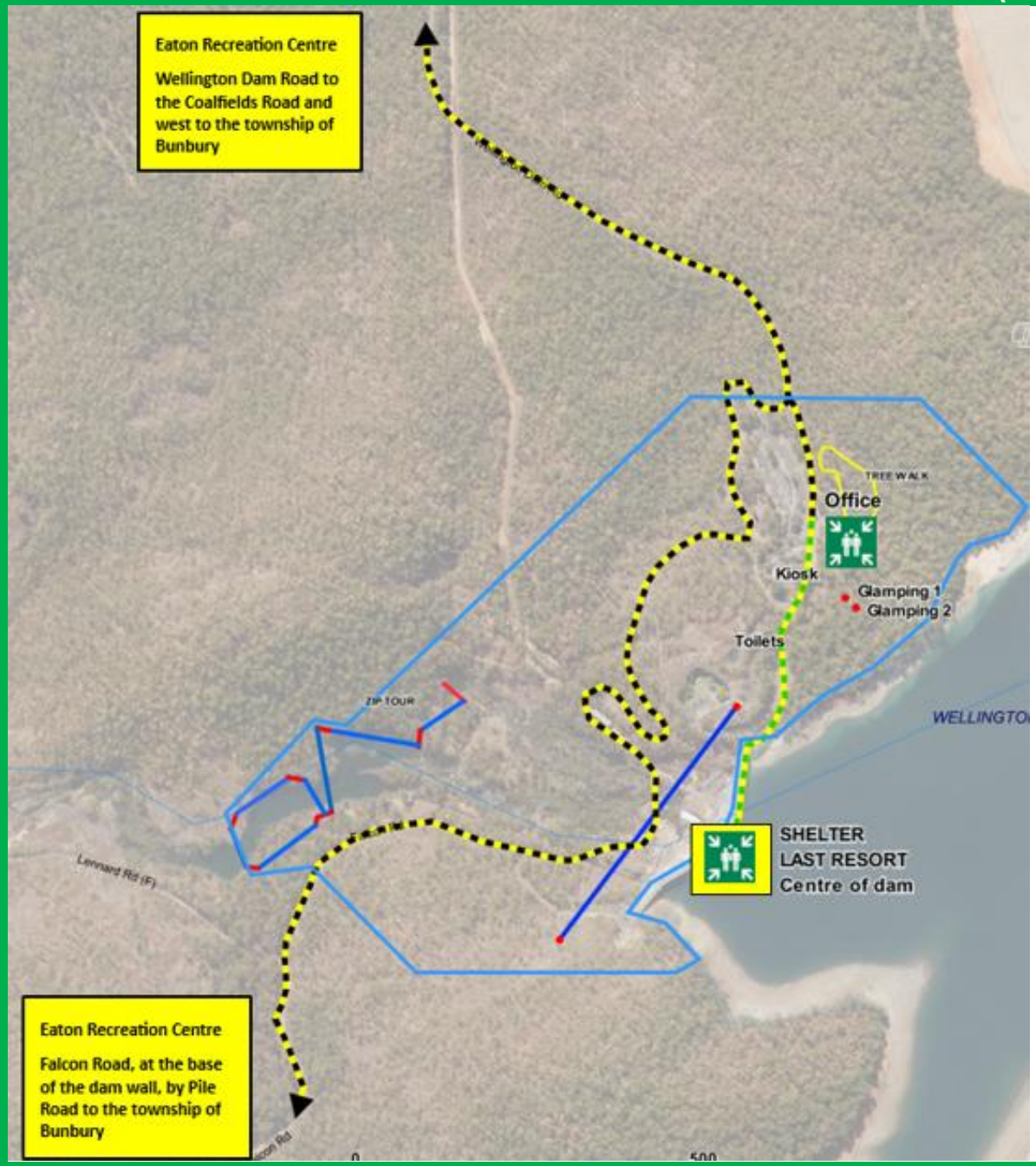
Evacuation Offsite by public road

Evacuation to Shelter Onsite

Assembly Area

Shelter Area

BUSHFIRE EMERGENCY RESPONSE PLAN (ISSUED TO EVACUATING DRIVERS)



OFFSITE EVACUATION DESTINATION AND ROUTES

Eaton Recreation Centre at 18 Recreation Drive in Eaton north route is by Wellington Dam Road to Coalfields Road and west towards the township of Bunbury (47 km).

or

Eaton Recreation Centre at 18 Recreation Drive south route is by Falcon Road, at the base of the dam wall, to Pile Road and towards the township of Bunbury (24 km).

WHAT TO DO IF YOU ENCOUNTER A BUSHFIRE WHILE DRIVING

If you see smoke or flames, leave the area immediately by driving away from the fire.
Do not wait and see.

- **If there is a lot of smoke, slow down and be aware. There could be people, vehicles and livestock on the road.**
- **Turn your car headlights on, close windows and outside vents.**
- **If you cannot see clearly, ensure you are not in the path of the fire and pull over to the side of the road.**
- **Keep your headlights and hazard lights on and wait until the smoke clears.**

! Sheltering inside a vehicle is a very high risk strategy that offers only a slightly higher chance of survival than being caught in the open. It is highly unlikely that a person will survive in all but the mildest circumstances.

If you become trapped by a fire

- **Park in an area with low or no vegetation off the roadway.**
- **Position the car facing towards the oncoming fire front.**
- **Turn headlights and hazard warning lights on to make the car as visible as possible.**
- **Tightly close all windows, doors and outside vents.**
- **Turn the air conditioning and engine off.**
- **Call 000.**
- **Get down as low as possible below the window level into the foot well and cover yourself under woollen blankets.**
- **Drink water to minimise the risk of dehydration.**
- **Stay in the car until the fire front has passed and the temperature has dropped outside.**
- **Once the fire front has passed and the temperate has dropped, cautiously exit the car.**

EQUIPMENT LIST

FIRST AID KIT

Basic first aid kit items

☐ Non-stick wound dressings	☐ Saline solution
☐ Adhesive strips (Bandaids)	☐ Safety pins
☐ Combine and eye pads	☐ Plastic bags
☐ Gauze swabs	☐ Stainless steel tweezers
☐ Alcohol and antiseptic swabs	☐ Thermo/shock blanket
☐ Triangular bandages	☐ Notepad and pencil
☐ Crepe bandages	☐ Disposable nitrile gloves
☐ Disposable hand towels	☐ Bite and itch relief gel
☐ Stainless steel scissors	☐ Cold pack (disposable)
☐ Blunt-nosed shears	☐ CPR protection mask

References

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