



# Onslow Township Village

## Bushfire Management Plan

Date: 8 April 2022

Prepared For: Mineral Resources

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**Linfire Consultancy**

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4	8 April 2022	Amended layout	Linden Wears (Level 3 BPAD 19809)

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## **1.0 Proposal details**

### **1.1 Background**

Mineral Resources (the Proponent) is seeking to lodge a development application for a proposed new campground on Lot 300 Back Beach Road, Onslow (the project area) in the Shire of Ashburton.

The development application is for the Onslow Township Village, which will be the permanent resort style accommodation facility and will be designed and built as long-term accommodation and facilities to cater for the mine operations workforce. The village will be designed to support 500 rooms, and will include central facilities and utilities that are also available for use by the public.

The development plan (see Figure 1) identifies that the proposed development will comprise the following elements:

- Village Buildings
  - Accommodation Pods
  - Field Store with Laundries
  - Restaurant
  - Tavern
  - Administration building
  - Creche and Communications building
  - Medical and Wellness building
  - Indoor recreation building
  - Gym building
  - Multi-purpose courts
  - Bin Room
  - Maintenance Shed
  - Storage Shed
  - Fire pump room
  - Water pump room
- Other elements
  - Raw/Firewater and Potable water storage tanks
  - Outdoor Pool
  - Outdoor Volleyball
  - Outdoor Golf
  - Outdoor Cricket
  - Sports Oval
  - Covered Outdoor Spaces
  - Transformer and SMSB
  - Carpark
  - Internal driveways
  - Onsite landscaping, paths and boardwalks
  - Perimeter fencing and gates
- Cultural Significant Area – retained vegetation within the south-western part of the site with a potential future Cultural Centre (subject to future planning application)

## 1.2 Site description

The project area comprises a significant portion of Lot 300, and is surrounded by (see Figure 2):

- Remnant coastal dune vegetation to the north-west, north and west, with the ocean further in all these directions
- Back Beach Road is located to the south-west, with remnant shrubland and scrub vegetation within Unallocated Crown Land further to the south-west.
- Existing developed residential land to the south, south-east and east of the project area, with minor remnant vegetation within the undeveloped Lot 300 Simpson Rd (Unallocated Crown Land) and First Street road reserve adjacent to the south-eastern boundary.

The project area is currently undeveloped and contains remnant coastal shrubland and scrub vegetation.

The project area is designated as bushfire prone on the *Map of Bush Fire Prone Areas* (DFES 2021; see Plate 1).

## 1.3 Proposed development occupancy

It is anticipated that peak occupancy levels at the proposed development would be at full capacity in the winter months when conditions are milder and dryer, in particular during school holiday periods. Notwithstanding, given the proposed use for mining short-term accommodation, it is expected there will be relatively steady occupant numbers expected throughout all times of the year.

The Proponent has confirmed the following maximum anticipated occupancy at any one time during peak operation:

- approximately 300 overnight guests
- up to 50 staff
- approximately 50 public visitors

Although the above represents the maximum anticipated occupant load for the site totalling 400 occupants at peak use, however an occupancy of 80% of this would be a more accurate.

**This occupancy information is based on preliminary estimates and will need to be reviewed and updated following development construction.**

## 1.4 Purpose

This Bushfire Management Plan (BMP) has been prepared to address requirements under Policy Measure 6.5 of *State Planning Policy 3.7 Planning in Bushfire-Prone Areas* (SPP 3.7; WAPC 2015) and *Guidelines for Planning in Bushfire-Prone Areas* (the Guidelines; WAPC 2017).

The proposed development is considered to be a vulnerable land use which triggers additional requirements under Policy Measure 6.6 of SPP 3.7. This BMP has been prepared in accordance with Sections 5.4 and 5.5 of the Guidelines, which require development applications for vulnerable be accompanied by a bushfire emergency management plan (BEMP) which details the emergency management and evacuation arrangements for the development. The BEMP for the project accompanies this BMP.

## 1.5 Other plans/reports

Linfire has prepared a BEMP (Linfire 2021) as a requirement of Policy Measure 6.6 of SPP 3.7. The BEMP should be read in conjunction within this BMP.

There are no known bushfire or assessments that have been prepared previously for the project area.



Plate 1: Map of Bush Fire Prone Areas (DFES 2021)









Legend

- Proposed Development
- Project Area
- 100m Assessment Area
- 150m Assessment Area
- Cadastre

Scale 1: 4,000



0 60 120 180 Metres



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Figure 2: Site Overview

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## 2.0 Environmental considerations

### 2.1 Native vegetation - modification and clearing

The project area is currently undeveloped and contains remnant native vegetation, much which will be cleared as part of the proposal. Table 1 provides a summary of a search of free publicly available environmental data.

Environmental impacts resulting from implementation of the proposal will need to be addressed under standard State and Federal environmental assessment and referral requirements under the Environmental Protection Act 1986 and Environment Protection and Biodiversity Conservation Act 1999.

**Linfire assumes that all relevant environmental studies and clearing and environmental approvals will be sought prior to commencing on-site vegetation modification.**

**Table 1: Summary of environmental values**

Environmental value	Not mapped as occurring within or adjacent to the project area	Mapped as occurring within or adjacent to the project area		Description
		Within	Adjacent	
Environmentally Sensitive Area	✓			The project area and adjacent land, is not identified as Environmentally Sensitive Areas.
Swan Bioplan Regionally Significant Natural Area	✓			No Regionally Significant Natural Areas were identified.
Ecological linkages	N/A	N/A	N/A	This layer not available at the time of document preparation. Additional studies may be required to assess.
Wetlands	✓			No wetlands identified within the project area or directly adjacent. No Ramsar sites are mapped as occurring within or adjacent to the project area.
Waterways	✓			No waterways or lakes within or adjacent to the project site.
Threatened Ecological Communities listed under the EPBC Act	✓			No Threatened Ecological Communities were identified within or adjacent to the project area
Threatened and priority flora	N/A	N/A	N/A	This layer not available at the time of document preparation. Additional studies may be required to assess.
Fauna habitat listed under the EPBC Act	✓			No EPBC Act-listed fauna habitat occurs within or adjacent to the Project Area.

Environmental value	Not mapped as occurring within or adjacent to the project area	Mapped as occurring within or adjacent to the project area		Description
		Within	Adjacent	
Threatened and priority fauna	N/A	N/A	N/A	This layer not available at the time of document preparation. Additional studies may be required to assess.
Bush Forever Site	✓			No protected Bush Forever sites have been identified within the project area or surrounding land.
DBCA managed lands and waters (includes legislated lands and waters and lands of interest)	✓			No DBCA managed or legislated land and waters were identified within or adjacent to the project area.
Conservation covenants	✓			No information has been provided by the client regarding Conservation Covenants.
Aboriginal Heritage		✓	✓	The project area and immediate surrounds are mapped as registered Aboriginal Heritage sites. Land to the south is also mapped as Other Heritage Place.

## 2.2 Revegetation / Landscape Plans

No revegetation is proposed as part of the proposal.

Almost all of the vegetation within the project area, other than the Cultural Significant Area, will be modified to either non-vegetated elements (buildings, roads, buildings, paths etc) or low threat vegetation through tree removal and management of understorey vegetation. There will be a small plot of vegetation retained in south of the project area and in the east, where full clearing is not required.

Asset Protection Zones (APZs) are also required where buildings directly interface unmanaged vegetation to limit exposure of proposed assets to bushfire impact, and perimeter firebreaks will be required around most of the site. Ongoing management of the APZ and all low threat vegetation is to be by the Proponent or facility manager.

Any landscaping proposed within the project area will consist of low threat and managed gardens and lawn in accordance with AS 3959 Clause 2.2.3.2 (f), with the APZ complying with Schedule 1 of the Guidelines (refer to Appendix 2).

### 3.0 Bushfire assessment results

#### 3.1 Assessment inputs

##### 3.1.1 Vegetation classification

Linfire assessed classified vegetation and exclusions within 150 m of the project area through on-ground verification on 20 July 2021 in accordance with AS 3959—2018 *Construction of Buildings in Bushfire-Prone Areas* (AS 3959; SA 2018) and the *Visual Guide for Bushfire Risk Assessment in Western Australia* (DoP 2016). Georeferenced site photos and a description of the vegetation classifications and exclusions are contained in Appendix 1 and depicted in Figure 3 and Table 2.

Vegetation within and adjacent to the project area is typically a scrub structure that contains trees (height between 2m – 4m high) with a shrubby understorey, presenting as Class D scrub. In several areas there is a lack of the taller trees, resulting in a small plots of Class C shrubland where the predominant vegetation structure is less than 2 m high.

Currently small portions of the adjacent 150 m assessment area can be excluded from classification, including:

- existing non-vegetated areas devoid of vegetation including buildings, roads, footpaths and firebreaks, water bodies, beach excluded under Clause 2.2.3.2 (e)
- existing low threat vegetation including managed gardens/road verges, irrigated turf, street trees with managed understorey and non-flammable coastal succulent species excluded under Clause 2.2.3.2 (f).

##### 3.1.2 Effective slope

Linfire assessed effective slope under classified vegetation through on-ground verification on 20 July 2021 in accordance with AS 3959. Results were cross-referenced with Landgate 5m contour data and are depicted in Table 2 and Figure 3.

Site observations indicate that land within the project area undulates with the surrounding assessment area around the proposed development, tending to rise toward the higher elevation within the site. There are steeper slopes on the north-western, western and southern interfaces, with gentler slopes to the north, north-east and east.

##### 3.1.3 Summary of inputs

Table 2 illustrates the anticipated post-development vegetation classifications and exclusions following completion of development works and modification of existing vegetation to a non-vegetated or low threat state, throughout the development and new public road. The post-development vegetation classifications/exclusions and effective slope are summarised in Table 2.

**Table 2: Post-development vegetation classifications/exclusions and effective slope**

Vegetation plot	Vegetation classification	Effective slope	Comments
1	Class D Scrub	Flat/upslope (0°)	Plots with low shrubby understorey but with sufficient trees (2-4 m high) to be considered scrub vegetation. Occurs mostly within the project area, and land to the south-west
2	Class D Scrub	Downslope >0–5°	
3	Class D Scrub	Downslope >5–10°	
4	Class D Scrub	Downslope >15–20°	
5	Class C Shrubland	Flat/upslope (0°)	Isolated plots with low shrubby



Vegetation plot	Vegetation classification	Effective slope	Comments
6	Class C Shrubland	Downslope >0–5°	structure and without taller trees prevalent in the scrub vegetation. Occurs along the coastline, on steep land and in low lying areas
7	Class C Shrubland	Downslope >5–10°	
8	Class C Shrubland	Downslope >15–20°	
9	Class A Forest	Flat/upslope (0°)	Small plot of tall trees to south of project area.
10	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Existing non-vegetated elements (roads, paths, buildings) and low threat vegetation (managed gardens, maintain lawn) surrounding the project area
11	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Modified to non-vegetated elements and low threat vegetation as part of this development





Legend

Photo Location



Proposed Development

Project Area

Assessment Area

100m

150m

Asset Protection Zone

11m

15m

Accom Pod Perimeter APZ (33m)

Accom Pod Perimeter APZ (to lot boundary)

Vegetation Plot

Classified Vegetation

A. Forest

C. Shrubland

D. Scrub

Excluded Clause 2.2.3.2(e&f)

Modified to non vegetated and low threat

Scale 1: 4,000



0 60 120 180 Metres



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Figure 3: Post-development vegetation and effective slope

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## 3.2 Assessment outputs

### 3.2.1 Bushfire Attack Level (BAL) contour assessment

Linfire has undertaken a BAL contour assessment in accordance with Method 1 of AS 3959 for the project area (see Figure 4). The Method 1 procedure incorporates the following factors:

- state-adopted FDI 80 rating
- vegetation classification
- effective slope
- distance maintained between proposed development areas and the classified vegetation.

The BAL rating gives an indication of the level of bushfire attack (i.e. the radiant heat flux) that may be received by proposed future development and subsequently informs the standard of building construction and/or setbacks required for proposed habitable development to potentially withstand such impacts.

The BAL contours are based on:

- the post-development vegetation classifications and effective slope observed at the time of inspection
- the proposed on-site clearing extent including proposed Asset Protection Zones, firebreaks and resultant vegetation exclusions and separation distances achieved in line with the Development Plan

Should there be any changes in development design or classified vegetation extent that results in a modified BAL outcome, then the BAL contours will need to be reassessed.

The results of the BAL contour assessment are detailed in Table 3 and illustrated in Figure 4. The highest BAL applicable to the proposed buildings and elements is BAL-29 or less.

**Table 3: BAL contour assessment results (to proposed buildings)**

Method 1 BAL determination					
Plot	Vegetation classification	Calculation method	Effective slope	Separation (m)	BAL
1	Class D Scrub	Method 1	Flat/upslope (0°)	17 m	BAL-29
2	Class D Scrub	Method 1	Downslope >0-5°	15 m	BAL-29
3	Class D Scrub	Method 1	Downslope >5-10°	61 m	BAL-12.5
4	Class D Scrub	Method 1	Downslope >15-20°	45 m	BAL-12.5
5	Class C Shrubland	Method 1	Flat/upslope (0°)	47 m	BAL-12.5
6	Class C Shrubland	Method 1	Downslope >0-5°	70 m	BAL-12.5
7	Class C Shrubland	Method 1	Downslope >5-10°	17 m	BAL-19
8	Class C Shrubland	Method 1	Downslope >15-20°	28 m	BAL-19
9	Class A Forest	Method 1	Flat/upslope (0°)	>100 m	BAL-Low
10	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A	N/A

Method 1 BAL determination					
Plot	Vegetation classification	Calculation method	Effective slope	Separation (m)	BAL
11	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A	N/A

Table 4 lists the BAL applicable to each building or element within the proposed development.

**Table 4: BAL applicable to each building/element**

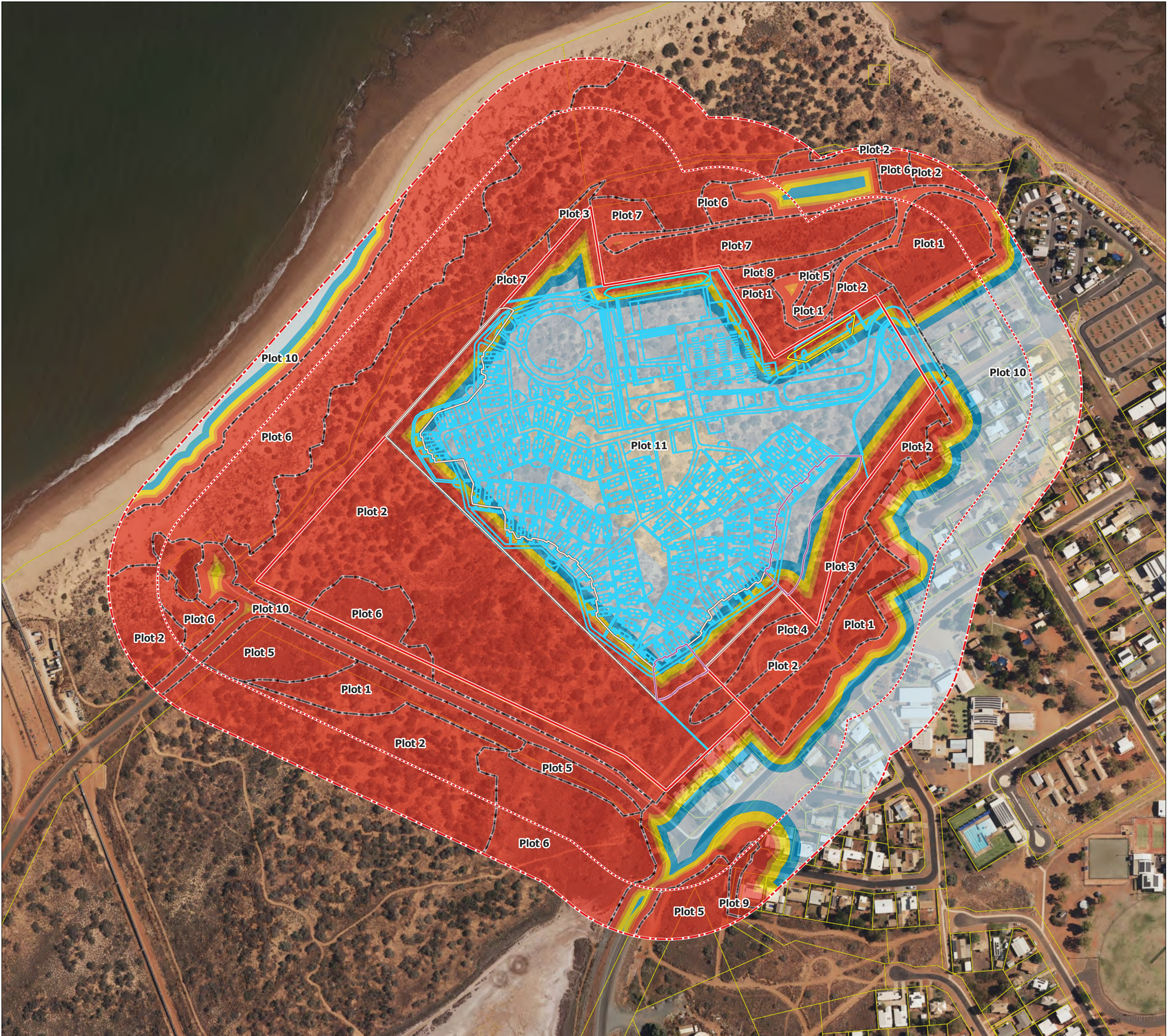
Building / element	Initial BAL	APZ	Revised BAL
Accommodation Pods	BAL-FZ	Accommodation Pod APZ (15 m-33 m wide) to the vegetation interface and site landscaping*	BAL-29, BAL-19, BAL12.5 and BAL-Low
Field Store with Laundries	BAL-FZ	Accommodation Pod APZ (15 m-33 m wide) and site landscaping*	BAL-19, BAL12.5 and BAL-Low
Restaurant	BAL-FZ	11m wide APZ to the vegetation interface and site landscaping*	BAL-29
Tavern	BAL-FZ	Interfacing APZs and site landscaping*	BAL-12.5
Administration building	BAL-FZ	15m wide APZ and site landscaping*	BAL-12.5
Creche and Communications building	BAL-FZ	15m wide APZ and site landscaping*	BAL-12.5
Medical and Wellness building	BAL-FZ	15m wide APZ and site landscaping*	BAL-12.5
Indoor recreation building	BAL-FZ	Interfacing APZs and site landscaping*	BAL-Low
Gym building	BAL-FZ	Interfacing APZs and site landscaping*	BAL-Low
Multi-purpose courts	BAL-FZ	Interfacing APZs and site landscaping*	BAL-12.5
Bin Room	BAL-FZ	15m wide APZ to the vegetation interface and site landscaping*	BAL-29
Maintenance Shed	BAL-FZ	15m wide APZ to the vegetation interface and site landscaping*	BAL-29
Storage Shed	BAL-FZ	15m wide APZ to the vegetation interface and site landscaping*	BAL-19
Fire pump room	BAL-FZ	15m wide APZ, site landscaping* and extension of Third Ave**	BAL-12.5

Building / element	Initial BAL	APZ	Revised BAL
Water pump room	BAL-FZ	15m wide APZ, site landscaping* and extension of Third Ave**	BAL-12.5

\* The interior of the development is largely to be modified to non-vegetated elements and low threat landscaping as depicted on Figure 3, other than the small plot of retained vegetation in the south of the project area, in addition to the Cultural Significant Area in the south-west.

\*\* Third Avenue is to be extended to the site, creating permanent separation to surrounding unmanaged vegetation





Legend

- Proposed Development
- Project Area
- Assessment Area
  - 100m
  - 150m
- Asset Protection Zone
  - 11m
  - 15m
  - Accom Pod Perimeter APZ (33m)
  - Accom Pod Perimeter APZ (to lot boundary)
  - Vegetation Plot
  - Cadastre
- BAL Contours
  - BAL FZ
  - BAL 40
  - BAL 29
  - BAL 19
  - BAL 12.5
  - BAL Low

Scale 1: 4,000



0 60 120 180 Metres



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Figure 4: BAL Contour plan

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## **4.0 Identification of bushfire hazard issues**

### **4.1 Bushfire context**

The project area is located adjacent to a built-up residential area, namely Onslow townsite, which is comprised of non-vegetated buildings and infrastructure, roads and managed low threat vegetation, with bushfire hazards limited to isolated and fragmented patches of vegetation to the south-east and east. The proposed development will clear almost all vegetation within the portion of the project area outside the Cultural Significant Area, which will retain all existing native vegetation.

The greatest bushfire threat to the proposed development is from south-west and south of the project area where fires through predominantly shrubland vegetation can approach the site over long fire runs. The vegetation in this direction is fragmented by various non-vegetated elements such as salt production beds and associated runoff, Onslow airport, Wheatstone LNG facility, local waterbodies and the coastline. The disruption to the vegetation continuity means that bushfires are unlikely to be able to spread toward the project area from distances greater than 6 km long. The vegetation is also very low, likely less than 0.5 m high in most instances, and as such unlikely to support significant bushfire behaviour, although it may spread quickly through this vegetation.

The fire runs from the west, north-west and north are locally constricted by the coastline, and are through coastal dune vegetation which will be unlikely to ignite, and would be over relative short fire runs less than 300 m long. The bushfire threat from these directions is not considered as great as a fire from the south-west or south. Similarly, a fire from the south-east would be through very minor plots of retained vegetation within undeveloped lot and road reserves to between the project area and Onslow townsite, which are also very short fire runs and not considered able to develop to a steady-state bushfire.

Based on the above, bushfire impact on the proposed development is expected to be from the south-west or south, but impact would likely be relatively short, given the quick residence time associated with bushfire spreading through the shrubland and scrub vegetation plots. Linfire consider it unlikely that the discontinuous fuel structure would result in the peak bushfire behaviour anticipated by AS 3959, however, if left unprotected, the project area would be expected to receive moderate levels of radiant heat and ember attack from a bushfire approaching the development.

### **4.2 Bushfire hazard issues**

Examination of the environmental considerations (Section 2.0) and the bushfire risk assessment (Section 3.0) has identified the following bushfire hazard issues:

1. The existing extent of unmanaged vegetation external to the project area, in addition to the retention of the vegetation within the Culturally Significant Area within the project area, will result in proposed buildings being subject to an initial BAL of BAL-FZ. Providing sufficient separation from unmanaged vegetation will be required to reduce the BAL impact to tolerable levels.
2. Access to the site will be via an unconstructed public road reserve to the east. Ensuring a compliant public road access will be critical, in addition to compliant internal driveways.
3. There are limited firefighting appliances in the local area, however there are fire appliances capable of using a firefighting water supply when they turn out to a bushfire event. Providing sufficient bushfire fighting water supply for the development will be required.
4. The proposed short-term accommodation constitutes a vulnerable land use. A BEMP has been prepared in accordance with Policy Measure 6.7 of SPP 3.7 to address the emergency evacuation plan for the site (refer to Linfire 2021).

#### **4.3 Bushfire safety strategy**

The following bushfire safety strategy is proposed to demonstrate compliance with the Bushfire Protection Criteria of the Guidelines and address the bushfire hazards identified above:

1. Create sufficient separation between the proposed buildings and surrounding classified shrubland and scrub vegetation, by establishing APZ at critical interfaces, compliant with the APZ standards of the Guidelines. Additionally, all land within the habitable development is either non-vegetated or low threat vegetation to reduce the chance of bushfire ignition and spread within the site.
2. Ensure the new public road and onsite vehicular access within the project area, is compliant with the requirements of the Guidelines
3. Ensure a secure bushfire fighting water supply by providing sufficient static water supplies onsite, to supplement the existing street hydrants within the public road network to the south.
4. To ensure occupant safety, it will be critical that onsite staff at the proposed development are prepared for bushfire emergencies and are aware how best to manage evacuation of the site in a bushfire event, to prioritise protection of life. The strategy for this will be outlined within this BMP and the project BEMP.

It is acknowledged that the bushfire risk to the proposed development posed by these hazards can be managed through a combination of standard application of acceptable solutions under the Guidelines.



## 5.0 Assessment against the bushfire protection criteria

### 5.1 Compliance table

An acceptable solutions assessment against the bushfire protection criteria is provided in Table 5.

**Table 5: Compliance with the bushfire protection criteria of the Guidelines**

Bushfire protection criteria				Linfire response		
Element	Intent	Performance Principle	Acceptable solutions	Method of compliance	Proposed bushfire management measures	Compliance Comment
Element 1: Location	To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure.	<u>Performance Principle P1</u> Development location The strategic planning proposal, subdivision and development application is located in an area where the bushfire hazard assessment is or will, on completion, be moderate or low, or a BAL-29 or below, and the risk can be managed. For unavoidable development in areas where BAL-40 or BAL-FZ applies, demonstrating that the risk can be managed to the satisfaction of the Department of Fire and Emergency Services and the decision-maker.	<u>A1.1 Development location</u> The strategic planning proposal, subdivision and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL-29 or below.	<b>Acceptable Solution</b>	The BAL contour map (see Figure 4) indicates that all proposed buildings and infrastructure can be sited in an area of BAL-29 or lower, upon completion of development and implementation of the Asset Protection Zones (APZs) and low threat vegetation.	<ul style="list-style-type: none"> <li>Compliance of the Performance Principle and Intent of Element 1 is achieved through compliance with Acceptable Solution A1.1</li> </ul>
Element 2: Siting and design of development	To ensure that the siting and design of development minimises the level of bushfire impact.	<u>Performance Principle P2</u> The siting and design of the strategic planning proposal, subdivision or development application, including roads, paths and landscaping, is appropriate to the level of bushfire threat that applies to the site. That it incorporates a defendable space and significantly reduces the heat intensities at the building surface thereby minimising the bushfire risk to people, property and infrastructure, including compliance with AS 3959 if appropriate.	<u>A2.1 Asset Protection Zone (APZ)</u> Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:  <b>Width:</b> Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m <sup>2</sup> (BAL-29) in all circumstances.  <b>Location:</b> the APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity (see explanatory notes)  <b>Management:</b> the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones' (see Guidelines Schedule 1).	<b>Acceptable Solution</b>	On completion of development, most of project area (other than the Cultural Significant Area and a small plot along the southern boundary) is to be non-vegetated or landscaped and maintained in a low threat state, with APZs nominated where buildings directly interface unmanaged vegetation to limit exposure of proposed assets to bushfire impact.  The nominated interface APZs are depicted on Figure 3, and are between 11 m and 33 m wide to ensure buildings remain in BAL-29 or lower. The Accommodation Pod APZ is to be variable width of between 15 m to 33 m wide, but not extending past the project area or lot boundaries.  All APZs are to be implemented and maintained in accordance with Schedule 1 of the Guidelines (see Appendix 2).  All other vegetation within the village area that is to be excluded from classification, but is outside of nominated APZs, is to be modified to non-vegetated or low threat vegetation in accordance with AS 3959 Clauses 2.2.3.2 (e) and (f). This can include the use of cultivated and managed gardens, managed sports fields (i.e. lawn), parkland managed landscaping, windbreaks etc as per Clause 2.2.3.2 (f) or implementation of vegetation to the APZ standard in accordance with Schedule 1 of the Guidelines.	<ul style="list-style-type: none"> <li>Compliance of the Performance Principle and Intent of Element 2 is achieved through compliance with Acceptable Solution A2.1</li> </ul>
Element 3: Vehicular access	To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.	<u>Performance Principle P3</u> The internal layout, design and construction of public and private vehicular access and egress in the subdivision / development allow emergency and other vehicles to move through it safely and easily.	<u>A3.1 Two access routes</u> Two different vehicular access routes are provided, both of which connect to the public road network, provide safe access and egress to two different destinations and are available to all residents/the public at all times and under all weather conditions.	<b>Acceptable Solution</b>	While there is only single public road accessing Onslow, the town is considered to be a suitable safer place on the following basis: <ul style="list-style-type: none"> <li>There is a significant portion of Onslow that is not designated as bushfire prone (see Plate 2) which will enable people to be 300-400 m from bushfire prone land</li> <li>Review of publicly available fire history datasets (Firewatch and DBCA-060 – see Plate 3), shows no evidence of bushfires within 10 km of the townsite</li> </ul>	<ul style="list-style-type: none"> <li>Compliance of the Performance Principle and Intent of Element 2 is achieved through compliance with Acceptable Solution A3.1, A 3.3, A3.5 and A3.8</li> </ul>

Bushfire protection criteria				Linfire response		
Element	Intent	Performance Principle	Acceptable solutions	Method of compliance	Proposed bushfire management measures	Compliance Comment
					<ul style="list-style-type: none"> <li>Onslow, while still a relatively small town, is of sufficient size and resources to manage a bushfire emergency, with local police, volunteer firefighters, a hospital and an airport.</li> <li>The vegetation surrounding the town is typically very low shrubland, which is unlikely to support significant landscape scale bushfire behaviour. Additionally, the main fire run from the south-west is fragmented by various non-vegetated elements.</li> </ul> <p>Based on the above, it is reasonable to expect that while there appears to be limited bushfire activity close to the town, the size of Onslow townsite is sufficient to ensure it will provide a place of relative safety for occupants to seek refuge in a bushfire emergency.</p> <p>The proposed development will be connected to the existing public road network, namely First Street, via extension of the currently undeveloped portion of Third Avenue.</p> <p>From Third Avenue, travel will be possible to First Street, where occupants with the option of travelling to more than two different destinations:</p> <ul style="list-style-type: none"> <li>Continue south along the existing part of Third Avenue, where travel can be in several directions at the intersection with Simpson Street</li> <li>Travel east on First Street to Second Avenue and south to Simpson Street, where travel can be in several directions</li> </ul> <p>In this regard, the proposed development is provided with at least two access routes which meets the requirements of Acceptable Solution A3.1.</p>	
			<u>A3.2 Public road</u> A public road is to meet the requirements in Table 2, Column 1.	Not applicable	Third Avenue is to be extended to the vehicular entrance to the village. This will be a new cul-de-sac road compliant with A3.3. No other public roads are proposed as part of the development. <p>While a full audit of the existing public road network has not been conducted given it is outside the Proponents ability to modify, the existing public roads viewed around the project area whilst conducting the site inspection, appear to be in reasonable condition and are appear compliant with public road specifications of the Guidelines. On this basis, the existing road network is considered sufficient for emergency egress or firefighter access to the site.</p>	
			<u>A3.3 Cul-de-sac (including a dead-end-road)</u> A cul-de-sac and/or a dead-end road should be avoided in bushfire prone areas. Where no alternative exists (i.e. the lot layout already exists and/or will need to be demonstrated by the proponent), detailed requirements will need to be achieved (refer to the Guidelines for detailed cul-de-sac requirements).	Acceptable Solution	A new cul-de-sac is proposed as part of the development, to extend the undeveloped portion of Third Avenue to the main entrance to the site. <p>The proposed cul-de-sac will be less than 200 m in length, will include minimum 17.5 m diameter turn-around head and will be constructed to the relevant technical requirements of the Guidelines (see Appendix 3)</p>	
			<u>A3.4 Battle-axe</u> Battle-axe access leg's should be avoided in bushfire prone areas. Where no alternative exists, (this will need to be demonstrated by the proponent) detailed requirements will need to be achieved (refer to the Guidelines for detailed battle-axe requirements).	Not applicable	No battle-axe legs are proposed as part of the development and the project area is not serviced by an existing battle-axe.	

Bushfire protection criteria				Linfire response		
Element	Intent	Performance Principle	Acceptable solutions	Method of compliance	Proposed bushfire management measures	Compliance Comment
			<u>A3.5 Private driveway longer than 50 m</u> A private driveway is to meet detailed requirements (refer to the Guidelines for detailed private driveway requirements).	<b>Acceptable Solution</b>	All proposed internal roads to be constructed as part of the development (within the project area) will be in accordance with the technical requirements of the Guidelines for private driveways (see Appendix 3) including compliant turn-around areas, but will comply with the technical specifications for public roads from Table 6 Column 1 of the Guidelines, rather than Column 3 for private driveways.	
			<u>A3.6 Emergency access way</u> An access way that does not provide through access to a public road is to be avoided in bushfire prone areas. Where no alternative exists (this will need to be demonstrated by the proponent), an emergency access way is to be provided as an alternative link to a public road during emergencies. An emergency access way is to meet detailed requirements (refer to the Guidelines for detailed EAW requirements).	<b>Not applicable</b>	The proposed development does not require Emergency Access Ways (EAWs) to provide through access to a public road.	
			<u>A3.7 Fire service access routes (perimeter roads)</u> Fire service access routes are to be established to provide access within and around the edge of the subdivision and related development to provide direct access to bushfire prone areas for fire fighters and link between public road networks for firefighting purposes. Fire service access routes are to meet detailed requirements (refer to the Guidelines for detailed fire service access route requirements).	<b>Not applicable</b>	The proposed development does not require fire service access routes (FSARs) to achieve access within and around the perimeter of the project area.	
			<u>A3.8 Firebreak width</u> Lots greater than 0.5 hectares must have an internal perimeter firebreak of a minimum width of three metres or to the level as prescribed in the local firebreak notice issued by the local government.	<b>Acceptable Solution</b>	On completion of development, the project area outside the Cultural Significant Areas, will be developed with non-vegetated surfaces, cleared land or low threat landscaping including nominated APZs.  While access within the development will be by internal driveway, it is considered appropriate that perimeter firebreaks are created around the main development to enable fire appliance access at the interfaces with unmanaged vegetation. As such, the Proponent is to comply with the current Shire of Ashburton annual firebreak notice (refer to Appendix 5), including any approved variations (should they exist).  The firebreak notice requires that perimeter firebreaks are implemented on all properties within the townsite that exceed 2000 m <sup>2</sup> . The perimeter mineral earth firebreak is to be no less than 5 m wide and 4 m high and must be immediately inside the external property boundary. A proposed perimeter firebreak layout has been proposed on Figure 5, which largely follows the external lot boundary, but is rationalised in several locations to align with the development layout, and to avoid sharp turns along lot boundary, especially the south-western boundary.	
Element 4: Water	To ensure that water is available to the subdivision, development or	<u>Performance Principle P4</u> The subdivision, development or land use is provided with a permanent and secure water	<u>A4.1 Reticulated areas</u> The subdivision, development or land use is provided with a reticulated water supply in accordance with the specifications of the	<b>Acceptable Solution</b>	The proposed development will be connected to reticulated water supply via surrounding development in accordance with Water Corporations Design Standard 63 requirements (refer to Appendix 4). Existing street hydrants are located along First Street and Simpson	<ul style="list-style-type: none"> <li>Compliance of the Performance Principle and Intent of Element 4 is achieved through</li> </ul>

Bushfire protection criteria				Linfire response		
Element	Intent	Performance Principle	Acceptable solutions	Method of compliance	Proposed bushfire management measures	Compliance Comment
	land use to enable people, property and infrastructure to be defended from bushfire.	supply that is sufficient for firefighting purposes.	relevant water supply authority and Department of Fire and Emergency Services.		Street to the east and south of the project area, the closet approximately 90 m from main site entrance (see Figure 5).  While street hydrants will enable the attending fire appliances to access the town main water supply, given the supply characteristics of the town main are unknown, and the overall size of the proposed development, the main bushfire fighting water supply is likely to be accessed from the dedicated onsite fire hydrant system detailed below in A4.2 below. This will provide attending fire fighters with hydrant coverage of the site and access to a firefighting water supply at the site.	compliance with Acceptable Solutions A4.1 and A4.2
			<u>A4.2 Non-reticulated areas</u> Water tanks for firefighting purposes with a hydrant or standpipe are provided and meet detailed requirements (refer to the Guidelines for detailed requirements for non-reticulated areas).	<b>Acceptable Solution</b>	The proposed development is to have an on-site fire hydrant system, complete with two dedicated firewater storage tanks and booster connection. This hydrant system provides attending fire fighters with fire hydrant coverage of the project area, as well as access to water for bushfire fighting purposes.  The tanks are to be sized to have an additional capacity of 50 kL for bushfire fighting purposes, with an overall minimum capacity of 200 kL.  The fire hydrant system is to be designed, installed and maintained in accordance with the National Construction Code and relevant Australian Standards.	
			<u>A4.3 Individual lots within non-reticulated areas (Only for use if creating 1 additional lot and cannot be applied cumulatively)</u> Single lots above 500 m <sup>2</sup> need a dedicated static water supply on the lot that has the effective capacity of 10,000 L.	<b>Not applicable</b>	The proposed development is being addressed in accordance with A41 and A4.2	





Plate 2: Designated bushfire prone area surrounding Onslow

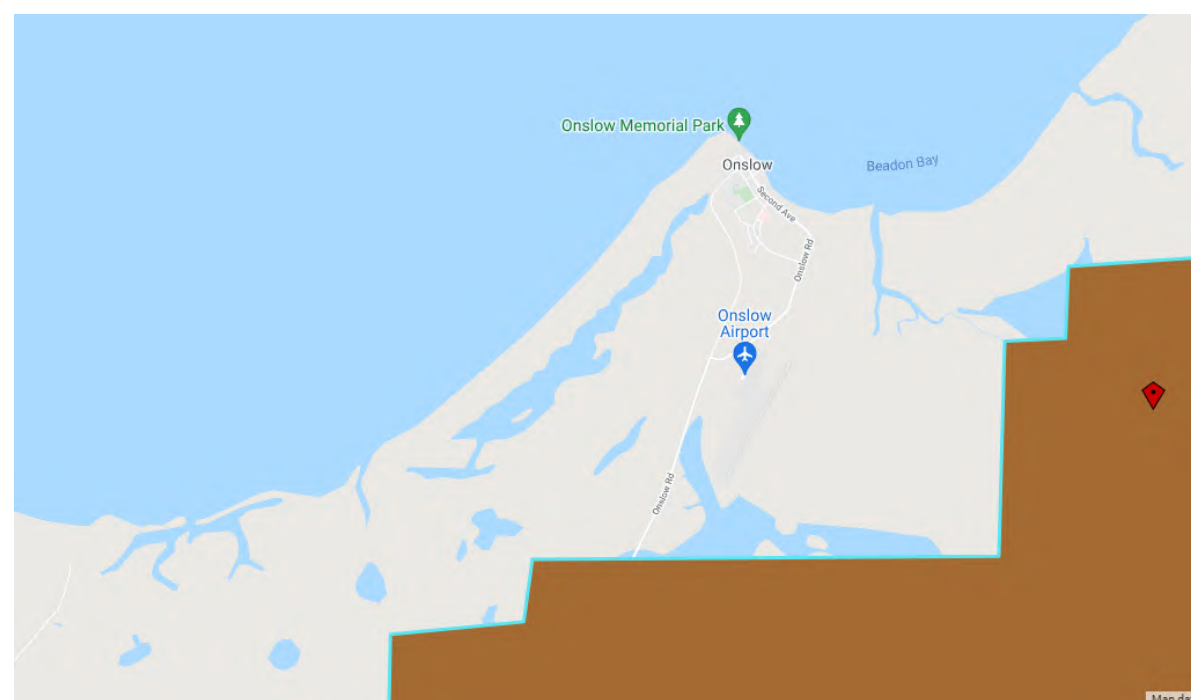


Plate 3: Firewatch and DBCA fire history



## **6.0 Bushfire management measures**

Linfire makes the following additional bushfire management recommendations to inform ongoing planning stages of the development and increase the level of bushfire risk mitigation across the site. Where possible, these measures have been depicted on Figure 4.

### **6.1 Bushfire Emergency Management Plan (BEMP)**

The proposed development constitutes a vulnerable land use. On this basis, a Bushfire Emergency Management Plan (BEMP) has been prepared to address the requirements of Policy Measure 6.7. The BEMP provides procedures to assist with the management of occupants during a bushfire emergency as well detailed site-specific information in order to assess the vulnerability of the development and location and extent of the hazard.

Given the lack of significant fuel loads, the size of the development, the location adjacent to the built-up residential area of Onslow, the bushfire emergency management strategy for the site will be to assess the bushfire scenario and if required, evacuate occupants to Onslow townsite. Upon becoming aware of a bushfire scenario with potential to impact the facility, the first action will be to advise all staff and guests of the bushfire status to commence evacuation preparations. Once organised, occupants can either be evacuated to the nominated off-site refuges.

### **6.2 Onsite Landscaping and staging buffers**

The BAL contour assessment is reliant on all onsite excluded vegetation being implemented and maintained as low threat vegetation, with all nominated APZs within the project area to be modified and managed in a low threat minimal fuel condition in accordance with Clause 2.2.3.2 (f) of AS 3959 and Schedule 1: Standards for Asset Protection Zones from the Guidelines (see Appendix 2). These areas have been depicted on Figure 5. Responsibility for establishment and maintenance of low threat landscaping and APZs, as discussed above, is summarised in Section 7.0.

If the development (and therefore clearing) is to occur on a staged basis, clearing in advance will need to occur to ensure building construction is not inhibited by a temporary vegetation extent located within adjacent development stages yet to be cleared. This can be achieved by ensuring that each approved stage subject to construction is surrounded by a suitably sized, on-site cleared or low threat buffer to development (not including vegetation proposed to be retained). Once the buffers are created, they will need to be maintained on a regular and ongoing basis in accordance with AS 3959 Clause 2.2.3.2 (f) and Schedule 1 of the Guidelines (refer to Appendix 2). Management will need to achieve a low threat minimal fuel condition all year round, until such time that the buffer area is developed as part of the next development stage.

### **6.3 Emergency Pedestrian Gates**

Emergency pedestrian gates are proposed in the fence surrounding the project area (refer Figure 5), to permit egress by on-site occupants into Onslow townsite, should offsite evacuation from the development be required.

The gates are to have a minimum width of no less than 3.6m to enable 2-3 people to pass through simultaneously. Both gates should be locked to restrict access, however a common key system is to be used with keys made available to onsite Emergency Response Team and to local fire brigade personnel. Installation and ongoing maintenance of the gates is to be the responsibility of the Proponent.

### **6.4 Road verge fuel management**

Existing and proposed road verges that have been excluded as low threat are to be managed to ensure

the understorey and surface fuels remain in a low threat, minimal fuel condition in accordance with Clause 2.2.3.2 (f) of AS 3959. Ongoing road verge management is the responsibility of the Shire.

## **6.5 Staging of access**

If development (and therefore construction of vehicular access) is to occur on a staged basis, vehicular access arrangements will need to ensure that all occupants are provided with compliant public access and internal driveways at all stages. This can be achieved via construction of access in advance of stages.

## **6.6 BAL compliance and/or BAL assessment report**

A BAL compliance and/or BAL assessment report may be prepared at the discretion of the Shire following completion of construction works and prior to issue of certificate of occupancy to validate and confirm the accuracy of the BAL contour assessment; or demonstrate any change in the assessed BAL or other management measures documented in this BMP, which may occur as a result of changes in building location, vegetation class or bushfire management approach. The Shire or Building Certifier may also require a revised BAL assessment to confirm the BAL rating to buildings, prior to submission of building licence.

## **6.7 Building construction standards**

Bushfire construction provisions of the National Construction Code require that Class 1, 2, 3 and associated Class 10a buildings comply with the bushfire specific construction requirements of AS 3959, in accordance with the assessed BAL. On this basis, the accommodation buildings within the proposed development are required to comply with AS 3959 to the assessed BAL rating as identified on Figure 4 or through subsequent BAL assessment.

## **6.8 Notification on title**

Notification is to be placed on the Title of proposed lots subject to BAL-12.5 or higher (either through condition of subdivision or other head of power) to ensure landowners/proponents and prospective purchasers are aware that their lot is subject to an approved BMP and BAL assessment.

## **6.9 Compliance with annual firebreak notice**

The Proponent is to comply with the current Shire of Ashburton annual firebreak notice (refer to Appendix 5), including any approved variations (should they exist).

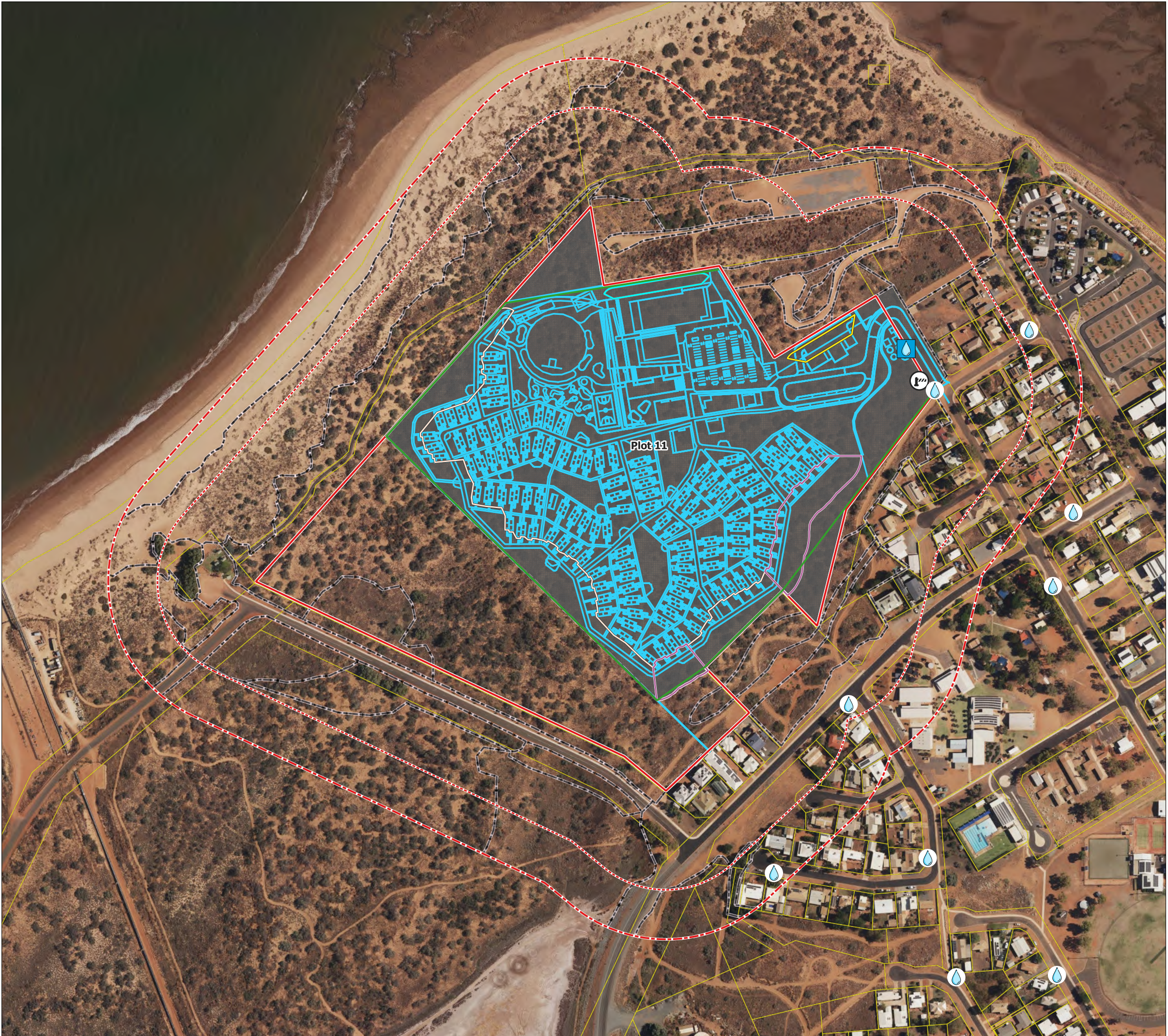
The firebreak notice requires that perimeter firebreaks are implemented on all properties within the townsite that exceed 2000 m<sup>2</sup>. The perimeter mineral earth firebreak is to be no less than 5 m wide and 4 m high and must be immediately inside the external property boundary. It is considered appropriate that perimeter firebreaks are created around the main development to enable fire appliance access at the interfaces with unmanaged vegetation, with a proposed route provided on Figure 5.

The firebreak notice also requires the following that may apply to the proposed development:

- Firebreaks around power and water supply infrastructure
- Firebreaks around fuel storage and stockpiled flammable material
- Burning times

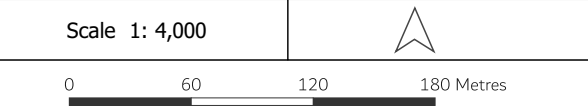
Ongoing maintenance of the Shire firebreak notice, and any approved variations, will be the responsibility of the Proponent.





Legend

- Mitigation Measure
- Emergency Pedestrian Gate
  - Onsite Fire Hydrant System Infrastructure
- Street Hydrant
- Street Hydrant
- Proposed Development
- Proposed Development
- Firebreak
- Firebreak
- Project Area
- Project Area
- Assessment Area
- 100m
  - 150m
- Asset Protection Zone
- 11m
  - 15m
  - Accom Pod Perimeter APZ (33m)
  - Accom Pod Perimeter APZ (to lot boundary)
  - Vegetation Plot
  - Cadastre
- Classified Vegetation
- Modified to non vegetated and low threat



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Mineral Resources

Onslow Township Village

Figure 5: Bushfire Management Measures

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## 7.0 Responsibilities for implementation and management of the bushfire measures

Implementation of the BMP applies to the Proponent (or landowner, facility manager) and the Shire to ensure bushfire management measures are adopted and implemented on an ongoing basis. A bushfire responsibilities table is provided in Table 6 to drive implementation of all bushfire management works associated with this BMP.

**Table 6: Responsibilities for implementation and management of the bushfire measures**

Implementation/management table	
<i>Proponent – prior to development occupation</i>	
No.	Implementation action
1	If required by the Shire or Building Certifier, individual BAL assessment prior to issuing of building permits.
2	Establish onsite low threat landscaping and nominated APZs across the project area, to the dimensions and standard stated in the BMP.
3	Construct the Third Avenue public road extension to the main entrance, to the cul-de-sac road standards stated in the BMP.
4	Construct the internal driveway to the private driveway road standards stated in the BMP, however compliance shall also be achieved with the technical specifications for public roads stated Table 6 Column 1 from the Guidelines (see Appendix 3).
5	Install the firefighting water tank and associated hardstand and turnaround areas to the standards stated in the BMP.
6	Adopt bushfire construction requirements of AS 3959 for all Class 1, 2, 3 or associated 10a buildings, to the assessed BAL.
7	Construct emergency pedestrian gates in the fence surrounding the project area with minimum width of no less than 3.6m, to the standards and location stated in the BMP. Where locked, keys are to be made available to onsite Emergency Response Team and to local fire brigade personnel.
8	Implement all requirements of the project Bushfire Emergency Management Plan.
9	Comply with the relevant local government annual firebreak notice issued under s33 of the Bush Fires Act 1954, including any approved variations, including the creation of all required perimeter firebreaks.
10	If development is staged, create suitably sized on-site staging buffers to prevent any temporary non-compliant BAL impacts on buildings. The buffer is to achieve exclusion under Clauses 2.2.3.2 (e) and (f) of AS 3959.
11	If development is staged, ensure vehicular access arrangements are implemented to provide compliant public access and internal driveways at all stages.
<i>Proponent – ongoing</i>	
No.	Implementation action
1	Maintain the onsite low threat landscaping and nominated APZs across the project area, to the dimensions and standards stated in the BMP.
2	Maintain the internal driveway to the standards stated in the BMP.
3	Maintain the firefighting water tank and associated hardstand and turnaround areas to the standard stated in the BMP.
4	Maintain buildings constructed in accordance with AS 3959 to the applicable standard.

<b>Implementation/management table</b>	
5	Maintain the emergency pedestrian gates to the standards stated in the BMP. Where locked, ensure keys are available to onsite Emergency Response Team and to local fire brigade personnel.
6	Review and implement all requirements of the project Bushfire Emergency Evacuation Plan, including all training and exercise drills.
7	Comply with the relevant local government annual firebreak notice issued under s33 of the Bush Fires Act 1954, including any approved variations, including maintenance of perimeter firebreaks.
<b><i>Local Government – ongoing</i></b>	
<b><i>No.</i></b>	<b><i>Implementation action</i></b>
1	Maintain road verges in a low threat minimal fuel condition as per Clause 2.2.3.2 (f) of AS 3959. This is to include the new Third Avenue cul-de-sac proposed as part of this development.

## 8.0 References

Department of Fire and Emergency Services (DFES) 2021, *Map of Bush Fire Prone Areas*, [Online], Government of Western Australia, available from:  
<https://maps.slip.wa.gov.au/landgate/bushfireprone/>,.

Department of Planning (DoP) 2016, *Visual guide for bushfire risk assessment in Western Australia*, Department of Planning, Perth.

Standards Australia (SA) 2018, Australian Standard AS 3959–2018 *Construction of Buildings in Bushfire-prone Areas*, Standards Australia, Sydney.

Linfire 2021, *Bushfire Emergency Management Plan: Onslow Township Village*, Linfire Consultancy, Perth.

Western Australian Planning Commission (WAPC) 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth.

Western Australian Planning Commission (WAPC) 2017, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.3 August 2017, Western Australian Planning Commission, Perth.

## Appendix 1: Vegetation plot photos and description



Photo ID: 1a



Photo ID: 1b



Photo ID: 1c

Plot number		Plot 1
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity



Photo ID: 1d



Photo ID: 1e



Photo ID: 1f

Plot number		Plot 1
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity





Photo ID: 1g



Photo ID: 1h

Plot number		Plot 1
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity



Photo ID: 2a

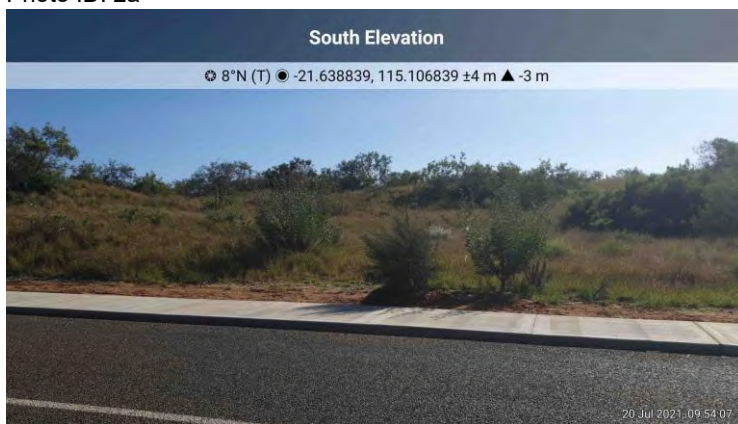


Photo ID: 2b



Photo ID: 2c

Plot number		Plot 2
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity



Photo ID: 2d



Photo ID: 2e



Photo ID: 2f

Plot number		Plot 2
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity





Photo ID: 2g

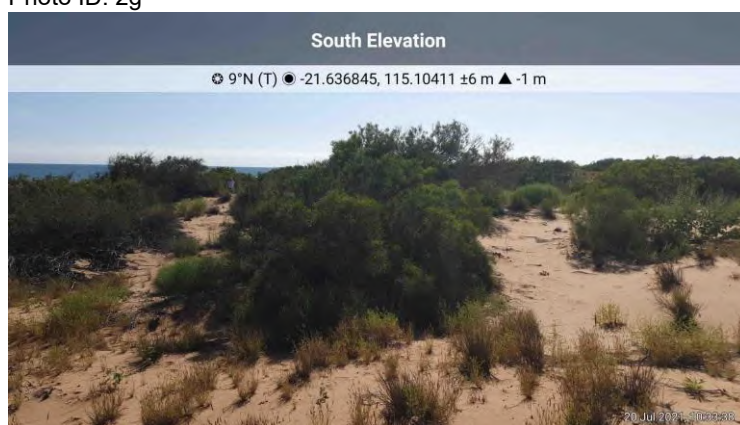


Photo ID: 2h



Photo ID: 2i

Plot number		Plot 2
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity



Photo ID: 2j



Photo ID: 2k



Photo ID: 2l

Plot number		Plot 2
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity





Photo ID: 2m

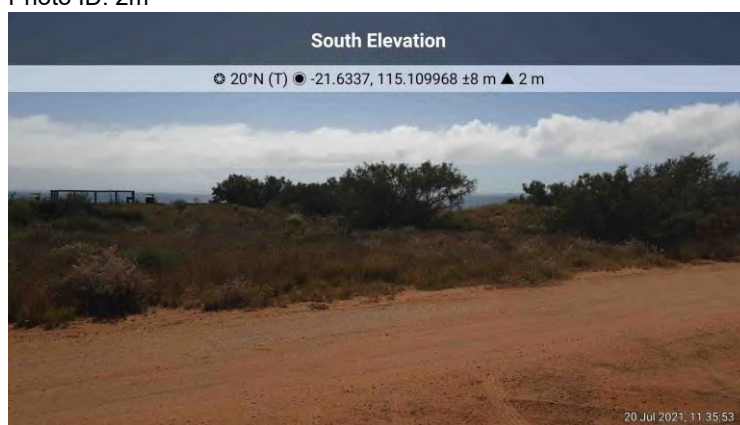


Photo ID: 2n



Photo ID: 2o

Plot number		Plot 2
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity



Photo ID: 2p



Photo ID: 2q



Photo ID: 2r

Plot number		Plot 2
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity





Photo ID: 2s



Photo ID: 2t



Photo ID: 2u

Plot number		Plot 2
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity





Photo ID: 2v



Photo ID: 2w

Plot number		Plot 2
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity



Photo ID: 3a



Photo ID: 3b



Photo ID: 3c

Plot number		Plot 3
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity



Photo ID: 4a

Plot number		Plot 4
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Vegetation with a continuous horizontal and vertical structure, greater than 2 m high at maturity





Photo ID: 5a



Photo ID: 5b

Plot number		Plot 5
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity



Photo ID: 5c



Photo ID: 5d

Plot number		Plot 5
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity





Photo ID: 6a



Photo ID: 6b



Photo ID: 6c

Plot number		Plot 6
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity

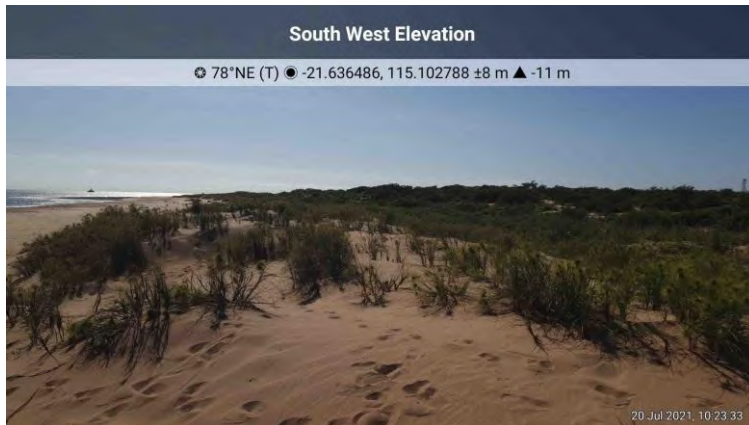


Photo ID: 6d



Photo ID: 6e



Photo ID: 6f

Plot number		Plot 6
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity





Photo ID: 6g

Plot number		Plot 6
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity



Photo ID: 7a



Photo ID: 7b



Photo ID: 7c

Plot number		Plot 7
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity





Photo ID: 7d

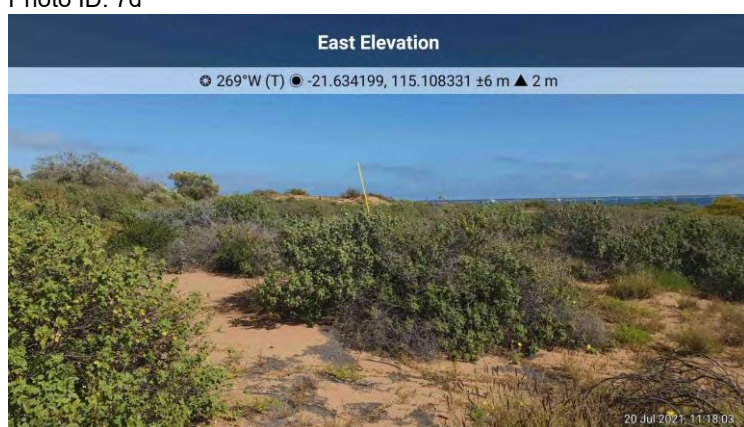


Photo ID: 7e



Photo ID: 7f

Plot number		Plot 7
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity



Photo ID: 7g



Photo ID: 7h



Photo ID: 7i

Plot number		Plot 7
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity





Photo ID: 7j

Plot number		Plot 7
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity

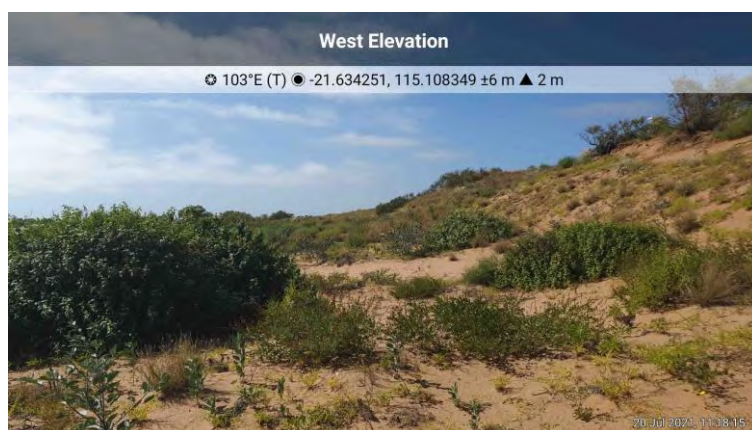


Photo ID: 8a



Photo ID: 8b

Plot number		Plot 8
Vegetation classification	Pre-development	Class C Shrubland
	Post-development	Class C Shrubland
Description / justification		Shrub vegetation less than 2 m high at maturity





Photo ID: 9a

Plot number		Plot 9
Vegetation classification	Pre-development	Class A Forest
	Post-development	Class A Forest
Description / justification		Trees 10-30 m high at maturity, dominated by Eucalypts, multi-tiered structure comprising tall canopy layer, shrubby middle layer and grass/herb/sedge understorey



Photo ID: 10a



Photo ID: 10b



Photo ID: 10c

Plot number		Plot 10
Vegetation classification	Pre-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
	Post-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
Description / justification		Low threat cultivated gardens and maintained lawns within surrounding properties and non-vegetated areas including roads, footpaths, driveways and building footprints





Photo ID: 10d



Photo ID: 10e



Photo ID: 10f

Plot number		Plot 10
Vegetation classification	Pre-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
	Post-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
Description / justification		Low threat cultivated gardens and maintained lawns within surrounding properties and non-vegetated areas including roads, footpaths, driveways and building footprints



Photo ID: 10g



Photo ID: 10h

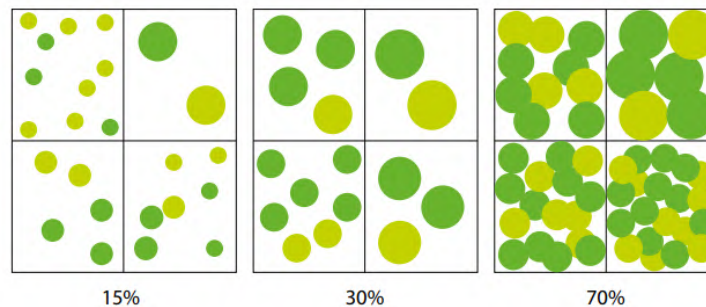
Plot number		Plot 10
Vegetation classification	Pre-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
	Post-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
Description / justification		Low threat cultivated gardens and maintained lawns within surrounding properties and non-vegetated areas including roads, footpaths, driveways and building footprints



## Appendix 2: APZ standards (Schedule 1 of the Guidelines)

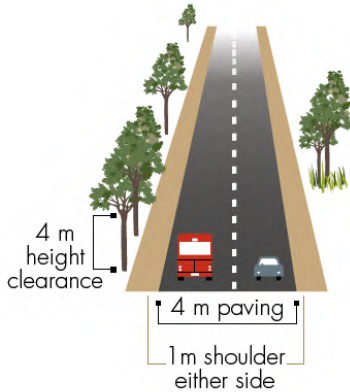
### Schedule 1: Standards for Asset Protection Zones

- **Fences:** within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.
- **Objects:** within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.
- **Fine Fuel load:** combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare.
- **Trees (> 5 metres in height):** trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy.



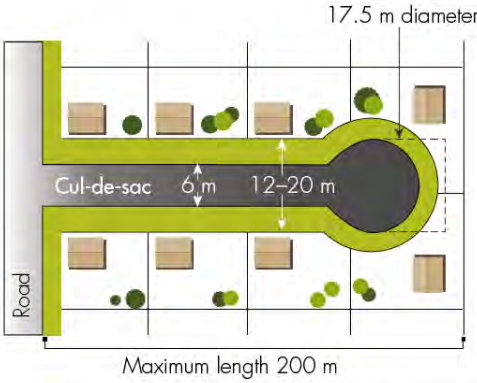
- **Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5 m<sup>2</sup> in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.
- **Ground covers (<0.5 metres in height):** can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.
- **Grass:** should be managed to maintain a height of 100 millimetres or less.

## Appendix 3: Vehicular access technical standards of the Guidelines

Public roads	
<b>Acceptable solution A3.2</b>	A public road is to meet the requirements in Table 6, Column 1.
<b>Explanatory note E3.2</b>	<p><b>Trafficable surface:</b></p> <p>Widths quoted for access routes refer to the width of the trafficable surface. A six metre trafficable surface does not necessarily mean paving width. It could, for example, include four metre wide paving one metre wide constructed road shoulders. In special circumstances, where eight lots or less are being serviced, a public road with a minimum trafficable surface of four metres for a maximum distance of 90 metres may be provided subject to the approval of both the local government and Department of Fire and Emergency Services.</p> <p><b>Public road design:</b></p> <p>All roads should allow for two-way traffic to allow conventional two-wheel drive vehicles and fire appliances to travel safely on them.</p>  <p>The diagram illustrates a cross-section of a public road. It shows a central paved area labeled '4 m paving' with a dashed white line down the center. On either side of the paving is a shoulder labeled '1 m shoulder either side'. Above the paving, a vertical dimension line indicates a '4 m height clearance' between the road surface and the top of the trees on the sides. A red fire truck and a blue car are shown driving on the road.</p>

Cul-de-sac (including a dead-end road)	
<b>Acceptable solution A3.3</b>	<p>A cul-de-sac and/ or a dead end road should be avoided in bushfire prone areas. Where no alternative exists (i.e. the lot layout already exists and/ or will need to be demonstrated by the proponent), the following requirements are to be achieved:</p> <ul style="list-style-type: none"> <li>• <b>Requirements in Table 6, Column 2</b></li> <li>• <b>Maximum length:</b> 200 metres (if public emergency access is provided between cul-de-sac heads maximum length can be increased to 600 metres provided no more than eight lots are serviced and the emergency access way is no more than 600 metres)</li> <li>• <b>Turn-around area requirements,</b> including a minimum 17.5 metre diameter head.</li> </ul>
<b>Explanatory note E3.3</b>	<p>In bushfire prone areas, a cul-de-sac subdivision layout is not favoured because they do not provide access in different directions for residents. In some instances it may be possible to provide an emergency access way between cul-de-sac heads to a maximum distance of 600 metres, so as to achieve two-way access. Such links must be provided as right of ways or public access easements in</p>



Cul-de-sac (including a dead-end road)	
	<p>gross to ensure accessibility to the public and fire services during an emergency. A cul-de-sac in a bushfire prone area is to connect to a public road that allows for travel in two directions in order to address Acceptable Solution A3.1.</p> 

Private driveway longer than 50 metres	
<b>Acceptable solution A3.5</b>	<p>A private driveway is to meet all of the following requirements:</p> <ul style="list-style-type: none"> <li>• <b>Requirements in Table 6, Column 3</b></li> <li>• <b>Required where a house site is more than 50 metres from a public road</b></li> <li>• <b>Passing bays:</b> every 200 metres with a minimum length of 20 metres and a minimum width of two metres (i.e. the combined width of the passing bay and constructed private driveway to be a minimum six metres)</li> <li>• <b>Turn-around areas:</b> designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres (i.e. kerb to kerb 17.5 metres) and within 50 metres of a house</li> <li>• <b>Any bridges or culverts:</b> are able to support a minimum weight capacity of 15 tonnes</li> <li>• <b>All-weather surface (i.e. compacted gravel, limestone or sealed).</b></li> </ul>
<b>Explanatory note E3.5</b>	<p>For a driveway shorter than 50 metres, fire appliances typically operate from the street frontage however where the distance exceeds 50 metres, then fire appliances will need to gain access along the driveway in order to defend the property during a bushfire. Where house sites are more than 50 metres from a public road, access to individual houses and turnaround areas should be available for both conventional two-wheel drive vehicles of residents and type 3.4 fire appliances.</p> <p>Turn-around areas should be located within 50 metres of a house. Passing bays should be available where driveways are longer than 200 metres and turn-around areas in driveways that are longer than 500 metres. Circular and loop driveway designs may also be considered. These criteria should be addressed through subdivision design.</p> <p>Passing bays should be provided at 200 metre intervals along private driveways to allow two-way traffic. The passing bays should be a minimum length of 20 metres, with the combined width of the passing bay and the access being a minimum of six metres.</p> <p>Turn-around areas should allow type 3.4 fire appliances to turn around safely (i.e. kerb to kerb 17.5 metres) and should be available at the house sites and at 500 metre intervals along the driveway.</p>

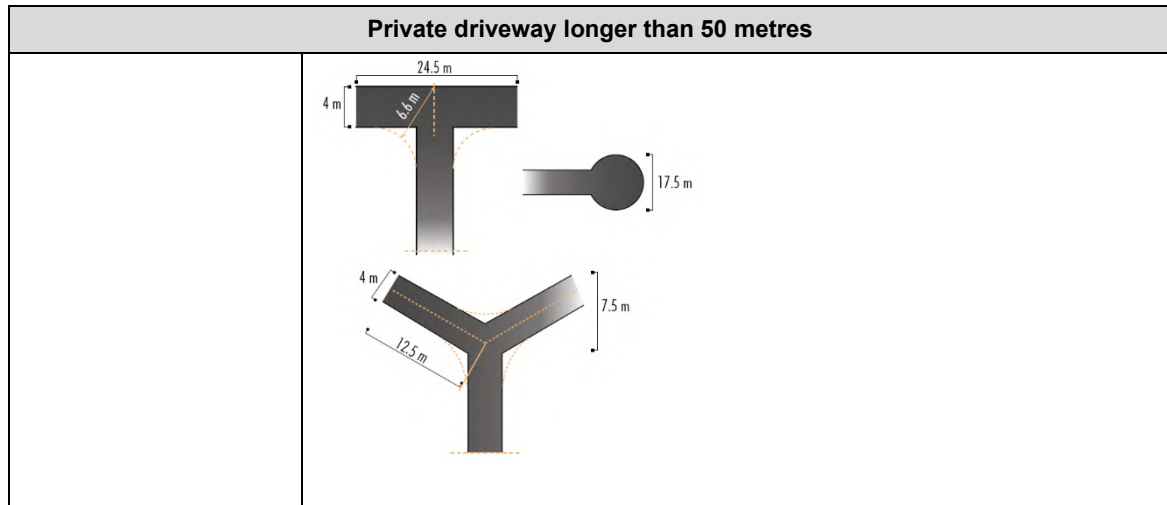


Table 6 from Guidelines

Technical requirement	1	2	3	4	5
	Public road	Cul-de-sac	Private driveway longer than 50 m	Emergency access way	Fire service access routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal distance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5
Maximum grade <50 m	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius	8.5	8.5	8.5	8.5	8.5
* Refer to E3.2 Public roads: Trafficable surface					



## Appendix 4: Water technical standards of the Guidelines

Non-reticulated areas	
Acceptable solution A4.2	<p>Water tanks for firefighting purposes with a hydrant or standpipe are provided and meet the following requirements:</p> <ul style="list-style-type: none"> <li>• <b>Volume:</b> minimum 50,000 litres per tank</li> <li>• <b>Ratio of tanks to lots:</b> minimum one tank per 25 lots (or part thereof)</li> <li>• <b>Tank location:</b> no more than two kilometres to the further most house site within the residential development to allow a 2.4 fire appliance to achieve a 20 minute turnaround time at legal road speeds</li> <li>• <b>Hardstand and turn-around areas:</b> suitable for a type 3.4 fire appliance (i.e. kerb to kerb 17.5 metres) are provided within three metres of each water tank</li> <li>• <b>Water tanks and associated facilities:</b> are vested in the relevant local government.</li> </ul>
Explanatory note E4.2	<p>A procedure must be in place to ensure that water tanks are maintained at or above the designated capacity, including home tanks on single lots, at all times. This could be in the form of an agreement with the local government and the fire service.</p>



## **Appendix 5: Shire of Ashburton Firebreak Notice (2020-2021)**



# Firebreak Notice

## 2021



## BUSH FIRES ACT 1954 - SECTION 33

### NOTICE TO ALL OWNERS AND/OR OCCUPIERS OF LAND SITUATED IN THE SHIRE OF ASHBURTON

Pursuant to the powers contained in Section 33 of the Bush Fires Act 1954, you are hereby required on or before the 1st day of January, (or within fourteen days of your becoming owner or occupier of land should this be after the 1st day of January), to clear and maintain mineral earth breaks and reduce the fuel load from the land owned or occupied by you as specified hereunder and to have the specified land and firebreaks clear of all flammable material all year round.

#### (1) LAND IN TOWNSITES- INCLUDING MINING AND OR CONSTRUCTION ACCOMMODATION FACILITIES

- 1.1 Where the area of land is 2000 square metres (approximately 1/2 an acre) or less, all flammable material must be reduced over the whole of the land. Grasses shall be slashed to a height 75mm.
- 1.2 Where the area of land exceeds 2000 square metres, mineral earth breaks of at least five (5) metres in width must be cleared of all flammable material immediately inside and along the boundaries of the land. Where there are buildings on the land additional mineral earth breaks five (5) metres in width must be cleared immediately surrounding each building.

#### (2) LAND OUTSIDE TOWNSITES INCLUDING MINING AND OR CONSTRUCTION ACCOMMODATION FACILITIES

- 2.1 For all buildings on land outside of the townsite, two mineral earth breaks with a width not less than five (5) metres and cleared of all flammable material must surround the buildings. The inner mineral earth break must be sited not be less than twenty (20) metres from the perimeter of the building or group of buildings and the outer mineral earth break sited not less than one hundred (100) metres from the inner mineral earth break.

#### (3) POWERLINES AND POWER TRANSMISSION LINES IN TOWNSITES INCLUDING MINING AND OR CONSTRUCTION ACCOMMODATION FACILITIES

- 3.1 Aerial hazards to power and power transmission lines must be maintained as per the guidelines issued by the *Energy Safety - Department of Mines, Industry Regulation and Safety*.  
  
For power lines conducting less than or equal to 33,000 volts; ground fuels such as grasses and ground storey species must be cleared to a minimum of five (5) metres either side of a centre line created by the poles, or towers. The total cleared area must not be less than ten (10) metres wide and the entire area must be maintained to the standard of a mineral earth break.
- 3.2 For power transmission lines greater than 33,000 volts, a mineral earth break of not less than five (5) metres in width must be maintained either side of the widest point of any arms or cross arms on the pole or tower. A mineral earth break of no less than five (5) metres width is to be maintained directly under the power line corridor. All power and transmission lines are to be maintained as per Australian Standard AS7000, to assist in minimizing the risk from sparks or arcing and shall be the responsibility of the owner of the transmission line.



#### (4) WATER SUPPLY PIPELINES AND INFRASTRUCTURE

- 4.1 All water supply pipelines and associated infrastructure must have mineral earth breaks not less than five (5) metres wide on both sides of the pipeline and all associated infrastructure and be cleared of all flammable material to prevent the spread of fire and damage to the pipelines or associated infrastructure. Access points must be installed and maintained to allow for Emergency Services access and maintenance use.

#### (5) EXPLOSIVES MAGAZINES AND STORAGE AREAS

- 5.1 All Flammable Materials are to be removed to bare earth between any bunkers or storage facilities and all Flammable Materials are to be removed for a distance of not less than fifteen (15) metres from the perimeter of any such storage area.

#### (6) FUEL DEPOT / FUEL STORAGE AREA / HAYSTACKS / STOCKPILED FLAMMABLE MATERIAL

- 6.1 For all fuel depots/fuel storage areas all flammable matter within 10 metres of where fuel drums, fuel ramps or fuel dumps are located, and where fuel drums, whether containing fuel or not, are stored.
- 6.2 For all haystacks/stockpiled flammable materials a mineral earth break of not less than ten (10) metres in width must be installed immediately adjacent to any haystacks or stockpiled flammable material.

#### (7) RAILWAY RESERVES IN TOWNSITES

- 7.1 Mineral earth breaks of at least five (5) metres in width must be installed immediately inside all boundaries continuous with any railway reserve on which railway traffic operates and are the responsibility of the owner of the railway.

#### (8) APPLICATION TO VARY FIREBREAK REQUIREMENTS

If you consider it to be impractical to clear a mineral earth break or remove flammable material as required by this Notice, you may apply to Council or its Authorised Officer no later than the 30th day of August, for permission to provide firebreaks in alternative positions or take alternative action to remove or abate fire hazards. If permission is not granted by Council or Authorised Officer, you must comply with the requirement of this Notice.

#### (9) BURNING GARDEN REFUSE DURING LIMITED BURNING TIMES

- 9.1 A person must not burn garden refuse at a place (other than a rubbish tip) during the limited burning times for that place unless it is burned:
- (a) in an incinerator in accordance with subsection (2); or
  - (b) on the ground in accordance with subsection (3).
- 9.2 Garden refuse burned in an incinerator is burned in accordance with this subsection where:
- (a) the incinerator is designed and constructed so as to prevent the escape of sparks or burning material; and
  - (b) either
    - (i) the incinerator is situated not less than two (2) metres from any building or fence; or
    - (ii) if the incinerator is less than two (2) metres from a building or fence, the Council or its Authorised Officer has given written permission in writing for the incinerator to be used; and

- (c) there is no flammable material within two (2) metres of the incinerator while it is in use; and
  - (d) at least one person is present at the site of the fire at all times until it is completely extinguished; and
  - (e) the fire is no longer required, the person ensures that the fire is completely extinguished by the application of water or earth.
- 9.3 Garden refuse burned on the ground is burned in accordance with this subsection where:
- (a) there is no flammable material (other than that being burned) within 5m of the fire at any time while the fire is burning; and
  - (b) the fire is lit between 6:00pm and 11:00pm and is completely extinguished before midnight on the same day; and
  - (c) at least one person is present at the site of the fire at all times until it is completely extinguished; and
  - (d) when the fire is no longer required, the person ensures that the fire is completely extinguished by the application of water or earth.
- 9.4 The Council or Authorised Officer must not give permission under subsection 9.2 (b) (ii) unless it is satisfied that the use of the incinerator is not likely to create a fire hazard.

## 10. ADDITIONAL WORKS

- 10.1 In addition to the requirements of this Notice, you may be required to carry out further works which are considered necessary by an Authorised Officer and specified by way of a separate written notice forwarded to the address of the owner/s as shown on the Shire rates record for the relevant land.
- 10.2 If the requirements of this Notice are carried out by burning, such burning must be in accordance with the relevant provisions of the *Act*.
- 10.3 Pursuant to Section 33(4) of the *Act*, where the owner and/or occupier of land fails or neglects to comply with the requisitions of this Notice within the times specified, the Shire may by its officers and with such servants, workmen and contractors, vehicles and machinery as the officers deem fit, enter upon the land and carry out the requisitions of this Notice which have not been complied with and pursuant to Section 33(5) of the *Act*, the amount of any costs and expenses incurred may be recovered from the owner and or occupier of the land.
- 10.4 The penalty for failing to comply with this notice is a fine of \$5000. A person in default is also liable, whether prosecuted or not, to pay the cost of performing the work directed in this notice, if it is not carried out by the owner or occupier by the date required by this notice.



Compliant Residential Property



Compliant Vacant Land



Non-Compliant Residential Property



Compliant Mineral Earth Break



## DEFINITIONS

For the purpose of this Notice the following definitions apply:

*Act* means the Bush Fires Act 1954.

*Chief Bush Fire Control Officer* is a person appointed as the Chief Bush Fire Control Officer by the Fire and Emergency Services Commissioner pursuant to Section 38A of the *Act*

*Authorised Officer* is a person appointed by the Shire as a Fire Control Officer pursuant to Section 38 of the *Act*.

*Bush* includes trees, bushes, plants, stubble, scrub, and undergrowth of all kinds whatsoever whether alive or dead and whether standing or not standing and also a part of a tree, bush, plant, or undergrowth, and whether severed therefrom or not so severed.

*Council* means the Council of the Shire of Ashburton.

*Explosives* has the same meaning given to it by the Dangerous Goods Safety Act 2004 and the regulations pursuant to it.

*Firebreak Period* means the time from 1 January until 31 December each year.

*Flammable Material* means material that can be easily ignited or burnt. i.e. dead or dry grass, leaves, timber, paper, plastic and other materials or things deemed by an authorised officer to be capable of combustion. Flammable material does not include green growing trees or live plants growing in a garden.

*Fuel Depot / Fuel Storage Area* means an area of land, a building or structure where fuel, i.e. (petrol, diesel, kerosene, liquid gas or any other fossil fuel) is kept in any container or manner.

*Mineral Earth Break* means an area of ground, of a specified width that has all material (living or dead) removed by scarifying, cultivating, ploughing or other means removed to bare mineral earth, and includes the pruning and removal of any living or dead trees, scrub or other material that overhangs the cleared firebreak area to a vertical height of four (4) metres from the ground. A prepared fire break shall be trafficable.

*Shire* means the Shire of Ashburton.

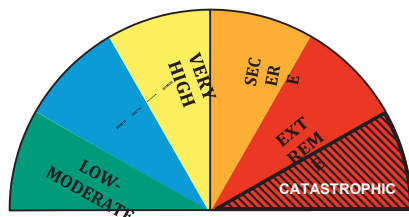
*Trafficable* means able to be driven around, unhindered, in a standard four-wheel drive vehicle.

*Townsite Land* means land within the district that is within the boundaries of a townsite (and for the purposes of this definition “townsite” has the meaning given it in Section 6 (1) of the *Local Government Act 1995*).



# IMPORTANT INFORMATION

## FIRE DANGER RATINGS



The Fire Danger Rating tells you how dangerous a fire would be if one started. It helps you to know when conditions are dangerous enough to put your bushfire survival plan in to action.

Ratings are forecast using Bureau of Meteorology data for up to four days in advance, based on weather and other environmental conditions such as fuel load.

The rating is your prompt to take action to stay safe.

[www.emergency.wa.gov.au/#fdr](http://www.emergency.wa.gov.au/#fdr)

### CATASTROPHIC

#### What does it mean?

These are the worst conditions for a bush or grass fire. Homes are not designed or constructed to withstand fires in these conditions. The safest place to be is away from high risk bushfire areas.

#### What should I do?

Leaving high risk bushfire areas, the night before or early in the day is your safest option - do not wait and see. Avoid forested areas, thick bush or long, dry grass.

Know your trigger - make a decision about when you will leave

- Where will you go?
- How will you get there?
- When will you return?

### EXTREME

#### What does it mean?

Expect extremely hot, dry and windy conditions. If a fire starts and takes hold, it will be uncontrollable, unpredictable and fast moving. Spot fires will start, move quickly and come from many directions. Homes that are situated and constructed or modified to withstand a bushfire, that are well prepared and actively defended, may provide safety. You must be physically and mentally prepared to defend in these conditions.

#### What should I do?

Consider staying with your property only if you are prepared to the highest level. This means your home needs to be situated and constructed or modified to withstand a bushfire\*, you are well prepared, and you can actively defend your home if a fire starts. If you are not prepared to the highest level, leaving high risk bushfire areas early in the day is your safest option.

- What will you do if you cannot leave?



SEVERE

### What does it mean?

Expect hot, dry and possibly windy conditions. If a fire starts and takes hold, it may be uncontrollable. Well prepared homes that are actively defended can provide safety. You must be physically and mentally prepared to defend in these conditions.

### What should I do?

Well prepared homes that are actively defended can provide safety - check your bushfire survival plan. If you are not prepared, leaving bushfire prone areas early in the day is your safest option.

#### VERY HIGH

#### What does it mean?

If a fire starts, it can most likely be controlled in these conditions and homes can provide safety. Be aware of how fires can start and minimise the risk. Controlled burning off may occur in these conditions if it is safe - check to see if permits apply.

#### What should I do?

Check your bushfire survival plan. Monitor conditions. Action may be needed. Leave if necessary.

#### HIGH

#### What does it mean?

If a fire starts, it can most likely be controlled in these conditions and homes can provide safety. Be aware of how fires can start and minimise the risk. Controlled burning off may occur in these conditions if it is safe - check to see if permits apply.

#### What should I do?

Check your bushfire survival plan. Monitor conditions. Action may be needed. Leave if necessary.

#### LOW-MODERATE

#### What does it mean?

If a fire starts, it can most likely be controlled in these conditions and homes can provide safety. Be aware of how fires can start and minimise the risk. Controlled burning off may occur in these conditions if it is safe - check to see if permits apply.

#### What should I do?

Check your bushfire survival plan. Monitor conditions. Action may be needed. Leave if necessary.

## Bushfire Warning System

#### Bushfire Fact Sheet

During a bushfire, emergency services will provide you as much information as possible through a number of different methods.

There are **four levels of warning**. These change to reflect the increasing risk to your life or property, and the decreasing amount of time you have until the fire arrives.

**Your surroundings could be your best information source.**

**Stay alert to what is happening around you.** If you believe you may be in danger, act immediately to stay safe.



### Bushfire Warning System

-  **ADVICE**
-  **WATCH AND ACT**
-  **EMERGENCY WARNING**
-  **ALL CLEAR**

#### ADVICE

A fire has started but there is no immediate threat to lives or homes. Be aware and keep up to date.

#### WATCH AND ACT

There is a possible threat to lives or homes. You need to leave or get ready to defend – do not wait and see.

#### EMERGENCY WARNING

You are in danger and need to take immediate action to survive. There is a threat to lives or homes.

#### ALL CLEAR

Take care to avoid any dangers and keep up to date.

#### Where can you get information during a bushfire?

Know where to find information before the fire season starts. Work out what your local ABC radio station is and familiarise yourself with the DFES website.

**Bushfire Warnings at [www.emergency.wa.gov.au](http://www.emergency.wa.gov.au)**

**DFES Information Line on 13DFES (13 3337)**

Local radio and other local media



**Stay alert when a bushfire starts!**  
**Do not wait and see, this can be deadly.**



**For more information visit [dfes.wa.gov.au](http://dfes.wa.gov.au)**  
or contact DFES Community Engagement – 9395 9816

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Government of Western Australia  
Department of Fire & Emergency Services



## RESTRICTED BURNING

The Shire of Ashburton is in a **RESTRICTED BURNING** period all year round, therefore Camping and Cooking Fires are not permitted;

- When the Fire Danger rating is Very High or above.
- Where campgrounds prohibit camping and cooking fires at any time.
- On public land that is not a designated area.
- Are permitted on Private Property during the hours of 6:00pm and 12:00am with consent from the landowner and or occupier and a Permit has been issued by an Authorised Fire Control Officer.

### Wood / Solid Fuel BBQ's, Pizza Ovens and Incinerators.

- Are not permitted to be used when the Fire Danger Rating is Very High or above.
- Are not permitted where campgrounds prohibit the use of wood / solid fuel BBQ's.
- Are permitted to be used on Private Property at any time only if a spark arrestor is fitted. A permit is required for operation outside of the hours of 6:00pm and 12:00am.

### Gas / Electric Fueled BBQ's and Pizza Ovens

- Are permitted to be used at any time of the year.

### Garden Refuse and Rubbish

- Garden refuse and rubbish in one (1) small heap, up to one (1) cubic metre may be burnt during the Restricted Burning Times between the hours of 6:00pm and 11:00pm.
- One (1) able bodied person capable of extinguishing the fire must be in attendance at all times.
- All fires must be extinguished by 12:00am.
- A courtesy call to your neighbours and a Fire Control Officer prior to undertaking any burning of garden refuse and rubbish would be appreciated.



## WHAT IS A TOTAL FIRE BAN

- A Total Fire Ban (TFB) is declared on days of extreme weather or when widespread fires are seriously stretching firefighting resources.
- The need for the ban is assessed throughout the day and the ban may be revoked if weather conditions ease.
- A Total Fire Ban is declared the evening before it is to take effect. You should check the Emergency WA website after 6pm to see if a ban has been declared for the next day.  
[www.emergency.wa.gov.au/#totalfirebans](http://www.emergency.wa.gov.au/#totalfirebans)
- When a TFB is declared it prohibits the lighting of any fires in the open air and any other activities that may start a fire.
- The ban includes all open-air fires for the purpose of cooking or camping. It also includes incinerators, welding, grinding, soldering or gas cutting.



## PERMIT TO BURN

Bush Fire Permits can be obtained by contacting an Authorised Fire Control Officer (FCO). Before requesting a permit please have the following information ready

- What is the size of the proposed burn?
- What type of material are you intending to burn?
- What is the location of the burn area?
- Have you notified your neighbours?
- Do you have the appropriate resources to control and suppress the burn?

**PLEASE NOTE:** Permit holders must give notice of their intention to burn prior to ignition to:

- Adjoining landowners / occupiers.
- The CBFCO or DCBFCO.
- The Department of Biodiversity, Conservation & Attractions if the planned burn is situated within 3km of DBCA Managed Lands.

## SHIRE OF ASHBURTON FIRE CONTROL OFFICERS

NAME	CONTACT	POWERS	AREA of RESPONSIBILITY
<b>District Officer Hamersley Range</b>	0448 971 505	CBFCO	Shire of Ashburton
<b>Wayne Hatton</b>	0448 894 035	DCBFCO	Shire of Ashburton
<b>Craig Mackrell</b>	0429 964 354	FCO	Shire of Ashburton
<b>Tristian Padfield</b>	0429 653 044	FCO	Shire of Ashburton
<b>Kyle Cameron</b>	0457 000 283	FCO	Shire of Ashburton
<b>Hamish James</b>	0417 949 661	FCO	Shire of Ashburton
<b>Terry Mellor</b>	0419 952 604	FCO	Shire of Ashburton
<b>Eilish McNulty</b>	0488 427 997	FCO	Pannawonica Area Only
<b>Leigh Mullholland</b>	0429 947 582	FCO	Shire of East Pilbara Boundary
<b>Keith Squibb</b>	0427 701 065	FCO	Town of Pt Hedland Boundary
<b>Colin Walker</b>	0427 491 399	FCO	Shire of Exmouth Boundary

## IF I DON'T COMPLY WHAT PENALTIES CAN BE APPLIED?

The below are just some of the modified penalties issued by the Shire of Ashburton and are 10% of the maximum penalty that may apply should a matter proceed to court.

Property not compliant on first inspection	Penalty of \$250
Property not compliant on further subsequent inspections	Penalty of \$250 + costs of works should a contractor be engaged to undertake works
Burning on restricted times without a permit	Penalty of \$250
Failure to extinguish a bush fire	Penalty of \$250
Failure to obtain a permit	Penalty of \$250
Failure to state name and address	Penalty of \$250

## INTERESTED IN BECOMING A VOLUNTEER WITHIN YOUR COMMUNITY?

Volunteer Fire Service Units are always on the lookout for new Volunteers. If you think you have what it takes to Volunteer within your community, please contact your local Brigade:

### **Tom Price Volunteer Bush Fire Brigade**

Lot 2003 Boonderoo Rd, Tom Price  
Mob: 0448 894 035  
Email: [admin@tpbfb.com.au](mailto:admin@tpbfb.com.au)

### **Tom Price Volunteer Fire & Rescue Service**

Lot 30 Central Rd, Tom Price  
Ph: 0458 813 101  
Email: [tpvfrs@gmail.com](mailto:tpvfrs@gmail.com)

### **Paraburdoo Volunteer Fire & Rescue Service**

Lot 630 McRae Ave, Paraburdoo  
Ph: 0413 014 052  
Email: [paravfrs.captain@gmail.com](mailto:paravfrs.captain@gmail.com)

### **Pannawonica Volunteer Fire & Rescue Service**

Pannawonica Rd, Pannawonica  
Ph: 0488 427 997  
Email: [Pannawonica.vfrs@hotmail.com](mailto:Pannawonica.vfrs@hotmail.com)

### **Onslow Volunteer Fire & Emergency Services Unit**

Cnr McGrath & Hooley Ave, Onslow  
Ph: 0409 091 954  
Email: [onslowvesu@bigpond.com.au](mailto:onslowvesu@bigpond.com.au)



shire of Ashburton  
reef to range

Lot 246 Poinciana Street  
Tom Price WA 6751

PO Box 567  
Tom Price WA 6751

Phone: (08) 9188 4444

Freecall: 1800 679 232

Fax: (08) 9189 2252

Freecall Fax: 1800 655 086

Email: [soa@ashburton.wa.gov.au](mailto:soa@ashburton.wa.gov.au)



[www.ashburton.wa.gov.au](http://www.ashburton.wa.gov.au)



# **Appendix F**

## **Onslow Township Resort Bushfire Emergency Management Plan**



# **Onslow Township Village Bushfire Emergency Management Plan**

Date: 8 April 2022

Prepared For: Mineral Resources

Linfire Ref: 20210707149360ENV-BEMP-001\_4

**Linfire Consultancy**

ABN: 577 930 47299

Revision	Issue Date	Revision Description	Approved By
0	5 Aug 2021	Issued for Approval	Linden Wears (Level 3 BPAD 19809)
1	25 Aug 2021	Issued for Approval	Linden Wears (Level 3 BPAD 19809)
2	19 Nov 2021	Issued for Approval	Linden Wears (Level 3 BPAD 19809)
3	19 Jan 2022	Issued for Approval	Linden Wears (Level 3 BPAD 19809)
4	8 April 2022	Amended layout	Linden Wears (Level 3 BPAD 19809)

## **Disclaimer and Limitation**

This report is prepared solely for the nominated client, and any future residents of the subject lot(s), and is not for the benefit of any other person and may not be relied upon by any other person.

To the maximum extent permitted by the law, Linfire Consultancy, its employees, officers, agents and the writer ("Linfire") excludes all liability whatsoever for:

1. claim, damage, loss or injury to any property and any person caused by fire or as a result of fire or indeed howsoever caused;
2. errors or omissions in this report except where grossly negligent; and the proponent expressly acknowledges that they have been made aware of this exclusion and that such exclusion of liability is reasonable in all the circumstances.

If despite the provisions of the above disclaimer Linfire is found liable then Linfire limits its liability to the lesser of the maximum extent permitted by the law and the proceeds paid out by Linfire's professional or public liability insurance following the making of a successful claim against such insurer.

Fire is an unpredictable force of nature. Changing climatic factors (whether predictable or otherwise) either before or at the time of a fire can also significantly affect the nature of a fire and in a bushfire prone area it is not possible to completely guard against bushfire. The strategies contained in the Bushfire Emergency Management Plan (BEMP) are considered to be prudent minimum standards only, based on the standards prescribed by relevant authorities. It is expressly stated that Linfire do not guarantee that if such standards are complied with or if a property owner exercises prudence, that a building or property will not be damaged or that lives will not be lost in a bush fire.

Further, the achievement of the level of implementation of fire precautions will depend on the actions of the landowner or occupiers of the land, over which Linfire has no control. If the proponent becomes concerned about changing factors then either a review of the existing BEMP should be requested. Linfire accepts no liability or responsibility whatsoever for or in respect of any use or reliance upon this report and its supporting material by any third party.



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## 1.0 Bushfire Emergency Action Summary

This Bushfire Emergency Management Plan (BEMP) provides information for planning for a bushfire emergency, as well as responding to a bushfire.

This section provides a quick reference for the Emergency Response Team, or other onsite personnel, when there is an imminent bushfire threat to the facility and/or the surrounding vehicular access network, and they need to rapidly access response procedures.

The Bushfire Emergency Management Map in Appendix 2 provides a quick reference summary.

This BEMP applies to the entire Onslow Township Village.

The Primary Emergency Action to follow under normal bushfire conditions is to:

### EVACUATE ☒

### SHELTER-IN-PLACE ☐

- Shelter-in-place procedures are to be carried out as a last resort only. Given the direct connection to the existing built-up residential portion of Onslow townsite, remaining on-site is not considered the safest option.
- The safety and wellbeing of occupants (staff, guests and visitors) is, at all times, the main priority. Property protection is not considered a priority.
- Staff are not expected to fight bushfires

For quick reference where the bushfire threat to the facility is imminent, including the surrounding vehicular access network:

Section No.	Page No.	Information
Appendix 2	N/A	• Emergency Management Map including Evacuation Routes
Section 3.0	Page 13	• Facility details and occupant details
Section 4.0	Page 16	• Emergency Contacts including ERT, Emergency Services and utility agencies details
Section 5.0	Page 18	• Bushfire Emergency Warnings, Fire Danger Rating and Total Fire Ban information
Section 7.0	Page 26	• Awareness and Pre-emptive Procedures (based on forecast FDR and TFB)
Section 8.0	Page 30	• Bushfire decision making tool (based on warnings, location and visual cues)
Section 9.0	Page 33	• Standby/Controlled Shutdown Procedures (when sufficient time to react)
Section 10.0	Page 36	• Offsite Evacuation Procedures (when evacuation routes are safe to use) including Emergency Shutdown Procedures (when little time to react)
Section 11.0	Page 45	• Onsite Shelter-in-Place (last resort action when unsafe to evacuate offsite)

Key information to know to use this BEMP:

- How to find the ERT, emergency services and utility agency contact details (see Section 4.0)
- How to determine the forecast Fire Danger Rating, Total Fire Ban and current Emergency Warnings and bushfire status (see Section 5.0).

- How to use the decision- making tool to make an informed assessment of bushfire situation and the required course of action, especially whether offsite evacuation is safe to conduct (see Section 8.0)
- How to implement offsite evacuation procedures including the nominated offsite locations (see Section 10.0) or onsite shelter-in-place (see Section 11.0) based on the bushfire situation.

## 2.0 Purpose of the Bushfire Emergency Management Plan

This bushfire emergency management plan (BEMP) has been developed to provide guidance regarding:

- ***Preparedness prior to, and during, bushfire season***
  - to ensure the facility and the occupants are well prepared for a bushfire emergency, which is a critical element of effective emergency managements
- ***Awareness and pre-emptive actions during bushfire season***
  - to promote awareness of forecast high-risk bushfire conditions, and enable pre-emptive actions to reduce exposure of people to this elevated risk
- ***Actions to be undertaken during, and following, a bushfire emergency***
  - to provide the relevant personnel with the emergency management plan to effectively control and coordinate all occupants, and liaise with relevant agencies, during a bushfire emergency

This document is the current BEMP for the Onslow Township Village and is a “live” document, that will require ongoing review.

## 2.1 Regulatory Framework and Reference Material

The approved Bushfire Management Plans for the facility detail bushfire risk management measures designed to reduce the risk of bushfire impact to the site to tolerable levels, including such measures as vegetation management (Asset Protection Zones and low threat vegetation), bushfire construction and suitable vehicular access and bushfire fighting water

As the proposed development has been assessed as a “vulnerable land use” as per State Planning Policy 3.7 Planning in Bushfire-Prone Areas (SPP 3.7; WAPC 2015), this BEMP has been developed to address the requirements of Policy Measure 6.6 of SPP 3.7.

This BEMP details the emergency management procedures for proposed occupants to satisfy SPP 3.7 Policy Measure 6.6, and has been prepared to specifically consider bushfire in the context of the risk identified within the project Bushfire Management Plan (Linfire 2021) for the facility.

This BEMP was developed using reference and guidance from the following documents:

- Section 5.5.2 from the Guidelines for Planning in Bushfire Prone Areas (the Guidelines; WAPC 2017)
- A Guide to developing a Bushfire Emergency Evacuation Plan (WAPC 2019)
- Australian Standard 3745-2010, Planning for Emergencies in Facilities (Standards Australia 2010)
- Endorsed Bushfire Management Plan/s for the facility
  - 20210707149360ENV-BMP-001 Rev 2 dated 19 November 2021 (prepared by Linfire)

## 2.2 BEMP Development and Implementation

It is expected that the development will have an overall Emergency Management Plan, which identifies various hazards that could impact the facility (e.g building fires, explosion, floods, cyclones, bomb threats, armed threat/robbery etc.), and details the required response actions. Whilst this BEMP is presented as a standalone plan, this should be reference, or otherwise incorporated, into the overall Emergency Management Plan for the development, once it is produced

The BEMP will primarily be used by two groups of people at the facility:



### 2.2.1 Emergency Management Team (EMT)

- **The group of people responsible for the development, documentation, review and revision of the BEMP to enable its use in a bushfire emergency**
- Assigning appropriate personnel roles for the Emergency Response Team
- Responsible for overseeing the successful implementation of all Preparedness actions outlined in Section 6.0.
- This is the same entity as the Emergency Planning Committee referenced in AS 3745
- The members of the ERT are nominated below in Table 1

**Table 1: Emergency Management Team personnel**

Name of person	Position/Organisation	Contact Details
TBC	TBC	TBC
TBC	TBC	TBC
TBC	TBC	TBC
TBC	TBC	TBC
TBC	TBC	TBC

### 2.2.2 Emergency Response Team (ERT)

- **The group of people responsible for directing and controlling the implementation of the BEMP in a bushfire emergency**
- **The members of the ERT are nominated in in Section Table 3**
- Personnel should be trained and certified to conduct specific tasks in the event of a bushfire emergency including first aid, communication protocols and the operation of relevant firefighting equipment.
- The Emergency Response Team can be formed from the following positions (see Appendix 1 for further descriptions):
  - Chief Fire Warden
  - Deputy Chief Fire Warden
  - Fire Warden.
  - First Aid Personnel.
  - Traffic Warden.
  - Communications Officer.
- This is the same entity as the Emergency Control Organisation referenced in AS 3745

## 2.3 BEMP Assumptions

The following are the assumptions upon which this BEMP is based:

- The facility will implement the management measures within the latest version of the approved Bushfire Management Plan, and are done so prior to occupancy (unless stated in the BMP).
- All management measures and bushfire construction measures are to be maintained for the life of the development, with a focus on compliance immediately prior to, and during, bushfire season.

- The facility will comply with all relevant requirements of the annual firebreak notice.
- Information not available at the time of preparation of this BEMP is noted as being to be confirmed “(TBC)”, and it to be updated prior to occupation by the Proponent.
- Guests can see and smell smoke and can see a fire.
- Guests can read and understand the English language, or will be accompanied or guided by people who can.
- The hotel facility is manned by staff at all times.

Should any of the above assumptions no longer be accurate, the BEMP shall be reviewed, and amended as required.

#### 2.4 BEMP and Evacuation Plan Distribution

The BEMP is an internal document, to be used by the facility to prepare for, and manage bushfire emergencies. The latest approved version of the BEMP is to be made available to all relevant occupants and also be provided at appropriate locations or communication mediums:

- Administration building (TBC)
- Noticeboards (TBC)

The latest approved version of the Bushfire Emergency Management Map (see Appendix 2) is also to be displayed so it is readily visible and available to all occupants and also be provided on any relevant communication mediums:

- Administration building (TBC)
- Noticeboards (TBC)

#### 2.5 Exercise Drills and Training

Ensure nominated personnel in the facility forming the Emergency Response Team (see Table 3 in Section 4.1) and any other relevant staff (preferably all staff) are fully conversant and trained in the procedures outlined in this BEMP.

**Exercise drills covering evacuation and/or shelter-in-place procedures as outlined within this BEMP, shall be practiced on an annual basis, preferably in the month prior to bushfire season.**

To ensure correct implementation of the BEMP, the drills and supplementary training, should include the following:

- understanding the bushfire warning system, where to access the Fire Danger Rating and Total Fire Ban day forecasts, and where to current emergency warning and road condition information.
- how to contact DFES, local fire brigade and any other emergency services personnel
- how to use the various communication methods (see Section 3.2)
- how to safely operate the fire hose reels and, when it is appropriate and safe to do so, to undertake firefighting activities. This would only be considered appropriate if the bushfire is very small. Liaise with the local fire brigade regarding this training.
- have a basic understanding of bushfire behaviour and how it threatens people and property. Liaise with the local fire brigade regarding this training.
- What critical actions are required to improve building resilience to bushfire impact including, but not limited to, closing doors, window, roof vents and other openings, turning off evaporative coolers, moving flammable items away from the building etc.
- It is recommended that sufficient staff are trained in senior first aid to enable first response

care in any emergency. Facility management should ensure sufficient staff holding a current senior first aid certification are rostered on each day.

Prior to all exercise drills, staff should be briefed to discuss the process and objectives of the drill. Following drills, staff shall be debriefed to discuss any issues associated with implementing the BEMP. Staff debriefing should also occur following any bushfire event, and this information used to inform improvements to the BEMP as part of the review.

Understanding the BEMP should be incorporated into the staff induction process to ensure they know the ERT members, learn how it is to be implemented and have a broad knowledge regarding its proper application.

The implementation of the BEMP may also relate to, or impact, occupants in surrounding areas. Where possible it is recommend that any relevant residents and members of the public, facility managers and staff in adjacent developments, and any other relevant parties, are also invited to any training to ensure they are broadly familiar with the BEMP procedures.

## **2.6 Ongoing Review of BEMP**

Like all such plans, the BEMP is considered a “live” document, that will require ongoing review and amendment as required, to reflect changes to staff, occupants, the facility, vehicular access routes or the surrounding bushfire hazard including:

- Changes to staff, or their contact details, especially for members of the EMT and/or ERT
- Changes to emergency contacts or forecast or emergency information sources
- Ensure the off-site safer locations and nominated evacuation routes are current and still represent the best options, and confirm their availability for use during a bushfire emergency.
- Ensure any nominated off-site transportation suppliers have continued availability and capability to enable their use during a bushfire emergency.
- Incorporate any changes building construction, extent or locations that could have implications for the BEMP.
- Incorporate any changes to occupant numbers that could have implications on the BEMP, especially impacting any response actions.

As a minimum, the BEP shall be reviewed:

- annually (prior to bushfire season)
- following any actual bushfire emergency requiring the plan to be implemented
- prior to habitation of any new or renovated buildings within the site
- should there be deviation from any assumptions in Section 2.3

Ensure that any review of the BEMP incorporates any bushfire advice received from authorised personnel from:

- Department of Fire and Emergency Services (DFES)
- Local Emergency Management Committee (LEMC)
- Community Emergency Services Manager (CESM); or
- external experts.

Ensure that any review of the BEMP following a bushfire event considers the following:

- what worked and what didn't?
- was anything overlooked?
- what could you and your staff do better next time?



- should roles change?
- if changes are made, incorporate them into the formal plan and advise the appropriate parties including staff and other authorities
- share the knowledge with other facilities (if relevant)
- test the revised bushfire management plan and procedures.

Ensure that following any amendments to the BEMP and/or the Bushfire Emergency Plan, these are replaced in the locations specified in Section 2.4.

### 3.0 Facility and Occupant Details

This BEMP is for the entire **Onslow Township Village** and has been designed to assist management to protect life and property in the event of a bushfire. Table 2 provides a brief summary of the facility and the anticipated occupants that could be onsite during a bushfire emergency. The subsequent subsections provide further detailed information.

**Table 2: Facility and Occupant Summary**

<b>Address</b>	Lot 300 Back Beach Road, Onslow
<b>Onsite Contact person</b>	TBC prior to occupation
<b>Position / role of Contact Person</b>	TBC prior to occupation
<b>Phone number (Before hours)</b>	TBC prior to occupation
<b>Phone number (After hours)</b>	TBC prior to occupation
<b>Type of facility</b>	Short-term accommodation; public resort
<b>Number of buildings</b>	TBC prior to occupation
<b>Number of employees</b>	<ul style="list-style-type: none"> <li>TBC prior to occupation</li> <li>approximately 50 onsite staff consisting of full-time and part-time employees</li> </ul>
<b>Maximum number of occupants</b>	<ul style="list-style-type: none"> <li>TBC prior to occupation</li> <li>approximately 300 guests staying in the overnight accommodation</li> <li>approximately 50 public visitors</li> <li>Total occupant load, including staff of up to 400 people</li> </ul>
<b>Number of occupants with support needs</b>	Yes. Guest and visitors will be a representative of the general population
<b>Description of support needs</b>	<p>Support needs could include a range of physical or mental impairments that are found throughout the general population.</p> <p>If anyone has special needs, it is expected they will be accompanied by an able-bodied adult, and that if there is a requirement for assistance, this will be provided by the accompanying adult or other adult guests or staff.</p>

### 3.1 Vulnerable Occupants

For the purposes of these procedures, people are considered to be vulnerable if they are unable to relocate without assistance, or if their time to relocate would be much greater than the average person. The reasons for this could be:

- Mental or physical impairment
- Very young children or the elderly
- Pre-existing conditions such as respiratory issues
- Sickness, illness or injured
- People unfamiliar with surroundings

Given the use of the facility by mining personnel, it is anticipated there will be very few vulnerable people at the site, other than those potentially being unfamiliar with the layout. There will be members of the public using part of the facility, and while some may be Onslow residents, some may also be visitors to the town. These people would be expected to be representative of the general population, and could be impaired, young, elderly or sick/injured, as well as unfamiliar with their surroundings.

While it is expected vulnerable occupants would typically be accompanied by an able-bodied adult, that will be able to provide assistance, however if this is not the case, then this would be the responsibility of the ERT and other staff. In these instances, the Chief Fire Warden or nominated delegate, should arrange for a staff member or another responsible guests or visitor, to assist the vulnerable occupant/s throughout the bushfire emergency.

In the case of sickness or injury, there may be need for an ambulance to render professional medical attention. The ability to get an ambulance during a bushfire emergency will be variable depending on the nature and extent of the bushfire. It may be possible to evacuate these occupant/s to a hospital depending on the nature sickness or injury and the bushfire. The pre-emptive relocation of such vulnerable occupants should be a primary consideration during a bushfire emergency.

### **3.2 Communication Equipment and Strategy**

Communication systems are critical to enable the onsite ERT to relay status and actions to occupants during a bushfire in order to manage the emergency and the recovery, as well as communicate with offsite emergency services.

The following communication systems are expected to be available for use during a bushfire emergency (TBC):

- Mobile phones
- Two-way handheld radios/walkie talkies
- Mobile loudspeakers
- Onsite PA/Fire Occupant Warning systems
- Battery powered radio to receive radio information
- Noticeboards depicting emergency management map and daily bushfire advice
  - Administration building (TBC)

### **3.3 Vehicular Access**

The primary vehicular access to the local area is via Third Avenue, which extends to the south-west via First Street, Second Avenue and Simpson Street.

Within the development, vehicular access is via the internal driveway (compliant with the public road standards) and the carpark.

Perimeter firebreaks are also provided for fire appliance use only.

### **3.4 Pedestrian Access**

Pedestrian access within, to and from the site, is available via running/walking tracks throughout the site, with gates at the main entrance and the egress gates in the south-west providing access to Onslow. The egress gates will be locked for normal use, but can be unlocked in a bushfire emergency to enable rapid pedestrian egress to Onslow.



### **3.5 Fire fighting and other Emergency Equipment**

The development has the following onsite firefighting equipment available for use by emergency personnel:

- Onsite fire hydrant system including firewater tanks with suction from booster connection
- Street hydrants throughout the residential areas
- Fire hose reels
- Portable fire extinguishers
- First aid kits

All equipment should be maintained annually (as a minimum) in accordance with equipment specifications and the relevant Australian standards.

### **3.6 Vegetation Management and Building Bushfire Construction**

These main vegetation management and landscaping treatments around the site to reduce bushfire spread and impact on buildings and people are as follows:

- Nominated Asset Protection Zones (APZs; highly modified low vegetation zone) along the key interfaces between buildings and unmanaged vegetation
- Low threat vegetation throughout the entire village

The bushfire construction elements work in conjunction with the vegetation management measures above:

- All accommodation buildings are constructed to the bushfire standards of the assessed BAL rating
- All other buildings are not required to be constructed to the assessed BAL rating, but are located in areas of BAL-29 or less.

## 4.0 Emergency Contacts

### 4.1 Onsite Emergency Response Team

Table 3 outline the people within the **Emergency Response Team who are responsible for implementing the emergency procedures in the event of a bushfire**. Guidance on the responsibilities associated with each position is provided in Appendix 1.

**Table 3: Emergency Response Team members**

Emergency Role	Name of person	Organisational Position	Phone number
Chief Fire Warden	TBC	e.g. Site Manager	TBC
Deputy Chief Fire Warden	TBC	TBC	TBC
Fire Warden/s	TBC	TBC	TBC
First Aid Personnel	TBC	TBC	TBC
Traffic Warden	TBC	TBC	TBC
Communications Officer	TBC	TBC	TBC

### 4.2 Emergency Services and Other Organisations

Table 4 provides a summary of contacts for emergency services agencies and other organisations that may be useful in a bushfire emergency. Further information relating to bushfire emergency warning and status are provided in Section 5.0.

**Table 4: Emergency contacts**

Organisation	Office /contact	Information	Phone number / website
Local Fire Brigade	DFES Communications	Report a fire	000
Department of Fire and Emergency Services (DFES)	Communications Centre	Emergency warnings and incidents in local area	13 DFES (133 337)
Ambulance	Communications Centre	Report a medical emergency	000
Police	Communications Centre	Report other emergencies	000
Department of Fire and Emergency Services (DFES)	Website	Emergency warnings and incidents in local area	<a href="http://www.dfes.wa.gov.au">www.dfes.wa.gov.au</a> <a href="https://twitter.com/dfes.wa">twitter.com/dfes.wa</a>

Organisation	Office /contact	Information	Phone number / website
EmergencyWA	Website	Emergency warnings and incidents in local area	<a href="http://www.emergency.wa.gov.au">www.emergency.wa.gov.au</a>
Bureau of Meteorology	Website	Forecast fire danger ratings and weather	<a href="http://www.bom.gov.au/wa/forecasts">www.bom.gov.au/wa/forecasts</a>
Parks and Wildlife Services	Website	Emergency warnings and prescribed burning in national parks	<a href="http://www.dpaw.wa.gov.au">www.dpaw.wa.gov.au</a>
<b>Secondary contacts</b>			
Shire of Ashburton	Ranger Services	Emergency management	(08) 9184 6001 0417 949 661
Onslow Hospital		Emergency medical	(08) 9184 3200
Onslow Volunteer Fire and Emergency		Local volunteer fire service	(08) 9184 6555 onslowvesu@bigpond.com.au
DFES State Emergency Service (SES)	Communications Centre	SES services for building damage and rescue	132 500
Main Roads WA	Office / website	Road closures	138 138 <a href="http://www.mainroads.wa.gov.au">www.mainroads.wa.gov.au</a>
Western Power		Electrical outages and damage	131 351



## 5.0 Bushfire Emergency Warnings and Forecast Bushfire Information

### 5.1 Bushfire emergency status information

In order to best understand the bushfire situation and the scale of response, information is available from the following sources:

- **Emergency WA website:** <https://www.emergency.wa.gov.au/>
  - the website is a map-based display with the best available emergency information across Western Australia
- **DFES website:** <https://www.dfes.wa.gov.au/newsandmedia/Pages/NewsHome.aspx>
  - which will redirect to Emergency WA website
- **DFES emergency information telephone:** 13 DFES (13 3337)
- **DFES Twitter:** [https://twitter.com/dfes\\_wa](https://twitter.com/dfes_wa)
- **DFES Facebook:** <https://facebook.com/dfeswa/>
- **Emergency Alert national telephone warning system:**  
<http://www.emergencyalert.gov.au/>
  - one of the ways emergency services (police, fire and emergency services etc) can warn a community of a likely or actual emergency
  - Emergency Alert is not used in all circumstances. Whether emergency services decide to issue telephone warnings through Emergency Alert will depend on the nature of the incident
  - the warning system sends voice messages to landline telephones and text messages to mobile telephones within a specific area defined by the emergency service organisation issuing the warning message about likely or actual emergencies such as fire, flood, or extreme weather events
- **Emergency WA RSS and CAP AU feeds:** <https://www.emergency.wa.gov.au/#cap-rss>
  - RSS and CAP AU feeds allow you to receive updates of emergency information from official sources, including summaries and web content with links to any other available information
  - CAP AU is a standard web format that allows consistent and easy to understand emergency warning messages to be broadcast across a variety of communication systems. Specific feed readers are required to access these services.
  - DFES has provided further information on RSS feeds on the following website: <https://www.dfes.wa.gov.au/pages/rss.aspx>
- **ABC Local Radio** or local radio news bulletins
- **Main Roads Travel Map (road status):** <https://travelmap.mainroads.wa.gov.au/Home/Map>
  - the website is a map-based display with the road status information across WA
- **Bureau of Meteorology:** <http://www.bom.gov.au/wa/index.shtml>
  - Current and forecast weather
- **Bushfire IO:** <https://bushfire.io/>
  - This is website that integrates information from a variety of sources and provides in a single configurable map. It provides good visuals on fire locations, emergency warnings, weather and prevailing wind directions, and road hazards.
  - While this a good visual tool, it is run by a private organisation and should be used with care and corroborated with the other sources above.

- Emergency Services personnel
- local knowledge and being alert and aware of your surroundings.

## 5.2 Fire Danger Ratings

Department of Fire and Emergency Services (DFES) uses Fire Danger Ratings (FDR) to provide advice on the level of bushfire threat on a particular day. Anyone working or living in bushfire prone area should know the FDR is for their area, monitor local conditions and keep informed.

Information on forecast and current FDRs can be found on the Emergency WA website, with links to this also available from the DFES and Bureau of Meteorology websites.

- **Bureau of Meteorology website (4-day forecast FDR)**  
<http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml>
- **Emergency WA website (current and next day forecast FDR):**  
<https://www.emergency.wa.gov.au/index.html#firedangerratings>

The relevant weather district for the forecast FDR is: **WEST PILBARA COAST**

Information on the different FDR levels and what they mean is provided in Plate 1.

FIRE DANGER RATING	WHAT DOES IT MEAN?
<b>CATASTROPHIC</b> 100+	<ul style="list-style-type: none"> <li>• These are the worst conditions for a bush or grass fire</li> <li>• If a fire starts and takes hold, it will be extremely difficult to control and will take significant firefighting resources and cooler conditions to bring it under control</li> <li>• Spot fires will start well ahead of the main fire and cause rapid spread of the fire. Embers will come from many directions</li> <li>• Homes are not designed or constructed to withstand fires in these conditions</li> <li>• The only safe place to be is away from bushfire risk areas.</li> </ul>
<b>EXTREME</b> 75-99	<ul style="list-style-type: none"> <li>• These are very hot, dry and windy conditions for a bush or grass fire</li> <li>• If a fire starts and takes hold, it will be unpredictable, move very fast and difficult for firefighters to bring under control</li> <li>• Spot fires will start and move quickly. Embers may come from many directions</li> <li>• Homes that are prepared to the highest level, have been constructed to bushfire protection levels and are actively defended may provide safety</li> <li>• You must be physically and mentally prepared to defend in these conditions</li> <li>• The only safe place to be is away from bushfire risk areas.</li> </ul>
<b>SEVERE</b> 50-74	
<b>VERY HIGH</b> 32-49	<ul style="list-style-type: none"> <li>• These are hot, dry and possibly windy conditions for a bush or grass fire</li> <li>• If a fire starts and takes hold, it may be hard for firefighters to control</li> <li>• Well prepared homes that are actively defended can provide safety</li> <li>• You must be physically and mentally prepared to defend in these conditions.</li> </ul>
<b>HIGH</b> 12-31	<ul style="list-style-type: none"> <li>• If a fire starts, it is likely to be controlled in these conditions and homes can provide safety</li> <li>• Controlled burning may occur in these conditions if it is safe – check to see if permits apply.</li> </ul>
<b>LOW-MODERATE</b> 0-11	

**Plate 1: Fire Danger Ratings**

Understanding the FDR categories and what they mean will assist personnel in making decisions about what to do if a bushfire starts. The FDR is based on forecast weather conditions and gives advice about the level of bushfire threat on a particular day. When the rating is high, the threat of a bushfire increases.

### 5.3 Total Fire Ban days

A Total Fire Ban (TFB) is declared on days when fires are most likely to threaten lives and property. This is because of predicted extreme fire weather or when there are already widespread fires and firefighting resources are stretched. TFB days are often aligned with days with an elevated FDR, however they may be declared outside of a fire season due to other factors such as higher temperatures and expected strong winds preceding a storm front.

To determine if a TFB has been declared for the next day (evening after 6pm and prior to 8.15am), the following resources are able to be used:

- **Emergency WA website (current and next day forecast FDR):**  
<https://www.emergency.wa.gov.au/#totalfirebans>
- **Total Fire Ban Hotline:** (1800 709 355)
- **DFES phone:** (13 3337)
- **DFES Twitter:** [https://twitter.com/dfes\\_wa](https://twitter.com/dfes_wa)

There are restrictions on what activities can be conducted on a TFB day, such as it being illegal to light an open-air fire or conduct any activity that could start a fire. Further information is provided regarding these activities in Section 7.2.

### 5.4 DFES emergency warning system

During a bushfire, emergency services will provide information through the issuing of community alerts. The alert level changes to reflect the increasing risk to life and the decreasing amount of time until the fire arrives. Further information on the warnings and what they mean are provided below.



DFES issues the following warnings (see Plate 2 or further information):

- **Advice**
- **Watch and Act**
- **Emergency Warning**
- **All clear**

The best place to determine the current alert level is from the Emergency WA website, which shows the alert level as part of the Bushfire Advice note for each bushfire.

- **Emergency WA website:** <https://www.emergency.wa.gov.au/>



  <b>BUSHFIRE WARNINGS: WHAT SHOULD YOU DO?</b>		
ALERT LEVEL	WHEN WILL IT BE ISSUED?	WHAT SHOULD YOU DO?
<b>ADVICE</b> <b>Be aware and keep up to date</b> Issued at <b>11am</b> and <b>4pm</b> unless the situation changes	<ul style="list-style-type: none"> <li>When a fire has started but there is no immediate danger</li> <li>There is no known threat to lives and homes</li> <li>The fire is likely to be small and may be causing smoke near homes</li> <li>Firefighters will be able to control the fire</li> </ul>	<b>You need to be aware</b> <ul style="list-style-type: none"> <li>Stay alert and monitor your surroundings by watching for signs of a bushfire, especially smoke and flames</li> <li>Check the Fire Danger Rating for your area</li> <li>Close all doors and windows</li> <li>Turn off evaporative air conditioners but leave water running through the system if possible</li> <li>Read through your bushfire survival plan. If you do not have one decide what you will do if the situation gets worse</li> </ul>
<b>WATCH AND ACT</b> <b>Put your preparations into action – do not wait and see</b> Issued <b>every two hours</b> unless the situation changes	<ul style="list-style-type: none"> <li>When a fire is approaching and conditions are changing</li> <li>There is a possible threat to lives and homes</li> <li>The fire will be out of control. There may be smoke and embers around your home and roads</li> <li>Firefighters will be working with machines to put in containment lines to stop the fire spreading</li> </ul>	<b>You need to leave or get ready to defend</b> <ul style="list-style-type: none"> <li>Put your bushfire survival plan into action</li> <li>If you have decided to leave for a safer place, leave now and take your survival kit with you</li> <li>Leave well before roads are closed and full of smoke</li> <li>If you are not prepared for a bushfire the safest place is to be away from the fire</li> <li>If you plan to stay and actively defend make final preparations now</li> </ul>
<b>EMERGENCY WARNING</b> <b>Take immediate action to survive – you will be impacted by fire</b> Issued <b>every hour</b> unless the situation changes	<ul style="list-style-type: none"> <li>When there is immediate danger and the fire will impact your home</li> <li>There is a threat to lives and homes</li> <li>The fire will be out of control and moving very fast. This is the highest level of warning</li> <li>Firefighters will find it difficult to control the fire and it will take significant firefighting resources and a change in conditions to bring it under control</li> <li>A siren sound called the Standard Emergency Warning Signal (SEWS) may be used to get your attention on radio and television</li> </ul>	<b>You need to act immediately to survive</b> <ul style="list-style-type: none"> <li>If the way is clear leave immediately for your safer place and take your survival kit with you</li> <li>If you have not prepared your home, it is too late to do it now. Your safest option is to leave for a safer place, if the way is clear</li> <li>Do not relocate at the last minute in a vehicle or on foot as this is deadly, leave immediately if the way is clear</li> <li>If you are unable to leave you need to get ready to take shelter in your home and actively defend it</li> </ul>
<b>ALL CLEAR</b> <b>Take care to avoid any dangers and keep up to date</b> Issued when the threat has passed	<ul style="list-style-type: none"> <li>When the danger has passed and the fire is under control</li> <li>Firefighters will be working to put the last bits of the fire out and make the area safe</li> <li>It may still not be safe to return home. Emergency services will advise when you can go home</li> </ul>	<b>You need to be careful</b> <ul style="list-style-type: none"> <li>Remain vigilant in case the situation changes</li> <li>When driving in the fire area you should take extreme caution and drive slowly</li> <li>Dangers like smoke, fallen trees and downed power lines may be on roads and emergency services will still be working in the area</li> </ul>

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Plate 2: Bushfire Warning Levels

## 6.0 Bushfire Preparedness

Preparation prior to, and during, the declared bushfire season is paramount to increasing the chances of occupants surviving a bushfire including the resilience of buildings to withstand bushfire impact. These actions focus on management of onsite combustible material, maintenance of buildings, access routes and fire and emergency systems and ensuring emergency management preparedness, to not only reduce the intensity of bushfire impact but also to maximise the chance for successful occupant evacuation or refuge (as per the project BMP).

<b>Bushfire Season:</b> (Shire of Ashburton firebreak notice 2020/2021)	<b>Compliance Dates</b> 1 January – 31 December each year
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Below is a summary of the bushfire preparations that should be carried out within the facility throughout the year, and specifically prior to and during the bushfire season. While this list of tasks is comprehensive, throughout the life of the facility there may be other actions that become necessary to improve bushfire resilience. It is requirement that this is reviewed as part of the annual BEMP review by the Emergency Management Team, and amended as required.

### 6.1 Preparation – Ongoing year round

Tasks detailed in Table 5 are to be performed throughout the year on the following basis:

- Year-round on an ongoing basis
- **Specifically prior to bushfire season**

**Table 5: Preparation tasks/actions – Ongoing tasks throughout year**

<b>Task/Action</b>	<b>Timing (if relevant)</b>
Comply with current Shire of Ashburton firebreak notice, including any approved variations and maintenance of perimeter firebreaks.	Ongoing; regularly with attention prior to, and during, bushfire season
Ensure all management actions documented within any endorsed Bushfire Management Plans (supporting planning applications) is undertaken in particular the ongoing maintenance of Asset Protection Zones and low threat vegetation	Ongoing; regularly with attention prior to, and during, bushfire season
Maintain and test any firefighting equipment present within the facility (e.g. fire hydrant system, fire hose reels, extinguishers) to ensure it is fit for purpose and is in good working order.	Ongoing; regularly with attention prior to, and during, bushfire season
Maintain and test any onsite communication equipment required for bushfire emergencies, is fit for purpose and is in good working order.	Ongoing; regularly with attention prior to, and during, bushfire season
Ensure there is sufficient first aid equipment, and that it is available and in good working order. Ensure sufficient staff are trained in Senior First Aid.	Ongoing; regularly with attention prior to, and during, bushfire season

<b>Task/Action</b>	<b>Timing (if relevant)</b>
Ensure all landscaping reticulation systems, especially around buildings, is in good working order and providing sufficient coverage.	Ongoing; regularly with attention prior to, and during, bushfire season
Maintain all AS 3959 bushfire construction elements for implemented on the various accommodation buildings	Ongoing; at least an annual basis with attention prior to, and during, bushfire season
Ensure nominated personnel in the Emergency Response Team are fully trained in the procedures outlined in this BEMP and conduct drills to practice evacuation procedures as outlined in Section 2.5. Ensure appropriate members of the ERT know how to use any site communication systems. Ensure sufficient staff are trained in first aid and first response firefighting (extinguishers, hose reels). Ensure all other staff are aware of the procedures outlined within this BEMP	Ongoing; regularly with attention prior to, and during, bushfire season
Update contact details of the emergency response team in the BEMP.	Ongoing; at least an annual basis with attention prior to, and during, bushfire season
Review and update this Bushfire Emergency Management Plan as outlined in Section 2.6, including any required bushfire preparedness tasks, training and exercises.	Ongoing; at least an annual basis with attention prior to, and during, bushfire season
Ensure procedures are in place to ensure visitor registers are readily available for use in an emergency.	Ongoing; regularly with attention during bushfire season
Comply with any forecast declared Total Fire Bans as outlined in Section 7.2	Total Fire Ban days

## 6.2 Preparation – Daily actions throughout bushfire season

Tasks detailed in Table 6 are to be performed daily throughout bushfire season, on declared Total Fire Ban Days, or when conditions may otherwise support significant bushfire behaviour

**Table 6: Preparation tasks/actions – Daily throughout bushfire season**

<b>Task/Action</b>	<b>Timing (if relevant)</b>
Ensure all vehicular access/egress routes are clear of any obstructions and have the appropriate vertical and horizontal clearances to ensure they are in good traversable condition. Ensure any gates along egress routes are in good working order, with keys available at all times to unlock any locked gates.	



<b>Task/Action</b>	<b>Timing (if relevant)</b>
<p>Ensure any internal personnel egress pathways onsite and within buildings, are also clear and available.</p> <p>Ensure any pedestrian egress gates are in in good working order, with keys available at all times to unlock any locked gates.</p>	
<p>Check exterior of buildings and any decks, and remove/relocate combustible items (rubbish, wood piles, furniture etc that can ignite) that can be stored 10m from building and decks.</p> <p>Ensure all objects attached to the buildings are non-combustible or can be easily removed in a bushfire event</p> <p>Clear all roofs, roof gutters and valleys of any leaf litter, debris or other combustible material.</p>	
<p>Ensure nominated assembly points and onsite safer places are appropriately maintained including and are available and fit-for-purpose.</p>	
<p>Ensure all required communication equipment is available, in good working order and ready for use.</p> <p>Ensure all mobile phones and any radio communication devices are fully charged.</p> <p>Ensure site has access to a battery-operated radio.</p>	
<p>Ensure sufficient first aid kits and other emergency resources are available and fit-for-purpose.</p>	
<p>Record the presence of all people using or visiting the site, and when they have left</p>	
<p>Review forecast Fire Danger Rating, weather and for Total Fire Bans as outlined in Section 7.0, and implement pre-emptive actions as required.</p> <p>Advise all relevant staff, ERT and occupants of the forecast FDR or TFB status as required.</p>	
<p>Regularly check the monitor the Emergency WA website, DFES phone (13 3337), DFES Twitter and local ABC radio for current emergency warning status and bushfire information.</p> <p>Regularly visually scan local area for signs of bushfire</p>	

### 6.3 Additional resources

Table 7 provides a list of publications that provide additional information relating to bushfire preparedness and awareness. It is recommended that facility management review these publications prior to and during the bushfire season.

**Table 7: Preparation and awareness publications**

Agency	Resource	Website
Department of Fire and Emergency Services (DFES)	5 Minute Fire Chat online resource	<a href="https://www.dfes.wa.gov.au/firechat/Pages/default.htm">https://www.dfes.wa.gov.au/firechat/Pages/default.htm</a>
	5 Minute Fire Chat publications	<a href="https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/Pages/publications.aspx">https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/Pages/publications.aspx</a>
	Bushfire Preparation Toolkit	<a href="https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/BushfireManualsandGuides/DFES-Fire-Chat-Bushfire-Preparedness-Toolkit.pdf">https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/BushfireManualsandGuides/DFES-Fire-Chat-Bushfire-Preparedness-Toolkit.pdf</a>
Shire of Ashburton	Bushfire Control	<a href="https://www.ashburton.wa.gov.au/live/services/ranger-services/bush-fires.aspx">https://www.ashburton.wa.gov.au/live/services/ranger-services/bush-fires.aspx</a>
	Fire and Emergency	<a href="https://www.ashburton.wa.gov.au/live/services/fire-and-emergency.aspx">https://www.ashburton.wa.gov.au/live/services/fire-and-emergency.aspx</a>

## 7.0 Awareness and pre-emptive procedures

This section outlines when and what monitoring actions are to be undertaken to ensure the facility maintains awareness of any forecast elevated bushfire weather days, and the associated pre-emptive procedures the facility can implement to respond to heightened risk. The ERT, or nominated staff, shall ensure they undertake the following monitoring and pre-emptive actions based on:

- the forecast Fire Danger Rating (FDR)
- declared Total Fire Ban days

Maintaining a high level of situational awareness, including forecast conditions, will also assist with the rapid assessment of any bushfire emergency as outlined in Section 8.0.

## 7.1 Forecast Fire Danger Rating

Monitoring the forecast FDR is to be conducted daily using the resources outlined in Section 5.2. The pre-emptive responses are detailed in Table 8.

**Table 8: Forecast Fire Danger Rating Pre-Emptive Actions**

FDR MONITORING TRIGGER (Refer Section 5.2 to determine FDR):						
<ul style="list-style-type: none"> <li>On all days during bushfire season, if the FDR will be Very High or above, or any declared Total Fire Ban days</li> <li>On days outside bushfire season with when weather is hot, dry or windy or there has been recent bushfires in the area</li> </ul>						
Weather District: <u>WEST PILBARA COAST</u>						
Action/Task	Fire Danger Rating					
	Low/Mod	High	Very High	Severe	Extreme	Catastrophic
Maintain situational awareness by: <ul style="list-style-type: none"> <li>having nominated staff visually monitor land in the local area around the development for signs of bushfire</li> <li>monitoring the Emergency WA website, DFES phone (13 3337), DFES Twitter and local ABC radio for current emergency warning status and bushfire information.</li> </ul>	Conduct checks if conditions are unusually warm and windy		Conduct regular checks throughout the day, at the following times as a minimum: <ul style="list-style-type: none"> <li>8am</li> <li>11am</li> <li>2pm</li> <li>5pm</li> </ul> If a bushfire is detected, go to Table 10.		Forecast FDR of Extreme or Catastrophic are less common in this location, and the facility should treat these days with great caution with potential for worst bushfire behaviour. Conduct hourly checks throughout the day, from sunrise to 1 hour after sunset If a bushfire is detected, go to Table 10.	
Contact DFES or local Fire Control Officer to discuss the next days operation	No specific requirements		No specific need to contact DFES or the or City of Busselton CESM for this forecast FDR unless there are specific circumstances result in high visitation to the area		Advise the Chief Fire Warden ASAP. They are to make contact with DFES or local Fire Control Officer as soon as the forecast FDR of Extreme or Catastrophic is identified (which may be several days in advance) and determine what pre-emptive actions can be undertaken including: <ul style="list-style-type: none"> <li>reduce visitation to the development (public visitors, functions etc)</li> <li>rostering additional staff to handle an emergency</li> <li>review whether a local brigade appliance is able to be in the local area</li> </ul>	
Advise the ERT and relevant staff	No specific requirements		Ensure all ERT and relevant staff are notified of the elevated bushfire risk			
Update guests and visitors of the Fire Danger Rating	No specific requirements		Advise guests and visitors of the elevated bushfire risk. Post forecast bushfire weather and warnings on nominated noticeboards (see Section 2.4) Recommend they remain at the development and be ready for potential bushfire response such as offsite evacuation Recommend if they leave the development, they should go to areas with low bushfire risk areas (e.g. a town centre) during the hottest part of the day (e.g. 10 am to 4pm).			



<b>FDR MONITORING TRIGGER (Refer Section 5.2 to determine FDR):</b> <ul style="list-style-type: none"><li>On all days during bushfire season, if the FDR will be Very High or above, or any declared Total Fire Ban days</li><li>On days outside bushfire season with when weather is hot, dry or windy or there has been recent bushfires in the area</li></ul>						
Weather District: <u>WEST PILBARA COAST</u>						
Action/Task	Fire Danger Rating					
	Low/Mod	High	Very High	Severe	Extreme	Catastrophic
Conduct daily preparations from Table 6	Recommended, but no specific requirements		Conduct daily preparations the day prior or in early morning			
Conduct year-round preparation from Table 5	Conduct preparations on ongoing basis, with focus on prior to bushfire season					
Open air fires/Campfires/Cooking fires	Can be conducted in accordance with Shire firebreak notice, and provided conditions are benign					
	No open fires on declared Total Fire Ban days					

## 7.2 Forecast Total Fire Ban

Total Fire Ban (TFB) procedures are triggered on days when a Total Fire Ban is declared due to extreme fire weather, when widespread fires are stretching firefighting resources or even outside bushfire season due to higher temperatures or expected strong winds.

A TFB will be declared the evening before it is to take effect and the resources detailed in Section 5.3 can be used to determine the forecast and current TFB status.

There are restrictions on what activities can be conducted on a TFB day and Table 9 lists the procedures the required actions when a Total Fire Ban is declared.

**Table 9: Total Fire Ban Actions**

TFB MONITORING TRIGGER (Refer Section 5.3 for how to determine TFB day status):	
<ul style="list-style-type: none"> <li>On all days during bushfire season</li> <li>On days outside bushfire season with when weather is hot, dry or windy or there has been recent bushfires in the area</li> </ul>	
Action	Person responsible
If a Total Fire Ban is declared, ensure all relevant staff and occupants are notified to ensure all relevant actions are undertaken.	Chief Fire Warden (or nominated delegate)
<p>Ensure the following actions are avoided if a Total Fire Ban is declared:</p> <ul style="list-style-type: none"> <li>no fire or flames allowed in the open air</li> <li>no open fires for the purpose of cooking or camping are not allowed</li> <li>no 'hot work' such as metal work, grinding, welding, soldering, gas cutting or similar is allowed unless a formal exemption has been obtained</li> <li>no use of chainsaws, plant or grass trimmers or lawn mowers in bushland areas</li> <li>no other activities that may start a fire</li> <li>ensure equipment or machinery is mechanically sound</li> <li>ensure all reasonable precautions are taken to prevent a bushfire igniting, including postponing any activity that could result in a bushfire ignition.</li> </ul> <p>Further information on prohibited activities can be found on the DFES website below</p>	Chief Fire Warden (or nominated delegate)
<p>Maintain situational awareness by:</p> <ul style="list-style-type: none"> <li>having nominated staff visually monitor land in the local area around the development for signs of bushfire (signs or smell of smoke etc)</li> <li>monitoring the Emergency WA website, DFES phone (13 3337), DFES Twitter and local ABC radio for current emergency warning status and bushfire information.</li> <li>If a bushfire is detected, either visually or via website/radio/social media, obtain information on the fire location and direction and speed of travel</li> </ul> <p><b>If a bushfire is detected, refer to Table 10.</b></p>	Nominated Fire Warden



The Department of Fire and Emergency Services advice is that chainsaws, plant or grass trimmers or lawn mowers can be used during a total fire ban in suburban or built up areas which are cleared of flammable material, but not in bushland or other areas where their use is likely to cause fire. Further information on TFB days and the prohibited activities can be found on the following DFES website <https://www.dfes.wa.gov.au/totalfirebans/#faqs>

Individuals could be fined up to \$25,000 or jailed for 12 months or both if the Total Fire Ban is ignored.



## 8.0 Bushfire Emergency Triggers and Decision making

The onsite ERT, in particular the Chief Fire Warden (or nominated delegate), must assume responsibility for assessing the bushfire situation, using the information available, and making a decision regarding the response occupants need to undertake to stay safe. While there are various sources of potential information available upon which to base decision making, in a bushfire emergency to timing and accuracy of the information is not always clear and if the bushfire is close to the development, onsite personnel may be the most aware of the current situation by being the closest. Additionally, when the bushfire is near the development or the evacuation routes, onsite personnel will need to exercise greater situational awareness, judgement and caution as the margin of safety is less.

There are two main response options for this facility to keep people safe:

- **Offsite Evacuation** – vehicular evacuation along the road network to an offsite location
- **Onsite Shelter-in-Place** – relocating occupants and public to an onsite location

Prior to the two main response actions, there will be two other actions:

- **Standby and Controlled Shutdown** – shutdown tasks where there is adequate time for controlled preparation for safe offsite evacuation or onsite shelter-in-place
- **Emergency Shutdown** – shutdown tasks where the bushfire impact to the site or roads will occur shortly and rapid shutdown is required with the intention of getting occupants to a place of relative safety. Given the limited time to conduct these, they have been incorporated into the Offsite Evacuation procedures.

In bushfires, people often plan to remain in place and become overwhelmed by the bushfire causing them to leave for a safer place too late. The key to a safe evacuation is leaving early, this means long before the development or evacuation roads come under bushfire attack. Driving is very dangerous during a bushfire with smoke making it hard to see, fallen trees over the road and power lines down can all trap vehicles on the road, and result in fatalities. Traffic on the roads can also hamper firefighting operations, especially when the bushfire is close.

Early detection of a bushfire's existence and location, provides the best opportunity to conduct early evacuation. Warning of a bushfire is often provided by emergency authorities (e.g. EmergencyWA, radio, SMS alert etc) however this can't be relied upon in all cases. Visual or olfactory cues or information from arriving visitors may also be other sources of information.

When assessing the bushfire situation, the Chief Fire Warden, or nominated delegate, should consider the following:

- the location and behaviour of the bushfire based on the following:
  - current bushfire warnings that have been issued
  - any available local knowledge (e.g. visual signs of bushfire, relayed information from occupants/visitors etc), which if the bushfire is close, can be more relevant for decision-making than the regional bushfire warnings
- the nature of the hazard between the current fire location and the development e.g. type of vegetation and slope
- the development layout and incorporated bushfire protection measures as a measure of bushfire resilience
- the evacuation network (roads, paths etc) including potential to be impacted by bushfire
- variations in the facility operational routines that can impact the amount of time required to commence and complete the evacuation procedure

Advice may be provided by emergency authorities to self-evacuate which greatly assists because it confirms the safety of evacuation routes and makes the process relatively straight forward.

While it is highly recommended that the specific direction/advice of authorised emergency services personnel is followed if they are onsite, however they may not be familiar with the development, so one should always use their judgement and all available information to balance advice and make the most informed assessment possible regarding potential impact to the occupants, the development and evacuation routes.

Table 10 provides a summary of likely information that will be available to make decisions during a bushfire emergency, complete with actions to be considered. The main sources of information include:

- DFES Bushfire Emergency Warnings
- Decision Zones where the bushfire location is known
  - From reputable website, radio etc
  - Physical cues (visual, olfactory) of fire
  - relayed information (from occupants, arriving visitors or adjacent land uses)

**Table 10: Bushfire Triggers and Response Actions**

Trigger	Action/Tasks
<b>Bushfire Emergency Warnings (see Section 5.1 for where to obtain warnings)</b>	
<b>Advice</b>	<ul style="list-style-type: none"> <li>Commence Standby/Controlled Shutdown Procedures</li> <li>Consider pre-emptive use of Offsite Evacuation procedures (depending on location and if bushfire is moving toward facility)</li> <li>Continue monitoring and re-evaluating situation</li> </ul>
<b>Watch and Act</b>	<ul style="list-style-type: none"> <li>Commence or continue Offsite Evacuation procedures</li> <li>Continue monitoring and re-evaluating situation</li> </ul>
<b>Emergency</b>	<ul style="list-style-type: none"> <li>Urgently commence or continue Offsite Evacuation procedures</li> <li>Only consider Onsite Shelter-in-Place as a last resort action only</li> <li>Continue monitoring and re-evaluating situation</li> </ul>
<b>All Clear</b>	<ul style="list-style-type: none"> <li>Commence Recovery Procedures (Offsite Evacuation or Shelter-in-Place)</li> <li>Continue monitoring and re-evaluating situation</li> </ul>
<b>Decision Zones – based on distance of bushfire from development (from reputable website, visual signs of bushfire, relayed information from occupants/visitors etc). Bushfire conditions can change rapidly and evidence of a nearby fire may precede any formal bushfire warning.</b>	
<b>Monitoring Zone</b> <ul style="list-style-type: none"> <li>Distance from site: &gt;20km</li> </ul>	<ul style="list-style-type: none"> <li>Call 000 and advise DFES of the bushfire (and obtain any information)</li> <li>Consider commencing Standby/Controlled Shutdown Procedures (if bushfire is moving toward facility)</li> <li>Continue monitoring and re-evaluating situation</li> </ul>
<b>Readiness Zone</b> <ul style="list-style-type: none"> <li>Distance from site: 10 -20km</li> </ul>	<ul style="list-style-type: none"> <li>Call 000 and advise DFES of the bushfire (and obtain any information)</li> <li>Commence or continue Standby/Controlled Shutdown Procedures</li> <li>Consider pre-emptive use of Offsite Evacuation procedures</li> <li>Continue monitoring and re-evaluating situation</li> </ul>
<b>Response Zone</b> <ul style="list-style-type: none"> <li>Distance from site: &lt;10km</li> </ul>	<ul style="list-style-type: none"> <li>Call 000 and advise DFES of the bushfire (and obtain any information)</li> <li>Commence or continue Offsite Evacuation procedures</li> <li>Only consider Onsite Shelter-in-Place as a last resort action only</li> <li>Continue monitoring and re-evaluating situation</li> </ul>



## 9.0 Standby and Controlled Shutdown Procedures

Where the bushfire is sufficiently far away that it is not clear whether it will impact the facility or vehicular access routes, but is close enough to trigger a heightened level of awareness by occupants which may also include commencing a shutdown response by the facility. There is still considered adequate time for shutdown to be conducted in a controlled way in preparation for safe offsite evacuation.

**Bushfire situations can change rapidly**, so where the bushfire is close enough to the facility and/or evacuation routes to require rapid shutdown of the development, with the priority to get occupants to a place of relative safety, emergency shutdown may need to be triggered during a controlled shutdown. Given the limited time to conduct emergency shutdown actions when the bushfire is close, these actions have been incorporated into the Offsite Evacuation procedures.

**Table 11: Standby and Controlled Shutdown Procedures**

Action	Person responsible
<p>Chief Fire Warden to take charge and to assess the situation relating to level of bushfire threat and potential impact on the facility, occupants and the evacuation network through the following:</p> <ul style="list-style-type: none"> <li>using latest emergency, weather and road information obtained from Section 5.0</li> <li>implementing the following procedure: <ul style="list-style-type: none"> <li>obtain aerial photo</li> <li>plot where bushfire is located and whether it is moving toward the development. Wind direction is typically an indicator of fire direction</li> <li>obtain the Fire Danger Rating for the day from EmergencyWA website</li> <li>note temperature, wind direction and speed from live BoM observations from website.</li> </ul> </li> </ul>	Chief Fire Warden
<p>Contact DFES (000) if not already undertaken:</p> <ul style="list-style-type: none"> <li>inform that the facility is operating and has vulnerable occupants and the number of occupants</li> <li>seek advice about the fire location, behaviour and likelihood of impacting the facility</li> <li>seek instructions from DFES (preferably Emergency Services Incident Controller who is managing the fire) about what actions to take</li> <li>determine Emergency Services Incident Controller/DFES point of contact (if any)</li> <li>Determine where offsite safer locations or Welfare Centres are being designated (open). If they are not known, determine where to evacuate if possible. <ul style="list-style-type: none"> <li>If this information is not possible to obtain, use the offsite safer location/s nominated in this BEMP on Table 13</li> </ul> </li> </ul>	Chief Fire Warden Communications Officer
<p>Assemble entire ERT and relevant staff:</p> <ul style="list-style-type: none"> <li>Ensure all ERT members remain contactable</li> <li>Update ERT and staff of the bushfire situation and the planned emergency management strategy.</li> </ul>	Chief Fire Warden All ERT members All staff (if possible)

Action	Person responsible
Ensure all other emergency communication equipment around the site is available and ready for use (e.g. connected, batteries charged etc)	Communications Officer Fire Wardens
Ensure all first aid equipment is available and ready for use.	First Aid Personnel
<p>Begin arranging any guest and visitor registers and information to create a current and collated register enable accounting for all known occupants (staff, guests and visitors) as possible</p> <ul style="list-style-type: none"> <li>Begin accounting for all occupants and staff,</li> <li>Begin identifying any known vulnerable people that may require pre-emptive evacuation offsite safer location/s or hospital</li> </ul>	Deputy Chief Fire Warden Fire Wardens
<p>Contact all guests and visitors:</p> <ul style="list-style-type: none"> <li>Sounding alarms,</li> <li>Using communication systems outlined in Section 3.2 or</li> <li>Direct occupants to gather at the onsite assembly area</li> </ul> <p>Inform guests and visitors of the following:</p> <ul style="list-style-type: none"> <li>The current emergency warning and bushfire situation</li> <li>The anticipated response actions (offsite evacuation or onsite shelter-in-place):</li> <li>Confirm the location of the offsite safer location</li> <li>Ensure occupants are able to walk to the offsite safer location or have access to a vehicle and identify those that don't</li> <li>Identify any vulnerable occupants (young, elderly, impaired, sick, injured, respiratory or other illness etc) who may require pre-emptive offsite evacuation or relocation to the local hospital.</li> </ul> <p>Arrange any required emergency transportation to relocate any vulnerable occupants offsite (this may need to be an ambulance)</p>	Chief Fire Warden All ERT members All staff (if possible)
<p>Consider ceasing some or all non-essential operations</p> <p>Consider ceasing activities with guests, visitors and public, including functions</p> <p><b>NOTE: This is a consideration only and should be based on current bushfire situation, including location, discussion with local Emergency Services and DFES, and the nature of the activity. A remote offsite activity poses a greater risk than onsite indoor activities).</b></p>	Chief Fire Warden
<p>Where appropriate, request guests commence undertaking shutdown of their accommodation including:</p> <ul style="list-style-type: none"> <li>Begin gathering their belongings and packing to be ready for offsite evacuation or onsite sheltering and request they close any doors or doors.</li> <li>Close all windows and doors including roller and sliding doors</li> <li>Put away all external combustible items or put inside building/s</li> <li>Turn off air-conditioners especially evaporative coolers, or keep the water running and turn off the fan if possible</li> <li>Leave on adequate lighting including points of entry lighting.</li> </ul>	Deputy Chief Fire Warden Fire Wardens
Where appropriate, commence shutting down the facility buildings	Deputy Chief Fire Warden

Action	Person responsible
including: <ul style="list-style-type: none"> <li>Close all windows and doors including roller and sliding doors</li> <li>Put away all external combustible items or put inside building/s</li> <li>Turn off air-conditioners especially evaporative cooler</li> </ul>	Fire Wardens
Ensure all internal emergency vehicular access routes are unlocked, and clear and available for use by staff, guests, visitors and firefighters including: <ul style="list-style-type: none"> <li>Main entrance gate</li> <li>All internal driveways</li> <li>Access to the booster connection and/or firewater tanks</li> <li>Perimeter firebreaks</li> </ul>	Traffic Warden Fire Wardens
Ensure all internal emergency pedestrian access routes are unlocked, and clear and available for use by staff, guests, visitors and firefighters including: <ul style="list-style-type: none"> <li>Main entrance gate</li> <li>Emergency egress gates</li> <li>All internal walkways</li> <li>Any secured access points</li> </ul>	Deputy Chief Fire Warden Fire Wardens
If safe to do so, organise for regular patrols of the facility (if not easily observed through regular activities) to check for any signs of bushfire ignition. Those conducting the patrols are to wear appropriate PPE <b><i>Strongly consider commencing offsite evacuation while evacuation routes are open and unimpacted by smoke, embers or fire or congested with traffic</i></b>	Deputy Chief Fire Warden Fire Wardens
<ul style="list-style-type: none"> <li>Continue monitoring and re-evaluating the bushfire scenario.</li> <li>Maintain situational awareness by: <ul style="list-style-type: none"> <li>having nominated staff visually monitor land in the local area around the development for signs of bushfire (signs or smell of smoke etc)</li> <li>monitoring the Emergency WA website, DFES phone (13 3337), DFES Twitter and local ABC radio for current emergency warning status and bushfire information.</li> </ul> </li> <li>If a bushfire scenario is changing, obtain information on the new warning status, fire location and direction and speed of travel</li> <li>Review Table 10 with new information to determine new response actions <ul style="list-style-type: none"> <li>Where possible, undertake decision making process in consultation with Emergency Services Incident Controller/DFES point of contact</li> <li>Initiate Offsite Evacuation or Onsite Shelter-in-Place response procedures as required.</li> </ul> </li> </ul>	Chief Fire Warden and Communications Officer



## 10.0 Offsite Evacuation Response

Where the bushfire is close enough to the facility and/or egress routes to require rapid shutdown of the development, with the intention of getting occupants to a place of relative safety. Priority shall be on ensuring occupants are evacuated offsite to safety, with a focus on egress routes, however if this unsafe to conduct, they shall be relocated to the onsite location to shelter-in-place. Site shutdown to be undertaken if safe to do so, although this may have been commenced as part of the Standby/Controlled Shutdown procedures.

Given the location and relatively direct connection to the residential part of Onslow townsite, offsite evacuation conducted early is the safest response in a bushfire event, while evacuation routes are open and unimpacted by smoke, embers, fire or blocked or congested with traffic, however these will likely still be available during bushfire impact on the site.

**The decision to evacuate occupants to the off-site location will depend on the location and behaviour of the bushfire, and where possible, should always be conducted in consultation with the Emergency Services Incident Controller or authorised DFES personnel managing the bushfire emergency.**

### 10.1 Emergency Onsite Assembly Point and Offsite Safer Locations

In the event that offsite evacuation is to be conducted, understanding where to assemble people onsite prior to evacuation, and the offsite locations available to safely send people, will be critical to ensure its success.

#### 10.1.1 Designated on-site assembly point

An on-site assembly point is an area within the development where occupants are to meet on becoming aware that there is a bushfire in the area, to obtain further status information and be advised of response actions.

Although the communication strategy for the facility is considered to be sufficient to avoid the need for onsite assembly, there may be instances where on-site assembly is required. It is proposed that the designated on-site assembly point identified below in Table 12 and depicted in Appendix 2.

**Table 12: Designated on-site assembly point**

Designated assembly point
<b>Administration, Training/Inductions, Medical/Wellness and Creche/Comms buildings area</b>

#### 10.1.2 Designated off-site locations

DFES and the Shire of Ashburton may provide advice on the day as to the locations of the designated off-site safer location/welfare centres.

***In the event that this information is not yet available***, Table 13 lists potential offsite location areas that are to be considered during an evacuation. The safer location/s have been chosen based on:

- relative proximity to the facility
- relative safety of evacuation route
- whether the refuge is located away from the effects of a bushfire

Table 13 nominates when the various offsite locations should be considered, while also providing

primary route to the location as well as estimated travel times during normal traffic. ***Allowance needs to be made for increased travel times due to bushfire conditions (e.g. smoke) and traffic congestion on the road network.***

**Table 13: Designated off-site safer location**

Location and address	Route to location	Travel Distance and Time (normal travel)
<b>Onslow Sports Club</b> (47 Third Avenue, Onslow)	<b>Primary Route</b> Third Avenue (S) – Onslow Sports Club (R)	600 m (7 - 10 min walk) (2 - 5 min drive)

## 10.2 Offsite Evacuation Procedures

Once the decision has been made conduct offsite evacuation of the facility, Table 14 lists the evacuation procedures to be followed.

**Table 14: Offsite Evacuation procedures**

Action	Person responsible
<p>Chief Fire Warden to take charge and to assess the situation relating to level of bushfire threat and potential impact on the facility, occupants and the evacuation network through the following:</p> <ul style="list-style-type: none"> <li>• using latest emergency, weather and road information obtained from Section 5.0</li> <li>• implementing the following procedure:</li> <li>• obtain aerial photo</li> <li>• plot where bushfire is located and whether it is moving toward the development. Wind direction is typically an indicator of fire direction</li> <li>• obtain the Fire Danger Rating for the day from EmergencyWA website</li> <li>• note temperature, wind direction and speed from live BoM observations from website.</li> </ul> <p>Once the decision is made to evacuate offsite, use the available information to:</p> <ul style="list-style-type: none"> <li>• Determine the preferred offsite location (pending advice from DFES or Emergency Services Incident Controller)</li> <li>• Determine the safest route to get to the offsite location that takes occupants as far from the fire as possible.</li> </ul>	Chief Fire Warden
<p>Contact DFES (000) if not already undertaken:</p> <ul style="list-style-type: none"> <li>• inform that the facility is operating and has vulnerable occupants and the number of occupants</li> <li>• seek advice about the fire location, behaviour and likelihood of impacting the facility. Alternatively provide current bushfire observations if fire is close to facility or town.</li> <li>• seek instructions from DFES (preferably Emergency Services Incident Controller who is managing the fire) about what actions to take</li> </ul>	Chief Fire Warden Communications Officer

Action	Person responsible
<ul style="list-style-type: none"> <li>determine Emergency Services Incident Controller/DFES point of contact (if any)</li> <li>Determine where offsite safer locations or Welfare Centres are being designated (open). <ul style="list-style-type: none"> <li>If this information is not possible to obtain, use the offsite safer location/s nominated in this BEMP on Table 13.</li> </ul> </li> <li>If decided, advise that offsite will be conducted, including the preferred offsite location and the route to be used.</li> </ul>	
<p>Ensure all relevant Standby and Controlled Shutdown actions are completed. The key actions are repeated below:</p> <ul style="list-style-type: none"> <li>Assemble ERT and relevant staff</li> <li>Update ERT and staff of the bushfire situation and the planned emergency management strategy.</li> <li>Cease all operations including any functions and activities</li> <li>Begin accounting for all occupants and staff <ul style="list-style-type: none"> <li>Identify any known vulnerable people and arrange any required emergency transportation for priority evacuation to offsite safer location/s or hospital</li> </ul> </li> </ul>	Chief Fire Warden Deputy Chief Fire Warden All ERT members
<p>Once decision is made to evacuate the site (following confirmation with the Emergency Services Incident Controller or authorised DFES personnel if possible), implement this broad process:</p> <ul style="list-style-type: none"> <li>Contact all guests and visitors (if not already undertaken): <ul style="list-style-type: none"> <li>Sounding alarms,</li> <li>Using communication systems outlined in Section 3.2 or</li> <li>Direct occupants to gather at the onsite assembly area</li> </ul> </li> <li>Inform guests and visitors of the following: <ul style="list-style-type: none"> <li>The current emergency warning and bushfire situation</li> <li>The plan to evacuate offsite</li> <li>Confirm the offsite safer location <ul style="list-style-type: none"> <li>if the Emergency Services Incident Controller or DFES representative do not advise of an off-site location, use the one nominated in this as per Table 13</li> </ul> </li> <li>the evacuation route to travel to the off-site location</li> <li>ensure occupants are able to walk to the offsite safer location or have access to a vehicle and identify those that don't</li> <li>Identify any vulnerable occupants (young, elderly, impaired, sick, injured, respiratory or other illness etc) who may require pre-emptive offsite evacuation or relocation to the local hospital.</li> </ul> </li> <li><b>If safe to do so (i.e. sufficient time)</b>, instruct guests and visitors to gather their belongings and either evacuate to the nominated offsite location by foot or meet at onsite assembly point prior to evacuation. <ul style="list-style-type: none"> <li>Belongings are to be limited to mobile phone or other communication devices, wallets/purses, medicines and other health/mobility aids, food and water. They shall not bring bulky luggage, only a small bag.</li> </ul> </li> </ul>	Chief Fire Warden Deputy Chief Fire Warden Communications Officer Fire Wardens

Action	Person responsible
<ul style="list-style-type: none"> <li>Encourage them to close all windows and doors at their accommodation where time to do so</li> <li><b>If there is insufficient time to collect belonging</b>, instruct guests and visitors to evacuate directly to the nominated offsite location by foot.</li> <li>all evacuating occupants are to move in an orderly manner as a group, ideally with staff members, to ensure guests and visitors don't become lost</li> <li>organise people traveling by vehicle to carpool as much as possible to reduce traffic.</li> <li><b>prioritise the evacuation of the following people, to evacuate those most at risk first and to minimise congestion of internal and local roads:</b> <ul style="list-style-type: none"> <li><b>any vulnerable occupant (elderly, respiratory problems, sick/injured)</b></li> <li><b>occupants along parts of the facility likely to be impacted by bushfire first</b></li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>Instruct ERT to conduct the following (if not already undertaken) <ul style="list-style-type: none"> <li>use guest and visitor registers to monitor the evacuation as occupants leave the site and to confirm that all staff, guests and visitors are successfully relocated to the nominated offsite location</li> <li>ensure all internal emergency vehicular and pedestrian access routes are unlocked, clear and available including the emergency egress gates to Third Avenue</li> <li>conduct a thorough check of the site, doing a walk-through of all buildings and areas, to confirm all persons have evacuated</li> <li>Final evacuating staff are to travel in a group of no less than 2 people.</li> </ul> </li> <li><b>If safe to do so</b>, instruct ERT and relevant staff to shut down the facility buildings including: <ul style="list-style-type: none"> <li>Close all windows and doors including roller and sliding doors</li> <li>Put away all external combustible items or put inside building/s</li> <li>Turn off air-conditioners especially evaporative cooler</li> </ul> </li> <li><b>If safe to do so</b>, organise for regular patrols by ERT of the facility to check for any signs of bushfire ignition.</li> </ul>	Deputy Chief Fire Warden Fire Wardens
If not previously conducted, advise Emergency Services Incident Controller or DFES if the facility is being impacted by bushfire (i.e. bushfire ignites on or adjacent to the site) and that the facility is performing an evacuation and advise number of occupants and where they are going.	Chief Fire Warden Communications Officer
<p>Upon arrival of occupants at off-site safer location:</p> <ul style="list-style-type: none"> <li>confirm all relocated occupants are accounted for and safe</li> <li>advise Emergency Services Incident Controller of relocation to off-site location and whether anyone is missing</li> </ul>	Chief Fire Warden First Aid Personnel Communications Officer
<p>To improve resilience of off-site safer location and ensure the safety of the occupants:</p> <ul style="list-style-type: none"> <li>close all doors and windows</li> </ul>	Deputy Chief Fire Warden First Aid Personnel Fire Wardens



Action	Person responsible
<ul style="list-style-type: none"> <li>• turn off any evaporative air-conditioners or if possible, keep the water running and turn off the fan.</li> <li>• fill sinks, bath and buckets with water for putting out any fires that may start inside or soaking towels, blankets or clothes</li> <li>• soak towels and rugs in water and lay them along the inside of external doorways or block any other gaps for embers or smoke</li> <li>• soak woollen blankets and keep them available for protection against radiant heat</li> <li>• take down curtains and push furniture away from windows</li> <li>• erect ladder next to roof space manhole to enable inspection for spot fires.</li> <li>• obtain any firefighting equipment e.g. fire extinguishers, hose reels, garden hoses and determine area of coverage.</li> <li>• evenly distribute fire extinguishers throughout the building</li> <li>• immediately before the fire arrives, wet down decks and landscaping close to the building</li> <li>• where possible, turn on any garden reticulation for areas surrounding the offsite safer location</li> <li>• ensure occupants to get down low to limit exposure to smoke and drink plenty of water to avoid becoming dehydrated</li> <li>• where safe to do so, nominate teams of no less than two persons to regularly inspect building exterior and roof cavity (wearing suitable protective clothing - at a minimum long sleeves, trousers and leather boots) to inspect building exterior for embers and fire ignitions, and extinguish where possible</li> <li>• Monitor the condition of the building/s including regular inspection of the inside of the building, including the roof space for sparks and embers, and extinguish where possible.</li> </ul> <p>Stay in the offsite safer location while the fire front is passing. If the building catches fire and/or conditions inside become unbearable:</p> <ul style="list-style-type: none"> <li>• leave through the door furthest from the approaching fire</li> <li>• go to another unaffected building onsite or an area that has already burnt, or a large open space.</li> </ul> <p>Once the fire has passed, you will need to regularly inspect the inside and outside of the building for several hours. Go outside and extinguish any fires on the building or in adjacent landscaping.</p>	
<ul style="list-style-type: none"> <li>• Continue monitoring and re-evaluating the bushfire scenario.</li> <li>• Maintain situational awareness by: <ul style="list-style-type: none"> <li>◦ having nominated staff visually monitor land in the local area around the development for signs of bushfire (signs or smell of smoke etc)</li> <li>◦ monitoring the Emergency WA website, DFES phone (13 3337), DFES Twitter and local ABC radio for current emergency warning status and bushfire information.</li> </ul> </li> <li>• If a bushfire scenario is changing, obtain information on the new warning status, fire location and direction and speed of travel</li> </ul>	Chief Fire Warden and Communications Officer

Action	Person responsible
<ul style="list-style-type: none"> <li>Review Table 10 with new information to determine new response actions <ul style="list-style-type: none"> <li>Where possible, undertake decision making process in consultation with Emergency Services Incident Controller/DFES point of contact</li> <li>Initiate Offsite Evacuation or Onsite Shelter-in-Place response procedures as required.</li> </ul> </li> </ul>	

### 10.3 Recovery procedures following Offsite Evacuation

Recovery procedures are triggered when emergency services have advised that the bushfire threat has passed and it is safe to return to the facility (DFES 'All Clear' alert).

Table 15 lists the recovery procedures to be carried out following an evacuation of the facility,

**Table 15: Recovery procedures (following offsite evacuation)**

Action	Person responsible
<p>Following a bushfire, emergency services are required to confirm conditions within facility and local area are safe for people to return to including the vehicular access network and services (electricity, water, gas etc)</p> <p>If the facility has been impacted by fire, ensure no one returns or re-enters until Emergency Services have declared it as being safe.</p>	<p>Chief Fire Warden Fire Wardens</p>
<p>Liaise and take directions from Emergency Services Incident Controller or DFES regarding whether safe return is possible. If safe to do so, consider conducting a preliminary review of the site for obvious damaged or destroyed buildings.</p> <p>Based on this information make the decision whether to reopen and return to the facility or whether it shall remain closed. The first priority is to ensure the safety of all people including staff.</p> <p>If the decision is made to keep the facility closed, seek alternative accommodation if required for displaced persons.</p>	<p>Chief Fire Warden Communications Officer</p>
<p>Once decision is made to either reopen or relocate:</p> <ul style="list-style-type: none"> <li>arrange for occupants to be moved back to the facility or to alternative location (nominated by Emergency Services Incident Controller or DFES);</li> <li>confirm all occupants are accounted for on their return to the facility (or have been otherwise safely relocated elsewhere) using the occupant/visitor register procedure used by the facility</li> <li>advise Emergency Services Incident Controller of relocation to facility or alternative location and whether anyone is missing.</li> </ul>	<p>Chief Fire Warden All ERT members</p>

#### 10.4 Transport Arrangements for Offsite Evacuation

Given the location of the facility with respect to Onslow, that offsite evacuation will be into the town, and that many guests are unlikely to have access to a vehicle, offsite evacuation from the development will likely be by foot.

While it is not expected that alternative transport arrangements will be required to facilitate offsite evacuation, it is recommended that the ERT negotiate with a local transport company, the necessary arrangements to use their vehicles to evacuate occupants offsite, should it be required. It is recommended this alternative (see Table 16) is at least in place prior to bushfire season, to provide the Chief Fire Warden with transport options to deal with any unforeseen circumstances.

**Table 16: Alternative transport arrangements**

Alternative Transportation Arrangements To be used should there be enough people onsite without transportation	
Name of organisation providing transportation	TBC (arrange with local transportation company)
Contact phone number	TBC
Time required for transportation to arrive	TBC (but expect delays due to traffic, smoke etc)
Estimated travelling time to destination	TBC (but expect delays due to traffic, smoke etc)

##### 10.4.1 Ambulances or Medical Transport

As noted in Section 3.1, there may be a need to pre-emptively relocate vulnerable occupants using ambulances or medical transport. Additionally it may be necessary to attempt to evacuate these occupants during the bushfire emergency, depending on the nature sickness or injury.

It is recommended that the ERT make contact with the relevant agencies and transport providers in the local area to discuss the access and extraction options available to them, prior to, during and following a bushfire emergency, so the Chief Fire Warden is clear on how to contact these services, and what the options are likely to be.

##### 10.4.2 Traffic Awareness and Management

Any vehicles used for offsite evacuation should be in good working order and should have sufficient fuel to travel at least 100 km, and if they are not considered appropriate for evacuation, alternative transport should be found for the occupants.

##### 10.4.3 Potential Traffic and Congestion

Evacuation from the development to an off-site location, may occur simultaneously with occupant egress from nearby facilities and the local residential population of the area. On this basis, there is likely to be traffic congestion on the road network, that potentially worsens at time passes. On that basis, the following shall be considered:

- Initiating early evacuation will be critical to ensure all occupants are able to relocate off-site, and minimise the potential for disruption of the local road network, which could prevent timely egress or impact firefighter access.
- The Chief Fire Warden (or nominated delegate) who is managing the evacuation of the development, shall ensure they are cognisant of the traffic conditions to the off-site conditions, and react to any disruption to the road network (bushfire, congestion). Traffic congestion may be sufficient to require a change in evacuation destination to the secondary

off-site location.

- Given the potential for traffic congestion, evacuation by foot shall be encouraged where safe to do so, to reduce vehicle traffic.

#### **10.4.4 Safety considerations for evacuating by car:**

While the intent of the Offsite Evacuation procedures is for early evacuation ahead of bushfire impact, including embers and smoke, or prior to any traffic congestion, there is always a chance the bushfire situation changes. Travel by vehicle through areas being impacted by bushfire, can present a significant risk to occupants, however occupants in this situation can improve their chances of survival through the following actions:

- **Before leaving**
  - Ensure there are fire blankets (or woollen blankets) and a water supply within the vehicle
  - Obtain a fire extinguisher if possible
  - Dress in protective clothing, preferably long-sleeved shirts and pants, and shoes.
  - Confirm there is sufficient fuel in the vehicle, and that it is roadworthy
    - If not, seek alternative transport or consider remaining onsite in well-prepared building
  - Ensure the vehicle headlights are on
- **If approaching bushfire on the road**
  - If there is considerable smoke
    - ensure headlights and hazard lights on
    - close windows and outside vents and put air-conditioning on recirculation
    - slow down as there could be people, vehicles and livestock on the road.
    - if you can't see clearly, pull over and wait until the smoke clears.
  - Carefully pull over and assess the situation.
    - It is a considerable risk to drive through smoke and flames. This is common cause of fatalities.
    - If safe, turn around and drive to safety in a different direction (if the option is available)
- **If you are trapped by bushfire**
  - Park and shelter within the vehicle.
    - Park off the road to avoid collisions with other vehicles
    - Park where there is the least vegetation (around, above and under the vehicle).
    - If possible, park behind a physical barrier (e.g. rock, earth mound) to minimise direct flame contact or radiant heat exposure
    - Face the vehicle towards the oncoming fire front as the front windscreen is generally thicker glass
    - Do not park too close to other vehicles in case a vehicle catches alight.
  - Inside the vehicle
    - As the fire front approaches, the intensity of the heat will increase along with the amount of smoke and embers. Smoke will gradually get inside the vehicle and fumes will be released from interior plastics.
    - Stay in the vehicle (unless there is a well-protected building nearby).



- Call 000 to inform of situation (if mobile reception available)
  - Close doors, windows and outside vents, keep headlights and hazard lights on and turn the engine off.
  - stay as close to the floor as possible to minimise exposure to radiant heat, preferably in the foot wells, and shelter under the blankets.
  - Cover mouth with moist cloth to minimise inhalation of smoke and toxic fumes being released from the interior of the vehicle
  - Continue to drink water to minimise dehydration.
  - Stay in the car until the fire front has passed and do not open windows or doors.
- **As fire front passes**
    - Parts of the car may be extremely hot. Tyres and external plastic body parts may catch alight and in more extreme cases the interior may catch on fire. Fuel tanks are unlikely to explode.
    - Stay in the vehicle, with windows and doors closed, until the fire front has passed, and the outside temperature has dropped sufficiently.
    - Stay covered by blankets, continue to drink water.
    - Once the fire front has passed cautiously exit the vehicle, move to a safe area such as an area of land already burnt or rocky outcrop.
    - Call 000 to inform of situation (if mobile reception available)
    - Wait for assistance

## 11.0 Onsite Shelter-in-Place Response (Last Resort Action Only)

The alternative to offsite evacuation is for occupants to shelter-in-place within the facility. This would typically be expected to occur if there is insufficient time to conduct a safe offsite evacuation or the risk associated with offsite evacuation otherwise considered to be greater than sheltering in place on-site.

**Given the facility is directly connected to the existing built-up residential portion of Onslow townsite, remaining on-site is not considered the safest option. Whilst pre-emptive and early off-site evacuation is always considered the best approach to avoid any bushfire impact on the evacuation route, the location is such that evacuation should be available even during bushfire impact on the development.**

**Onsite shelter-in-place is only to be conducted as a last resort action only.**

**The facility has no building specifically constructed for onsite refuge, and if required, should be undertaken as far from the approaching bushfire as possible. This is expected to be on the eastern side of the facility, either within a building or in open space.**

If onsite shelter is being conducted within a building, the following actions should be implemented to improve building resilience:

- close all doors and windows
- turn off any evaporative air-conditioners or if possible, keep the water running and turn off the fan.
- fill sinks, bath and buckets with water for putting out any fires that may start inside or soaking towels, blankets or clothes
- soak towels and rugs in water and lay them along the inside of external doorways or block any other gaps for embers or smoke
- soak woollen blankets and keep them available for protection against radiant heat
- take down curtains and push furniture away from windows
- erect ladder next to roof space manhole to enable inspection for spot fires.
- obtain any firefighting equipment e.g. fire extinguishers, hose reels, garden hoses and determine area of coverage.
- Immediately before the fire arrives, wet down decks and landscaping close to the building
- where possible, turn on any garden reticulation for areas surrounding the building
- ensure occupants to get down low to limit exposure to smoke and drink plenty of water to avoid becoming dehydrated
- where safe to do so, nominate teams of no less than two persons to regularly inspect building exterior and roof cavity (wearing suitable protective clothing - at a minimum long sleeves, trousers and leather boots) to inspect building exterior for embers and fire ignitions, and extinguish where possible
- monitor the condition of the building/s including regular inspection of the inside of the building, including the roof space for sparks and embers, and extinguish where possible.

Stay inside while the fire front is passing. If the building catches fire and/or conditions inside become unbearable:

- leave through the door furthest from the approaching fire
- go to another unaffected building onsite or an area that has already burnt, or a large open space.



Once the fire has passed, you will need to regularly inspect the inside and outside of the building for several hours. Go outside and extinguish any fires on the building or in adjacent landscaping.

## **Appendix 1: Responsibilities for emergency roles**

### **Chief Fire Warden**

The Chief Fire Warden is responsible for:

- Reviewing the forecast FDR and ensuring the pre-emptive actions are undertaken based on the FDR.
- Evaluating the available information to assess the bushfire emergency
- Initiating, coordinating and supervising shutdown, offsite evacuation or onsite shelter-in-place actions.
- Supervising the emergency response from the command centre.
- Liaising with emergency authorities including advising when offsite evacuation or onsite shelter-in-place is underway
- Re-evaluating the emergency response actions during the emergency based on situational updates during the emergency.
- Supervising the recovery response and debriefing
- Documenting the circumstances of the emergency, processes and outcome.

### **Deputy Chief Fire Warden**

The Deputy Chief Fire Warden is responsible for:

- Taking direction from and carrying out tasks allocated by the Chief Fire Warden.
- Assume the Chief Fire Warden responsibilities if not available.
- Ensuring all staff, guests, residents and visitors have been alerted of the bushfire emergency
- Once initiated, ensuring the shutdown, offsite evacuation or onsite shelter-in-place actions are being conducted correctly
- Monitoring the bushfire emergency to provide situation reports of fire location or impact on buildings and potential danger to people.
- Monitoring the response actions (shutdown, evacuation or shelter-in-place) and location of people to provide situation reports on any potential danger to people.
- Maintaining communication with, and updating the Chief Fire Warden with situation reports.
- Assisting oversee and contribute to the recovery response, debriefing and reporting.

### **Fire Wardens**

Fire Wardens are responsible for:

- Taking direction from and carrying out tasks allocated by the Chief Fire Warden and/or Deputy Chief Fire Warden.
- Assisting in alerting all staff, guests, residents and visitors of the bushfire emergency
- Assisting the initiation and implementation of shutdown, offsite evacuation or onsite shelter-in-place actions as directed by the Chief Fire Warden and/or Deputy Chief Fire Warden.
- Monitoring the bushfire emergency to provide situation reports of fire location or impact on buildings and potential danger to people.
- Monitoring the response actions (shutdown, evacuation or shelter-in-place) and location of people to provide situation reports on any potential danger to people.



- Maintaining communication with, and updating the Chief Fire Warden, Deputy Chief Fire Warden and other relevant ERT members to provide situation reports.
- Contribute to the recovery response, debriefing and reporting.
- All permanent staff are to be trained in the role of Fire Warden.

### **First Aid Personnel**

First Aid Personnel, under the direction of the Chief Fire Warden, Deputy Chief Fire Warden or Fire Warden are responsible for:

- Evaluating the extent of any injuries.
- Administer first aid (only where safe to do so).
- Assess if injured personnel can be evacuated safely.

### **Traffic Warden**

The Traffic Warden is responsible for:

- In collaboration with the Chief Fire Warden, arranging and coordinating additional offsite transport to come to the development to assist with offsite evacuation, if safe to do so.
- Ensuring all onsite access control measures (gates, bollards etc) are unlocked and removed to enable full use of the onsite access network.
- Coordinating and supervising the placement of Fire Wardens to nominated locations to coordinate vehicle movement and traffic flow oversee the orderly evacuation to offsite location, if the decision is made to evacuate the development.
- Ensuring any Fire Wardens conducting traffic management have communication devices to enable them to provide and receive situation reports

### **Communications Officer**

The Communications Officer is responsible for:

- Taking direction from and carrying out tasks allocated by the Chief Fire Warden.
- Maintaining communication with, and updating the Chief Fire Warden and/or Deputy Chief Fire Warden with situation reports.
- Providing situation updates (bushfire characteristics, emergency response update) to the Traffic Warden to enable them to update the Fire Warden conducting traffic management.
- Receive traffic situation updates from the Traffic Warden and relay to the Chief Fire Warden and/or Deputy Chief Fire Warden
- Liaise with external adjacent accommodation and residential properties to provide situation updates and receive information to relay to the Chief Fire Warden and/or Deputy Chief Fire Warden
- Liaise with emergency agencies under the direction of the Chief Fire Warden
- Assist the Chief Fire Warden collect any available information about the bushfire emergency



## **Appendix 2: Bushfire Emergency Management Map**

# BUSHFIRE EMERGENCY MANAGEMENT MAP

Lot 300 Back Beach Road, Onslow

## Emergency Response Team Contacts

Chief Fire Warden: [Joe Bloggs \(0400 000 000\)](tel:0400000000)  
 Deputy Chief Fire Warden: [Joe Bloggs \(0400 000 000\)](tel:0400000000)  
 First Aid Personnel: [Joe Bloggs \(0400 000 000\)](tel:0400000000)

## Emergency Services Contacts

DFES/Ambulance/Police: 000  
 DFES: 13 DFES (13 3337)

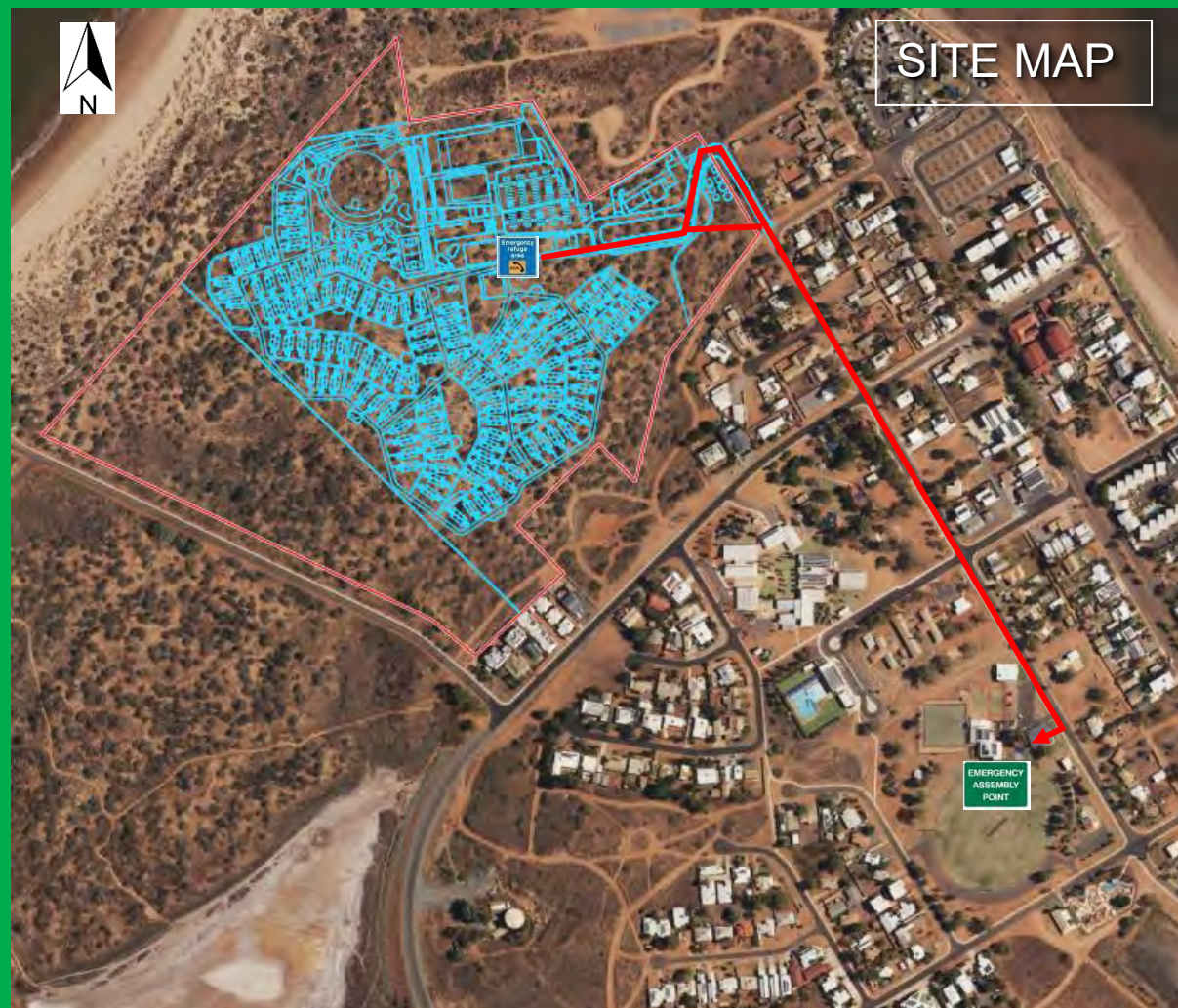
## Bushfire Information and Updates:

EmergencyWA [www.emergency.wa.gov.au](http://www.emergency.wa.gov.au)  
 DFES: 13 DFES (13 3337)  
 Radio Updates: 1188 AM (ABC Pilbara)  
 Fire Danger Ratings: [www.emergency.wa.gov.au](http://www.emergency.wa.gov.au)  
[www.bom.gov.au](http://www.bom.gov.au)

## Bushfire Awareness Actions (using forecast FDR)

FIRE DANGER RATING	ERT	Guests/Visitors
<b>CATASTROPHIC</b> 100+	<ul style="list-style-type: none"> <li>Rare event with potential for worst bushfire behaviour.</li> <li>Contact DFES</li> <li>Update guests and visitors</li> <li>Monitor for bushfires hourly</li> <li>Prepare all staff, systems procedures and the refuge for bushfire emergency</li> </ul>	<ul style="list-style-type: none"> <li>Know where onsite assembly point and offsite safer location is located</li> <li>Be prepared for rapid offsite evacuation</li> <li>Listen to ERT instructions</li> </ul>
<b>EXTREME</b> 75-99	<ul style="list-style-type: none"> <li>Update guests and visitors</li> <li>Monitor for bushfires (every few hours)</li> <li>Prepare all staff, systems procedures and the refuge for bushfire emergency</li> </ul>	
<b>SEVERE</b> 50-74	<ul style="list-style-type: none"> <li>Update guests and visitors</li> <li>Monitor for bushfires (every few hours)</li> <li>Prepare all staff, systems procedures and the refuge for bushfire emergency</li> </ul>	
<b>VERY HIGH</b> 32-49	<ul style="list-style-type: none"> <li>Monitor for bushfires (if conditions are unusually warm and windy)</li> </ul>	<ul style="list-style-type: none"> <li>Be aware of bushfires</li> <li>Listen to ERT instructions</li> </ul>
<b>MOD</b> 12-31		
<b>LOW-MODERATE</b> 0-11		

**ERT are to refer to facility Bushfire Emergency Management Plan for further detail on pre-emptive action**



## Bushfire Response Actions

- Offsite evacuation into Onslow townsite is considered the safest response action given the development is adjacent to a residential area.
- Evacuation will be safest when conducted early, prior to bushfire impact.
- This facility has an Emergency Response Team (ERT) who are trained to deal with bushfire emergencies. Listen to their instructions
- Take a copy of map with you if evacuating offsite
- Refer to response table on other side of sheet for further actions