

FLORA SITE SHEET

Project Name Lot 300 Back Beach Rd, Onslow
Site: Lot 300 Q5
Location MGA 50 304233 mE 7606346 mN

Described by: JW
Date: 20/07/2021
Type: Quadrat

Landform: Dune and dune swale
Slope: Moderate
Rock Type: N/A
Soil Type: Sand, Loam
Soil Colour: Orange



Vegetation: *Acacia coriacea* subsp. *coriacea* and *Trichodesma zeylanicum* tall to mid open shrubland over *Salsola australis* low sparse shrubland over *Euphorbia myrtilodes* and *Tribulus occidentalis* low open forbland with **Cenchrus ciliaris* low closed tussock grassland.

Condition: Good **Disturbance Type:** Vehicle tracks, Litter
Fire Age: > 5 years

SPECIES LIST

Taxon	Height (cm)	Cover (%)	Notes
<i>Acacia coriacea</i> subsp. <i>coriacea</i>	200	10	
<i>Trichodesma zeylanicum</i>	200	2	
<i>Aerva javanica</i>	100	2	
<i>Crotalaria cunninghamii</i> subsp. <i>sturtii</i>	100	2	
<i>Aristida holathera</i>	80	2	
<i>Salsola australis</i>	65	5	
<i>Tephrosia gardneri</i>	30	2	
<i>Nicotiana occidentalis</i> subsp. <i>occidentalis</i>	30	0.1	
<i>Euphorbia myrtilodes</i>	25	5	
<i>*Cenchrus ciliaris</i>	20	75	
<i>Tribulus occidentalis</i>	20	10	
<i>Indigofera colutea</i>	20	1	
<i>Rhagodia preissii</i> subsp. <i>obovata</i>	20	1	
<i>Ptilotus murrayi</i>	10	1	

FLORA SITE SHEET

Project Name Lot 300 Back Beach Rd, Onslow
Site: Lot 300 Q6
Location MGA 50 304075 mE 7606399 mN

Described by: JW
Date: 20/07/2021
Type: Quadrat

Landform: Dune and dune swale
Slope: Moderate
Rock Type: N/A
Soil Type: Sand, Loam
Soil Colour: Orange



Vegetation: *Acacia coriacea* subsp. *coriacea* tall open shrubland over *Trichodesma zeylanicum* and *Salsola australis* mid open shrubland over *Spinifex longifolius* tall sparse tussock grassland over *Triodia epactia* low sparse hummock grassland with *Euphorbia myrtooides* low sparse forbland with **Cenchrus ciliaris* low closed tussock grassland.

Condition: Good **Disturbance Type:** Weeds
Fire Age: > 5 years

SPECIES LIST

Taxon	Height (cm)	Cover (%)	Notes
<i>Acacia coriacea</i> subsp. <i>coriacea</i>	500	20	
<i>Trichodesma zeylanicum</i>	130	2	
<i>Salsola australis</i>	110	15	
<i>Spinifex longifolius</i>	110	7	
<i>Eulalia aurea</i>	90	1	
<i>Aerva javanica</i>	75	1	
<i>Crotalaria cunninghamii</i> subsp. <i>sturtii</i>	50	1	
<i>Rhagodia preissii</i> subsp. <i>obovata</i>	50	1	
<i>Triodia epactia</i>	45	5	
<i>Ptilotus polystachyus</i>	45	1	
<i>Euphorbia myrtooides</i>	35	5	
* <i>Cenchrus ciliaris</i>	30	40	
<i>Tephrosia gardneri</i>	25	1	
<i>Tribulus occidentalis</i>	20	2	
<i>Ptilotus murrayi</i>	20	1	
<i>Threlkeldia diffusa</i>	5	1	

Appendix F Fauna Habitat Assessments

Lot 300 HA1

Project:	4733 Lot 300 Back Beach Rd, Onslow		
Date	20/07/2021	Personnel	PW
Easting	303901	Northing	7606104
Landform	Landform and soil		
Soil type	Dune swale	Rock type/s	None
Soil colour	Sandy loam	Surface stone cover	
	Orange	Surface stone size classes present	
Quality	Condition		
Fire History	Disturbed	Habitat Features	
Disturbance	Burnt (1-5 years)	Water Source	Absent
Introduced fauna	Litter, Vehicle tracks, Weeds	Microhabitats	Leaf litter, Woody debris
	Cat	Vegetation	
Upper stratum	Low (<10 m)	Isolated trees (<0.25%)	
Mid stratum	Tall (>2m), Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	
Ground stratum	Low (>0.5 m)	Closed tussock grassland (>80%)	
		<i>Eucalyptus</i> sp., * <i>Washingtonia filifera</i> , * <i>Tamarix aphylla</i>	
		<i>Acacia coriacea</i> subsp. <i>coriacea</i> , <i>Trichodesma zeylanicum</i>	
		* <i>Cenchrus ciliaris</i>	



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1502

Lot 300 HA2

Project:	4733 Lot 300 Back Beach Rd, Onslow		
Date	20/07/2021	Personnel	PW
Easting	304112	Northing	7606043
Landform	Landform and soil		
Soil type	Dune slope	Rock type/s	None
Soil colour	Sandy loam	Surface stone cover	
	Orange	Surface stone size classes present	
Quality	Condition		
Fire History	Disturbed	Habitat Features	
Disturbance	Burnt (1-5 years)	Water Source	Absent
Introduced fauna	Weeds	Microhabitats	Leaf litter, Peeling bark, Woody debris
	Cat	Vegetation	
Upper stratum	Absent		
Mid stratum	Tall (>2m), Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%)	
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%)	
		<i>Acacia coriacea</i> subsp. <i>coriacea</i>	
		* <i>Cenchrus ciliaris</i>	



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Lot 300 HA3

Project:	4733 Lot 300 Back Beach Rd, Onslow		
Date	20/07/2021	Personnel	PW
Easting	304070	Northing	7606193
Landform	Landform and soil		
Soil type	Dune swale	Rock type/s	None
Soil colour	Sandy loam	Surface stone cover	Rock
	Orange	Surface stone size classes present	
Quality	Condition		
Fire History	Disturbed	Habitat Features	
Disturbance	Burnt (1-5 years)	Water Source	Absent
Introduced fauna	Vehicle tracks, Weeds	Microhabitats	Leaf litter, Woody debris
	Cat	Vegetation	
Upper stratum	Absent		
Mid stratum	Tall (>2m), Mid (1-2 m) Sparse shrubland and/or heathland (0.25-20%) <i>Acacia coriacea</i> subsp. <i>coriacea</i> , <i>Cullen martinii</i>		
Ground stratum	Mid (0.5-1 m) Tussock grassland (50-80%) * <i>Cenchrus ciliaris</i>		

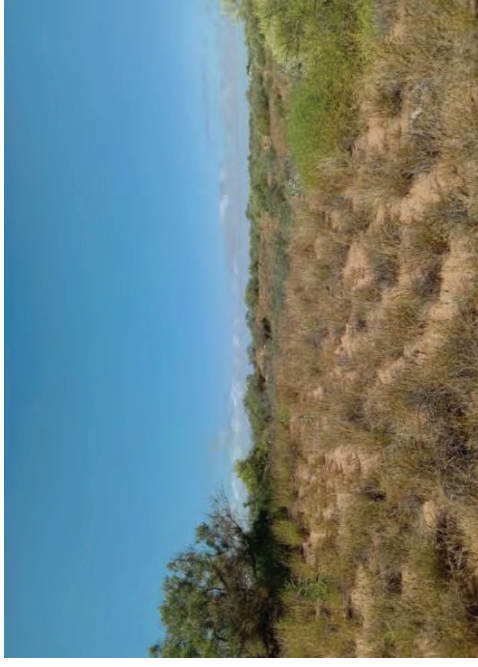


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1503

Lot 300 HA4

Project:	4733 Lot 300 Back Beach Rd, Onslow		
Date	20/07/2021	Personnel	PW
Easting	304015	Northing	7606353
Landform	Landform and soil		
Soil type	Dune crest	Rock type/s	None
Soil colour	Sandy loam	Surface stone cover	
	Orange	Surface stone size classes present	
Quality	Condition		
Fire History	Disturbed	Habitat Features	
Disturbance	Burnt (1-5 years)	Water Source	Absent
Introduced fauna	Litter, Weeds	Microhabitats	Leaf litter, Woody debris
	Cat	Vegetation	
Upper stratum	Absent		
Mid stratum	Tall (>2m), Mid (1-2 m) Sparse shrubland and/or heathland (0.25-20%) <i>Acacia coriacea</i> subsp. <i>coriacea</i> , <i>Salsola australis</i>		
Ground stratum	Mid (0.5-1 m) Tussock grassland (50-80%) * <i>Cenchrus ciliaris</i>		



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Lot 300 HA5

Project:	4733 Lot 300 Back Beach Rd, Onslow		
Date	20/07/2021	Personnel	PW
Easting	304211	Northing	7606335
Landform and soil			
Landform	Dune slope	Rock type/s	None
Soil type	Sandy loam	Surface stone cover	
Soil colour	Orange	Surface stone size classes present	
Condition			
Quality	Disturbed	Habitat Features	
Fire History	Burnt (1-5 years)	Water Source	Absent
Disturbance	Litter, Vehicle tracks, Weeds	Microhabitats	Leaf litter, Woody debris
Introduced fauna	Cat	Vegetation	
Upper stratum	Absent		
Mid stratum	Tall (>2 m)	Sparse shrubland and/or heathland (0.25-20%) <i>Acacia coriacea subsp. coriacea</i>	
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%) <i>*Cenchrus ciliaris</i>	



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1504

Lot 300 HA6

Project:	4733 Lot 300 Back Beach Rd, Onslow		
Date	20/07/2021	Personnel	PW
Easting	304261	Northing	7606207
Landform and soil			
Landform	Dune slope	Rock type/s	None
Soil type	Sandy loam	Surface stone cover	
Soil colour	Orange	Surface stone size classes present	
Condition			
Quality	Disturbed	Habitat Features	
Fire History	Burnt (1-5 years)	Water Source	Absent
Disturbance	Litter, Weeds	Microhabitats	Leaf litter, Peeling bark, Woody debris
Introduced fauna	Cat	Vegetation	
Upper stratum	Absent		
Mid stratum	Tall (>2m), Mid (1-2 m)	Sparse shrubland and/or heathland (0.25-20%) <i>Acacia coriacea subsp. coriacea, Salsola australis</i>	
Ground stratum	Mid (0.5-1 m)	Open tussock grassland (20-50%) <i>*Cenchrus ciliaris</i>	



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1505

Appendix C
Onslow Township Resort Bushfire
Management Plan



Onslow Township Village Bushfire Management Plan

Date: 19 November 2021

Prepared For: Mineral Resources

Linfire Ref: 20210707149360ENV-BMP-001_2

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)

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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 mitigation strategies contained in this Bushfire Management Plan (BMP) 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 BMP, or a new BMP, 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 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
 - Entrance Gatehouse
 - Accommodation Pods
 - Field Store with Laundries
 - Restaurant
 - Tavern
 - Administration building
 - Training and inductions 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
 - 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 approximately 20.45 ha within 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	<ul style="list-style-type: none"> Proposed Development Project Area 100m Assessment Area 150m Assessment Area Cadastral 	Scale 1: 4,000		<p>Linfire Consultancy A PO Box 4031 Woodlands WA 6018 M +61 (0)833 323 511 E linfire@linfire.com.au</p>	Mineral Resources	Onslow Township Village	Figure 2 : Site Overview	<p>© 2021. GIS Pro makes no claims, no representations, and no warranties, express or implied, as to the accuracy or reliability of the data or the accuracy of the GIS data and GIS data products, including the implied validity of any uses of such data. Street Map Sources: Map data © 2021 Google, Hybrid Imagery, Imagery © Google Imagery, CNES, Airbus, Maxar, Planet, GeoEye, © 2021 Google, OSN Streetmap, © OpenStreetMap contributors, Date Printed: 25-08-2021.</p>
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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 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. 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 Site Photo Proposed Development Project Area 100m Assessment Area 150m Assessment Area Asset Protection Zone 11m 15m 17m Vegetation Plot Classified Vegetation A. Forest C. Shrubland D. Scrub Excluded Clause 2.2.3.2(a&f) Modified to non vegetated and low threat	Scale 1: 4,000 0 60 120 180 Metres	 Linfire Consultancy A PO Box 4031 Woodlands WA 6018 M +61 (0)833 328 511 E linfire@linfire.com.au	Mineral Resources
	Onslow Township Village		Figure 3: Post-development vegetation classification 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°	34 m	BAL–19
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
Entrance Gatehouse	BAL-FZ	Interfacing APZs, site landscaping* and extension of Third Ave**	BAL-19
Accommodation Pods	BAL-FZ	15m – 17 m wide APZs to the vegetation interface and site landscaping*	BAL-29, BAL-19, BAL12.5 and BAL-Low
Field Store with Laundries	BAL-FZ	Interfacing APZs 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	Interfacing APZs and site landscaping*	BAL-12.5
Training and inductions building	BAL-FZ	Interfacing APZs and site landscaping*	BAL-12.5
Creche and Communications building	BAL-FZ	Interfacing APZs and site landscaping*	BAL-12.5
Medical and Wellness building	BAL-FZ	Interfacing APZs 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

Building / element	Initial BAL	APZ	Revised BAL
Storage Shed	BAL-FZ	15m wide APZ to the vegetation interface and site landscaping*	BAL-19
Fire pump room	BAL-FZ	Interfacing APZs, site landscaping* and extension of Third Ave**	BAL-12.5
Water pump room	BAL-FZ	Interfacing APZs, site landscaping* and extension of Third Ave**	BAL-12.5

* The interior of the development to be modified to non-vegetated elements and low threat landscaping as depicted on Figure 3.

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

Legend Proposed Development Project Area 100m Assessment Area 150m Assessment Area Asset Protection Zone 11m 15m 17m 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	 Linfire Consultancy A PO Box 4031 Woodlands WA 6018 M +61 (0)833 328 511 E linfire@linfire.com.au	Mineral Resources
	Onslow Township Village		Figure 4: BAL Contour Plan
<small>© 2021. GIS Pro makes no claims, no representations, and no warranties, express or implied, as to the accuracy or reliability of the data or the accuracy of the GIS data and GIS data products, including the implied validity of any uses of such data. Street Map Sources: Map data © 2021 Google, Hybrid Imagery, Imagery © Google Imagery, CNES, Airbus, GeoEye, DigitalGlobe, GeoEye, IGN, AerGRID, GeoEye, © OpenStreetMap contributors, Data Provider: 19 11 2021.</small>			



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.	Performance Principle P1 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.	A1.1 Development location 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.	Acceptable Solution	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"> Compliance of the Performance Principle and Intent of Element 1 is achieved through compliance with Acceptable Solution A1.1
Element 2: Siting and design of development	To ensure that the siting and design of development minimises the level of bushfire impact.	Performance Principle P2 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 defensible 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.	A2.1 Asset Protection Zone (APZ) Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements: Width: 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 ² (BAL-29) in all circumstances. Location: 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) Management: the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones' (see Guidelines Schedule 1).	Acceptable Solution	On completion of development, most of project area (other than the Cultural Significant Area and small plots along the south-western 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 17 m wide to ensure buildings remain in BAL-29 or lower. 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"> Compliance of the Performance Principle and Intent of Element 2 is achieved through compliance with Acceptable Solution A2.1
Element 3: Vehicular access	To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.	Performance Principle P3 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.	A3.1 Two access routes 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.	Acceptable Solution	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"> 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 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 	<ul style="list-style-type: none"> 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

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"> 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. 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. <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"> Continue south along the existing part of Third Avenue, where travel can be in several directions at the intersection with Simpson Street Travel east on First Street to Second Avenue and south to Simpson Street, where travel can be in several directions <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>		
			<p>A3.2. Public road A public road is to meet the requirements in Table 2, Column 1.</p>	Not applicable			
			<p>A3.3. Cul-de-sac (including a dead-end-road) 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).</p>	Acceptable Solution			
			<p>A3.4. Battle-axe 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).</p>	Not applicable			

Bushfire protection criteria		Linfire response				
Element	Intent	Performance Principle	Acceptable solutions	Method of compliance	Proposed bushfire management measures	Compliance Comment
			<p>A3.5 Private driveway longer than 50 m A private driveway is to meet detailed requirements (refer to the Guidelines for detailed private driveway requirements).</p> <p>A3.6 Emergency access way 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).</p> <p>A3.7 Fire service access routes (perimeter roads) 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).</p> <p>A3.8 Firebreak width 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.</p>	<p>Acceptable Solution</p>	<p>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, passing bays if driveways are longer than 200 m and less than 6 m wide. It is noted that the extent of the internal driveway is relatively limited, primarily providing access to the restaurant, ancillary buildings, and the onsite carpark. Notwithstanding, given the use will include delivery and garbage trucks and buses, the proposed driveway width is generally at least 6 m wide, rather than the 4 m permitted for private driveways, which would comply with the public road specifications. The proposed development does not require Emergency Access Ways (EAWs) to provide through access to a public road.</p>	
			<p>Not applicable</p>	<p>Not applicable</p>	<p>The proposed development does not require fire service access routes (FSARs) to achieve access within and around the perimeter of the project area.</p>	
			<p>Acceptable Solution</p>	<p>Acceptable Solution</p>	<p>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 township that exceed 2000 m². 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.</p>	

Bushfire protection criteria		Linfire response				
Element	Intent	Performance Principle	Acceptable solutions	Method of compliance		
Element 4: Water	To ensure that water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire.	<p><u>Performance Principle P4</u> The subdivision, development or land use is provided with a permanent and secure water supply that is sufficient for firefighting purposes.</p>	<p><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 relevant water supply authority and Department of Fire and Emergency Services.</p>	<p>Acceptable Solution 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 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.</p>	<p>Proposed bushfire management measures 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.</p>	<p>Compliance Comment • Compliance of the Performance Principle and Intent of Element 4 is achieved through compliance with Acceptable Solutions A4.1 and A4.2</p>
			<p><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).</p>	<p>Acceptable Solution 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.</p>		
		<p><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 m² need a dedicated static water supply on the lot that has the effective capacity of 10,000 L.</p>		<p>Not applicable The proposed development is being addressed in accordance with A4.1 and A4.2</p>		



Plate 2: Designated bushfire prone area surrounding Onslow

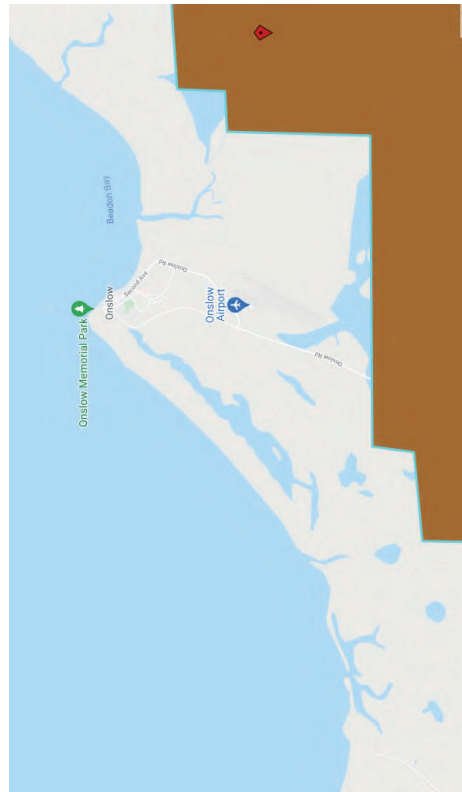


Plate 3: Firewatch and DBCA fire history

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 m². 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.

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.
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.
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

Implementation/management table	
	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.
<i>Local Government – ongoing</i>	
<i>No.</i>	<i>Implementation action</i>
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

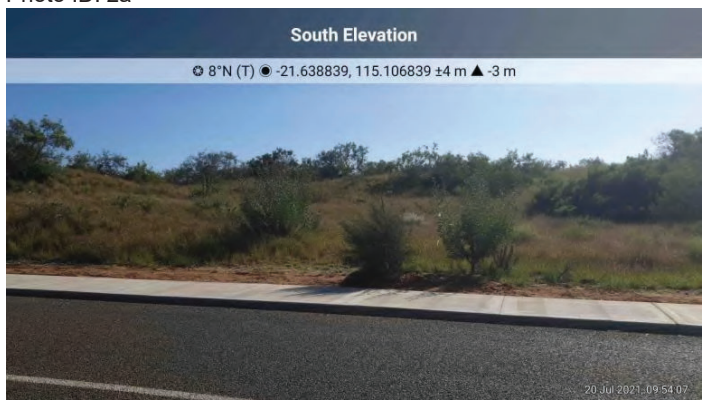


Photo ID: 2b



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

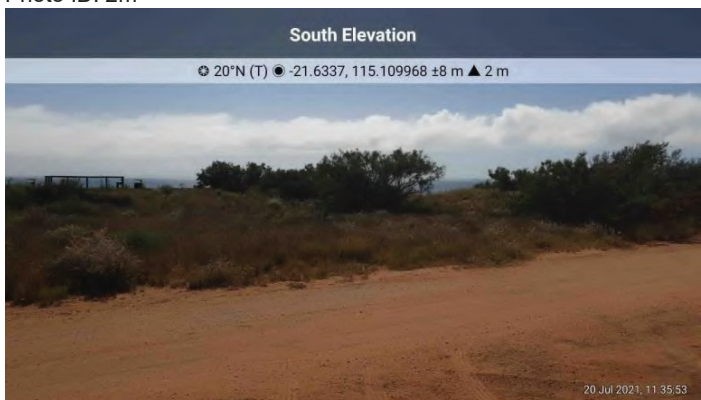


Photo ID: 2n



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

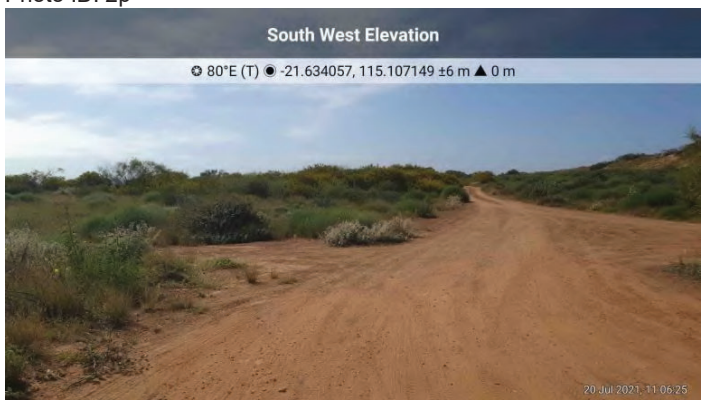


Photo ID: 2q

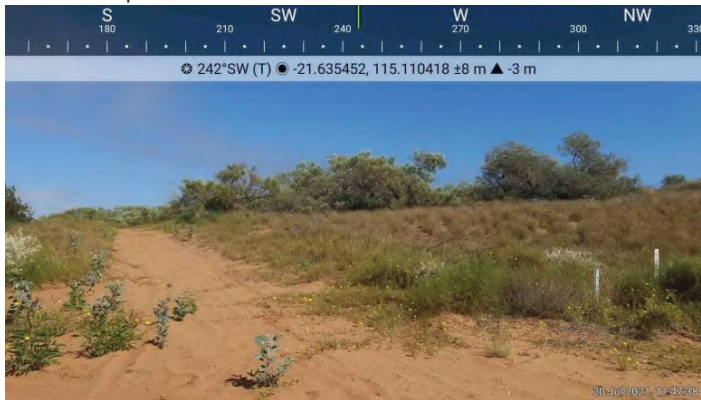


Photo ID: 2r

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

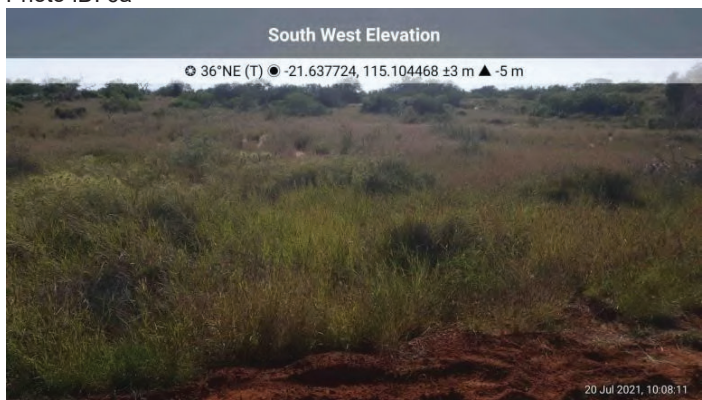


Photo ID: 6b



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



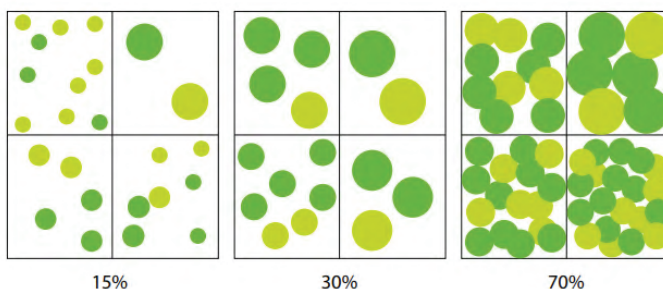
Photo ID: 10h

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)

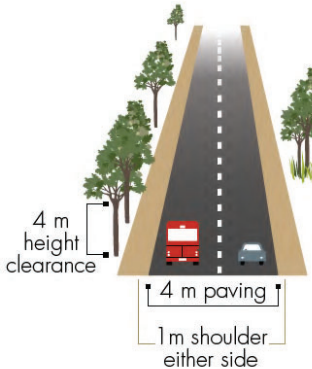
Schedule 1: Standards for Asset Protection Zones

- **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.

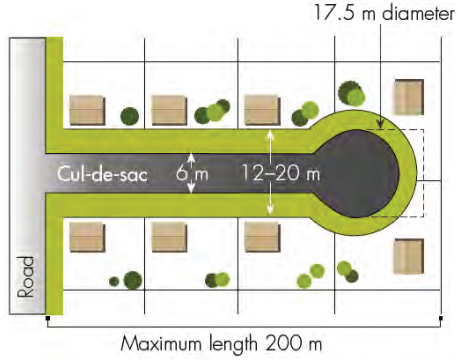


- **Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5 m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 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.

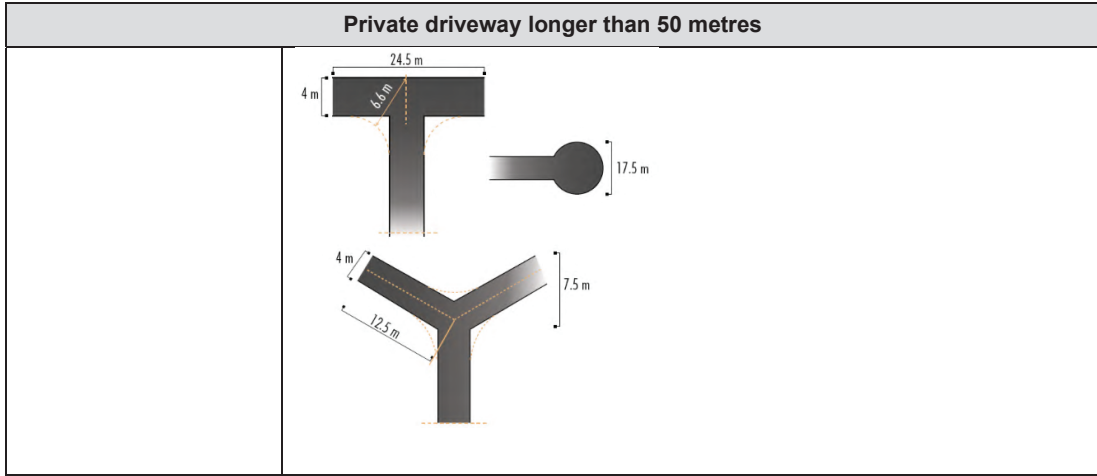
Appendix 3: Vehicular access technical standards of the Guidelines

Public roads	
Acceptable solution A3.2	A public road is to meet the requirements in Table 1, Column 1.
Explanatory note E3.2	<p>Trafficable surface:</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>Public road design:</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 road. It shows a central paved area that is 4 meters wide. On either side of this paved area is a shoulder that is 1 meter wide. The total width of the road, including the shoulders, is 6 meters. Above the road, there are trees and a dashed line indicating a 4-meter height clearance. A red fire truck and a blue car are shown driving on the road.</p>

Cul-de-sac (including a dead-end road)	
Acceptable solution A3.3	<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"> • Requirements in Table 1, Column 2 • Maximum length: 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) • Turn-around area requirements, including a minimum 17.5 metre diameter head.
Explanatory note E3.3	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

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	
Acceptable solution A3.5	<p>A private driveway is to meet all of the following requirements:</p> <ul style="list-style-type: none"> • Requirements in Table 1, Column 3 • Required where a house site is more than 50 metres from a public road • Passing bays: 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) • Turn-around areas: 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 • Any bridges or culverts: are able to support a minimum weight capacity of 15 tonnes • All-weather surface (i.e. compacted gravel, limestone or sealed).
Explanatory note E3.5	<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>



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"> • Volume: minimum 50,000 litres per tank • Ratio of tanks to lots: minimum one tank per 25 lots (or part thereof) • Tank location: 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 • Hardstand and turn-around areas: 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 • Water tanks and associated facilities: are vested in the relevant local government.
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



www.ashburton.wa.gov.au

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.

(4) 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.
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.
- 3.2

- (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

10. ADDITIONAL WORKS

- (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.
- 10.1 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 Vacant Land



Compliant Mineral Earth Break



Compliant Residential Property



Non-Compliant Residential Property

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.

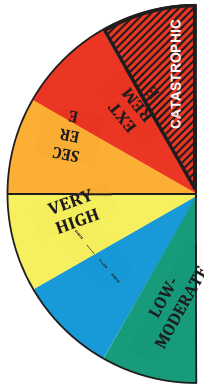
Trafficable means able to be driven around, unhindered, in a standard four-wheel drive vehicle.

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*).

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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/#fdrr

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.

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.

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

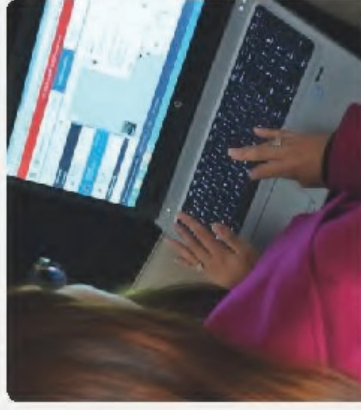
You are in danger and need to take immediate action to survive. There is a threat to lives or homes.

ALL CLEAR

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

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.



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

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
or contact DFES Community Engagement – 9395 9816

This information is provided to you as a service by the Department of Fire & Emergency Services (DFES). This information is provided to you as a service and is not intended to be used as a substitute for professional advice. It is provided as a guide only and does not constitute an offer of insurance or any other financial product. It is provided as a guide only and does not constitute an offer of insurance or any other financial product. It is provided as a guide only and does not constitute an offer of insurance or any other financial product.



Government of Western Australia
Department of Fire & Emergency Services

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.

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.
- ↑ 581 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
- 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 gascutting.

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?

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

Tom Price Volunteer Fire & Rescue Service

Lot 30 Central Rd, Tom Price
 Ph: 0458 813 101
 Email: tpvfrs@gmail.com

Paraburdoo Volunteer Fire & Rescue Service

Lot 630 McRae Ave, Paraburdoo
 Ph: 0413 014 052
 Email: paravfrs.captain@gmail.com

Pannawonica Volunteer Fire & Rescue Service

Pannawonica Rd, Pannawonica
 Ph: 0488 427 997
 Email: Pannawonica.vfrs@hotmail.com

Onslow Volunteer Fire & Emergency Services Unit

Cnr McGrath & Hooley Ave, Onslow
 Ph: 0409 091 954
 Email: onslowvesu@bigpond.com.au

Attachment 13.2G - DAP/21/02078 -DA 21-67 | L300 Back Beach Road, Onslow



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



Appendix D
Onslow Township Resort Bushfire
Emergency Management Plan



Onslow Township Village Bushfire Emergency Management Plan

Date: 19 November 2021

Prepared For: Mineral Resources

Linfire Ref: 20210707149360ENV-BEMP-001_2

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)

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

Address	Lot 300 Back Beach Road, Onslow
Onsite Contact person	TBC prior to occupation
Position / role of Contact Person	TBC prior to occupation
Phone number (Before hours)	TBC prior to occupation
Phone number (After hours)	TBC prior to occupation
Type of facility	Short-term accommodation; public resort
Number of buildings	TBC prior to occupation
Number of employees	<ul style="list-style-type: none"> TBC prior to occupation approximately 50 onsite staff consisting of full-time and part-time employees
Maximum number of occupants	<ul style="list-style-type: none"> TBC prior to occupation approximately 300 guests staying in the overnight accommodation approximately 50 public visitors Total occupant load, including staff of up to 400 people
Number of occupants with support needs	Yes. Guest and visitors will be a representative of the general population
Description of support needs	Support needs could include a range of physical or mental impairments that are found throughout the general population. 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.

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