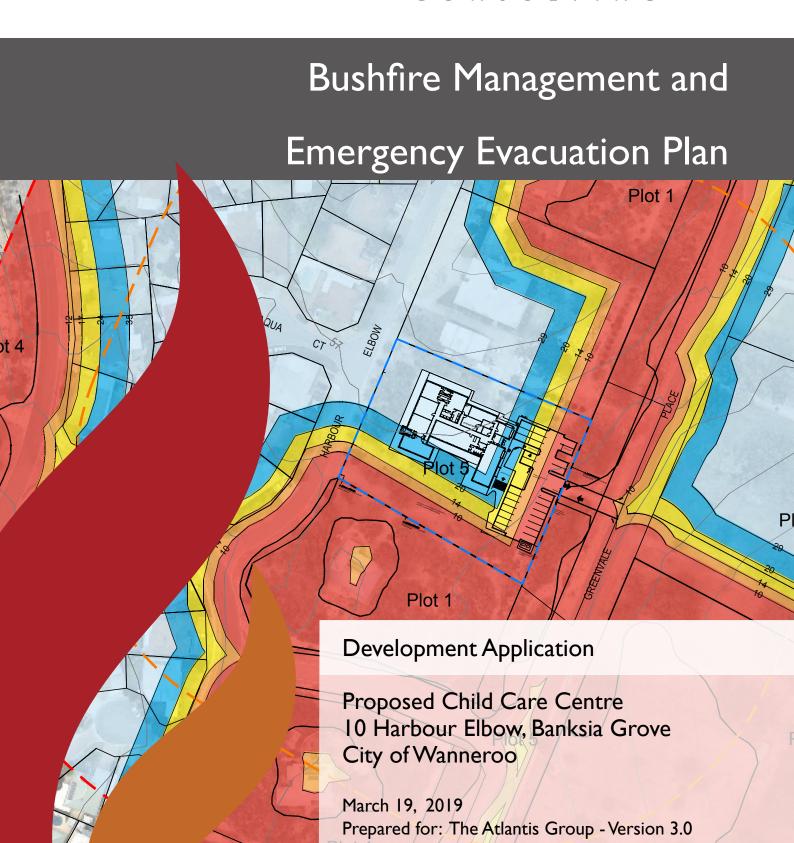


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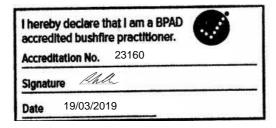
Prepared for: The Atlantis Group

Project Name: Development Application: Childcare Facility

Address: 10 Harbour Elbow, Banksia Grove, Western Australia

Prepared by: Rohan Carboon (Level 3 - BPAD 23160)

Bushfire Safety Consulting Pty Ltd





Document Control

Bushfire Management & Emergency Evacuation Plan					
REPORT PURPOSE AUTHOR/REVIEWER AND DATE S VERSION ACCREDITATION DETAILS					
V1	Client Review	Rohan Carboon (BPAD Level 3 23160) Reviewed Dr Ken Strahan (BPAD	28/5/2018		
V2	Submission	Rohan Carboon (BPAD Level 3 23160)	18/9/2018		
V3 Updated to new proposal for final submission		Rohan Carboon (BPAD Level 3 23160)	19/03/2019		

Front cover photo: Proposed Development.

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EXECUTIVE SUMMARY

This Bushfire Management and Emergency Evacuation Plan (BMEEP) has been prepared to support a Development Application for the 5003m² site at 10 Harbour Elbow, Banksia Grove. The proposed development is for a child care centre. The building to be erected will be 836.83m² in size and will comprise a waiting room, office, meeting and staff room at the front of the building; two (2) kindy rooms (south side); a nursey and one babies room (north side); two (2) toddlers rooms (west side); and a kitchen, art room and small laundry.

It is anticipated that the centre will employ up to 17 staff when it is operating at full capacity and accommodate up to 92 children. Its hours of operation will be 6.30am to 6pm Monday to Friday, every week, excluding public holidays.

There are bushfire threats to the site from the Banksia Woodland vegetation south of the site south and in the strip of Water Corporation land immediately east of the site. Managed properties occur west, north and north east of Greenvale Road.

The proposed child care development complies with the definition of "vulnerable land use" in the *State Planning Policy 3.7: Planning in Bushfire Prone Areas (SPP 3.7)*, policy clause 6.6 and therefore requires a Bushfire Management Plan which includes an emergency evacuation plan for proposed occupants.

In the event of a bushfire emergency, fire services require ready access to the site and to an adequate water supply. There is good vehicular access to the site via Greenvale Place and a reticulated water supply is available to the site from Harbor Elbow via a gate. The facility building is exposed to BAL-19 after the Asset Protection Zone is established within the site.

It is expected that the implementation of this BMEEP will reduce the threat to staff, children, the public and fire fighters in the area addressed by this BMEEP. The proposal complies with the State Planning Policy No. 3.7: Planning in Bushfire Prone Areas (SPP 3.7) and the Guidelines for Planning in Bushfire Prone Areas (WAPC 2017 V1.3).

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Appendix 5: Bushfire Response Landscape Concept

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1 PROPOSAL DETAILS

The development application is for a child care centre on the 5003m2 site at 10 Harbour Elbow, Banksia Grove.

It is anticipated that the centre will employ up to 17 staff when it is operating at full capacity and accommodate up to 92 children. Its hours of operation will be 6.30am to 6pm Monday to Friday, every week, excluding public holidays.

Access for staff, visitors and fire services personnel will be off Greenvale Place. One driveway is proposed to serve the land, positioned approximately 90 metres north of Malachite Fairway. The application includes plans to establish a car park containing 26 bays, to be setback 1.5 metres from the Greenvale Place boundary (noting this is separated from Greenvale Place by Water Corporation land across which an access easement is to be granted). Play spaces are to be established on either side of the planned building, along with additional tree plantings and landscaping, including screen plantings on the north and south side boundaries. The Development Application plan is found in Figure 1.

The site is located on the edge of residential areas to the north and west (Figure 2). The properties east of Greenvale Place are intensively managed horse properties with irrigated green grass and no fire threat. Remnant vegetation is concentrated in the lot immediately south of the site and in the strip of Water Corporation land immediately to the east of the site.

1.1 Building Design and Built Form

The building to be erected will be 836.83m² in size and will comprise a waiting room, office, meeting and staff room at the front of the building; two (2) kindy rooms (south side); a nursey and two (2) babies room (north side); two (2) toddlers rooms (north and west side); and a kitchen, art room and small laundry.

There are doors to the outdoor play spaces on all four sides of the building.

1.2 Purpose of Plan

This BMEEP has been prepared to support the Development Application and addresses existing and future bushfire threats by providing responses to the performance criteria in the *Guidelines for Planning in Bushfire Prone Areas* V1.3 (WAPC et.al. 2017). If there is a bushfire within or near the site, implementing this BMEEP will reduce the threat to staff, children, property and emergency response personnel.



Figure 1: Development Application for 10 Harbour Elbow, Banksia Grove



Figure 2: Site location.

Policy and Guidelines

1.2 Application of SPP 3.7

The State Planning Policy No. 3.7: Planning in Bushfire Prone Areas (SPP 3.7) provides the foundation for land use planning to address bushfire risk management in Western Australia. It is used to inform and guide decision makers, referral agencies and land owners to help achieve acceptable bushfire protection outcomes.

The policy contains objectives and policy measures as well as reference to the bushfire protection criteria as outlined in the Guidelines for Planning in Bushfire Prone Areas (WAPC 2017 V1.3; the Guidelines). The policy applies to this Development Application because the site is located in a designated bushfire prone area on the WA map of Bushfire Prone Areas (Figure 3). The following policy measures will need to comply with SPP 3.7:

Table 1. Policy measures

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Policy Measure 6.2	The development application is located within a designated bushfire prone area and will have a Bushfire Hazard Level above low and a Bushfire Attack Level rating above BAL-LOW.
Policy Measure 6.4	Policy 6.2 applies, meaning the development proposal will be accompanied by a Bushfire Management Plan including the following: - BAL Contour Plan - BAL ratings - Identification of relevant issues; and - Demonstration of compliance with the Guidelines
Policy Measure 6.6	Policy Clause 6.6 applies to vulnerable land use applications. The development application proposes a childcare centre which is a vulnerable land use under the policy because the users of the facility are less able to respond in a bushfire emergency. The development application will therefore include a comprehensive emergency evacuation plan which specifically reflects the users' needs and circumstances.

1.3 Guidelines for Planning in Bushfire Prone Areas V1.3 (2017)

The Department of Planning have recently released the *Guidelines for Planning in Bushfire Prone Areas V1.3 (2017).* The requirements of this document are accommodated within this BMEEP. The *Guidelines for Planning in Bushfire Prone Areas V 1.3(2017)* is intended to inform and guide decision makers, referral authorities and proponents to achieve acceptable bushfire protection outcomes, including expectations at the different stages of planning.

1.4 Evacuation Planning Handbook 4 (Australian Government – Attorney-General's Department) Australian Emergency Management Institute

This document sets out the process to develop a bushfire evacuation plan for community facilities and residential areas. The document details issues such as decisions to evacuate, warnings, withdrawal, shelter and returning home.

1.5 Australian Standard (AS3745-2010) Planning for Emergencies in Facilities

The objective of the standard is to enhance the safety of people in facilities by providing a framework for emergency planning utilising the built facility as appropriate.

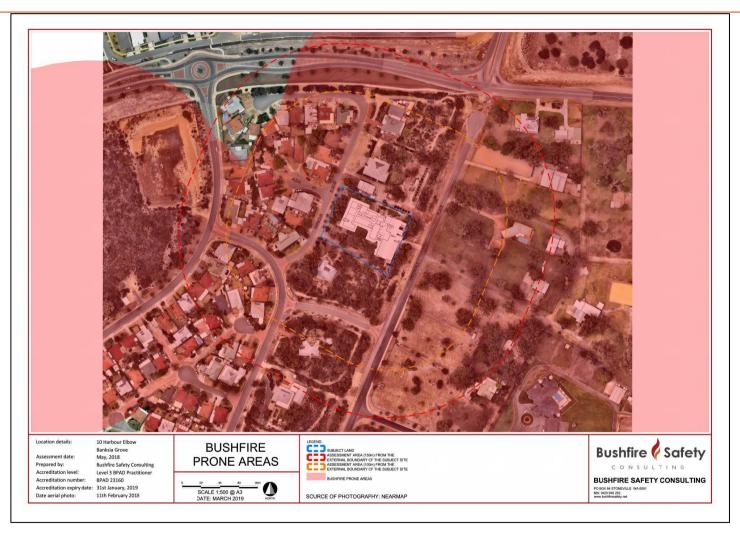


Figure 3: The development site is in the declared Bushfire Prone Area of WA

2 ENVIRONMENTAL CONSIDERATIONS

2.1 Native Vegetation – modification and clearing

The development site is in an established area and development plans include playgrounds and garden landscaping at the site. Extensive consultation has occurred with the Landscape Architect on this project and a detailed site analysis has been undertaken to determine what trees need to be removed and how fuel loads and fuel structure will be established and managed. The larger trees identified for removal are outlined in the Bushfire Response Tree Removal Plan (Appendix 4). All trees for removal have been tagged on-site and the focus on the recommendations has been to remove trees that provide canopy linkages (ie ladder fuels) and middle-storey vegetation to create horizontal and vertical spaces between tree canopies. The retained trees or clumps of retained trees are isolated from one another with 5 metre canopy spacings and middle-storey vegetation removed. All retained trees will be low pruned 2 metres from ground level as well as pruned back from the roof so there is no overhang and 5 metres canopy spacings are achieved.

The Bushfire Response Landscape Plan (Appendix 5) landscape shows understorey detail and the large areas of irrigated turf and formal play-spaces as well as vegetable gardens and transplanted fruit trees. All middle-storey vegetation under tree canopies is removed and the focus on all new plantings is on ground covers. There are no ground covers within 3 metres of the building, all of this space is concrete paths or irrigated turf, play-space or hard surfaces.

The Landscape Plan responds to the APZ standards found in Appendix 1 with modification of trees, shrubs and ground covers to achieve fuel structure and fuel load standards.

All environmental and bushfire considerations have been responded to in the Bushfire Response Landscape Concept.

3 BUSHFIRE ASSESSMENT RESULTS

Bushfires are common in the City of Wanneroo and local brigades respond to numerous bushfires in the district annually. Given the bushfire threat in the area this BMEEP plays a critical role in ensuring that the development of the land appropriately mitigates the risk from bushfire.

3.1 Assessment Inputs

The methodology used to assess the site is outlined in the *Guidelines for Planning in Bushfire Prone Areas V1.3 (2017).* The development proposal is known and a strategic level bushfire hazard assessment is not required. A BAL Contour map is provided in accordance with Appendix 3 of the guidelines. Assessing bushfire hazards at the site-specific level accounts for the predominant class of vegetation on the site and surrounding area for a minimum of 150 m, as shown in **Figure 4**.

3.1.1 Vegetation Classification

The site contains degraded remnant banksia woodland (Class B) vegetation which extends south onto the adjacent properties and in the Water Corporation corridor on the eastern interface. Intensively managed equine properties with small holding yards and irrigated grass vegetation occur east of Greenvale Place and a search of historical aerial images indicate this intensive management has been ongoing since 2007. There is some Class B degraded woodland east of Greenvale Place and intact woodland west of Viridian Drive. Some grassland vegetation occurs south east of the site, otherwise the surrounding residential areas north and west of the site and roadside verges are well managed and low threat.

The vegetation plots on and surrounding the site and within 150 metres of the site boundary are found in the plot descriptions below and in Figure 4.

Photo ID: 1

Plot Number: 1

Vegetation classification or exclusion

clause: Class B Woodland

Description/justification of

classification: Low Banksia and Casuarina Woodland with low shrubs.



Photo ID: 2

Plot Number: 1

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of
classification: Low Banksia and
Casuarina Woodland with low shrubs.



Photo ID: 3

Plot Number: 1

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of

classification: Strip of Low Banksia and

Casuarina Woodland with grass.



Photo ID: 4

Plot Number: 1

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of
classification: Low Banksia and
Casuarina Woodland with low shrubs.

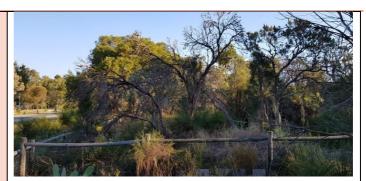


Photo ID: 5

Plot Number: 1

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of classification: Low Banksia and Casuarina Woodland with grass.



Photo ID: 6

Plot Number: 1

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of classification: Low Banksia and Casuarina Woodland with grass.



Photo ID: 7

Plot Number: 1

Vegetation classification or exclusion

Description/justification of classification: Low Banksia and Casuarina Woodland with grass.

clause: Woodland (Class B)



Photo ID: 8

Plot Number: 1

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of classification: Low Banksia and Casuarina Woodland with low shrubs.



Photo ID: 9

Plot Number: 1

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of classification: Low Banksia and Casuarina Woodland with low shrubs.



Photo ID: 10

Plot Number: 2

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of classification: Degraded Eucalypt Woodland with grass in paddock



Photo ID: 11

Plot Number: 2

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of classification: Degraded Eucalypt Woodland with grass in paddock



Photo ID: 12

Plot Number: 2

Vegetation classification or exclusion

clause: Woodland (Class B)

Description/justification of classification: Low Banksia and Casuarina Woodland with low shrubs



Photo ID: 13

Plot Number: 3

Vegetation classification or exclusion

clause: Grassland (Class G)Description/justification of classification: Pasture grasses in

paddock



Photo ID: 14
Plot Number: 3

Vegetation classification or exclusion

clause: Woodland (Class B)Description/justification of classification: Pasture grasses in

paddock

Photo ID: 15
Plot Number: 3

Vegetation classification or exclusion

clause: Woodland (Class B)Description/justification of

classification: Degraded Grasses near

cul-de-sac head.



Photo ID: 16
Plot Number: 4

Vegetation classification or exclusion

clause: Scrub (Class D)

Description/justification of

classification: Regenerating scrub in

drainage basin



Photo ID: 17
Plot Number: 5

Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2(f)

Description/justification of

classification: Mown irrigated lawn and

garden beds



Photo ID: 18
Plot Number: 5

Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2(f)

Description/justification of

classification: Woodchips in Neaves

Road reserve



Photo ID: 19

Plot Number: 5

Vegetation classification or exclusion

clause: Exclusion Clause 2.2.3.2(f)

Description/justification of classification: irrigated grazed

intensively managed equine property with small holding yards. History of intense management for the past 11

years.

Photo ID: 20

Plot Number: 5

Vegetation classification or exclusion

clause: Exclusion Clause 2.2.3.2(f)

Description/justification of

classification: irrigated grazed intensively managed equine property with small holding yards. History of

intense management for the past 11

years.

Photo ID: 21

Plot Number: 5

Vegetation classification or exclusion

clause: Exclusion Clause 2.2.3.2(e)

Description/justification of

classification: Unvegetated horse arena

Photo ID: 22
Plot Number: 5

Vegetation classification or exclusion

clause: Exclusion Clause 2.2.3.2(f)

Description/justification of

classification: Mown driveway entrance









3.1.2 Effective Slope

The landscape slopes gently down to the east from Harbour Elbow with a maximum of downslope of 3 degrees. The landscape slopes downslope west of Viridian Drive in Viridian Park. The effective slope under areas of classified vegetation is found in Table 2.

The landscape directly north and south of the site is flat or upslope. The contour lines shown are shown in Figure 4 and were field checked using a clinometer and Forestry Produring the site visit.

Table 2. Summary of vegetation type and effective slope

Vegetation Area/ Plot	Applied Vegetation Classification	Effective Slope under the Classified Vegetation (degrees)
1	Class B Woodland	Flat / upslope
2	Class B Woodland	Downslope 3°
3	Class G Grassland	Flat / upslope
4	Class D Scrub	Downslope 8°

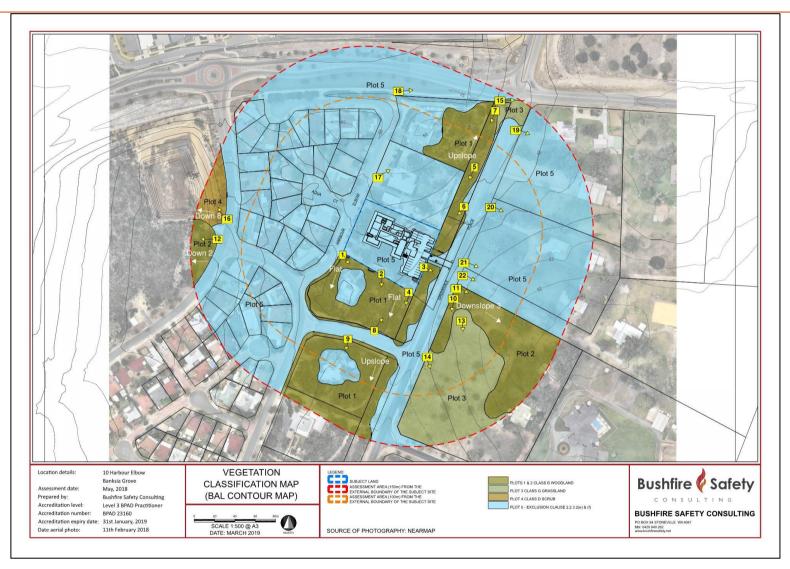


Figure 4: Vegetation Classification Map (for BAL Contour) showing photo points and effective slope.

3.2 Assessment Outputs

A BAL contour assessment was undertaken according to Appendix 3 of the Guidelines and the results are found in **Figure 5**.

A method 1 BAL Assessment was undertaken to determine the BAL contours impacting the proposed child care building (Table 3).

Table 3. Summary of assessment outputs

Applied Vegetation Classification	Plot No. & Effective slope & Site Slope	Separation distance to Classified Vegetation	Highest BAL Contour
Class B Woodland	Plot 1 - Flat	21.5 metres	BAL-19
Class B Woodland	Plot 2 – Downslope 3°	58 metres	BAL-12.5
Class G Grassland Plot 3 – Downslope 3°		74 metres	BAL- LOW
Class D Scrub	Plot 4 – Downslope 8°	138 metres	BAL-LOW

Figure 5 outlines the final developed scenario where the entire site remains fuel reduced and managed to Asset Protection Zone (APZ) standards. The proposed child care building is exposed to BAL-19 due to woodland vegetation located south and east of the site.

4 IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

There are no significant bushfire hazard issues. The site is in a developed area and Access routes and water supply are provided to acceptable levels.

The Class B Woodland vegetation south and immediately east in the site in the Water Corporation strip of land poses the greatest threat to the facility. There is a continuous strip of banksia woodland vegetation that is connected from the south through the vegetated lots so the southerly direction poses the greatest potential threat for an intense bushfire front.

There are well managed properties east of Greenvale Road, immediately to the north and west of Harbour Elbow. Ember attack from bushland areas 330 metres east of the site and 220 metres to the north east could ignite fuels closer to the facility and pose a threat.

The site could be impacted as outlined in the BAL contour plan. With the property managed to Asset Protection Zone standards, the facility is exposed to BAL-19.

Public access roads are extensive and border the western boundary and four access routes are available within 200m of the driveway on Greenvale Place. A water supply can be provided to acceptable levels.

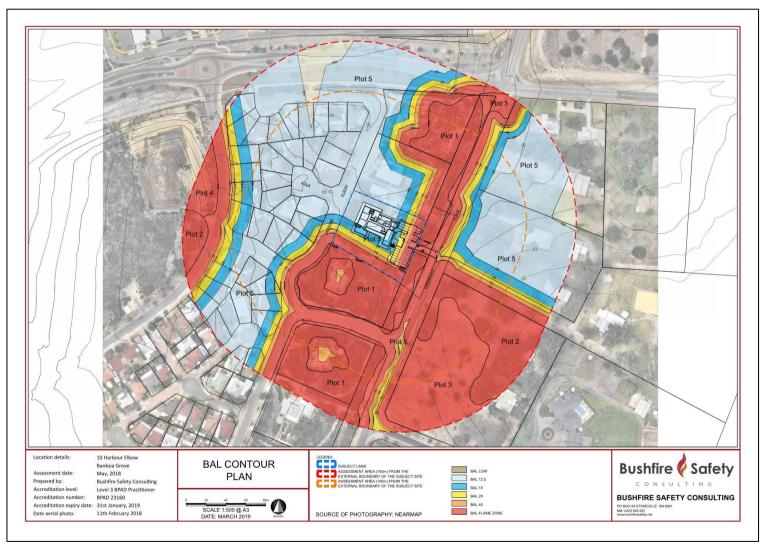


Figure 5: BAL Contour Plan showing predicted radiant heat flux levels into the site

5 ASSESSMENT AGAINST THE BUSHFIRE PROTECTION CRITERIA

This report adopts an acceptable solution and performance-based system of control for each bushfire protection criteria. This methodology is consistent with Appendix 4 of the *Guidelines for Planning in Bushfire Prone Areas, Version 1.3 (2017).* The management issues are:

- Location of the development
- Siting and Design of Development
- Vehicular access.
- Water

Acceptable solutions are proposed for all bushfire protection criteria.

Land use planning bushfire risk mitigation strategies are comprehensively detailed in the following sections by providing responses to the performance criteria that fulfil the intent of the bushfire hazard management issues outlined in the *Guidelines for Planning in Bushfire Prone Areas V1.3 (2017)*. The compliance details are outlined in Table 4 below.

Table 4: Compliance Table

Bushfire	Method of compliance	Proposed bushfire management strategies			
Protection Criteria	Acceptable Solutions				
Element 1: Location	A1.1 Development Location	The Method 1 BAL Assessment outlined in this report demonstrates that the development proposal can accommodate a childcare facility that is exposed to BAL-29 or lower. It is exposed to BAL-19.			
Element 2: siting and Design	A2.1 Asset Protection Zone (APZ)	The Asset Protection Zones (APZs) occupies the entire site and some tree removal and fuel load management is required to establish the standard. The Bushfire Response Tree Removal Plan (Appendix 4) has been developed to ensure canopy cover achieves APZ standards with isolated trees and some clumps of trees separated from one another with 5m canopy spaces. The Bushfire Response Landscape Concept responds to middle-storey and ground cover plantings and includes large areas of irrigated turf and non-vegetated play-spaces. Ongoing fuel load management will form an important fire risk mitigation strategy for the site managers to ensure standards are maintained. The building is exposed to BAL-19 as confirmed by the Method 1 BAL assessment. The APZ is established and managed in accordance with the requirements of Schedule 1 Standards for Asset Protection Zones outlined in Appendix 1.			
Element 3: Vehicular Access	A3.1 Two access routes	Access to and from the site is via Greenvale Place, a deadend road. However, 2 access routes are available 90m from the driveway with Greenvale Place where it meets Malachite Fairway, and four access routes are available within 200m of the driveway on Greenvale Place.			

	A3.2 Public Road	No public roads are proposed within the site however the
		access roads noted above all comply with public road standards.
	A3.3 Cul-de-sac	Greenvale Place is currently a dead end, however the site access to the facility is located 90 metres from Malacite Fairway. The cul-de-sac standard for surface condition, width and turn around head comply with standards.
	A3.4 Battle-axe	There are no battle axes proposed.
	A3.5 Private drive-way longer than 50 metres	There is no private drive-way longer than 50m, however the site does accommodate a 6m wide driveway and will additionally accommodate a compliant T-shaped turn around area. The private driveway standards that will be achieved are found in Appendix 2 - Vehicular Access Technical Requirements.
	A3.6 Emergency access way	There are no emergency access ways proposed
	A3.7 Fire Emergency access routes	There are no emergency access ways proposed
	A3.8 Firebreak width	Compliance with the current City of Wanneroo Firebreak requirement on a property greater than 2000sqm is for a firebreak no less than 3m wide by 3m high around the perimeter and the growth on the firebreak cannot exceed 20mm high. The entire site will comply with the firebreak notice as it will all be managed to APZ standards.
Element 4: Water	A4.1 Reticulated areas	Fire services require ready access to an adequate water supply during fire emergencies which is available via hydrants on Harbour Elbow. A 6m wide access gate is sited immediately east of the nearest hydrant into the site. The child care is setback only 20 metres from this gate. Fire appliances can park in the street and in the existing driveway which is being retained adjacent to the hydrant and have no restrictions accessing the site through the vehicular gate.
		As required by Regulation 18B (1) of the amended (19 Dec 2012) Building Regulations 2012, the application for the building permit for a Class 2-9 building is required to have plans and specifications of sufficient detail for assessment purposes deposited with DFES. This documentation will be provided to DFES for assessment.
	A4.2 Non-reticulated areas	Not Applicable
	A4.3 Individual lots within non-reticulated areas (for 1 additional lot only)	Not Applicable

5.1 Additional Management Strategies

The site will be developed in a single stage and the APZ standards within the site will be established and maintained by the owners/managers.

There are no designated Community Fire Refuges in the City of Wanneroo, however, at the time of an emergency, the relevant authorities will select an evacuation centre and DFES, the Council and Police will provide this information to the facility managers and residents at the site if this is required.

The safest place to be during a bushfire is away from it. Where to go is a crucial element when people are relocating during a time of emergency. The evacuation of the site if threatened by a bushfire will occur preferably by vehicle if time permits away from the threat with the assistance of the Police, local government and DFES. Where sufficient capacity cannot be organised for a site evacuation, there is potential for children to be walked away from the site in a northerly direction towards Neaves Road under supervised conditions by the Police and Emergency Services.

Comprehensive details are provided in the bushfire evacuation plan (Appendix 6).

There are no safe sheltering options available at the site unless a small localised fire occurs near to the facility and the local fire agencies advise it is safe to shelter on-site in the building.

The spatial representation of bushfire management strategies is outlined in Figure 6.

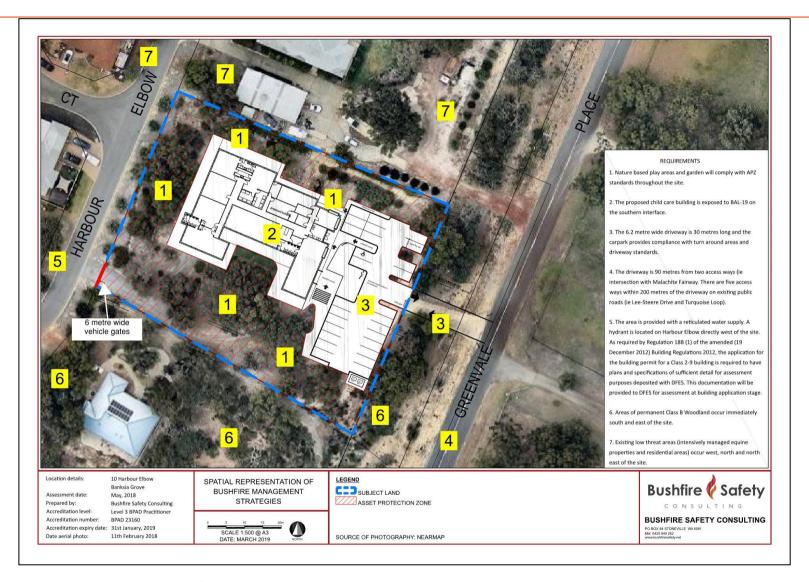


Figure 6: Spatial Representation of Bushfire Management Strategies

6 RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES

Table 5 outlines the initial and ongoing responsibilities, actions and associated works that need to be undertaken by the Developer, landowners and facility managers and the City of Wanneroo. The check boxes for implementation actions will be used for development application clearance. A Bushfire Planning Practitioner will certify the BAL ratings are correct and necessary implementation actions have been completed.

Table 5. Responsibility for bushfire measures

No.	Implementation Action DA Clearance					
1	Establish the landscape and APZ to standards outlined in Appendix 1 being guided by plans developed for this site in Appendix 4 and 5. Certify BAL the rating at building licence stage					
2	Make a copy of this BMEEP available to the facility manager and staff.					
3	Recommendation the facility is constructed to AS3959 standards.					
4	As required by Regulation 18B (1) of the amended (19 Dec 2012) Building Regulations 2012, the application for the building permit for a Class 2-9 building is required to have plans and specifications of sufficient detail for assessment purposes deposited with DFES. This documentation will be provided to DFES for assessment at this stage.					
5	Distribute the Bushfire Emergency Evacuation Plan to all members of the Local Emergency Management Committee and incorporate their feedback into the plan using this important local process.					
FACI	LITY MANAGEMENT – ONGOING MANAGEMEN	NT				
6	Update the BEEP once the facility is staffed and operational. Annually review the Bushfire Emergency Evacuation Plan					
7	Maintain the Asset Protection Zone (APZ) to standards stated in this BMEEP (Appendix 1) ensuring canopy separation standards and fuel loads are maintained.					
8	Ensure the site complies with the Shire of Wanneroo's Fire Control Notice as published.					
	If buildings are subject to additional construction in the future, AS 3959:2009 compliance is recommended.					

CITY	CITY OF WANNEROO – ONGOING MANAGEMENT				
10	Ensure road verge vegetation in proximity to the facility is maintained in a 'low threat' condition.				
11	Maintain public roads to appropriate standards and ensure compliance with the City of Wanneroo Fire Information Notice.				
12	Provide fire prevention and preparedness advice to landowners upon request, including the Homeowners Bush Fire Survival Manual, Prepare, Act, Survive (or similar suitable documentation) and the City of Wanneroo Fire Control and Fuel Load Notice.				

Certification by Bushfire Consultant	
I certify that at the within this BMEEP is correct; and implemen accordance with the BMEEP.	time of inspection, the BAL rating contained tation action 1 has been undertaken in
Clearance is recommended.	
Signature:	_
Date:	

REFERENCES

Standards Australia. 2009. Construction of buildings in bushfire-prone areas (Amendments 1-3), AS 3959-2009, Standards Australia International Ltd, Sydney

Western Australian Planning Commission (WAPC). 2017. Guidelines for Planning in Bushfire Prone Areas. December 2017 V1.3. Western Australian Planning Commission and Department of Planning WA, Government of Western Australia.

Western Australian Planning Commission (WAPC). 2015b. State Planning Policy No. 3.7: planning in Bushfire Prone Areas (SPP3.7). December 2015. Western Australian Planning Commission and Department of Planning WA, Government of Western Australia.



APPENDICES

Appendix 1: Asset Protection Standards

Appendix 2: Vehicular Access Technical Requirements Appendix 3: City of Wanneroo – Firebreak Notice Appendix 4: Bushfire Resposne Tree Removal Plan Appendix 5: Bushfire Response Lanscape Concept Appendix 6: Bushfire Emergency Evacuation Plan

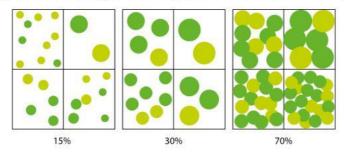
Appendix 1: Asset Protection Zone Standards

ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

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.

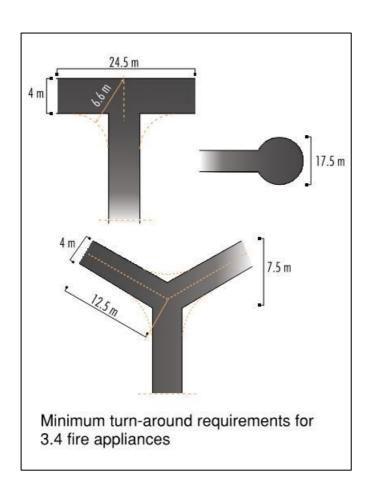
Figure 18: Tree canopy cover - ranging from 15 to 70 per cent at maturity



- 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 5m² 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 2: Vehicular Access Technical Requirements

Public road	Cul-de-sac	3 Private driveway	4 Emergency access way	5 Fire service access routes
6*	6	4	6*	6*
6	6	6	6	6
4.5	N/A	4.5	4.5	4.5
1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
15	15	15	15	15
1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
8.5	8.5	8.5	8.5	8.5
4	road 6* 6 4.5 1 in 10 15 1 in 33	road 6* 6 6 6 4.5 N/A 1 in 10 1 in 10 15 15 1 in 33 1 in 33 8.5 8.5	road driveway 6* 6 4 6 6 6 4.5 N/A 4.5 1 in 10 1 in 10 1 in 10 15 15 15 1 in 33 1 in 33 1 in 33 8.5 8.5 8.5	road driveway access way 6* 6 4 6* 6 6 6 6 4.5 N/A 4.5 4.5 1 in 10 1 in 10 1 in 10 1 in 10 15 15 15 15 1 in 33 1 in 33 1 in 33 1 in 33 8.5 8.5 8.5 8.5



Appendix 3: City of Wanneroo – Firebreak Notice



NOTICE TO ALL OWNERS OR OCCUPIERS OF LAND IN THE DISTRICT OF THE CITY OF WANNEROO REGARDING FIREBREAKS.

DISTRICT OF THE CITY OF WANNEROO RECARDING FIREBEAT.

The City of Wanneroo hereby gives notice pursuant to Section 33 of the Bush Fires Act 1954 to all owners or occupiers of land in its district that they are required on before 15 November, or within 14 days of becoming the owner or occupier of the land if that occurs after the 15 November, to annually plough, cultivate, scarify, or otherwise clear firebreaks as specified in this Notice and thereafter up to, and including the 30 April, annually, to maintain the firebreaks clear of flammable matter.

Land having an area of 2000m2 or more
 A firebreak not less than 3 metres wide and 3 metrimmediately inside and around all external boundar the land must be cleared.

Land having an area of less than 2000m²
 A firebreak not less than 2 metres wide and 2 metres high immediately inside and around all external boundaries of the land must be cleared.

the land must be cleared.

3. Buildings
A firebreak not less than 3 metres wide immediately
A firebreak not less than 3 metres wide immediately
around all external walls of every building must be cleared.
Whenever a firebreak is cleared by burning the provisions
of the Act and Regulations made thereunder must be
observed. If pursuant to tiere (12) of this Notice, mowing or
slashing is carried out the height of vegetation thereafter
must not exceed, as far as is reasonably practicable, 20mm
over the entire area of the firebreak. The use of chemicals
is subject to all restrictions imposed by the Department of
Agricultrue. Attention is drawn to the Hammable Liquids
Goods Act 1961, which requires a site on which flammable
liquid is stored to be totally cleared of all flammable material
for a minimum distance of 5 metres surrounding the site.

The arminimum distance of 5 metres surrounding the site. If it is considered to be impracticable for any reason to comply with the provisions of this Notice, application mabe made not later than the 1st day of November annually to the Council or its authorised officer for permission to provide alternative fire protection measures. If permission is not granted the requirements of this Notice must be compiled with.

Penalty
An owner or occupier of land who fails or neglects in any respect to comply with the requirements of this Notice is liable to a maximum fine of \$5,000.



Keeping your home safe from fire

There are a number of ways you can help keep your home

- Install smoke detectors in your home

- Install smoke detectors in your home
 Clear vegetation away from the walls of your home
 Clear vegetation away from the walls of your home
 Clear all rubbish and flammable material from around your home to create a 20 metre circle of safety
 Store firewood, timber, petrol, and kerosene well away from your home
 Prior to summer, clean all leaves and debris from your gutters
 Don't have flammable trees such as conifers near buildings
 Have branches trimmed that overhang the house or powerlines.
 Fit wire insect screens or shutters to windows and glass doors
 If a frebreak is impractical allong your boundary for

If a firebreak is impractical along your boundary for environmental or other reasons notify the City of Wanneroo by 1 October to obtain permission to install firebreaks in alternative positions, or of a different nature.

ALTERNATIVE METHODS OF REDUCING FIRE

- ALTERNATIVE METHODS OF REDUCING FIRE HAZARDS ON VACANT LAND

 For urban land less than 2000m³, if mowing or slashing is carried out, the height of the vegetation must not exceed, as far as is reasonably practical, 20mm over the entire area of the firebreak
- The use of chemicals is subject to all restrictions imposed by the Department of Agriculture

 Mulching

 Disposal at an authorised rubbish tip site

When and how to burn

NO BURNING FROM 1 DECEMBER - 31 MARCH

Burning off -1 that is, bushfunning free including grass, on any land is totally prohibited between 1 December and 31 March. Free permits for burning material other than garden rubbish are required all year round. A person in control of the fire must stay with the fire until it is completely extinguished.

GARDEN RUBBISH AND REFUSE

The burning of garden refuse is permitted between the h of 6pm and 11pm, provided the fire danger rating is not VERY HIGH, SEVERE, EXTREME or CATASTROPHIC or a TOTAL FIRE BAN has been declared.

TOTAL FIRE BAN has been declared.
Fire danger rating signs are located at the following locations:
Corner of Joondalup Drive and Wanneroo Road
Wanneroo Road, South of the Yanchep Beach Road turn off
Wanneroo Road, South of the Yanchep Beach Road turn off
Wanneroo Road, Carabooda • Marmion Avenue, Jindalee
• Neeves Road, Marigning• Old Yanchep Road, Prijar
Grangara Road, Landsdale • Cauntry Side Drive, Two Rocks

Other points to remember when burning garden refuse and rubbish are:

- and rudbish are:

 All bush and flammable material must be thoroughly cleared within two metres of all points of the site of the fire.

 The material must be on the ground, and be no more than one metre wide and one metre high.

Only one heap may be burnt at any one time Incinerators may be used providing:

- Institute across may be used providing:

 The incinerators is properly constructed and designed to prevent the escape of sparks of burning material

 The incinerator is situated not less than two metres away from a building or fence

 An area of two metres surrounding the incinerator is clear of all flammable material

BARBLE, UES Only gas or electric barbecues may be lit during VERY HIGH, SEVERE, EXTREME or CATASTROPHIC fire danger rating or declared TOTAL FIRE BAN. The lighting of solid fuel barbecues is not permitted on these days.

SMOKE NUISANCES

SMOKE NUISANCES

(Ity of Wanneroor esidents are advised to be mindful of smoke Issues associated with any burning that they conduct. Steps should be taken to avoid undue smoke impact to neighbours and adjacent roads. Smoke across roadways can severely impact motorists' visibility and therefore road safety. Issues of smoke nuisance are regulated by the Waste Avoidance and Resource Recovery Act 2007.

CAMPFIRES

CAMPFIRES

Campfires must not be lit on VERY HIGH, SEVERE, EXTREME or CATASTROPHIC fire danger days or declared TOTAL FIRE BAN. A person must remain in attendance at the site during the whole time the fire is burning. The user must extinguish the fire using water or earth before leaving the area.

Hints for safer burning

- Don't light a fire on a hot or windy day
 Don't burn more than you can control
 Let your neighbours know you'll be burning material
 Make sure smoke and sparks will not affect your
 neighbour's washing or enter open windows
 Cut or rake long grass around trees, building and fences
 before burning
 Burn against the wind
 On a sloping block, burn from the top down
 Keep a hose or spray pack at hand to dampen down fierce fires
 If in doubt, don't burn material yourself call the Volunteer
 Fire Briadet
- Fire Brigade

 Stay with the fire until it is completely extinguished

 Where possible, don't burn any closer than 20 metres from your home or other buildings

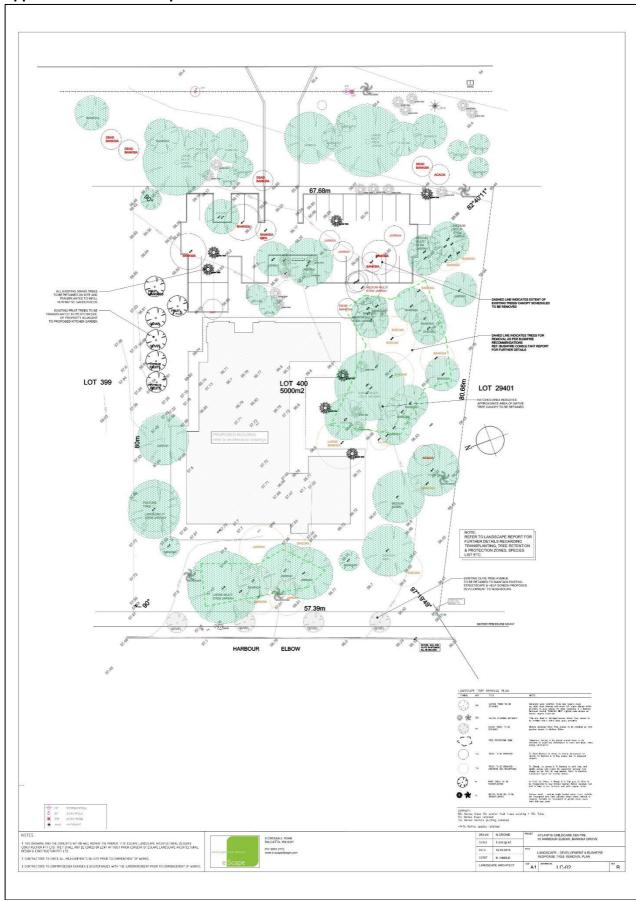
Under the Bush Fires Act 1954, failing to comply with regulations can result in a fine ranging from \$250 to \$250,000 or imprisonment.
Failure to maintain 2/3 metre firebreak \$250 as per firebreak order
Offence relating to lighting fire in the open air \$250 Setting fire to bush during prohibited \$250 burnen triese.

Failure of occupier to extinguish bush fire

The biggest penalty of all would be losing your loved on or home to fire. Please ensure you, your family and your home are kept safe by taking the necessary precautions.

- flammable material
 Care should be taken to avoid damaging or remosignificant trees and shrubs
 Avoid the build up of undergrowth and leaf litter

Appendix 4: Bushfire Response Tree Removal Plan



Appendix 5: Bushfire Response Landscape Concept



Appendix 6: Bushfire Emergency Evacuation Plan



E: enquiries@bushfiresafety.net **Bushfire Safety Consulting Pty Ltd**

ACN: 143 414 117 **ABN:** 58 143 414 117

Bushfire Emergency Evacuation Plan (Version 3)

for

Childcare Facility 10 Harbour Elbow, Banksia Grove, Western Australia.

Created March 13, 2019

Document Control

Bushfire Emergency Evacuation Plan – Child Care Centre (10 Harbour Elbow, Banksia Grove)							
VERSION	DATE	PURPOSE	PREPARED	REVIEWED	SUBMITTED TO CLIENT		
V1	29/05/2018	Submission	R Carboon	K Strahan	Electronic		
V2	18/9/2018	Submission	R Carboon	K Strahan	Electronic		
V3	13/03/2019	Submission	R Carboon	K Strahan	Electronic		

May 2018 2

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May 2018

3

1. Introduction

The proposed development of a childcare facility at 10 Harbour Elbow, Banksia Grove complies with the definition of "vulnerable land use" in the *State Planning Policy 3.7: Planning in Bushfire Prone Areas (SPP 3.7)*, policy clause 6.6 and therefore requires a Bushfire Management Plan which includes an emergency evacuation plan for proposed occupants.

The building to be erected on the 5003sqm site will be 836.83m² in size and will comprise a a waiting room, office, meeting and staff room at the front of the building; two (2) kindy rooms (south side); a nursey and one babies room (north side); two (2) toddlers rooms (west side); and a kitchen, art room and small laundry. There will be outdoor play areas designed and built also.

It is anticipated that the facility will employ up to 16 staff when it is operating at full capacity and accommodate up to 92 children. Its hours of operation will be 6.30am to 6pm Monday to Friday, every week, excluding public holidays.

The facility is privately owned by the Atlantis Group, a local Wanneroo family, who opened their first childcare facility in the area over 20 years ago.

Situated in a developed area within the City of Wanneroo, the facility caters for young children between the ages of 0 and 5 years who would require careful supervision in the event of a fire emergency.

The Facility is bound by Greenvale Road to the east and Harbour Elbow to the west. The bushfire threat is lower to the north and north north-west due to urban development and the bushfire fuels are concentrated immediately to the south and east.

The staff and children are unlikely to be able to respond independently to a bushfire emergency and due to their numbers and the requirement for care and supervision, an effective and comprehensive plan for evacuation is essential in the event of a bushfire occurring in the vicinity of the facility. This document seeks to mitigate and manage the risk associated with a bushfire emergency threatening the facility, and has been prepared to satisfy the requirements of *State Planning Policy 3.7 Planning in Bushfire Prone Areas*. The document details the components, personnel functions and implementation of evacuation procedures, and is outlined further below.

2. Outline of the Bushfire Evacuation Plan

2.1 Purpose of the Bushfire Evacuation Plan

The purpose of this Bushfire Emergency Evacuation Plan (BEEP) is to provide guidance and direction to all occupants of the Facility, including staff and children, by providing:

- Information, advice and means to prepare for a bushfire emergency
- Actions to be taken in the event of a bushfire emergency

This BEEP defines the process to be followed in the event of an emergency situation caused by an imminent threat from bushfire. It should be regarded as a 'living document' with guidelines that can be adapted to changing circumstances.

The BEEP is intended to be used by the Atlantis Group to:

- Outline key emergency features relevant for a bushfire event, see Section 3.
- Define the functions, roles and responsibilities of staff in a bushfire emergency, see Section 4.
- Establish ongoing education and training as part of the overall strategy, see Section 5.
- Provide procedures to evacuate staff and children in the event of a bushfire, see Section 6.

Critical to an effective evacuation is appropriate planning. This includes identifying staff functions, resources needed, arrangements and documentation. Importantly an established plan needs to be practiced.

Control and coordination is critical to effective evacuation of all stages in the evacuation process. This is especially the case where fire impact is imminent and immediate evacuation is required, as there may not be time for emergency agencies to assist in an evacuation. In this context, the responsibility to affect the safe evacuation falls to the person identified as having the control function.

Other roles and responsibilities, such as traffic management and control of the children, need to be assigned and understood by management and staff.

The BEEP specifically addresses the personal safety and survival of people present at the time of bushfire emergency and is not concerned with the protection of property.

2.2 Policies, Guidelines and Standards Informing the Bushfire Evacuation Plan

This BEEP is based on guidance provided in the following:

- Evacuation Planning Handbook 4 [Attorney General's Department; Australian Emergency Management Institute]
- Guidelines for Planning in Bushfire Prone Areas V1.3 (2017) [Western Australian Planning Commission and Department of Fire and Emergency Services]
- Australian Standard 3745-2010, Planning for Emergencies in Facilities.

2.3 Distribution of the Bushfire Evacuation Plan

The BEEP is an internal document, to be used by staff to guide evacuation procedures, with an up-to-date copy of the document to be maintained within the facility and to be provided to all staff.

3. Emergency features relevant to the Bushfire Evacuation Plan

3.1 Fire-fighting equipment

In accordance with the minimum requirements, the Facility will need onsite firefighting equipment that will be available for trained staff and emergency personnel for small scale events, including:

- Fire extinguishers
- Fire blankets
- Fire hose reels (if required following water supply application at Building license stage)
- Evacuation maps and diagrams

All equipment is maintained annually (as a minimum) in accordance with equipment specifications and the relevant standards, including (but not limited to) Australian Standard 1851 – 2005 Maintenance of Fire Protection Equipment. All events should be reported to emergency services who will coordinate the overall response, while staff coordinate the safe internal response (i.e. evacuation) as needed.

3.2 Vehicular access

The Facility will have one formal access driveway to Greenvale Road on the east perimeter. Two access routes are available 90m from Greenvale Rd where it meets Malachite Fairway, and four access routes are available within 200m of the driveway on Greenvale Rd.

A car park is to be established on-site containing 27 bays, to be setback 1.5m from the Greenvale Place boundary (noting this is separated from Greenvale Place by Water Corporations land across which an access easement is to be granted).

4. Roles and Responsibilities

The BEEP outlines the process to be undertaken by staff in the event of a bush fire/building fire and or damage caused to the Facility where it is necessary for the staff and children of the Facility to evacuate.

The Fire Warden, who is designated as the Senior Staff Supervisor on the day of the emergency, co-ordinates all communication and activities to enable an evacuation.

The following positions:

- Chief Warden (Facility Manager)
- Area Warden Kindy rooms
- Area Warden Toddler rooms
- Area Warden Baby rooms and Nursery
- First Aid Personnel: 3

The proposed organisational chart for the Facility's response to an emergency is illustrated in Figure 1 below.

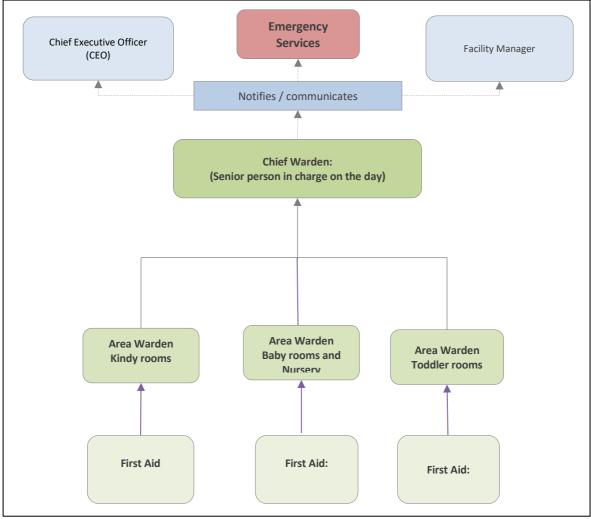


Figure 1: Proposed Organisational chart for the Facility

4.1 Bushfire Evacuation Committee

The Bushfire Evacuation Committee ('the Committee') consists of the following personnel:

- 1. CEO
- 2. Facility Manager
- 3. Area Wardens / First Aid Personnel

The Committee will review the BEEP, coordinate education and training, evaluate the outcomes of drills and responses (when applicable), and revise the BEEP as is required. The Committee will assign roles and responsibilities to staff, which have been outlined in Appendix 1, with contact details for the Committee provided in Appendix 2.

The Committee will meet on a monthly basis to discuss OH&S requirements and training, including bushfire response.

4.2 Roles of Evacuation Managers

In the event of a bushfire emergency, the following roles have been designated for the Facility, and the organisational chart summarised in Figure 1.

4.2.1 Chief Warden

The Chief Warden is the most senior staff member on site at the facility on the day and is responsible for:

- Evaluating the need for evacuation (using Bushfire Response Flow Chart in Appendix 5);
- Initiating evacuation;
- As required, advising authorities that an evacuation is being planned including Police, DFES, City of Wanneroo, fire and emergency services manager;
- Documenting the circumstances of the emergency, processes and outcome.

4.2.2 Evacuation/Area Wardens

The Area Wardens are responsible for:

- Taking direction from and carrying out tasks allocated by the Chief Warden:
- Checking all rooms and any outbuildings/outdoor play areas;
- Ensuring all staff, children and others have been alerted and a relocation / evacuation has been initiated;
- Maintaining communication with, and updating the Chief Warden with situation reports;
- Providing situational information to staff, children (if appropriate) and visitors:
- Contributing to debriefing.

In addition to these responsibilities, all full-time staff are trained in the role of Evacuation Warden.

4.2.3 Nursing and First Aid Personnel

First aid personnel, under the direction of the Chief Warden or Area Warden are responsible for:

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

4.2.4 Traffic Warden

The Chief Warden will act as the Traffic Warden and is responsible for:

- Ensuring an orderly evacuation onto Greenvale Road if the decision is made to evacuate the Facility by vehicle.
- Managing the access and placement of Area Wardens and employees to co-ordinate vehicles to safely leave the Facility during a bushfire event.

• Coordinating traffic flows on the Facility grounds during a bushfire evacuation.

4.2.5 Other staff

Other staff at the Facility (e.g. reception/administration staff, maintenance etc.) in the event of a bushfire will be required to follow the instructions of the Chief, and/or Area Wardens, and assist in the mustering and/or evacuation of children only as directed.

4.2.6 Emergency Response Team Identification

The control of a bushfire emergency is greatly assisted by key personnel being quickly identified by staff, children and emergency services. Table 1 below outlines the tabards and/ or helmets to be worn by the Evacuation Managers to enable them to be readily identifiable by employees, children and emergency services officers.

Table 1: Facility Emergency Response Team identification items and colours					
Wearers Title Item and identification colour					
Chief Warden	White helmet				
Area/Evacuation Warden	Red helmet				
First Aiders	Green helmet or green arm band				
First Aluers	Green heimet of green arm band				

5. Preparations and Actions

The actions outlined below relate specifically to bushfire evacuation and should be managed in the context of bushfire evacuation only.

5.1 Training requirements

All Wardens, staff and other responsible personnel working at the Facility should attend a bushfire evacuation session with the key local government and local Emergency Services to be informed of and trained in relation to:

- All information contained in this document
- Individual roles and responsibilities
- Access and egress routes
- Assembly point locations
- Written evacuation procedures applicable to the process.

All those who have received bushfire training should formally acknowledge that they have read and understood the emergency evacuation procedures, understand their role and responsibilities, and had any questions relating to the evacuation procedure adequately answered.

5.2 Exercise drills

Evacuation to the 'Bushfire Shelter in Place Area' should be practiced annually.

Staff briefing should occur prior to each such drill and a debriefing should follow any drill or bushfire event to discuss any issues regarding the implementation of the plan.

5.3 Maintenance of equipment

The fire-fighting equipment and water supply infrastructure will be maintained according to servicing schedules.

5.4 Evacuation plan review

This plan should be treated as a 'living document' and reviewed and revised (if required) prior to each bushfire season (which is from October to May of each year). A review checklist has been provided in Appendix 3.

In addition to this annual review, a review of the plan and response of the Facility personnel and children should be undertaken following any bushfire in the area and/or after an evacuation.

6. Evacuation Plan

6.1 Objective of the Bushfire Evacuation Plan

The objective of this Bushfire Evacuation Plan is to:

- Decrease the level of risk to staff, children and others on the Facility grounds; and
- Ensure safe and effective evacuation (both within the Facility and off site) of all those at the Facility through effective control and management.

There are two principal types of evacuation possible from the Facility:

- 1. *Pre-warned Evacuation*: when authorities contact the Facility, and coordinate an evacuation. This decision is made to evacuate ahead of a bushfire impacting the Facility.
- 2. *Self-Evacuation*: a spontaneous evacuation involving the self-initiated movement of staff, children and visitors after an assessment has been made that the Facility could be threatened by a bushfire and sufficient time exists to move everyone safely from the site.

An alternative to evacuation is to shelter in place rather than evacuate. This would occur if the risk associated with evacuation were greater than sheltering in place and is discussed later in this plan. Further below, this section discusses the option of evacuating at a time when it is safe to do so.

6.2 Communication

The Emergency Response Team (i.e. wardens and/or full-time staff) will communicate during a bushfire event using two-way handheld radios / walkietalkies.

Contact with emergency authorities will be maintained through cellular / mobile telephone. All Facility mobile phones need to be registered with the State Governments State Alert System. The Chief Warden should have access to a satellite phone in the event that a bushfire disrupts cellular reception.

Residents will be informed of a bushfire event that may impact the Facility and any action required via staff quietly moving through the facility and communicating face-to-face. It is important to keep calm and not distress children further.

6.3 Evacuation Process

The Chief Warden is responsible for deciding whether an evacuation is necessary and should take the following into consideration when determining if and when to evacuate:

- The advice from Emergency Services, including public warnings
- The severity of a bushfire incident, proximity of the bushfire and predicted fire spread (i.e. smoke, embers and radiant heat)
- The safety of evacuation routes

The decision should take account of all information provided by Emergency Services. The process that should be followed involves:

- Daily recording of Fire Danger Rating and weather conditions.
- Monitoring to establish the extent of bushfire Danger (Fire Danger Ratings) and to identify bushfires in the area.
- Determining whether the bushfire is a potential threat (using Bushfire Response Flow Chart Appendix 5).
- Deciding to evacuate or shelter in place (with communication from Emergency Services).
- Implementing the protective action decision to evacuate or shelter in place.
- Use the Evacuation route that provides the best level of protection and removes people away from the area of threat and impact.

The process to monitor for and implement evacuation due to bushfire is outlined below.

6.3.1 Monitoring for Bushfires

Receiving a warning of an approaching fire is enhanced by actively monitoring communications over the internet (i.e. EmergencyWA) and ABC radio and observing the environment surrounding the site. It is common for the first indication that a bushfire is burning nearby to observe smoke in the surroundings.

Fire Danger Ratings (FDRs) provide advice on the level of bushfire threat on any given day and are based on the forecast daily fire danger indices (which include consideration of forecast wind speed, temperature, humidity and fuel conditions). There are seven FDRs ('low', 'moderate', 'high', 'very high', 'severe', 'extreme' or 'catastrophic', summarised in Figure 2 and Figure 3) which provide an indication of how difficult a bushfire will be for authorities to extinguish and on what days bushfires are going to pose the greatest threat to property and lives. FDRs are therefore an important component of bushfire emergency evacuation planning.

The forecasted FDR can be accessed online through the Department of Fire and Emergency Services or Bureau of Meteorology websites.

FIRE DANGER RATING

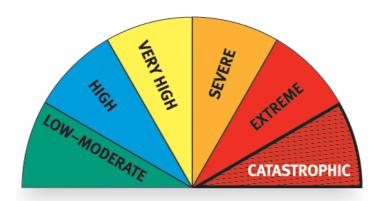


Figure 2: Fire Danger Ratings

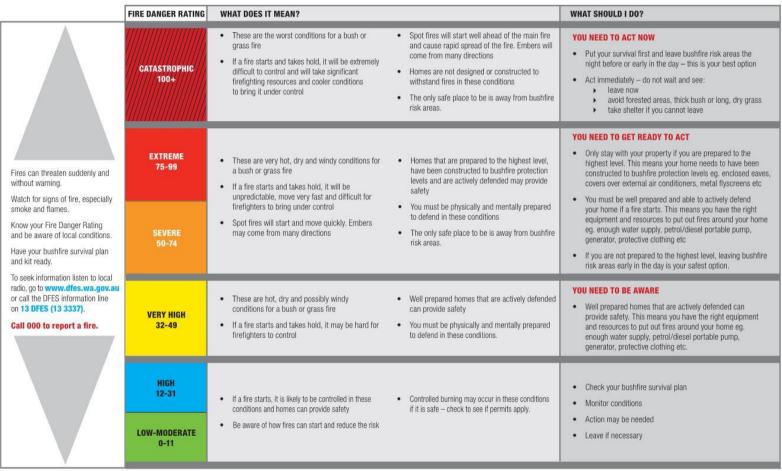
On days when the FDR is 'high' or above, bushfires can be unpredictable and uncontrollable, and these days trigger basic preparation and monitoring procedures.

The monitoring procedures to be implemented for the Facility have been outlined within Table 2 below. Monitoring involves accessing websites (i.e. those of the Department of Fire and Emergency Services and the Department of Biodiversity Conservation and Attractions) and listening to the emergency services broadcaster 720 ABC radio at regular intervals throughout the day.

Monitoring also involves regularly checking for smoke in the surrounding area. A staggering 56% of people surveyed after the Victorian Black Saturday bushfires reported that the sight of smoke was the first indication that they had that a bushfire was burning nearby (VBRC 2009).

Table 2: Fire Danger Rating monitoring procedures							
Actively monitor for bushfires according to these guidelines:							
Fire Danger Rating	Predicted Fire Behaviour	Monitoring Requirements					
Catastrophic Extreme and Severe	Uncontrollable fire, the worst conditions possible, very hot and windy, significant ember attack ahead of the fire, life threatening radiant heat and fast moving fire	Monitor ABC radio and DFES website every 15 minutes all day. Staff advised in the morning of fire conditions and requested to stay alert for smoke in local area					
Very High & High	Hot, dry and possibly windy conditions, fire may be hard to control	No specific monitoring required, but staff alert for any signs of smoke					
Low-Moderate	Fire likely to be controlled, but possibly unpredictable if windy	No specific monitoring required, but staff alert for any signs of smoke					





PREPARE. ACT. SURVIVE. PREPARE. ACT. SURVIVE.

Figure 3: Fire Danger Ratings and considerations for bushfire propagation and responses

In addition to FDRs, where a bushfire occurs, the Department of Fire and Emergency Services have three levels of warnings that escalate to reflect the increasing risk to life from a bushfire and the decreasing amount of time people have until the bushfire arrives. The three warning levels are detailed in Appendix 4 and include:

- Advice;
- Watch and Act; and
- Emergency.

In the event that an **Advice** Warning is received at the Facility for an approaching bushfire, staff should be notified of the potential need to muster and/or evacuate. If a **Watch and Act** Warning is received, it is recommended that children be mustered in preparation to enable the orderly evacuation of staff and children, if evacuation is required.

An all clear message means the danger has passed and the fire is under control. Although, it is possible that it still may not be safe to return to the Facility and the Emergency Services will advise the Chief Warden when it is safe to do so (DFES 2017).

Importantly, early detection of a bushfire's location provides everyone with the best opportunity to evacuate early. Warning of a bushfire may be provided by emergency authorities, but this is not guaranteed. All Warden mobile phones need to be registered with the State Governments State Alert System. Nominated staff should actively monitor for bushfires on days that a bushfire is likely to be difficult for fire agencies to suppress, in accordance with the procedure outlined in Table 3. This increases the chance of receiving an early warning of a bushfire.

If electricity fails, phone lines and internet can be interrupted. Mobile phones can assist with accessing information, however back-up battery powered radios will help with information in the event of power failure, therefore portable radios should be maintained within the administration area.

6.3.2 Evacuation triggers

There is strong evidence that moving about in an area when bushfires are nearby is the most dangerous option for people, and yet many people do it (VBRC 2010). The key to a safe evacuation is leaving early, this means long before the Facility or evacuation roads come under bushfire attack.

Within the Facility, the following are triggers for evacuation:

Receipt of an official warning to evacuate from the emergency authorities.
 Monitoring of the Emergency WA web page
 (https://www.emergency.wa.gov.au/) at regular intervals must occur (outlined in Section 6.3.1);

Advice may be provided by emergency authorities to self-evacuate which greatly assists because it confirms the safety of evacuation routes and makes the process relatively straight forward. The Emergency Alert Telephone warning system is used during an emergency to send messages to registered landline and mobile phones within a defined area where lives and homes are deemed to be under direct and imminent threat from a bushfire. These warnings should trigger an evacuation if they are received in a timely manner. These official warnings however must be assessed against the local conditions before evacuation is undertaken.

When it is judged by the Chief Warden, using the tools provided in this
document and in consultation with Emergencies Services, that a bushfire
has the potential to impact the Facility.

6.3.3 Implementation of evacuation

Early evacuation is the safest response in a bushfire event. Late evacuation is a dangerous response. After satisfying the criteria to evacuate, the following procedures should be implemented:

- Determine the route to be used for evacuation.
- Advise emergency authorities of the decision to evacuate (offsite or within the Bushfire Safer Assembly Area) and proposed route;
- Notify Wardens and staff that a bushfire evacuation is underway.
- Children and visitors to be informed and organised for evacuation by responsible Wardens;
- Nominated Wardens are to ensure the Facility is completely evacuated before the site is secured.
- Evacuate away from the threat to a safer place (designated by the emergency authorities or local government).

6.3.4 Procedure for evacuation

The order to evacuate will be given by DFES to the senior person (Chief Warden) in charge at the Facility. The order will be received either electronically or by verbal instruction.

The Chief Warden will immediately inform the CEO/Facility Manager.

The Chief Warden on duty will then issue the evacuation order to the staff working in areas throughout the Facility.

Staff will assist children to get ready to leave ensuring they have appropriate footwear and warm clothing.

Each child will be checked off the Attendance Register as they leave the building.

Area Wardens will take all medications and documentation in a clip lock plastic storage container, and a supply of any required aids with them (eg. nappies). They will supervise the children for the duration of the incident.

Equipment and Supplies

Area Wardens are to collect all documentation including medication documentation, rosters, staff contact details and parent contact lists.

The Chief Warden will then conduct a check of the Facility to ensure all residents and personnel are off the premises.

Staging Point

A check of the children will be undertaken to ensure everyone is accounted for. Parents/Guardians of the children will be notified of the evacuation and our location and if deemed safe by emergency personnel, can take their children home from there.

If children have to stay at the staging point (shelter on-site area), staff will be rostered to ensure children are supported and cared for.

A summary of the evacuation process has been outlined in Appendix 5.

6.3.5 Evacuation vehicles

Responsibility in this area rests with the Traffic Warden. It is likely buses will be required to evacuate the facility and these will be organised in consultation with Emergency Services. Parents may collect their children if confirmed safe to do so by Emergency Services., but is not encouraged or permitted unless approved to do so. Parents could be endangering themselves by driving on roads near the facility during a bushfire event.

7. Bushfire Shelter-in-place Area

An alternative to evacuation is to shelter in place (within the Facility) rather than evacuate. This would only occur if the risk associated with evacuation were greater than sheltering in place. Though undesirable, the trigger to shelter in place is an assessment by the Chief Warden and emergency authorities that staying on site is safer than evacuating.

The building is constructed to BAL-19 construction standards and will offer temporary shelter from life threatening radiant heat to occupants when they shelter in the Northern rooms on the opposite side of the building to the potential radiant heat. This area has two exit doors to the north away from areas of fire. Sheltering in place will only be undertaken if advised by emergency services and it is safer to do this that evacuate in the smoke and ember attack as determined by Emergency Services.

For sheltering in place, the following will be undertaken:

- Advise emergency authorities of the decision to shelter in place and provide all information as detailed in Appendix 7;
- Notify all staff of the decision to shelter in place
- Initiate procedures outlined in Appendix 8 to have Wardens move children to the safer place and provide P2 smoke masks to all people sheltering to assist with breathing if the air fills with smoke;
- Area Wardens to ensure that all staff and children have moved to the safer place.

The Facility may be subject to ember attack that may last for many hours and radiant heat that is intense but is unlikely to extend beyond 30 minutes duration. Embers may cause fires on-site that threaten lives. The Chief Warden and Area Wardens must therefore be prepared when sheltering with children to extinguish embers or small fires using fire-fighting equipment provided within the Facility.

APPENDIX 1: List of Emergency Control Personnel

Function	Name
Chief Warden	
Deputy Chief Warden	
Area Warden Kindy	
First Aid Officer	
Area Warden Baby Rooms and Nursery	
First Aid Officer	
Area Warden Toddler Rooms	
First Aid Officer	

APPENDIX 2: Emergency Contacts

Reception Office:	Direct Line:
Chief Warden	Name: Direct Line:
Area Warden Kindy Rooms	Name: Direct Line:
First Aid Officer	Name: Direct Line:
Area Warden Baby Rooms and Nursery	Name: Direct Line:
First Aid Officer	Name: Direct Line:
Area Warden Toddler Rooms	Name: Direct Line:
First Aid Officer	Name: Direct Line:
Police TTY (hearing impaired service)	
Local Police	
Wanneroo Hospital	
General Emergency	000
General Emergency (from mobile)	112
SES	
Water	Water Corporation:
Gas	
Electricity	

APPENDIX 3: Review of Emergency Plan

Date	Plan Reviewed	Modification Requested	Action Procedures Practiced	Responsib	Responsible Person	
		Yes / No	Yes / No	Name	Signature	

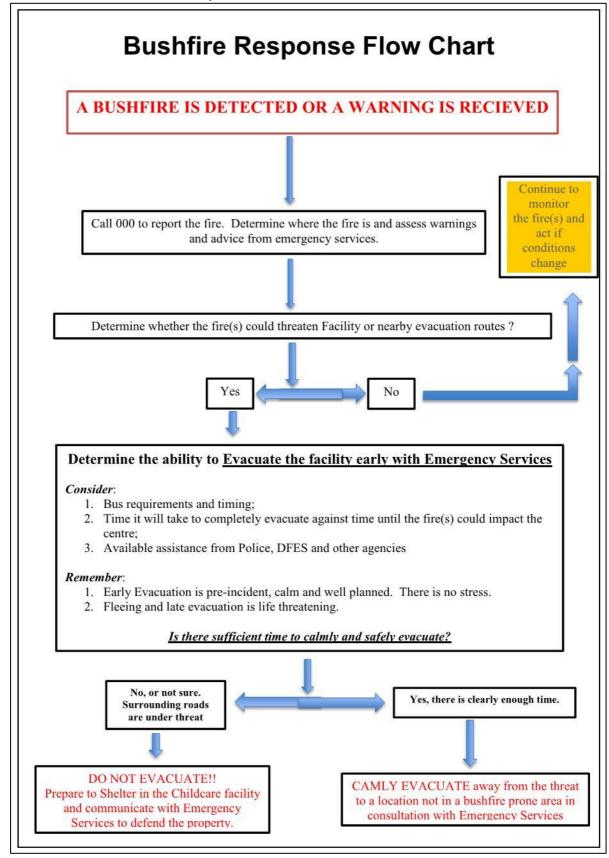
APPENDIX 4: Details of Fire Warning Levels

An **ADVICE** provides information that a fire has started but there is no immediate danger, this is general information to keep people informed and up to date with developments. **An Advice warning is a trigger to assess where the fire is and its potential threat level. This is a trigger to initiate Bushfire Evacuation flow chart investigations.**

A **WATCH AND ACT** message is issued when a fire is approaching and conditions are changing, DFES recommend people need to leave their property or prepare to actively defend (DFES 2017). **This is a trigger to initiate Bushfire Evacuation flow chart investigations.**

An **EMERGENCY WARNING** means there is immediate danger and the fire is likely to impact the site. There is a threat to lives and buildings, it is the highest level of warning (DFES 2017). The message may start with a siren called a Standard Emergency Warning Signal. Evacuation should only be attempted after ensuring roads are safe to travel and sufficient time exists for all vehicles to safely do so. It may trigger staying on the site and sheltering until authorities can ensure safe evacuation is possible. **This is a trigger to initiate Bushfire Evacuation flow chart investigations.**

APPENDIX 5: Bushfire Response Flow Chart



APPENDIX 6: Evacuation Procedures

To facilitate orderly evacuation of the Facility, the departure of children and staff should be phased if necessary, depending upon the number of occupants at the Facility and the resources available. This can be achieved by:

- Evacuating the most vulnerable people first;
- Using private staff vehicles if required to transport vulnerable people from the Facility;

After satisfying the criteria in the Bushfire Response Flow Chart (Appendix 5) and the decision has been made to evacuate, the following procedures should be implemented:

- Determine the route to be used for evacuation.
- Advise emergency authorities of the decision to evacuate and proposed route if they are not in attendance.
- Notify staff that a bushfire evacuation is underway.
- Children and staff to be informed and organised for evacuation by Area Wardens.
- Nominated Area Wardens are to ensure the Facility is completely evacuated before the site is secured.
- Evacuate away from the threat to a place not in a bushfire prone area.

If conditions change during an evacuation and the safety of the evacuation routes cannot be guaranteed, return to the Facility and shelter in place inside the building.

APPENDIX 7: Shelter in Place - Details to be provided to emergency authorities

The following information should be provided to the emergency authorities if a decision is made to shelter in place:

- 1. Nature of the emergency
 - a. Immediacy Can the bushfire be seen/ distance from Facility
 - b. Evidence of ember attack
 - c. Evidence of spot fires
- 2. Details of individuals sheltering:
 - a. Number of people
 - b. Condition/state
 - c. Special needs i.e. disabilities, elderly, medical conditions
- 3. Location:
 - a. Address of the Facility (10 Harbour Elbow, Banksia Grove)
 - b. Entry point to Facility (off Greenvale Road)

APPENDIX 8: Shelter in Place Procedures

Though undesirable the trigger to shelter in place is an assessment made by the Chief Warden with Emergency Services that sheltering on-site is safer than evacuation.

If a decision to shelter in place is taken, all staff and children will shelter in the identified 'Bushfire Shelter in Place Area' which is judged to be the safest place in the building because it is on the sheltered side of the building and has two exit doors to the outside area on the north side of the building.

After satisfying the criteria in the Bushfire Response Flow Chart (Appendix 5), the following procedures should be implemented:

The following process will be undertaken:

- Advise emergency authorities of the decision to shelter in place and provide all information as detailed in Appendix 7;
- Notify Wardens of the decision to shelter in place
- Initiate procedures to have Wardens notify and move staff and children to the safer place;
- Nominated Wardens are to ensure that all staff and children have moved to the safer place.
- Keep alert for any embers that could start fires in buildings or the garden areas at the Facility and alert authorities if any local fire cannot be extinguished.
- Stay sheltering in the 'Bushfire Safer Assembly Area' until advised by DFES or Police that fire is no longer a threat or until evacuated off-site coordinated by Emergency Services.

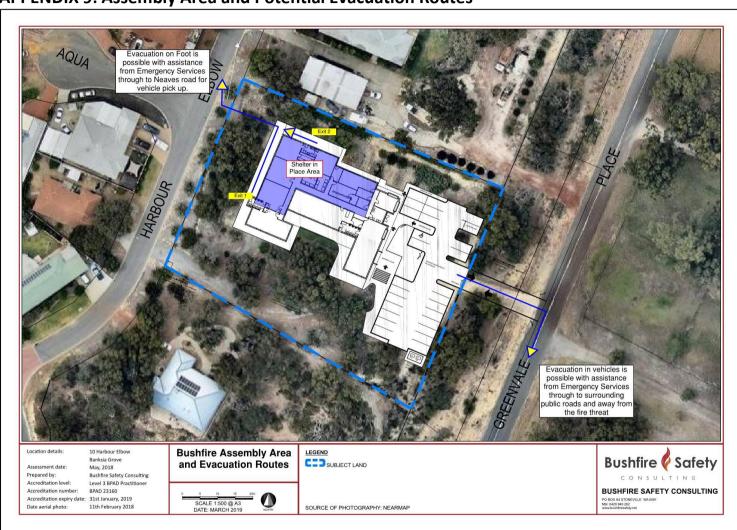
Specific roles include:

Chief Warden

- Collect vital records, computer tapes (server room), children emergency contact details and child files to reconcile everybody is accounted for.
- Lock filing cabinets in office.
- Maintain communication with emergency services.
- Communicate with DFES and police and provide updates to concerned family members.
- Collect First Aid Kit.
- Relocate to "Bushfire Shelter in Place Area".

Area Wardens Kindy, Toddler, Baby rooms and Nursery

- Alert and remove all staff and children, relocate to 'Bushfire Safer Assembly Area' in a quiet and orderly manner.
- Close all doors and windows on buildings if possible.
- Make final check of all buildings, ensure they are secured and empty of staff and children.
- On arrival at 'Bushfire Shelter in Place Area' assist with reconciling child records.
- Inform Chief Warden if anyone is missing.



APPENDIX 9: Assembly Area and Potential Evacuation Routes