## FIRE MANAGEMENT PLAN

Lot 700 and portions of Lots 9000 (formerly

Lot 50) and 10

Ocean Reef and Sydney Roads

Gnangara

City of Wanneroo



FirePlan WA

August 2011
Updated February 2014

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# Fire Management Plan – Lot 700 and portions of Lots 9000 (formerly Lot 50) & 10 Ocean Reef and Sydney Roads, Gnangara

**Prepared For** 

**Gnangara Holdings Pty Ltd** 

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#### **Document Status**

Version	Comment	Reviewer	Review Date
Version 1		BWH	01.08.11
Version 2		SR & BWH	03.08.11
Version 3	Updated to reflect new lot numbers, planning approvals, siteworks etc.	SR & BWH	06.02.14

Disclaimer: The measures contained in this fire management plan are considered to be minimum standards and they do not guarantee that a building will not be damaged in a bush fire. All surveys, forecasts, projections and recommendations made in this report associated with the project are made in good faith on the basis of information available to FirePlan WA at the time; and achievement of the level of implementation of fire precautions will depend among other things on the actions of the landowners or occupiers over which FirePlan WA has no control. Notwithstanding anything contained therein, FirePlan WA will not, except as the law may require, be liable for any loss or other consequences (whether or not due to the negligence of the consultants, their servants or agents) arising out of the services rendered by the consultants.

### 1.0 INTRODUCTION

The purpose of this Fire Management Plan is to assess bush fire risk and to detail any fire management requirements that will be implemented and responsibilities for Lot 700 and portions of Lots 9000 (formerly Lot 50) and 10 Ocean Reef and Sydney Roads, Gnangara. These lots are zoned for industrial use and comprise the Wangara Industrial Extension Area (herein referred to as the subject site). This Fire Management Plan is for the industrial development only and the Lot 6 'Rural Community' zone including the Bush Forever area north of the subject site is subject to a separate fire management plan. It is noted that Lot 9000 was recently created as a balance of title lot following the subdivision of the portion of Lot 50 south of Ocean Reef Road into industrial lots.

The Western Australian Planning Commission (WAPC) and the City of Wanneroo required the preparation of a fire management plan to support the rezoning and structure plan processes associated with the proposed industrial development. This Fire Management Plan was originally prepared to satisfy this requirement and the WAPC/City of Wanneroo deemed the subject land suitable for intensification of land use for industrial activity, including consideration of the bush fire hazard assessment, by rezoning the property and subsequently approving the structure plan and subdivision. The Fire Management Plan has been updated (February 2014) to reflect the rezoning and structure plan approvals and becomes operational as a condition of subdivision, namely Condition 15 of WAPC approval ref. 146778 and Condition 21 of WAPC approval ref. 147960.

The subject site currently has (or will have) a bush fire hazard rating of "Low" based on vegetation clearing which has occurred across the site associated with bulk earthworks and subdivision activities. Bush Forever site No. 463 is external to the subject site and contains remnant vegetation in various states of condition.

This Fire Management Plan complies with the acceptable solutions detailed in Appendix 2 of *Planning for Bush Fire Protection* - Edition 2 (2010) and as summarised in 'Compliance Checklist for Performance Criteria and Acceptable Solutions' at the end of this Fire Management Plan (Section 8).

This Fire Management Plan outlines the responsibility and timing for implementing and maintaining the fire protection measures and strategies contained within, allocating these responsibilities between the developer, future individual industrial lot owners and the City of Wanneroo.

The Fire Management Plan is an ongoing dynamic document that can be varied by the City of Wanneroo as it may deem necessary to do so if fire management strategies require altering to meet changing weather, environment and land use needs. It is noted that the provisions of the *Bush Fires Act 1954* may still be enforced in addition to this Fire Management Plan.

## 2.0 AIM

The aim of the Fire Management Plan is to reduce the occurrence of and minimise the impact of bush fires.

The Fire Management Plan sets out to reduce this threat by:

- Identifying the objectives of this Fire Management Plan (Section 3)
- Describing the site's description, topography, cultural features and land use (Section 4);
- Identifying the site's potential bush fire issues (Section 5); and
- Outlining the fire mitigation strategies for the site, including identifying the parties responsible for undertaking these fire mitigation strategies (Section 6).

The City of Wanneroo has the responsibility and powers under the Town Planning Scheme and the *Bush Fires Act 1954* to ensure that this Fire Management Plan, City of Wanneroo Fire Control notice and any Special orders issued under the *Bush Fires Act 1954* are complied with.

## 3.0 OBJECTIVES

The objectives of this Fire Management Plan are to:-

- Assess the bush fire hazard and propose bush fire mitigation measures for the site.
- Minimise fire risk through appropriate design and implementation of any identified fire protection requirements.
- Identify developer, future landowner and City of Wanneroo responsibilities for implementing and maintaining various components of this Fire Management Plan.
- Document the acceptable solutions adopted for the subdivision of Lot 700 and portions of Lots 9000 and 10 Sydney and Ocean Reef Roads, Gnangara to demonstrate compliance with the requirements of 'Planning for Bush Fire Protection Edition 2 (2010)'.

## 4.0 DESCRIPTION OF THE AREA

#### 4.1 GENERAL

This Fire Management Plan applies to Lot 700 and portions of Lots 9000 and 10 Ocean Reef and Sydney Roads, Gnangara encompassing the Wangara Industrial Extension Area north of Ocean Reef Road (refer Figure 1: Location Plan). The subject area comprises a net developable area of approximately 40ha which is to be subdivided into industrial lots of various sizes.

The subject area has historically been used for a turf farm and aboriginal community purposes, however, has recently been cleared to facilitate the industrial subdivision works. Portions of the adjoining land to the north and west comprise Bush Forever Site No. 463, comprised of Swan Coastal Plain Banksia woodland that is generally in good condition, although some parts are degraded.

The proposed development adjoins the existing Wangara Industrial Estate to the south.

#### 4.2 CLIMATE

The Mediterranean climate experienced by this area is such that the majority of rain falls in late autumn through to late spring. This rainfall supports vegetation growth, which dries off in Summer/Autumn.

The bush fire season is generally from October to the following May, but is subject to seasonal changes and drought conditions.

## 4.3 TOPOGRAPHY

The site is undulating with slopes up to 10°, with the subject site located down gradient of the Bush Forever area. This serves to naturally mitigate some of the bush fire risk as fire preferentially travels up hill.

The subject site has been extensively earth worked and is subject to up to 4m of 'cut' along the boundary of the Bush Forever site. This serves to increase the vertical separation and contribute to shielding at this interface.

#### 4.4 BUSH FIRE FUELS

The subject site has been/will be extensively cleared to facilitate subdivision works and as such, bush fire fuels within this area have/will be removed.

The fuel loads in the adjoining Banksia Woodlands vary between 6-10 tonnes/ha (no leaf litter) with increased loads in some areas where Banksia woodland is more dense and there is leaf litter fuel loads. It is noted that a program of fuel load reduction is being implemented by the City of Wanneroo within the Bush Forever area to reduce the bush fire fuels to acceptable levels – as previously noted, this does is external to the subject site and addressed in a separate Fire Management Plan.

#### 4.5 LAND USE

The area the subject of this Fire Management Plan is zoned for 'General Industrial' use and is identified as the 'Wangara Industrial Extension Area'. It has been cleared and is being subdivided into industrial lots, similar in nature to the existing Wangara Industrial Estate.

#### 4.6 ASSETS

The Bush Forever area is contained in the lot, which adjoins the site, generally to the north and west. Gnangara Lake is to the east on the opposite side of Sydney Road. Existing (recently subdivided) industrial lots are located to the south across Ocean Reef Road.

### 4.7 ACCESS

The approved Wangara Industrial Extension Area local structure plan (LSP No 96) for the development site proposes one entrance onto Ocean Reef Road and one entrance to Sydney Road (refer Figure 2: LSP No. 96). The internal road system is permeable and interconnected and complies with Acceptable Solution A2.1. All roads will be constructed to City of Wanneroo standards and are in excess of Acceptable Solution A2.2.

#### 4.8 WATER SUPPLY

The site will be reticulated from Water Corporation mains supply and fire hydrants will be installed by the developer in accordance with the *Water Corporation's No 63 Water Reticulation Standard* and will be marked by standard road markings. This complies with Acceptable Solution A3.1.

## 5.0 FIRE PROBLEM

#### 5.1 BUSH FIRE HISTORY

It is noted that the subject site has been (or will be) extensively cleared during development works. Prior to clearing it is likely that the site had been subject to infrequent bush fires, however, no documented fire history was available.

## 5.2 BUSH FIRE RISK

Given the extensive clearing of vegetation, the bush fire risk within the subject site is low. Bush fire risk that can threaten the proposed industrial area is likely to originate from the adjoining Bush Forever site.

It is noted that staged fire fuel load reduction program has been commenced in the Bush Forever area and is scheduled to be completed by the City of Wanneroo in winter 2014. It is also noted that the City of Wanneroo has the powers under the Bush Fires Act to issue Special Orders requiring landowners to reduce bush fires fuels to levels detailed in the Special Order should this be required at any time in the future.

In a bush fire in this general area (including adjoining land), ember attack may cause damage to industrial buildings. This could be increased if unsuitable vegetation or other flammable material is stored in the setback area of industrial lots immediately opposite the Bush Forever area. There is a risk that buildings that have evaporative air conditioners installed without effective screening around the roof mounted unit have an increased risk of a building catching on fire due to embers starting a fire in the air conditioning unit.

### 5.3 BUSH FIRE HAZARD

In *Planning for Bush Fire Protection* Appendix 1 details the methodology for classifying bush fire hazard levels. The methodology rates bush fire hazard using vegetation type and is also based on the underlying assumption that land in Western Australia is predominantly undulating. The methodology specifies three bush fire hazard levels "Low", "Moderate" and "Extreme".

This methodology has been used in this Fire Management Plan to determine the bush fire hazard (refer Figure 3: Bush Fire Hazard Assessment).

The assessment of fire risk takes into account existing site conditions which include:

- Topography with particular reference to ground slopes and accessibility;
- Vegetation cover both remnant and likely revegetation; and
- Relationship to adjoining land.

Following clearing within the subject site associated with the subdivision works the hazard rating will be "Low". In the adjoining property to the north and west, the hazard rating is assessed as "Moderate" or "Extreme" in the adjoining Bush Forever site and "Low" in portions of the community use area.

The future bushfire hazard will apply to the industrial lots on the outer edge of the development directly opposite the Bush Forever area on the adjoining land. This methodology identifies that the vegetation class within the Bush Forever area is "Type B – Woodland". As previously identified, the Bush Forever area is located upslope of the subject site. By virtue of the 20m industrial road interface, a minimum setback of 20m is provided from the predominant vegetation class (Bush Forever area). When a 4m fire break is applied along the boundary of the Bush Forever area and 6m front industrial setback is applied to industrial lots, an effective separation of 30m will exist between any future industrial buildings and any vegetation within the Bush Forever area. This separation represents the effective Building Protection Zone, which exceeds the minimum 20m set out in 'Planning for Bush Fire Protection'.

It is noted that AS 3959 construction standards only apply to residential development and as such do not apply to industrial buildings. Notwithstanding, individual lot owners opposite the Bush Forever site will be required to comply with Detailed Area Plans, which will require the front setback area of lots to be maintained with low combustible material.

### **5.4 BUSH FIRE THREAT**

Any bush fire threat originating within the subject site has been greatly reduced due to the removal of vegetation and reduction of levels at the external boundaries of the site, which will occur as part of the site works. Structural fires may start in industrial areas and with a quick fire response fires are unlikely to spread form one lot to another. There is a threat of fires originating in the adjoining Bush Forever Site.

## 6.0 FIRE MITIGATION

#### 6.1 BUSH FIRE RISK MANAGEMENT

Hazard Management within the subject site will be controlled by:-

- Setbacks of buildings and fuel loads opposite the Bush Forever area are to be managed as Building Protection Zones (BPZ). The BPZ within 20m road reserves will be constructed by the developer at the time of creation of the industrial lots. The BPZ within the street setback areas of lots opposite the Bush Forever area will be implemented through Detailed Area Plans (DAPs) and assessed by the City of Wanneroo through development applications/building licence and thereafter maintained by individual lot owners. The DAPs will specify planting to be in accordance with FESA's 'Plant Guide Within Building Protection Zone for the Swan Coastal Plain of Western Australia' and limit materials which can be stored in the street setback areas to minimise fire fuel loads.
- All industrial lots proposed in the development will be cleared of all vegetation at the time
  of site subdivision works.
- Fire Hydrants will be installed throughout the industrial development site by the developer at the time of installing reticulated water and will be to the specifications of the Water Corporation.
- The developer will make prospective purchasers of Lots opposite the Bush Forever Area aware of the Fire Management Plan, Detailed Area Plans and FESA's vegetation planting guidelines.
- The City of Wanneroo is to ensure fuel reduction and fire breaks are maintained to acceptable standards within the adjoining Bush Forever area.

City of Wanneroo is to continue to provide the community with advice on bush fire prevention and preparedness through brochures, newspaper articles, Firebreak Notice issued to rate payers and on their web site.

## 6.2 FUTURE DEVELOPMENT

This Fire Management Plan has been prepared on the basis of the site being developed in accordance with the approved structure plan (LSP No. 96) layout depicted in Figure 2. Any future proposed subdivision or development that results in a variation to this structure plan and would impact on the Bush Fire Risk Management will require approval from the City of Wanneroo and may result in the need to review the provisions of this Fire Management Plan.

#### 6.3 ACCESS AND FIREBREAKS

## 6.3.1 Road System

The approved structure plan (LSP No. 96) provides one entrance onto Ocean Reef Road and one entrance to Sydney Road. The internal road system is permeable and interconnected.

All road access will be designed and constructed to Council specifications and will comply with A2.1 & A2.2 of the *Planning for Bushfire Protection Guidelines (2010)*.

#### 6.3.2 Internal Firebreaks

Notwithstanding the provisions of this Fire Management Plan, all lots within the site must comply with the requirements of the City of Wanneroo Fire Control notice, as published annually.

### 6.4 PUBLIC EDUCATION AND COMMUNITY AWARENESS.

Copies of the approved Fire Management Plan will be issued to each affected property owner by the developer at the sale of the allotment.

Other Public Safety and Community information on Bush Fires is available on the Fire and Emergency Services Authority web site <a href="www.fesa.wa.gov.au">www.fesa.wa.gov.au</a> and the City of Wanneroo website <a href="www.wanneroo.wa.gov.au">www.wanneroo.wa.gov.au</a>

#### 6.5 FIRE SAFER AREAS

In the event of a bush fire, the Incident Controller of Fire Fighting operation will advise if an evacuation is necessary and, in conjunction with the City of Wanneroo, direct these workers to Safer Refuge Areas. These should be identified in a Local Emergency Management Arrangements by the City of Wanneroo.

### 6.6 ASSESSMENT OF FIRE MANAGEMENT STRATEGIES

It will be the responsibility of the developer initially to implement the relevant provisions of this Fire Management Plan in order to seek clearance of the related condition(s) of subdivision. The City of Wanneroo will ensure that the developer requirements identified in this Fire Management Plan are met by the developer prior to clearing any conditions of subdivision relating to this Fire Management Plan.

After any major fires that may occur during or once this development has been completed, the City of Wanneroo may conduct a Post Incident Analysis of the fire, which may include identifying and implementing any changes that may be needed to improve the performance of fire prevention strategies.

With the hazard management provisions detailed in this Fire Management Plan any fires that occur in the site are not expected to devastate the estate if the provisions of this Fire Management Plan are implemented initially by the Developer and maintained by future affected property owners, the City of Wanneroo and FESA (Section 6.7).

This Fire Management Plan has been prepared in accordance with the acceptable solutions detailed in *Planning for Bush Fire Protection Edition 2 (2010)*. It is noted that this Fire Management Plan cannot guarantee that a building will survive a bushfire event in every occasion. This is substantially due to the unpredictable nature and behavior of fire and extreme weather conditions.

## 6.7 IMPLEMENTATION OF THE FIRE MANAGEMENT PLAN.

This Fire Management Plan becomes operational as a condition of subdivision.

In implementing this Fire Management Plan, the following responsibilities have been determined.

## 6.7.1 Developer's Responsibilities

As a condition of subdivision the developer shall be required to carry out works described below to the satisfaction of the City of Wanneroo (and in the case of fire hydrants, to the satisfaction of the Water Corporation):

- All internal roads and access ways are to comply with the design requirements of the City of Wanneroo.
- Ensure fire hydrants are installed (as is standard Water Corporation requirements within the Perth metropolitan region) at the time of reticulating a water supply within the industrial subdivision.
- Preparation of a Detailed Area Plan for industrial lots immediately opposite the Bush Forever area (as identified on LSP N0. 96) to control vegetation and materials stored in the front setback areas.
- Each lot is to comply with the City of Wanneroo Fire Control Notice as published annually. This is to be maintained until lots are sold.
- Supply a copy of this Fire Management Plan, the Detailed Area Plan and FESA's
  vegetation planting guidelines to each affected property purchaser on sale of the
  allotment.

### 6.7.2 Property Owner's Responsibilities

To maintain the reduced level of risk and threat of fire, the owners/occupiers of industrial lots opposite the Bush Forever area and identified in any applicable Detailed Area Plan (DAP) will be responsible for undertaking, complying and implementing measures protecting their own assets from the threat and risk of bush fire:

- Maintaining the property in good order to minimize potential bushfire fuels to mitigate the risk of fire on the property, including those requirements specified in the DAP;
- Ensuring that the lot complies with the City of Wanneroo Fire Control Notice;
- Maintaining the Building Protection Zoned in the lot street setback area in perpetuity if required in the lot (this is identified on the DAP held by the City of Wanneroo and will have been supplied to the original owner of the land).
- Complying with the instructions of FESA Fire Services, the City of Wanneroo and/or volunteer fire services in maintaining the property or during the event of a bushfire;
- Ensuring that in the event an evaporative air conditioner is installed at the property, suitable external ember screens are installed to roof mounted units.

## 6.7.3 City of Wanneroo

The responsibility for compliance with the law rests with individual property owners and occupiers and the following conditions are not intended to unnecessarily transfer these responsibilities to the City of Wanneroo.

The City of Wanneroo shall be responsible for:

- Ensuring compliance with the Detailed Area Plans for those applicable industrial lots at the time of development application/building licence and then ongoing.
- Enforcing the City of Wanneroo Fire Control Notice.
- Monitoring bush fire fuel loads in the industrial lots and Bush Forever site and liaise with relevant landowners to maintain safe levels.
- Maintaining the road reserve interface as a Building Protection Zone.
- Providing fire prevention and preparedness advice to landowners upon request; and
- Ensuring the developer has implemented (or made other arrangement suitable to the City) the applicable requirements (refer 6.8.1) of this Fire Management Plan prior to clearance of conditions of subdivision.

## 6.7.4 Fire and Emergency Services Authority.

The Fire and Emergency Services Authority shall be responsible for:

• Developing and maintaining any applicable District Fire Fighting Facilities under its control.

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#### 7.0 **APPENDICES**

#### 7.1 **MAPS AND FIGURES**

Figure 1: Location Plan

Figure 2: Approved Structure Plan (LSP No. 96)
Figure 3: Bush Fire Hazard Assessment

Figure 1: Location Plan

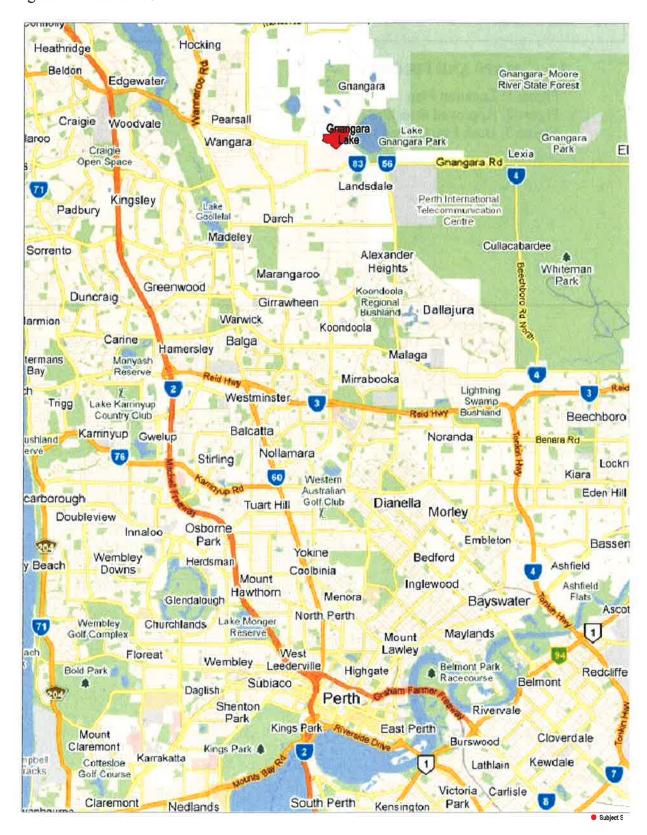


Figure 2: Approved Structure Plan (LSP No. 96)

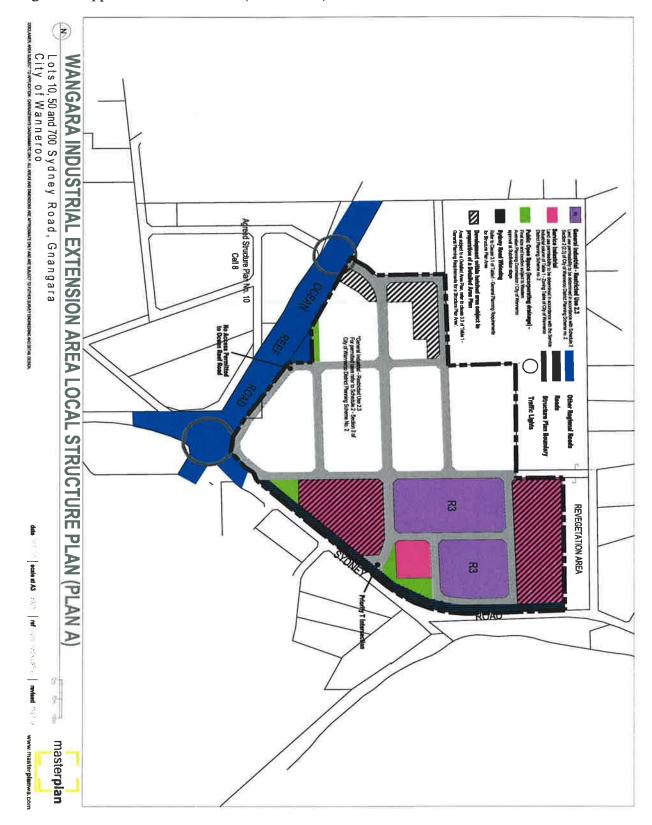


Figure 3: Bush Fire Hazard Assessment



### 7.2 WORKS PROGRAM

The works identified in this Fire Management Plan as being the developer responsibility will generally be implemented during subdivisional works.

Landowners and the City of Wanneroo will be responsible for implementing the applicable actions identified in the Fire Management Plan for each, thereafter.

### 7.3 GUIDELINES SPECIFICATIONS AND MINIMUM STANDARDS

The following section outlines the required specifications and minimum development standards that are required under this Fire Management Plan.

## 7.3.1 Building Protection Zone

The aim of the Building Protection Zones (BPZ) is to reduce bush fire intensity close to buildings and to minimise the likelihood of flame contact with buildings.

The Building Protection Zone is a low fuel area between the industrial area and the adjoining Bush Forever area which complies with *Planning for Bush Fire Protection* Acceptable Solution A4.3.

A minimum 20 metre Building Protection Zone is to apply to the interface area of industrial lots opposite the Bush Forever Site. Where possible, this is to be incorporated into a public road reserve. The Building Protection Zone must fulfil the following conditions:

- Bush fire fuels must be maintained at or below 2 tonnes per hectare and dry grass must be maintained below a height of 50mm;
- The spacing of tree trunks should be 15-20 metres apart to provide for a separation of 10 metres between crowns when trees mature;
- Trees are to be progressively low pruned at least to a height of 2 metres;
- No tall shrubs or trees are to be planted within 2 metres of a building including windows;
- There are no tree crowns over hanging the building;
- Branches, must be removed at least 2 metres back from the eaves of all buildings;
- Shrubs within the Building Protection Zone have no dead material within the plant;
- Trees in the Building Protection Zone have no dead material within the plant's crown or on the bole (tree trunk);
- Fences within the Building Protection Zone are to be constructed using non combustible materials (e.g. colour bond iron, brick, limestone);

• All leaves, twigs, logs, branches must be removed from within the building protection zone. Annual falls of leaf litter must be raked up and removed or burnt; and

#### 7.4 GLOSSARY

## **Acceptable Solution**

A statement describing an acceptable means of complying with the requirements of corresponding performance criteria.

## **Appliance or Fire Appliance**

A fire fighting appliance (vehicle) with structural, grass and bush fire fighting capabilities, with either a 2000 litres water capacity (2.4 appliance) or a 3000 litre water capacity (3.4 appliance) and four (4) wheel drive.

## **Building Protection Zone (BPZ)**

Low fuel area immediately surrounding buildings. Minimum width 20 metres, increasing with slope. Maintained by the landowner or, if incorporated into a road reserve, by the local government.

#### Bush

Under the Bush Fires Act 1954 the term bush is defined to include trees, bushes, plants, stubble, scrub and undergrowth of a kind whatsoever whether dead or alive and whether standing or not standing.

#### **Bush Fire or Wildfire**

A general term used to describe fire in vegetation that is not under control.

#### **Bush Fire Hazard.**

The flammability, arrangement and quantity of vegetation, dead or alive, that can be burnt in a bush fire. Development is to be avoided in extreme bush fire hazard designated areas.

**Bush fire prone area** - for the purposes of this fire management plan, a bush fire prone area is an area that has been declared as such by the relevant local government responsible for an area.

## **Bush Fire Risk**

The chance of a bush fire starting that will have harmful consequences on life and property. It is measured in terms of consequences and likelihood and arises from the interaction of hazards, communities and the environment.

## **Development Application**

An application for approval to carry out a development under either a local planning scheme or regional planning scheme.

**Street setback** – the horizontal distance between a wall of a building at any point, and an adjacent lot boundary, measured at right angles (90 degrees) to the boundary. Minimum setbacks are generally specified by the City of Wanneroo in the Local Planning Scheme and associated policies.

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## **Emergency Access Way**

Road not normally open but available to the public (using two wheel drive vehicles) for evacuation during a bush fire emergency.

#### **FESA**

The Fire and Emergency Services Authority of Western Australia.

#### Fire Break or Firebreak

Any natural or constructed discontinuity in a fuel bed used to segregate, stop and control the spread of a bush fire or to provide a fire line from which to suppress a bush fire. This is an area cleared to reduce the risk of bush fire damage.

## **FDI- Fire Danger Index**

The chance of a fire starting, its rate of spread, its intensity and the difficulty of its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long and short- term drought effects.

#### **Fire Protection**

A generic term used to describe the range of services and systems used to mitigate the impact of fire on the community. It encompasses both fire prevention and emergency response.

## Fire Management Plan

Ongoing, dynamic document that sets out the medium to long term mitigation strategies for fire hazards and risks in particular developments within local government areas.

#### **Fire Services Access Route**

Accessible by heavy four wheel drive fire fighting vehicles.

#### Fuel Reduction also Hazard Reduction

Removal and modification of bush fire fuel, or increase in building construction standards or a combination of the two.

## Performance Criteria.

Statement which specifies the outcomes required for the protection of life and property from bush fires.

### Structural Fire

A fire in a building.

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# 8.0 FIRE MANAGEMENT PLAN COMPLIANCE CHECKLIST FOR PERFORMANCE CRITERIA AND ACCEPTABLE SOLUTIONS

PROPERTY DETAILS: Lot 700 and portions of Lots 9000 and 10 Ocean Reef and Sydney Roads GNANGARA
Local Government: City of Wanneroo

Local Governin	one. Only of Wannioroo			
Element 1: Locat	tion			
Does the proposal co by applying acceptal	omply with the performance criter ble solution A1.1?	ria Yes	✓ N	10 <u> </u>
Bush fire hazard level can be implemented	is manageable and an appropriate l	3PZ	,	
Element 2: Vehic	cular Access			
Does the proposal co by applying acceptal	omply with the performance criter ble solution A2.1?	ria Yes	✓ N	10 <u> </u>
Does the proposal co	omply with performance criteria ble solution A2.2?	Yes	✓ N	No
Subdivisional roads w	ill exceed minimum requirements			
Does the proposal co by applying acceptal	omply with the performance criter ble solution A2.3?	ria Yes		No O
N/A – No cul-de-sacs	are proposed			
Does the proposal co by applying acceptal	omply with the performance criter ble solution A2.4?	ria Yes		No
N/A – No battle axes a	are proposed			
Does the proposal co by applying acceptal	omply with the performance criter ble solution A2.5?	ria Yes	✓	No
Private driveways will	comply with the City's requriements			
Does the proposal co by applying acceptal	omply with the performance criter ble solution A2.6?	ria Yes		No
N/A – No emergency a	access ways are proposed			
Does the proposal co by applying acceptat	omply with the performance criter ble solution A2.7?	ria Yes		No
N/A – No fire serve ac	cess routes are proposed			

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Does the proposal comply with the performance criteria by applying acceptable solution A2.8?	Yes		No	
N/A				
Does the proposal comply with the performance criteria by applying acceptable solution A2.9?	Yes	✓	No	
Complying with City of Wanneroo Fire Control notice.				
Does the proposal comply with the performance criteria by applying acceptable solution A2.10?	Yes		No	
N/A – no signage required within the subject site				
Element 3: Water				
Does the proposal comply with the performance criteria by applying acceptable solution A3.1?	Yes	✓	No	
Development will have reticulated water, fire hydrants installed by Development	per			
Does the proposal comply with the performance criteria by applying acceptable solution A3.2?	Yes	П	No	
N/A				
Does the proposal comply with the performance criteria by applying acceptable solution A3.3?	Yes		No	
N/A				
Element 4: Siting of Development				
Does the proposal comply with the performance criteria by applying acceptable solution A4.1?	Yes	✓	No	
BPZ				
Does the proposal comply with the performance criteria by applying acceptable solution A4.2?	Yes		No	
N/A				
Does the proposal comply with the performance criteria by applying acceptable solution A4.3?	Yes	<b>✓</b>	No	
Does the proposal comply with the performance criteria by applying acceptable solution A4.4?	Yes		No	

Fire Management Plan Lot 700 & portions of Lots 9000 and 10 Ocean Reef and Sydney Roads, Gnangara					
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N/A					
Does the proposal comply with the performance criteria by applying acceptable solution A4.5?  Yes No					
Element 5: Design of Development					
Does the proposal comply with the performance criteria by applying acceptable solution A5.1?	Yes 🗸	No			
The development uses acceptable solutions as appropriate to meet the requirements under performance criterion P5. Note: AS 3959 does not apply to industrial development.	<u> </u>				
Does the proposal comply with the performance criteria by applying acceptable solution A5.2?	Yes	No			
Applicant Declaration:					
I declare that the information provided is true and correct to the best of my knowledge.					
Name of Person Preparing the Fire Management Plan:					
Full Name: B.W. Barris for FirePlan WA Date: 2/8/2011					