



**MIRVAC-FINI**

**LOT 201 BREAKWATER DRIVE,  
TWO ROCKS**

**FIRE MANAGEMENT PLAN**

**VERSION 3**

**MAY 2002**

**REPORT NO: 2001/127**

## DISCLAIMER

This document is published in accordance with and subject to an agreement between ATA Environmental (“ATA”) and the client for whom it has been prepared Mirvac-Fini (“Client”) and is restricted to those issues that have been raised by the client in its engagement of ATA and prepared using the standard of skill and care ordinarily exercised by Environmental Scientists in the preparation of such Documents.

Any person or organisation that relies on or uses the document for purposes or reasons other than those agreed by ATA and the Client without first obtaining the prior written consent of ATA, does so entirely at their own risk and ATA denies all liability in tort, contract or otherwise for any loss, damage or injury of any kind whatsoever (whether in negligence or otherwise) that may be suffered as a consequence of relying on this Document for any purpose other than that agreed with the Client.

## QUALITY ASSURANCE

ATA Environmental has implemented a comprehensive range of quality control measures on all aspects of the company’s operation and has Quality Assurance certification to ISO 9001.

An internal quality review process has been applied to each project task undertaken by us. Each document is carefully reviewed by core members of the consultancy team and signed off at Director level prior to issue to the client. Draft documents are submitted to the client for comment and acceptance prior to final production.

**Document No:** 20171/fire\_001\_sm\_V3

**Report No:** 2001/127

**Checked by:** Signed: 

Name: Sarah Maxwell Date: 3 May 2002

**Approved by:** Signed: 

Name: Paul van der Moezel Date: 3 May 2002

## TABLE OF CONTENTS

1. INTRODUCTION .....	1
1.1 Purpose and Scope .....	1
2. DEVELOPMENT PROPOSAL.....	2
3. BUSHFIRE HAZARD RATING .....	3
4. FIRE MANAGEMENT STRATEGIES .....	4
4.1 Strategic Firebreaks .....	4
4.2 Access and Egress.....	4
4.3 Water Supply and Fire Hydrants.....	5
4.4 Building Protection Zone.....	5
4.5 Community Awareness.....	5
5. SUMMARY AND RECOMMENDATIONS.....	6
REFERENCES .....	7

## FIGURE

1. Study Area and Fire Protection Measures

## APPENDIX

1. Home Owners Bush Fire Manual

## 1. INTRODUCTION

### 1.1 Purpose and Scope

This report examines the potential fire management issues for a proposed Special Rural community development on Lot 201 Breakwater Drive, Two Rocks (Figure 1) on behalf of Mirvac-Fini.

The implementation of a Fire Management Plan has two principal objectives:

- to protect the life and property within the existing land at Two Rocks and the proposed development from wildfires; and
- to protect the environmental values of the surrounding regionally significant bushland and fauna habitats at Two Rocks.

As a result of rural and residential developments in the Two Rocks area, increased development will further increase the potential for fire. In view of this, the City of Wanneroo has established a need for a Management Plan, to provide for the control of this risk. In particular, this Plan has been prepared to partially fulfil a Ministerial Condition (15.2.2000) which states:

*Regionally significant vegetation which surrounds the Amendment Area shall be protected from indirect and direct impacts associated with the development of the amendment area by: Fire Management.*

The preparation of the Plan is also a requirement of the City of Wanneroo's District Planning Scheme.

The Fire Management Plan aims to introduce fire protection measures such as long-term maintenance of access, strategic fire break systems, water supply, fuel reduction management and maintenance of a fire-fighting force. In addition to this the Plan aims to deal with the long-term maintenance of the protective measures.

## 2. DEVELOPMENT PROPOSAL

The Rural Community zoning of Lot 201 Breakwater Drive allows for either conventional special rural lots, cluster development or a hybrid of both types of development.

The subdivision plan for Lot 201 comprises 139 conventional special rural lots with an average lot size of 1.6ha. The plan retains two areas of locally significant vegetation in Public Open Space, one in the north-west corner (9.9ha) and a larger parcel near the south-east corner (14.8ha). The land surrounding the proposed development comprises remnant Tuart and *Banksia* Woodland which is in excellent condition. Land to the south has been parkland cleared and contains scattered Tuarts and pasture areas.

Breakwater Drive borders the development to the south and the future Mitchell Freeway alignment is located along most of the eastern boundary. A 10m wide bridle trail is proposed to be located at the periphery of the development.

Each lot in the proposed development will be serviced with underground power and connected to the mains water supply. Effluent disposal will be via Alternative Treatment Units.

### 3. BUSHFIRE HAZARD RATING

According to FESA (2000), bushfire hazard refers to the flammability, arrangement and quantity of the vegetation (dead and alive) that is burnt in a bushfire.

The level of bush fire hazard provides a measure of the likely intensity of a bush fire and the level of bush fire attack on a development, whether from within or from outside the development. Four levels of bush fire hazard have been defined; low, medium, high and extreme bush fire hazard.

The development of the study area as a Special Rural subdivision ensures that the area is a 'Medium bush fire hazard'. Typically, these areas include:

- Areas where standing native vegetation occupies no more than about 30% spread across the total area. Suburban areas with some native tree cover would fall in this category.
- Shrubland and open heath would also be classified as medium fire hazard areas. Slopes within these areas would be flat or moderate (<15°).

The level of bush fire attack in these areas is such that protective features are required as part of development and building design to minimise the vulnerability of the development and its residents, as well as to assist with fire control operations.

FESA identifies that the following fire performance criteria is required in medium fire hazard areas:

- building protection zones;
- water supply;
- establishment of fire breaks (as per the Local Government Fire Break Notice);
- development design to address hazard separation, building protection, access and fire services access; and
- all habitable buildings to comply with Australian Standard for the Construction of Buildings in Bushfire-Prone areas (AS 3959).

The following section outlines the application of the above criteria to the proposed development of Lot 201 Breakwater Drive, Two Rocks.

#### **4. FIRE MANAGEMENT STRATEGIES**

The following section identifies the fire management strategies and subdivision and development design criteria that are to be incorporated into the proposed development of Lot 201 to reduce the impact of a potential fire.

##### **4.1 Strategic Firebreaks**

The proposed development provides for two forms of strategic fire breaking:

- the construction of a bridle trail at the west, north and eastern boundary which will also function as a formal trafficable firebreak; and
- the utilisation of internal roads as firebreaks.

Road access is available to all lots within the subdivision with the existing road network and series of peripheral bridle trails/firebreaks making provision for the separation of the surrounding bushland from the proposed development. All roads within the development are a minimum width of 8m with a 8.5m wide pavement to allow two vehicles to pass and constructed to a trafficable standard for a 2WD vehicle.

The firebreaks/bridle trails are approximately 6m wide and provide additional access to the periphery of the development and surrounding bushland. The firebreaks have a minimum grade of 1:6. The surface will be compacted, and where this can not be achieved compacted limestone will be applied. A standard firebreak gate will be installed at entry points to firebreaks and POS access paths. Emergency services will require keys to facilitate access during emergencies.

Fire breaks through the two POS areas will be 3m wide and will be aligned to take advantage of existing tracks, avoiding proposed rehabilitation areas where possible. Firebreaks on the eastern perimeter of the southern area of POS will also be 3m wide.

A firebreak between the Wilbinga Conservation Reserve and Lot 203 (Parks and Recreation Reserve) will not be constructed.

All fire breaks will be installed prior to development of the surrounding lots.

##### **4.2 Access and Egress**

Access to and from the subdivision will be via two entry points at Breakwater Drive to allow rapid evacuation from the development in the event of a fire.

Access to the surrounding bushland will be available to fire vehicles and for maintenance purposes only from the proposed fire breaks.

### **4.3 Water Supply and Fire Hydrants**

Each residence will be connected to reticulated water supply for fire control purposes if required.

Fire hydrants will be installed every 400m within the main road network to which hoses can be connected for fire suppression.

All supply sources which can be used for fire fighting purposes will be signposted.

### **4.4 Building Protection Zone**

The building envelopes for the subdivision are identified on Figure 1 and are to be endorsed by the City of Wanneroo prior to subdivision. Each envelope has been located to minimise the potential fire hazard, to maximise amenity and accessibility.

In addition, the lot layout incorporates a building protection zone to minimise fire intensity around buildings and prevent potential flame contact. The protection zone surrounds the proposed building up to 15m and will comprise a low fuel area immediately surrounding the building. The zone must fulfil the following conditions:

- Bush fire fuels must be maintained below 10cm in height.
- Trees and branches which may fall onto a house must be removed.
- Lower branches of remaining trees must be removed.

Features such as driveways, lawn, landscaped gardens may form part of the building protection zone. In addition, isolated trees and shrubs may be retained within this zone.

### **4.5 Community Awareness**

To assure protection to the individual landowners within the estate, this Management Plan will be distributed to all prospective land owners within the development. In addition, a copy of the Home Owners Fire Manual, prepared by the Fire and Emergency Services authority of WA (FESA), is included as part of this Management Plan (Appendix 1).

Following development, FESA, in conjunction with the City of Wanneroo, will establish a Bushfire Ready Action Group comprising members of the community including a street coordinator from each major thoroughfare in the development.



## 5. SUMMARY AND RECOMMENDATIONS

Although the area in and around lot 201 Breakwater Drive has not experienced fire for a long period, the area is considered naturally fire prone. As a result, a number of fire management measures are proposed for Lot 201 including:

- The establishment of strategic fire breaks at the periphery of the development and linking to the internal road network.
- Identification of building envelopes and low fuel zones within each lot.
- Road network providing alternative forms of access.
- The provision of reticulated water supply to each residence.
- Installation of fire hydrants throughout the subdivision.
- Community education program to increase community awareness of potential fire hazards and management measures.
- Establishment of a Bushfire Ready Action Group (BRAG) within the community.

In addition, the proponent proposes to implement measures to ensure the community is educated in terms of maintaining low fire risk dwellings and surrounds.

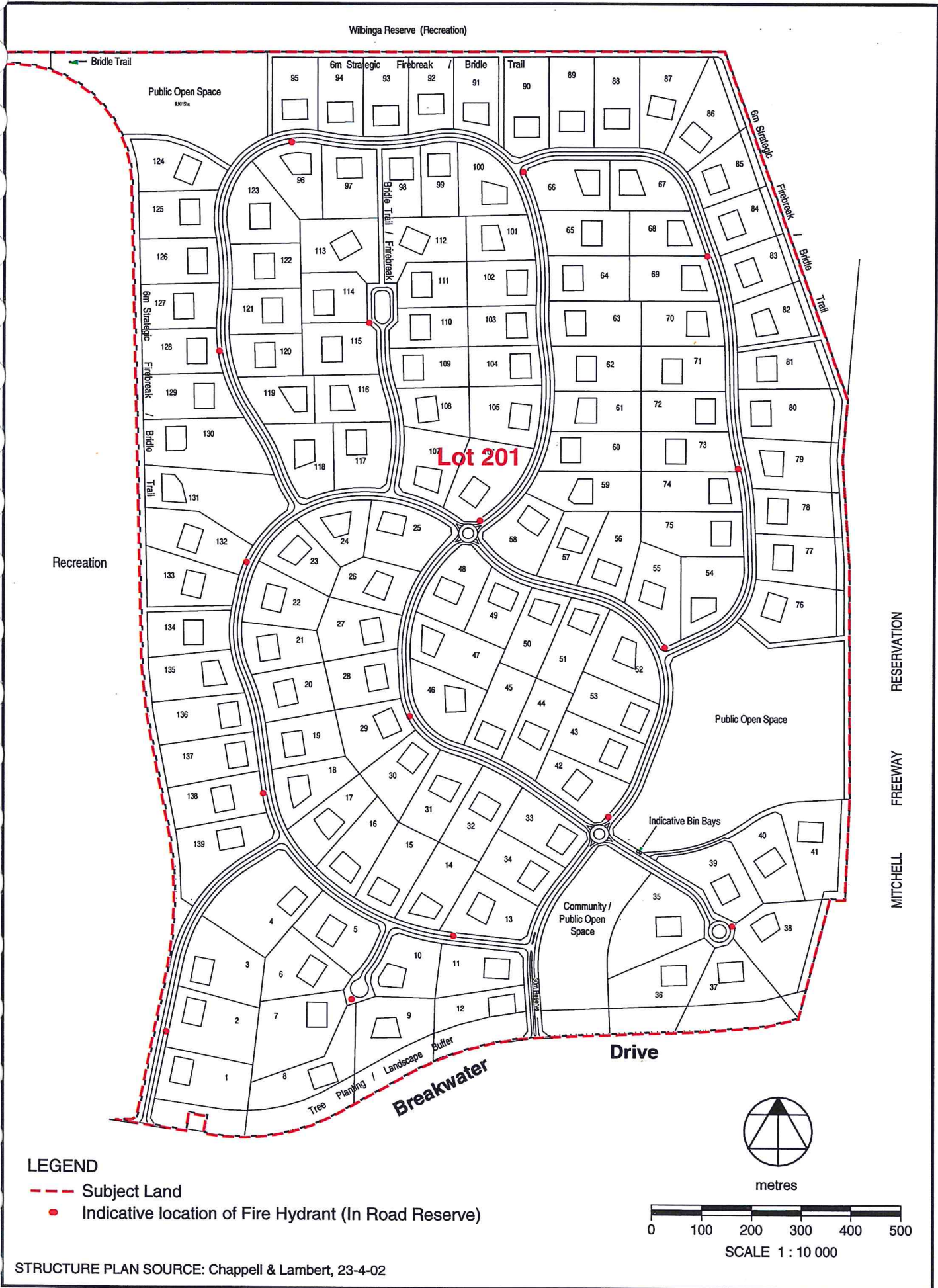
The adoption and implementation of the above measures will ensure that the potential impact of a fire on and adjoining Lot 201 Breakwater Drive can be minimised and maintained within limits which are acceptable to land management and bushfire protection agencies.

**REFERENCES**

Fire and Emergency Services Authority of Western Australia (2000) Homeowners Bush Fire Survival Manual.

Fire and Emergency Services Authority of Western Australia (2000) Planning for Fire. Draft discussion document.







THE HOMEOWNER'S

# Bush Fire Survival Manual

**F E S A**

Fire & Emergency Services  
Authority of Western Australia

---

JUNE 2000  
THIRD EDITION

---