

# **Corowa Berrigan Bush Fire Management Committee**

## **Bush Fire Risk Management Plan**

*Prepared by the Corowa Berrigan Bush Fire Management Committee; pursuant to section 52 of the Rural Fires Act, 1997. In accordance with the Regulations to the Rural Fires Act 1997, the draft bush fire risk management plan will be exhibited for a period of not less than 42 days during which time submissions are invited from the public.*

*As such, members of the public, whether as private individuals or as members of community interest groups were invited to comment on the plan. Submissions should be in writing, and as detailed and specific as possible; however any comments, no matter how brief or general are welcome. All comments received will be referred to the Bush Fire Coordinating Committee with the plan for their final deliberation and approval.*

*Prior to finalising the plan, the Bush Fire Management Committee is required to consider the submissions to plan and prepare a review for consideration by the Bush Fire Coordinating Committee. Under the Act, the Bush Fire Coordinating Committee may approve the plan, amend the plan or reject the plan in the light of public submissions.*

*If significant changes are made to the plan after public exhibition, the draft plan will be placed on further exhibition prior to its final adoption.*

*Comments should be forwarded to:*

*Executive Officer*

*Corowa Berrigan Bush Fire Management Committee*

*C/\_NSW Rural Fire Service*

*PO BOX 180*

*COROWA NSW 2646*

*Additional information or enquires on any aspect of the plan can be obtained from the Corowa Berrigan Fire Control Centre or by telephoning 02 6033 4550 .*

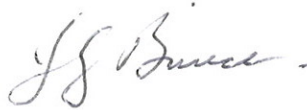
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## Authorisation

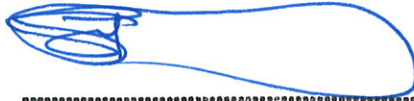
In accordance with Part 3 Division 4 of the Rural Fires Act 1997, this Draft Plan has been prepared by the Corowa Berrigan Bush Fire Management Committee and has been endorsed at the BFMC meeting on 4 February 2009 for submission to the Bush Fire Coordinating Committee.

### Recommended



Chairperson  
Corowa Berrigan Bush Fire Management Committee

### Approved



.....  
**Shane Fitzsimmons, A/SM**  
**Chairman**  
**NSW Bush Fire Coordinating Committee**



On behalf of the  
NSW Bush Fire Coordinating Committee

## Amendment List

Amendment		Entered	
Number	Date	Signature	Date

## **Glossary**

**Assets:** anything valued by the community which includes houses, crops, heritage buildings and places, infrastructure, the environment, businesses, and forests, that may be at risk from bush fire.

**Bush Fire:** a general term used to describe fire in vegetation, includes grass fire.

**Bush Fire Hazard:** the potential severity of a bush fire, which is determined by fuel load, fuel arrangement and topography under a given climatic condition.

**Bush Fire Risk:** the chance of a bush fire igniting, spreading and causing damage to the community or the assets they value.

**Bush Fire Risk Management:** a systematic process that provides a range of treatments which contribute to the well being of communities and the environment, which suffer the adverse effects of wildfire/bush fire.

**Bush Fire Threat:** potential bush fire exposure of an asset due to the proximity and type of a hazard and the slope on which the hazard is situated.

**Consequence:** outcome or impact of a bush fire event.

**Fire Fighting Authorities:** the NSW Rural Fire Service, NSW Fire Brigades, the National Parks and Wildlife Service and Forests NSW.

**Likelihood:** the chance of a bush fire igniting and spreading.

**Major Bush Fire:** A bush fire which requires the attendance of multiple brigades, or causes damage to property or injury to one or more persons.

**Display area:** geographic area determined by the Bush Fire Management Committee which is used to provide a suitable area and scale for community participation and mapping display purposes.

**Recovery costs:** the capacity of an asset to recover from the impacts of a bush fire.

**Risk Acceptance:** an informed decision to accept the consequences and the likelihood of a particular risk.

**Risk Analysis:** a systematic process to understand the nature of and to deduce the level of risk.

**Risk Assessment:** the overall process of risk identification, risk analysis and risk evaluation.

**Risk Identification:** the process of determining what, where, when, why, and how something could happen.

**Risk Treatment:** the process of selection and implementation of measures to modify risk.

**Vulnerability:** the susceptibility of an asset to the impacts of bush fire.

# Chapter 1. Introduction

## 1.1 Background

Under the *Rural Fires Act 1997* the Bush Fire Coordinating Committee (BFCC) must constitute a Bush Fire Management Committee (BFMC) for each area in the State, which is subject to the risk of bush fires. Each BFMC is required to prepare and submit to the BFCC a draft Bush Fire Risk Management Plan (BFRMP).

A BFRMP is a strategic document that identifies community assets at risk and sets out a five-year program of coordinated multi-agency treatments to reduce the risk of bush fire to the assets. Treatments may include such things as hazard reduction burning, grazing, community education, fire trail maintenance and establishing community fireguard groups.

Annual programs to implement the treatments identified in this plan will be undertaken by the relevant land managers and fire fighting authorities.

In exercising its functions under the *Rural Fires Act 1997*, including the preparation of a draft bush fire risk management plan, the Corowa Berrigan BFMC is required to have regard to the principles of ecologically sustainable development (ESD).

This document and the accompanying maps together form the BFRMP for the Corowa Berrigan BFMC area.

This BFRMP has been prepared by the Corowa Berrigan BFMC and covers both public and private lands. This BFRMP must be reviewed and updated within each successive five-year period from the constitution of the BFMC.

The BFCC recognises that climate change has the potential to increase bush fire risk. The risk assessment process applied in this BFRMP is based on current climatic conditions. The BFCC will monitor information on climate change and will modify the process when necessary.

## 1.2 Aim and Objectives

The **aim** of this BFRMP is to minimise the risk of adverse impact of bush fires on life, property and the environment.

The **objectives** of this BFRMP are to:

- reduce the number of human-induced bush fire ignitions that cause damage to life, property and the environment;
- manage fuel to reduce the rate of spread and intensity of bush fires, while minimising environmental/ecological impacts;
- reduce the community's vulnerability to bush fires by improving its preparedness; and
- effectively contain fires with a potential to cause damage to life, property and the environment.

## **1.3 Description of the Corowa Berrigan BFMC Area**

### **1.3.1 Location and land tenure**

The Corowa Berrigan BFMC area is located in central southern New South Wales and includes the Local Government Areas of Corowa and Berrigan.

The area covered by the Corowa Berrigan BFMC is 439 100 hectares and includes the land tenures outlined in Table 1.1.

<b>Land Manager</b>	<b>% of BFMC area</b>
Forests NSW	1.3 %
Department of Lands	1.9 %
Local Government	1.6 %
Private	95 %
All other	0.2 %

**Table 1.1 Land Tenure**

### **1.3.2 Climate and bush fire season**

The typical / average climate in the Corowa Berrigan BFMC area is warm to hot during the summer period of November to March. Winters tend to experience lower temperatures and rainfall. The bush fire season generally runs from November to February.

Prevailing weather conditions associated with the bush fire season in the Corowa Berrigan BFMC area are:- North-westerly winds accompanied by high daytime temperatures and low relative humidity. There are also frequent dry lightning storms occurring during the bush fire season.

### **1.3.3 Population and demographic information**

The population of the Corowa Berrigan BFMC area is approximately 19,500 people. The major population centres are Corowa, Howlong, Mulwala, Berrigan, Finley, Tocumwal and Barooga. The Murray River borders the area to the south which attracts a large tourist influx during the summer months and school holidays, particularly campers. The exact location of all of these groups during these periods is not easily identifiable and this group are not necessarily knowledgeable of, or prepared for, a bushfire within their holiday vicinity.

### **1.3.4 History of bush fire frequency and ignition cause**

The Corowa Berrigan BFMC area has on average of 50 bush fires per year, of which 2-3 on average can be considered to be major fires (> 100ha).

The main sources of ignition in the Corowa Berrigan BFMC area are lightning strikes and machinery.



## Chapter 2. Identifying and Assessing the Bush Fire Risk

### 2.1 Process

The Australia/New Zealand Standard *AS/NZS 4360: 2004 Risk Management* was used as the basis for the risk assessment process. See Figure 2.1 for the steps involved. For a detailed description of the process undertaken see the Bush Fire Risk Management Planning Guidelines for Bush Fire Management Committees on the RFS website: [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au).

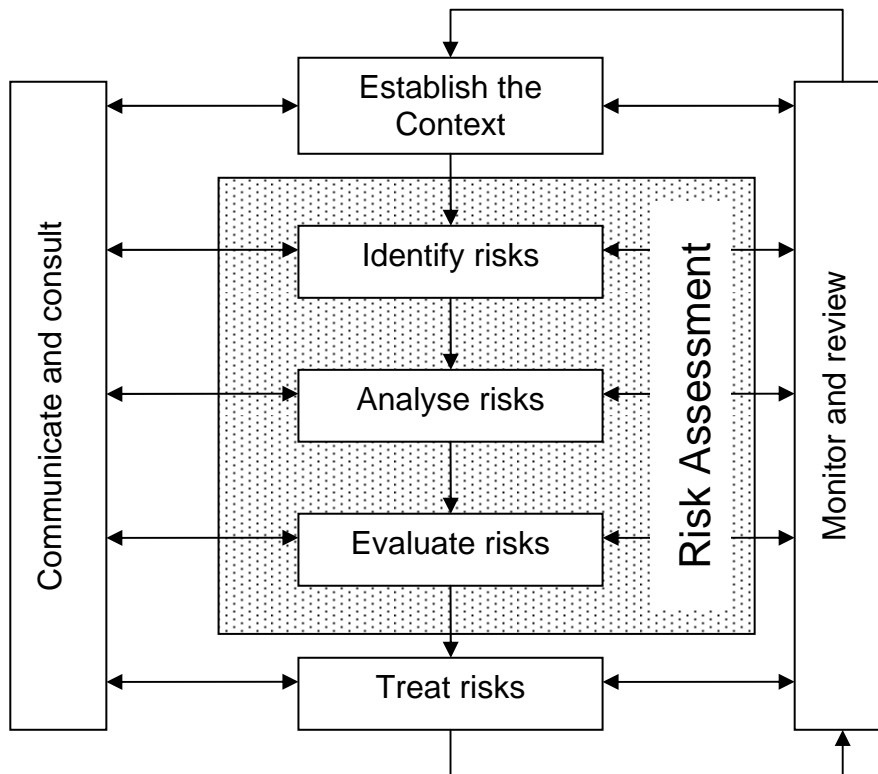


Figure 2.1 Overview of the risk assessment process

### 2.2 Communication and Consultation

Community participation is an integral part of risk management. The Community Participation Strategy involved developing and implementing a process to address the needs, issues and concerns of stakeholders within the BFMC area in regards to the BFRMP. See Appendix 1 for the Community Participation Strategy used by the Corowa Berrigan BFMC in preparing this BFRMP.

## **2.3 Identifying the Bush Fire Risk**

Identifying the level of bush fire risk firstly involved identifying important community assets considered to be at risk from bush fire in the Corowa Berrigan BFMC area, and then assessing the likelihood and consequence ratings.

### **2.3.1 Assets**

BFMC members and the community, including RFS volunteers, identified assets within the Corowa Berrigan BFMC that they believed were at risk of bush fire.

The assets were divided into four asset types:

#### **Human settlement**

- Residential areas including urban bushland interface areas and rural properties;
- Special Fire Protection areas including schools, hospitals, nursing homes, and tourist facilities; and
- Other human settlement areas including commercial and industrial areas where distinct from major towns.

#### **Economic**

- Agricultural; e.g. major silos, regional saleyards, cropping/grazing land;
- Commercial/industrial e.g. major industries, waste treatment plants, sawmills;
- Infrastructure e.g. large power lines, gas and oil pipelines, railway lines, electricity substations, communication facilities;
- Tourist and recreational e.g. tourist sites and facilities, resorts, retreats;
- Mines;
- Commercial forests e.g. pine plantations, eucalypt plantations and commercial native forests; and
- Drinking water catchments.

#### **Environmental**

- Threatened species, populations and ecological communities and Ramsar wetlands;
- Locally important species and ecological communities, such as species and ecological communities especially sensitive to fire.

## **Cultural**

- Aboriginal significance – Aboriginal places and items of significance;
- Non-indigenous heritage – places and items arising from the early occupation of NSW by European or other non-indigenous settlers; and
- Other cultural assets – community halls, clubs and recreational facilities.

See Appendix 2 for the full list of assets identified in the Corowa Berrigan BFMC area. See maps 1- 3 for the location of assets to be treated under this BFRMP.

### **2.3.2 Assessing the Bush Fire Risk - Consequence**

Once the assets were identified, the consequence of a bush fire impacting on these assets was assessed.

See Appendix 2 for the consequence ratings assigned to each asset identified in the Corowa Berrigan BFMC area.

The different asset types had different assessment processes used to determine the consequence. These processes are identified below.

#### **Human settlement**

A potential fire behaviour model using vegetation type, slope and separation distance was used to produce a threat rating for human settlement assets. The vulnerability of the asset to a bush fire was also assessed and a rating assigned. These ratings were then used to assess the consequence of a bush fire impacting upon a human settlement asset.

Special Fire Protection (SFP) assets were considered inherently more vulnerable to bush fire due to mobility capacity, knowledge or other issues relating to their inhabitants, (e.g. the elderly, infirm, children or tourists) and therefore stricter requirements for vulnerability assessment and rating were applied.

#### **Economic**

The level of economic impact e.g. local, regional or state, as well as the economic recovery costs (how long and complicated a financial recovery will be) of the asset were identified. These ratings were used to assess the consequence of a bush fire impacting upon an economic asset.

#### **Environmental**

Environmental assets with known minimum fire threshold were assessed to determine if they were at risk of a bush fire within the 5 year life of the BFRMP using fire history) data. Those environmental assets which were within or above the fire threshold were not assessed in the BFRMP, as the negative impact of a fire within the 5 year period was determined as being low and may even be of benefit to the asset and surrounding habitat.

The vulnerability of an environmental asset was determined by its conservation status and its geographic extent (distribution across the landscape). Vulnerability and potential impact of bush fire were used to assess the consequence of a bush fire impacting upon an environmental asset.

## **Cultural**

For non-indigenous historical, Aboriginal and other cultural assets a potential fire behaviour model using fuel load, slope and proximity was used to produce a threat rating. The physical vulnerability of the asset to a bush fire was also assessed. These ratings were then used to assess the consequence of a bush fire impacting upon a cultural asset.

### **2.3.3 Assessing the Bush Fire Risk - Likelihood**

For all asset types the likelihood of a bush fire occurring was assessed. This involves considering fire history, including ignition cause and patterns, known fire paths, access, containment potential and potential fire run (size of the vegetated area). See Appendix 2 for the likelihood ratings assigned to each asset identified in the Corowa Berrigan BFMC area.

### **2.3.4 Identifying the level of risk**

The consequence and likelihood ratings were then used to identify the level of risk. See Appendix 2 for the risk ratings assigned to each asset identified in the Corowa Berrigan BFMC area.

### **2.3.5 Evaluating the Bush Fire Risk**

Once the risk ratings for each asset were identified, they were evaluated to:

- a) confirm that risk levels identified in the risk analysis process are appropriate and reflect the relative seriousness of the bush fire risk;
- b) identify which assets require treatments; and
- c) identify treatment priorities.

### **2.3.6 Prioritising Treatments**

No organisation has limitless resources to deal with adverse risk. It is therefore necessary to define priorities. The bush fire risk ratings determined were used to prioritise the risk treatments, i.e. areas of extreme risk were considered first for treatment, then very high, then high then medium then low.

### **2.3.7 Risk Acceptability**

Risks below a certain level were assessed as not requiring treatment within the life of this plan. This is due to a combination of risk priority and capacity to undertake the works within the Corowa Berrigan BFMC area the level of acceptable risk is medium. Areas of medium or low risk, cultural and environmental assets are likely to be managed by routine procedures and so do not require a specific application of resources. However, the BFMC will endeavour to treat acceptable risk if possible.

## Chapter 3. Treating the Risk

### 3.1 Bush Fire Management Zones

Bush Fire Management Zones were identified within the Corowa Berrigan BFMC area and mapped (see maps 1, 2, 3). These zones identify the fire management intent for a specific area. See Table 3.1 for descriptions of the zones and their purposes. The four categories of Bush Fire Management Zones are:

- Asset Protection Zone (APZ);
- Strategic Fire Advantage Zone (SFAZ);
- Land Management Zone (LMZ); and
- Fire Exclusion Zone (FEZ).

SFAZ have been identified within the Corowa Berrigan BFMC area to allow for mosaic or patch burning to complement APZ's where in place and provide strategically located varying fuel loads to more easily suppress and reduce the potential for large wild fires to develop and spread.

Zone	Purpose	Suppression Objective(s)	Zone characteristics
<b>Asset Protection Zone</b>	To protect human life, property and highly valued public assets and values.	To enable the safe use of <b>Direct Attack</b> suppression strategies within the zone. To minimise bush fire impacts on undefended assets.	As per RFS document <i>Standards for Asset Protection Zones</i> .
<b>Strategic Fire Advantage Zone</b>	To provide strategic areas of fire protection advantage which will reduce the speed and intensity of bush fires, and reduce the potential for spot fire development; To aid containment of wildfires to existing management boundaries.	To improve the likelihood and safe use of: <b>Parallel Attack</b> suppression strategies within the zone. and/or <b>Indirect Attack</b> (back burning) in high to very high fire weather conditions within the zone.  To reduce the likelihood of: Crown fire development within the zone. and/or Spot fire ignition potential from the zone	Zone width related to suppression objectives and dependant upon: <ul style="list-style-type: none"> <li>• Topography</li> <li>• Aspect</li> <li>• Spotting propensity</li> <li>• Location of adjacent firebreaks</li> <li>• Mosaic pattern of treatment</li> </ul> Assess Overall Fuel Hazard (OFH) once vegetation communities reach minimum fire thresholds within this plan. Management practices should aim to achieve mosaic fuel reduction patterns so that the majority of the SFAZ has an OFH of less than high.
<b>Land Management Zone</b>	To meet relevant land management objectives in areas where APZs or SFAZs are not appropriate.	As per the land management and fire protection objectives of the responsible land management agency. To reduce the likelihood of spread of fires. To undertake mosaic burning	As appropriate to achieve land management e.g. heritage and/or fire protection e.g. broad scale mosaic burning objectives.

<b>Fire Exclusion Zone</b>	To exclude bush fires.	N/A	Variable dependant on size of fire sensitive area requiring protection.
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**Table 3.1 Bush Fire Management Zones: Purpose, objectives and characteristics**

NB: OFH refers the Overall Fuel Hazard Guide as described in the document published by (Dept. of Sustainability and Environment 3<sup>rd</sup> ed. 1999 & NPWS version); State-wide procedures for assessment of fuel hazard will be developed in conjunction with the BFCC.

**Note:** All areas that are not mapped or described as APZs or SFAZs are considered as LMZs.

### **3.2 BFMC Wide Treatments**

BFMC wide treatments are activities which reduce the overall bush fire risk within the BFMC area and are undertaken on an ongoing basis as part of normal business. These treatments are not linked to specific assets in the BFRMP, rather they are applied across all or part of the BFMC area as designated by legislation or agency policy. BFMC wide treatments include the following:

- **Reviewing the bush fire prone land map**  
These maps identify bush fire prone land and are used to trigger whether a development application is assessed using *Planning for Bush Fire Protection*<sup>1</sup>.
- **Ensuring developments in bush fire prone land comply with *Planning for Bush Fire Protection***  
This assessment process requires new applications for development to include bush fire protection measures.
- **Using the Local Environment Plan/s (LEPs) to control developments in areas with a bush fire risk**  
LEPs can be used to exclude development in extreme bush fire risk areas or where bush fire protection measures cannot be incorporated.
- **Varying the standard bush fire danger period as required**  
In years where the weather is particularly adverse the bush fire danger period may be brought in early or extended. This is assessed every year by the BFMC.
- **Requiring permits during the bush fire danger period**  
In the bush fire danger period a fire safety permit is required to light a fire in the open. Permits specify conditions such as fire fighting equipment that must be on site, or restrict burns based on weather conditions.

<sup>1</sup> NSW Rural Fire Service 2006 *Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers.*

- **Prosecution of arsonists/offenders**

Under the *Rural Fires Act 1997* persons may be prosecuted for breaching the conditions on a fire permit, lighting a fire during a Total Fire Ban, allowing fire to escape their property, or other breaches of the Act.

- **Investigation of bush fire cause**

All bush fires which do not have a known cause are investigated to identify how they started.

- **Normal fire suppression activities**

Responding to bush fire is a normal business activity for the fire fighting authorities.

- **Assessing and managing compliance with strategic fire fighting resource allocation provisions**

Strategic fire fighting resource allocation provisions is the process used to identify the number of stations, brigades and appliances required in an area, and considers members, training, assets and hazards.

- **Preparation of a S52 Operations Coordination Plan**

The Operations Coordination Plan is prepared biannually and sets out how coordinated fire fighting will occur. It includes specific operational restrictions on fire fighting techniques in certain areas, where fires will be managed from, and how agencies involved can communicate during operations.

- **Fire Management Plans or Plans of Management**

Some land management agencies have developed fire management plans or plans of management with specific fire or fuel management strategies, for example a Forests NSW Regional Fuel Management Risk Plan, a NPWS Fire Management Strategy. These publicly exhibited plans form the basis for operational fire planning on public parks, reserves and forests.

- **Bush Fire Hazard Complaints**

If someone is concerned about possible bush fire hazards on a neighbouring property or any other land, then this can be reported to the RFS Commissioner or their local RFS Fire Control Centre. The complaint will be investigated and may result in a notice being issued to the landowner or manager to reduce the hazard.

### 3.3 Asset Specific Treatments

There are five broad strategy groups available to treat the bush fire risk to assets identified in the BFRMP.

The types of asset specific treatments in each strategy group used in the Corowa Berrigan BFMC area are listed below. A full list of the treatment strategies in the Corowa Berrigan BFMC area are in Appendix 3.

<b>Strategy</b>	<b>Targeted treatments used in the <i>Corowa Berrigan BFMC</i> area</b>
Hazard Reduction	SFAZ & LMZ Grazing Mechanical Inspect and maintain SFAZ's if required
Community Education	Conduct Community Education Programs
Property Planning	Village Protection Plans Emergency Fire Relocation Plans
Preparedness	Construct and maintain fire trails

**Table 3.2 Asset specific treatments used in the Corowa Berrigan BFMC area**



### 3.4 Fire Thresholds

The vegetation in the Corowa Berrigan BFMC area was classified into fire threshold categories (Table 3.3).

Vegetation formation	Minimum SFAZ Threshold	Minimum LMZ Threshold	Maximum Threshold	Notes
Rainforest	NA	NA	NA	Fire should be avoided.
Alpine complex	NA	NA	NA	Fire should be avoided.
Wet Sclerophyll forest (shrubby subformation)	25	30	60	Crown fires should be avoided in the lower end of the interval range.
Wet Sclerophyll forest (grassy subformation)	10	15	50	Crown fires should be avoided in the lower end of the interval range.
Grassy woodland	5	8	40	Minimum interval of 10 years should apply in the southern Tablelands area. Occasional intervals greater than 15 years may be desirable.
Grassland	2	3	10	Occasional intervals greater than 7 years should be included in coastal areas. There was insufficient data to give a maximum interval; available evidence indicates maximum intervals should be approximately 10 years.
Dry sclerophyll forest (shrub/grass subformation)	5	8	50	Occasional intervals greater than 25 years may be desirable.
Dry sclerophyll forest (shrub subformation)	7	10	30	Occasional intervals greater than 25 years may be desirable.
Heathlands	7	10	30	Occasional intervals greater than 20 years may be desirable.
Freshwater wetlands	6	10	35	Occasional intervals greater than 30 years may be desirable.
Forested wetlands	7	10	35	Some intervals greater than 20 years may be desirable.
Saline wetlands	NA	NA	NA	Fire should be avoided.
Semi-arid woodlands (grassy subformation)	6	9	No max	Not enough data for a maximum fire interval.
Semi-arid woodlands (shrubby subformation)	10	15	No Max	Not enough data for a maximum fire interval.
Arid shrublands (chenopod subformation)	NA	NA	NA	Fire should be avoided.
Arid shrublands (acacia subformation)	10	15	No Max	Not enough data for a maximum fire interval.

**Table 3.3 Fire Thresholds for Vegetation Categories**

### **3.5 Annual Works Programs**

The land management agencies and fire fighting authorities responsible for implementing the treatments identified in this plan will include those treatments in their annual works programs detailing how, when, and where the required activities will be undertaken.

### **3.6 Implementation**

When the treatments identified in this BFRMP are implemented there are a number of issues that need to be considered by the responsible agency including environmental assessments and approvals, smoke management and prescribed burn plans.

#### **Local permit issuing/hazard reduction burning exclusion periods**

In the Corowa Berrigan BFMC area the issuing of permits and hazard reduction burning is restricted and generally not permitted during the summer Bush Fire Danger Period; usually mid November to March.

## **Chapter 4. Performance Monitoring and Reviewing**

### **4.1 Review**

This BFRMP must be reviewed and updated within each successive five-year period from the constitution of the BFMC. The Corowa Berrigan BFMC will also review this plan as necessary to account for any changes in context or risk. This may be triggered by a range of circumstances, including but not limited to:

- changes to the BFMC area, organisational responsibilities or legislation;
- changes to the bush fire risk in the area; or
- following a major fire event.

### **4.2 Monitoring**

The BFMC is required to monitor progress towards the completion of treatment works listed in the BFRMP, and the timeliness of the works.

### **4.3 Reporting**

The BFMC is required to report annually to the BFCC on its progress in implementing the bush fire risk management activities identified in this plan.

### **4.4 Performance Measurements**

State wide performance measurements which are linked to the BFRMP have been identified by the BFCC. All BFMCs must use these to monitor and report on their success in reducing the bush fire risk in their BFMC area.

## Appendices

### Appendix 1 Community Participation Strategy

Date	Target Audience	Method of communication	Method of notification	Key messages/ purpose	Resources required	Responsibility
7 Feb 2008	General Public, Businesses, and Government Agencies	ABC Radio – Wagga, and Albury.  The Edge FM/3NE.  Star FM  The River FM	Radio Interviews	Notification/explanation of new Risk Management Plan for Corowa/Berrigan Zone.  Encouraging Community involvement and local knowledge.	Nil	Kelwyn Wilson-White
7 Feb 2008	General Public, Businesses, and Government Agencies	News Papers Southern Riverina News  Yarrawonga Chronicles  Eastern Riverina Chronicles  The Boarder Mail  Corowa Free Press	News Paper articles	Notification/explanation of new Risk Management Plan for Corowa/Berrigan Zone.  Encouraging Community involvement and local knowledge.  Contact details for input	Nil	Kelwyn Wilson-White
2 March 2008	RFS Group 1 Officers	Pre-planned meeting	Email, mail-out and fax	Information, community issues, asset identification and possible treatment requirements	Asset lists	George Alexander
10 March 2008	RFS Group 2 Officers	Pre-planned meeting	Email, mail-out and fax	Information, community issues, asset identification and possible treatment requirements	Asset lists	George Alexander

17 March 2008	RFS Group 3 Officers	Pre-planned meeting	Email, mail-out and fax	Information, community issues, asset identification and possible treatment requirements	Asset lists	George Alexander
1 April 2008	Corowa & Berrigan Council & RLPB	Pre-planned meeting	Email, phone & fax, mail-out	Review agency assets and treatment requirements – identify other issues of BFRMP process and communication	Maps	Marg Wehner/ Jesse White
2 April 2008	RFS Senior Management Team C/B	Pre-planned meeting	Email, mail-out and fax	Information, community issues, asset identification and possible treatment requirements	Asset lists	Marg Wehner / Jesse White
7 April 2008	RFS Volunteers	Newsletter	Mail-out	Information, community issues, asset identification and possible treatment requirements	Nil	Marg Wehner
13 June 2008	General Public, Businesses, and Government Agencies	Corowa & Berrigan Shire Websites & Public display	Council newsletter and website	Explanation of BFRMP process, along with spreadsheets of assets already in BFRR	Nil	Marg Wehner / Council staff
26 June 2008	Tocumwal Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments	Asset lists & fire history map	Marg Wehner.
30 June 2008	Berrigan Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments	Asset lists & fire history map	George Alexander
2 July 2008	RFS Senior Management Team C/B	Pre-planned meeting	Email, mail-out and fax	Update on asset identification and possible treatment requirements, fire history map and township SFAZ maps	Asset lists, township maps & fire history map	Marg Wehner
9 July 2008	Savernake Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	George Alexander
15 July 2008	Corowa Council Meeting	Pre Planned Meeting	Email, mail-out and fax	Explanation of BFRMP process, along with spreadsheets of assets and treatments. Maps of townships in shire with assets and SFAZ registered. Fire history map discussion	Asset lists, township maps & fire history map	Marg Wehner
16 July 2008	Corowa HQ Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	George Alexander

22 July 2008	Berrigan Council Meeting	Pre Planned Meeting	Email, mail-out and fax	Explanation of BFRMP process, along with spreadsheets of assets and treatments. Maps of townships in shire with assets and SFAZ registered. Fire history map discussion	Asset lists, township maps & fire history map	Marg Wehner
23 July 2008	Hopefield Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	Scott Gooch
25 July 2008	Barooga Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	Marg Wehner
30 July 2008	Redlands Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	George Alexander
4 Aug 2008	Mt Gwynne Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	George Alexander
5 Aug 2008	Finley Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	Scott Gooch
5 Aug 2008	Buraja Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	George Alexander
6 Aug 2008	Corowa Berrigan BFMC	Pre-planned meeting	Mail-out, fax & email	BFRMP accompanying word document, fire history, asset maps and treatments to date, future communication process and expectation for public exhibition	Asset lists & fire history map	Marg Wehner / Jesse White

11 Aug 2008	Mulwala Tarramia Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	George Alexander
11 Aug 2008	Coreen Rural Fire Brigade	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	John French
13 Aug 2008	Ringwood	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	George Alexander
14 Aug 2008	Balldale	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	John McGrath
21 Aug 2008	Daysdale	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	George Alexander
31 Aug 2008	Parragon	Pre-planned meeting	Mail-out & telephone	Explanation of BFRMP process, along with spreadsheets of assets and treatments and fire history to date, request additional input	Asset lists & fire history map	Scott Gooch

## Appendix 2 Asset Register

No.	Asset type	Asset name	Asset Location	Display area	Likelihood	Consequence	Risk	Priority	Treatment
37	Human Settlement	North Tocumwal	Tocumwal	Group 1	Likely	Minor	Medium	4	4;6
94	Human Settlement	Savernake	Savernake	Group 2	Likely	Minor	Medium	4	
105	Human Settlement	Berrigan Township	Berrigan	Group 1	Unlikely	Minor	Low	NA	
41	Human Settlement	North Tocumwal	Berrigan	Group 1	Likely	Minor	Medium	4	1;6
12	Human Settlement	Barooga South Township	Barooga	Group 1	Likely	Moderate	High	3A	4;2;3;6
51	Human Settlement	South Corowa Township	Corowa	Group 2	Likely	Minor	Medium	4	
13	Human Settlement	Corowa Central Township	Corowa	Group 2	Likely	Moderate	High	3A	4;1;2;3;6
40	Human Settlement	Howlong Township East	Howlong	Group 3	Likely	Minor	Medium	4	1
104	Human Settlement	Howlong Township	Howlong	Group 3	Unlikely	Minor	Low	NA	
11	Human Settlement	Howlong Township North	Howlong	Group 3	Likely	Moderate	High	3A	1;2;6
38	Human Settlement	Tocumwal South	Tocumwal		Likely	Minor	Medium	4	4;6
10	Human Settlement	Corowa Airport Subdivision	Redlands Road, Corowa	Group 2	Likely	Moderate	High	3A	1;2
77	Human Settlement	Barooga North Township		Group 1	Possible	Moderate	Medium	4	
31	Human Settlement	Daysdale Township	Daysdale		Likely	Minor	Medium	4	4
39	Human Settlement	Finley Township West	Finley		Likely	Minor	Medium	4	4;6

91	Human Settlement	Collins Piggery	Jerildrie Road, Berrigan	Group 1	Likely	Minor	Medium	4	
103	Human Settlement	Finley Township	Finley	Group 1	Unlikely	Minor	Low	NA	
93	Human Settlement	Mulwala West Township	Mulwala	Group 2	Likely	Minor	Medium	4	
26	Human Settlement	Buraja Township	Riverina Hwy, Buraja	Group 3	Likely	Minor	Medium	4	4;6
97	Human Settlement	Coreen Township	Urana/Corowa Road, Coreen	Group 3	Likely	Minor	Medium	4	4
29	Human Settlement	Balldale Township	Balldale	Group 3	Likely	Minor	Medium	4	4
3	Human Settlement	Balldale School	Balldale	Group 3	Likely	Major	Very High	2A	1;2;3
53	Human Settlement	Berrigan MP Hospital and aged care	Memorial Street, Berrigan	Group 1	Likely	Minor	Medium	4	2;3
18	Human Settlement	Savernake Primary School	Riverina Hwy, Savernake	Group 2	Likely	Moderate	High	3A	1;2;3
2	Human Settlement	Buraja/Lowesdale	Riverina Hwy, Buraja	Group 3	Likely	Major	Very High	2A	1;2;3
4	Human Settlement	Howlong Primary School	Riverina Hwy, Howlong	Group 3	Likely	Major	Very High	2A	1;2;3
98	Economic	Orica Explosives Depot	Newell Hwy, Tocumwal	Group 1	Unlikely	Minor	Low	NA	
45	Economic	Graincorp Silos	Jerilderie Road, Berrigan	Group 1	Likely	Minor	Medium	4	
107	Economic	Pepper Tree Quarry	Pepper Tree Road	Group 1	Unlikely	Minor	Low	NA	
56	Economic	Claremont Piggery	Oakenful Road. Berrigan	Group 1	Likely	Minor	Medium	4	
108	Economic	Melrose Quarry	Melrose Road, Tocumwal	Group 1	Unlikely	Minor	Low	NA	
95	Economic	Tocumwal Piggery	Langunya		Likely	Minor	Medium	4	
19	Economic	Stoney Hill	Mulwala/Barooga Road	Group 1	Likely	Moderate	High	3A	1
43	Economic	Country Energy Depot	Drohan Street, Berrigan	Group 1	Likely	Minor	Medium	4	
24	Economic	Corowa Airport	Redlands Road, Corowa	Group 2	Likely	Minor	Medium	4	
42	Economic	Berrigan Mobil Fuel Station	Jerilderie Road, Berrigan	Group 1	Likely	Minor	Medium	4	
55	Economic	Equity Park Piggery	Piney Road, Berrigan	Group 1	Likely	Minor	Medium	4	
106	Economic	Tocumwal Grain Silos & Hay Sheds	Silo Rd, Tocumwal	Group 1	Unlikely	Minor	Low	NA	
22	Economic	Corowa North Industrial Area	Riverina Hwy, Corowa	Group 2	Likely	Minor	Medium	4	
8	Economic	Mulwala Industrial Area	Berrigan Yarrawonga Rd	Group 2	Likely	Moderate	High	3A	4;1;5



25	Economic	Sanger Siding	Urana Road, Sanger	Group 3	Likely	Minor	Medium	4	
46	Economic	Baxters Fuel Depot	Riverina Hwy	Group 1	Likely	Minor	Medium	4	
54	Economic	Dempsters Seed Grading	Cobram Road, Berrigan	Group 1	Likely	Minor	Medium	4	
36	Economic	howlong Industrial Area	Riverina Hwy, Howlong	Group 3	Likely	Minor	Medium	4	
35	Economic	Hopefield Chicken Farm	Hopefield	Group 3	Likely	Minor	Medium	4	
34	Economic	Hopefield Silos	Hopefield	Group 3	Likely	Minor	Medium	4	
9	Economic	Hopefield Piggery	Rand Road, Hopefield	Group 3	Likely	Moderate	High	3A	1
30	Economic	Balldale Silos	Balldale/Corowa Rd, Balldale	Group 3	Likely	Minor	Medium	4	
23	Economic	Corowa West Industrial Area	Redlands Road, Corowa	Group 2	Likely	Minor	Medium	4	
89	Economic	Schifferle Hay	Berrigan Oaklands Road, Berrigan	Group 1	Likely	Minor	Medium	4	
81	Economic	Seppltes Vineyard	Stock Route Road, Barooga	Group 1	Likely	Minor	Medium	4	
79	Economic	Fosters Winery	Seppelts Road, Barooga	Group 1	Likely	Minor	Medium	4	
78	Economic	Barooga Bottlers (Brentwoods Factory)	Angle Road	Group 1	Likely	Minor	Medium	4	
82	Economic	Wilson Hay Shed	Tocumwal/Barooga	Group 1	Likely	Minor	Medium	4	
85	Economic	Stuarts Hay	Auburn Road	Group 1	Likely	Minor	Medium	4	
86	Economic	McNaughts	Riverina Hwy, Berrigan	Group 1	Likely	Minor	Medium	4	
87	Economic	Ryans Piggery	Piney Road, Berrigan	Group 1	Likely	Minor	Medium	4	
88	Economic	Graincorp Silo	Jerilderie Road, Berrigan	Group 1	Likely	Minor	Medium	4	
90	Economic	Baxters Transport		Group 1	Likely	Minor	Medium	4	
64	Economic	Rennie Siding	Rennie Road, Rennie	Group 2	Likely	Minor	Medium	4	
58	Economic	QAF Grain Storage	Albury Road, Corowa	Group 2	Likely	Minor	Medium	4	
65	Economic	QAF Meat Industries	Redlands Road, Redlands	Group 2	Likely	Minor	Medium	4	
59	Economic	Corowa Sewage plant	Corowa	Group 2	Likely	Minor	Medium	4	
44	Economic	Mulwala Canal Power Station	Berrigan/Cobram Road, Berrigan	Group 1	Likely	Minor	Medium	4	
61	Economic	West Corugan Pump Station	Spring Drive, Corowa	Group 2	Likely	Minor	Medium	4	
1	Economic	Mulwala Power Station	Barooga Mulwala Road	Group 2	Likely	Major	Very High	2A	1;3
92	Economic	Trandgrid Power Sub Station	Broughans, Finley	Group 1	Likely	Minor	Medium	4	
60	Economic	Corowa Power Sub Station	Bullicourt Road, Corowa	Group 2	Likely	Minor	Medium	4	
80	Economic	Comms Tower, Ryans Hill	Ryans Hill, Barooga	Group 1	Likely	Minor	Medium	4	
62	Economic	Power Sub Station	Whitehead Street, Corowa	Group 2	Likely	Minor	Medium	4	

16	Economic	Corowa Caravan Park	Albury Road, Corowa	Group 2	Likely	Moderate	High	3A	4;2;3
17	Economic	Bindaree Caravan Park	Albury Road, Corowa	Group 2	Likely	Moderate	High	3A	4;2;3
57	Economic	Corowa Sports Club	Hume Street, Corowa	Group 1	Likely	Minor	Medium	4	
33	Economic	Daysdale Sports Ground	Uran Road, Daysdale	Group 3	Likely	Minor	Medium	4	
84	Economic	Barooga Sports Club	Golf Course Road, Barooga	Group 1	Likely	Minor	Medium	4	
102	Economic	Howlong Golf Club	Riverina Hwy, Howlong	Group 3	Unlikely	Minor	Low	NA	
100	Economic	Buraja/Lowesdale Recreation Grounds	Riverina Hwy	Group 3	Unlikely	Minor	Low	NA	
83	Economic	Happy Hours Caravan Park	River Road, Tocumwal	Group 1	Likely	Minor	Medium	4	
47	Economic	Berrigan Race Track & Club House	Racecourse Road, Berrigan	Group 1	Likely	Minor	Medium	4	
28	Economic	Buraja Art Studio	Riverina Hwy, Buraja	Group 3	Likely	Minor	Medium	4	
48	Economic	Corowa Golf Club	Corowa	Group 2	Likely	Minor	Medium	4	
99	Economic	Mulwala Ski Club	Barooga Mulwala Rd	Group 2	Unlikely	Minor	Low	NA	
67	Economic	Club Mulwala	Spring Drive, Mulwala	Group 2	Likely	Minor	Medium	4	
66	Economic	Yarrowonga/Border Golf Club	Spring Drive. Corowa	Group 2	Likely	Minor	Medium	4	
101	Economic	Balldale Sports Ground	Balldale	Group 3	Unlikely	Minor	Low	NA	
20	Economic	Quicks Caravan Park	Quicks Road	Group 1	Likely	Moderate	High	3A	4;2;3
14	Economic	Bushlands Caravan Park	Toc/Barooga Road	Group 1	Likely	Moderate	High	3A	4;2;3
96	Economic	Tocumwal Vineyard	Toc/Barooga Road	Group 1	Likely	Minor	Medium	4	
52	Economic	Tocumwal Airport	Racecourse Road		Likely	Minor	Medium	4	
15	Economic	Pumps Beach Caravan Park	Pumps Beach	Group 1	Likely	Moderate	High	3A	4;2;3
63	Economic	Rennie Recreation Grounds	Rennie	Group 2	Likely	Minor	Medium	4	
49	Economic	Corowa Showgrounds	Corowa	Group 2	Likely	Minor	Medium	4	
76	Environment	Colledendia/Travellers Point RLPB Reserve	Spring Drive, Corowa	Group 2	Likely	Minor	Medium	4	
75	Environment	Oil Tree Swap	Hopefield/Rand Road, Buraja	Group 3	Likely	Minor	Medium	4	
21	Environment	Buraja RLPB Reserve	Urana/Corowa Road	Group 3	Likely	Minor	Medium	4	
74	Environment	Daysdale RLPB Reserve	Urana/Corowa Road, Daysdale	Group 3	Likely	Minor	Medium	4	
73	Environment	Round Swamp RLBP Reserve	Urana/Corowa Road, Coreen		Likely	Minor	Medium	4	
72	Environment	Monaro Vale RLPB Reserve	Berrigan/Barooga Road, Berrigan	Group 1	Likely	Minor	Medium	4	
71	Environment	Yellow Water Holes RLPB Reserve	Tocumwal/Barooga Road, Tocumwal	Group 1	Likely	Minor	Medium	4	

70	Environment	Woperana/Lower River Road RLPB Reserve	Lower River Road, Tocumwal	Group 1	Likely	Minor	Medium	4	
69	Environment	Tocumwal 3 Mile RLPB Reserve	Newell Hwy, Tocumwal	Group 1	Likely	Minor	Medium	4	
68	Environment	Finley 3 Mile RLPB Reserve	Newell Hwy, Finley	Group 1	Likely	Minor	Medium	4	
50	Environment	Native Dog Swamp	Yarrowonga/Berrigan Road	Group 1	Likely	Minor	Medium	4	
6	Environment	Endangered Flora			Likely	Major	Very High	2A	
7	Environment	Endangered Fauna			Likely	Major	Very High	2A	
5	Environment	Endangered Fauna			Likely	Major	Very High	2A	
0	Cultural	Nangunia Homestead	Berrigan/Yarrowonga Road	Group 1	Likely	Minor	Medium	4	
0	Cultural	Lalaly Hall	Cnr CobramRd & Nolans Road, Lalaly	Group 1	Likely	Minor	Medium	4	
32	Cultural	Daysdale Pub	Urana Road, Daysdale	Group 3	Likely	Minor	Medium	4	
27	Cultural	Buraja Pub	Riverina Hwy, Buraja	Group 3	Likely	Minor	Medium	4	

## Appendix 3 Treatment Register

No	Strategy	Priority	Action	Comment	Responsible Agency
1	Hazard Reduction	2A	SFAZ & LMZ Grazing	Reduction grazing and land management practices	Private
2	Community Education	2A	Conduct Community Education programs	Provide information to residents on property protection etc	RFS
3	Property Planning	2A	Emergency Evacuation Plan	Ensure EEP	RFS
4	Property Planning	3A	Village Protection Plan/Emergency Evacuation Plan	Develop Village Protection Plan Ensure SFPP has Evac Plan	RFS
5	Hazard Reduction	3A	Mechanical	Yearly Slashing	Private
6	Hazard Reduction	3A	Inspect nearby SFAZ's and maintain if required	Barooga, Tocumwal South, Tocumwal North, Finley West, Howlong, Corowa, Buraja, Berrigan	LGA;Private;DPI;Other

## **Appendix 4 Maps**

Map Display Areas 1 – 3 - Corrowa Berrigan Overview Maps.