

# **Lord Howe Island Bush Fire Management Committee**

## **Bush Fire Risk Management Plan**

# Lord Howe Island Bush Fire Risk Management Plan

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## Authorisation

In accordance with Part 3 Division 4 of the *Rural Fires Act 1997*, this Plan has been prepared by the Lord Howe Island Bush Fire Management Committee (BFMC) and has been endorsed at the BFMC meeting on September 19, 2018 for submission to the Bush Fire Coordinating Committee.

### Recommended



Chairperson

Lord Howe Island Bush Fire Management Committee

### Approved



A Commissioner

On behalf of the

9/5/19

NSW Bush Fire Coordinating Committee

Lord Howe Island Bush Fire Risk Management Plan

Amendment List

| Amendment |      | Entered   |      |
|-----------|------|-----------|------|
| Number    | Date | Signature | Date |
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## Lord Howe Island Bush Fire Risk Management Plan

### 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, Fire & Rescue NSW, the National Parks and Wildlife Service and Forestry Corporation of 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 BFRMP, the Lord Howe Island 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 Lord Howe Island BFMC area.

This BFRMP has been prepared by the Lord Howe Island 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 Lord Howe Island BFMC Area**

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

The Lord Howe Island BFMC area, including 11 associated (but smaller) islands are located in the Tasman Sea, 760 kilometres north east of Sydney and 585 kilometres east of Port Macquarie New South Wales. The Lord Howe Island BFMC area includes the Local Authority Area of the Lord Howe Island Board (LHIB).

The area covered by the Lord Howe Island BFMC includes the main Island which is approximately 11 kilometres long and between 0.6 – 2.8 kilometres wide with a total land area of 1,455 hectares.

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

The typical / average climate in the Lord Howe Island BFMC area is moderated by oceanic air currents and mild sea temperatures. The winters are wet and cool, with an average daily maximum temperature of 20°C and average daily minimum temperatures of 15.5°C.

Summers have less rainfall and are mild or warm, averaging a maximum temperature of 24°C and average minimum temperatures of 19°C. Temperatures on the high plateau of Mt Gower are 6-8°C cooler than at sea level.

The mean annual rainfall of the lowlands is 1508mm, with a pronounced maximum in mid-winter. The rainfall in the mountainous southern half of the Island is considerably higher due to orographic cloud and rainfall influences. Humidity on Lord Howe Island is high throughout the year.

The Island is generally windy, more so in the afternoons. The wind comes predominantly from the south west and east and the mean wind speed is highest in late winter and spring<sup>1</sup>.

Extended periods of drought (e.g. years 2009-2010) resulted in conditions conducive to bush fires (particularly curing of grasses and flammability of palm fronds)<sup>2</sup>.

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<sup>1</sup> Summary statistics - Bureau of Meteorology Website

<sup>2</sup> Information provided by LHIB dated 12/9/11

### 1.3.3 Population and demographic information

The population of Lord Howe Island consists of approximately 350 permanent residents, 50 transient workers and up to 400 tourists at any one time. During the peak tourist season between December and January, the population of the Island can increase to approximately 1100 people. There is no single population centre on the Island; however, there is an area in the northern half of the Island where residential development has a greater density than elsewhere. The settlement area is concentrated between Old Settlement (north) and Smoking Tree Ridge (south) and contains a mix of residential, commercial, agricultural, administrative and recreational activities.

There are a total of 195 residential dwellings, 20 tourist lodges, 25 commercial structures, including the Island hospital, and approximately 50 small ancillary structures.

The following issue has been identified within the Lord Howe Island BFMC area as potentially impacting on the ability of certain sections of the community to prepare themselves for bush fire: High levels of tourism to this internationally renowned World Heritage Area, which significant increases in the island population particularly in the months of December and January.

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

Based on data for Lord Howe Island from 1964 – 1984, 3 fires have occurred in woody vegetation over this 20 year period<sup>3</sup>. Anecdotal evidence suggests that 4 fires affecting grass / woody vegetation have occurred from 1984 to present (i.e. 7 fires in 48 years). The main source of ignitions in the Lord Howe Island BFMC area is escaped BBQ fires, camp fires and pile burns<sup>4</sup>.

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<sup>3</sup> Unwin, N. (1984). LHI Regional Environmental Study Bushfire Hazard Report

<sup>4</sup> Information provided by LHIB dated 12/9/11

## 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).

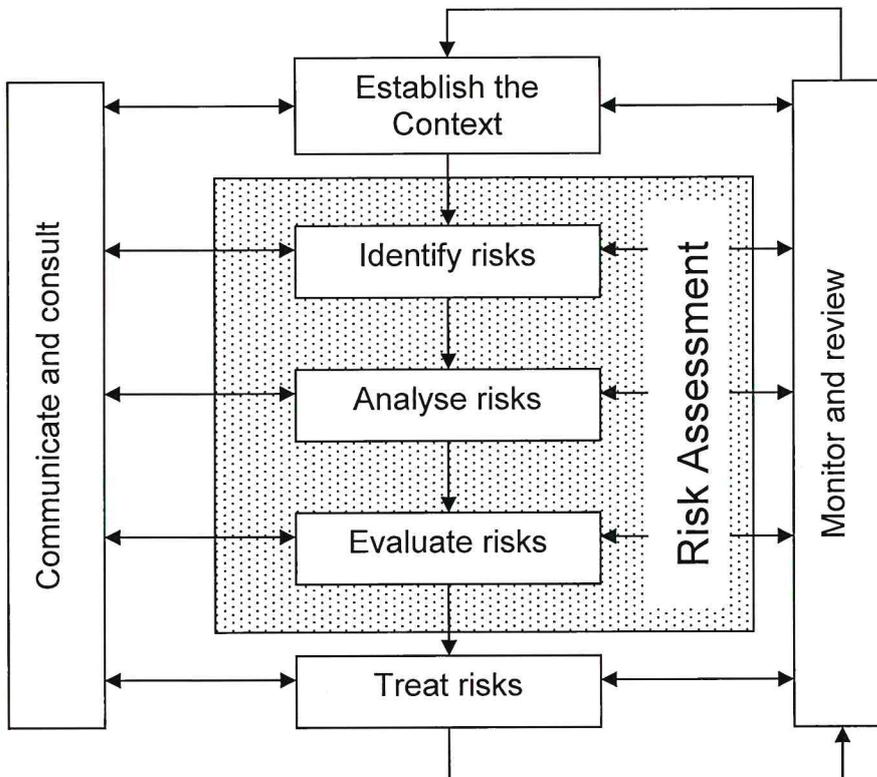


Figure 2.1 Overview of the risk assessment process

### 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 regard to the BFRMP. See Appendix 1 for the Community Participation Strategy used by the Lord Howe Island 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 Lord Howe Island BFMC area, and then assessing the likelihood and consequence ratings.

### **2.3.1 Assets**

BFMC members and the community, including RFS members, identified assets within the Lord Howe Island 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 and tourist facilities; and
- Other human settlement areas including commercial areas.
- Neighbourhood Safer Place (NSP) is defined by the *Rural Fires Act 1997* as *land or a building designated as a neighbourhood safer place under section 62C*. NSPs provide a place of last resort for people during a bush fire. All designated NSP locations for NSW are available at [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au).

#### **Economic**

- Agricultural; e.g. cropping/grazing land;
- Commercial/industrial e.g. waste treatment facility;
- Infrastructure e.g. electricity substations, communication facilities;
- Tourist and recreational e.g. tourist sites, facilities and resorts.

#### **Environmental**

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

#### **Cultural**

- 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 Lord Howe Island BFMC area. See map 1 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 Lord Howe Island 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. Due to circumstances surrounding NSPs and their use during a bush fire, stricter requirements for vulnerability assessment and rating will also apply to these assets.

#### **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**

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 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 Lord Howe Island 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 Lord Howe Island 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 risk priority and capacity to undertake the works. Within the Lord Howe Island BFMC area the level of acceptability is low. Areas of low risk are likely to be managed by routine procedures and so do not require a specific application of resources.

All NSPs for a BFMC area will require ongoing treatment by the applicable land owner to ensure that the asset remains viable as a place of last resort for people during a bush fire. Therefore, all NSP assets are allocated specific treatments in this Plan, regardless of the level of bush fire risk identified and the risk acceptability nominated by the Lord Howe Island BFMC.

## Chapter 3. Treating the Risk

### 3.1 Bush Fire Management Zones

Bush Fire Management Zones were identified within the Lord Howe Island BFMC area. 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).

Some of these zones (usually Land Management Zones) may be further classified within this category by the land manager. In the case of Lord Howe Island, the entire BFMC area has been classified as an LMZ with no APZ, SFAZ or FEZs currently identified in this Plan.

## Lord Howe Island Bush Fire Risk Management Plan

| 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.<br>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;<br>To aid containment of wildfires to existing management boundaries. | To improve the likelihood and safe use of:<br><b>Parallel Attack</b> suppression strategies within the zone.<br>and/or<br><b>Indirect Attack</b> (back burning) in high to very high fire weather conditions within the zone.<br><br>To reduce the likelihood of:<br>Crown fire development within the zone.<br>and/or<br>Spot fire ignition potential from the zone | Zone width related to suppression objectives and dependent upon:<br>* Topography<br>* Aspect<br>* Spotting propensity<br>* Location of adjacent firebreaks<br>* Mosaic pattern of treatment<br>Assess Overall Fuel Hazard (OFH) once vegetation communities reach minimum fire thresholds within this Plan.<br>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.<br>To reduce the likelihood of spread of fires.<br>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.   |

**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.

### 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:

- **Varying the standard bush fire danger period as required**

The BFMC has determined that the standard bush fire danger period is to be extended to the whole year.

- **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 excluding in a fireplace designated for that purpose by the LHIB. Permits specify conditions such as fire fighting equipment that must be on site, or restrict burns based on weather conditions.

- **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 may be 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 every two years 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 Forestry Corporation of NSW Regional Fuel Management Risk Plan, and/or a National Parks and Wildlife Service Fire Management Strategy. These publicly exhibited plans form the basis for operational fire planning on public parks, reserves and forests.

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- **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.

- **Reviewing the Bush Fire Prone Land map**

These maps identify Bush Fire Prone Land (BFPL) and are used to trigger whether a development application is assessed using *Planning for Bush Fire Protection*<sup>5</sup>.

*No part of the Lord Howe Island BFMC Area is currently mapped BFPL, therefore the provisions of Planning for Bushfire Protection do not currently apply on the Island.*

- **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.

*No part of the Lord Howe Island BFMC Area is currently mapped BFPL, therefore the provisions of Planning for Bushfire Protection do not currently apply on the Island.*

- **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.

*The Lord Howe Island Local Environmental Plan 2010 contains no provisions excluding development in extreme bush fire risk areas. No part of the Lord Howe Island BFMC Area is mapped BFPL.*

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<sup>5</sup> NSW Rural Fire Service 2006 *Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers.*

## Lord Howe Island Bush Fire Risk Management Plan

### 3.3 Asset Specific Treatments

There are four 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 Lord Howe Island BFMC area are listed below. A full list of the treatment strategies in the Lord Howe Island BFMC area are in Appendix 3.

| Strategy            | Targeted treatments used in the Lord Howe Island BFMC area  |
|---------------------|---|
| Ignition Management | <ul style="list-style-type: none"><li>• Closure of walking tracks in the Permanent Park Preserve on days of Very High and above Forest Fire Danger Index (FFDI 25 and above);</li><li>• Prohibit smoking and naked flame within designated areas on days of Very High and above (FFDI 25 and above);</li><li>• To manage and control ignition sources through the use of Fire Safety Permits.</li></ul> |
| Hazard Reduction    | <ul style="list-style-type: none"><li>• Inspect and maintain fuel reduced areas around public areas.</li></ul>  |
| Community Education | <ul style="list-style-type: none"><li>• Development and execution of targeted Community Engagement activities;</li><li>• Review need for, and content of, environmental and bush fire safety information available for tourists.</li></ul>  |
| Preparedness        | <ul style="list-style-type: none"><li>• Biennial review of Operations &amp; Coordination Plan and amendment as required.</li></ul>  |

Table 3.2 Asset specific treatments used in the Lord Howe Island BFMC area

# Lord Howe Island Bush Fire Risk Management Plan

## 3.4 Fire Thresholds

The vegetation in the Lord Howe Island BFMC is to be classified into five 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.   |
| 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. |
| Heathlands*          | 7                      | 10                    | 30                | Occasional intervals greater than 20 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.   |

**Table 3.3 Fire Thresholds for Vegetation Categories**

\* The vegetation of the Island has evolved in the absence of fire and as such the Lord Howe Island BFMC will not adopt/introduce fire as per the recommended fire regimes for any of the native vegetation communities.

## 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.

## 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 Lord Howe Island 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.

## Appendix 1 Community Participation Strategy

The Lord Howe Island Board (LHIB) is a NSW Statutory Authority established under the Lord Howe Island Act 1953, which gives a high level of autonomy to this community. The Board reports directly to the NSW Minister for Environment, and is charged with the care, control and management of the island. Its responsibilities include:

- protection of World Heritage values;
- development control;
- administration of all Crown Land including the island's protected area, the Permanent Park Preserve;
- the provision of community services and infrastructure;
- the delivery of sustainable tourism.

The LHIB and BFMC consider that the level of bush fire risk present on the Island is generally low, with a small number of assets considered being at risk, and a small number of treatments considered appropriate. See attached asset and treatment tables. For this reason the Board considers it is appropriate to use the 6 week public submission process as its community consultation process.

| Date                     | Target Audience                                 | Method of communication      | Method of notification                             | Key messages/ purpose                    | Resources required                                  | Responsibility                     |
|--------------------------|---|------------------------------|--|--|---|------------------------------------|
| 14/12/2017               | LHI Board Staff,<br>Other<br>Emergency services | Meeting                      | Direct contact                                     | Invite review of proposed BFRMP          | Meeting venue,<br>Data Projector,<br>Whiteboard(s), | Lord Howe Island Board             |
| 26/3/2018 -<br>30/3/2018 | Residents of<br>Lord Howe<br>Island             | Public exhibition<br>of Plan | Shop<br>Front/community<br>Hall – Drop in<br>kiosk | Discuss benefits<br>of proposed<br>BFRMP | Data Projector,<br>Whiteboard(s),<br>A0 Maps.       | RFS & Lord<br>Howe Island<br>Board |
| 26/3/2018 -<br>6/5/2018  | Residents of<br>Lord Howe<br>Island             | Public exhibition<br>of Plan | Media release,<br>letter box drop                  | Invite review of<br>proposed<br>BFRMP    | Whiteboard(s),<br>A0 Maps.                          | Lord Howe<br>Island Board          |

## Lord Howe Island Bush Fire Risk Management Plan

### Appendix 2 Asset Register

| Map ref # | Asset type       | Asset sub type           | Asset name   | Display area | Likelihood | Consequence  | Risk    | Priority | Treatment number |
|-----------|------------------|--------------------------|--|--------------|------------|--------------|---------|----------|------------------|
| 6         | Human Settlement | Special Fire Protection  | Tourist Accommodation                                      | Lord Howe    | Unlikely   | Catastrophic | High    | 3C       | 4; 2             |
| 13        | Human Settlement | Residential              | Settlement North   | Lord Howe    | Unlikely   | Major        | Medium  | 4        | 8; 3; 4; 9       |
| 14        | Human Settlement | Residential              | Settlement Central   | Lord Howe    | Unlikely   | Major        | Medium  | 4        | 8                |
| 15        | Human Settlement | Residential              | Settlement South   | Lord Howe    | Unlikely   | Major        | Medium  | 4        | 8                |
| 7         | Human Settlement | Special Fire Protection  | Gower Wilson Memorial Hospital                             | Lord Howe    | Unlikely   | Catastrophic | High    | 3C       | 4                |
| 8         | Human Settlement | Special Fire Protection  | LHI Central School   | Lord Howe    | Unlikely   | Catastrophic | High    | 3C       | 4                |
| 1         | Economic         | Infrastructure           | Waste Management Facility                                  | Lord Howe    | Likely     | Moderate     | High    | 3A       | 3                |
| 11        | Economic         | Infrastructure           | Airport Fuel Store   | Lord Howe    | Likely     | Minor        | Medium  | 4        | 3; 5             |
| 17        | Economic         | Tourist and Recreational | North Bay Visitor Facilities                               | Lord Howe    | Likely     | Minor        | Medium  | 4        | 6                |
| 9         | Economic         | Commercial               | LHI Aerodrome  | Lord Howe    | Unlikely   | Catastrophic | High    | 3C       | 3; 5             |
| 18        | Economic         | Infrastructure           | LHI Power Generation Plant                                 | Lord Howe    | Unlikely   | Major        | Medium  | 4        | 3; 5             |
| 16        | Economic         | Infrastructure           | LHI Back-up Generator                                      | Lord Howe    | Unlikely   | Major        | Medium  | 4        | 3; 5             |
| 10        | Economic         | Infrastructure           | Air Navigation Aid   | Lord Howe    | Unlikely   | Catastrophic | High    | 3C       | 7                |
| 12        | Economic         | Infrastructure           | LHI Wharf and Freight Terminal                             | Lord Howe    | Unlikely   | Major        | Medium  | 4        | 3                |
| 19        | Economic         | Tourist and Recreational | Neds Beach Shelter Shed                                    | Lord Howe    | Unlikely   | Moderate     | Low     | NA       | 6                |
| 5         | Economic         | Infrastructure           | Telstra Exchange   | Lord Howe    | Unlikely   | Catastrophic | High    | 3C       | 7                |
| 0         | Environment      | Endangered               | Threatened species with catastrophic and major consequence | Lord Howe    | Likely     | Catastrophic | Extreme | 1B       | 2                |
| 2         | Environment      | Endangered               | Blackburn Island   | Lord Howe    | Unlikely   | Catastrophic | High    | 3C       | 5                |
| 3         | Environment      | Endangered               | Muttonbird Point   | Lord Howe    | Unlikely   | Catastrophic | High    | 3C       | 2; 5             |
| 4         | Environment      | Endangered               | Permanent Park Preserve                                    | Lord Howe    | Unlikely   | Catastrophic | High    | 3C       | 2; 5; 6          |
| 20        | Cultural         | Non Indigenous           | Catalina Crash Site  | Lord Howe    | Unlikely   | Moderate     | Low     | NA       | 10               |
| 21        | Cultural         | Non Indigenous           | North Bay Archaeological Site                              | Lord Howe    | Unlikely   | Moderate     | Low     | NA       | 10               |
| 22        | Cultural         | Non Indigenous           | Boat Sheds   | Lord Howe    | Unlikely   | Moderate     | Low     | NA       | 10               |
| 23        | Cultural         | Non Indigenous           | Government House   | Lord Howe    | Unlikely   | Moderate     | Low     | NA       | 10               |
| 24        | Cultural         | Non Indigenous           | War Memorial(s)  | Lord Howe    | Unlikely   | Moderate     | Low     | NA       | 10               |
| 25        | Cultural         | Non Indigenous           | Cemeteries   | Lord Howe    | Unlikely   | Moderate     | Low     | NA       | 10               |

## Lord Howe Island Bush Fire Risk Management Plan

### Appendix 3 Treatment Register

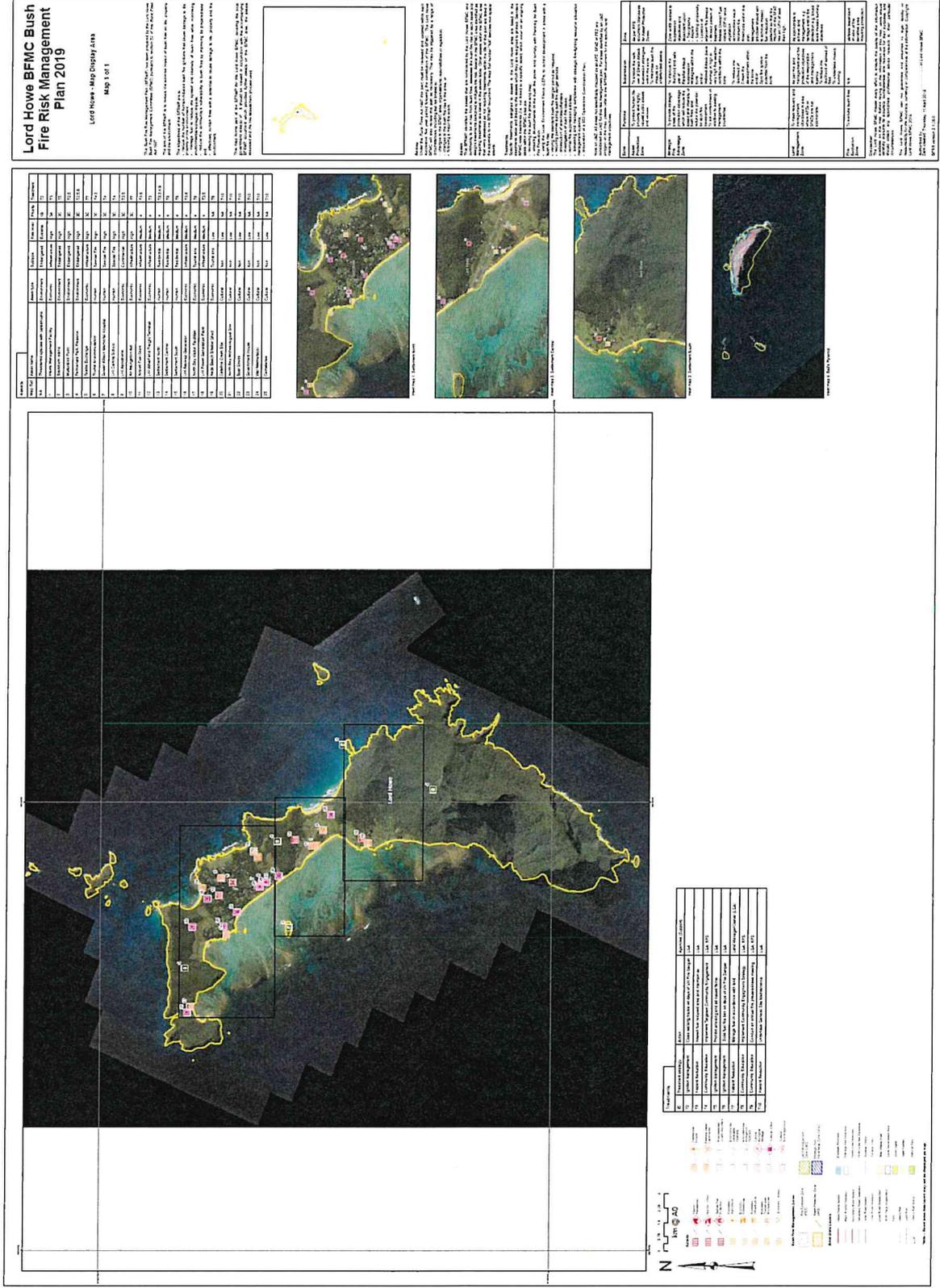
| Treatment Ref # | Strategy            | Priority | Action   | Comment  | Responsible Agency | Other Responsible Agency | Support Agency | Scheduled Action Date        | Asset Ref Nos            |
|-----------------|---------------------|----------|--|--|--------------------|--------------------------|----------------|------------------------------|--------------------------|
| 1               | Community Education |          | Conduct SWS program                                | Implement SWS program across all built structures.   | LGA; RFS           |                          |                | 1718; 1819; 1920; 2021; 2122 |                          |
| 2               | Ignition Management | 1B       | Close walking tracks on days of VH Fire Danger     | The Lord Howe Island Board will consider closure of walking tracks within Permanent Park Preserve.   | LGA                |                          |                | 1718; 1819; 1920; 2021; 2122 | 0; 6; 3; 4               |
| 3               | Hazard Reduction    | 3A       | Inspect fuel reduced area and maintain as required | Ensure adequate cleared area around asset by performing mechanical hazard reduction works.           | LGA                |                          |                | 1718; 1819; 1920; 2021; 2122 | 1; 11; 13; 9; 18; 16; 12 |
| 4               | Community Education | 3C       | Implement Targeted Community Engagement Activity   | Promote and Facilitate Bush Fire Emergency Management & Evacuation Plan                              | LGA; RFS           |                          |                | 1718; 1819; 1920; 2021; 2122 | 6; 13; 7; 8              |
| 5               | Ignition Management | 3C       | Prohibit smoking and all naked flame.              | Install signage at access point(s).  | LGA                |                          |                | 1718; 1819; 1920; 2021; 2122 | 11; 9; 18; 16; 2; 3; 4   |
| 6               | Ignition Management | 3C       | Solid fuel fire ban on days of VH Fire Danger      | Implement solid fuel fire ban on days of VH Fire Danger at North Bay.                                | LGA                |                          |                | 1718; 1819; 1920; 2021; 2122 | 17; 19; 4                |
| 7               | Hazard Reduction    | 3C       | Manage fuel in accordance with land management     | Manage land in accordance with land management practices   | Other              | Land Manager/Owner       | LGA            | 1718; 1819; 1920; 2021; 2122 | 10; 5                    |
| 8               | Community Education | 4        | Implement Community Engagement Strategy            | Engage with residents & business owners on fire safety and distribute property preparation material. | LGA; RFS           |                          |                | 1718; 1819; 1920; 2021; 2122 | 13; 14; 15               |

## Lord Howe Island Bush Fire Risk Management Plan

|    |                     |    |   |   |          |                              |                        |
|----|---------------------|----|---|---|----------|------------------------------|------------------------|
| 9  | Community Education | 4  | Conduct an annual fire preparedness meeting | Conduct an annual fire preparedness meeting to increase awareness of risk of fire to the community. | LGA, RFS | 1718; 1819; 1920; 2021; 2122 | 13                     |
| 10 | Hazard Reduction    | NA | Undertake General Site Maintenance          | Include site maintenance in periodic works schedule.  | LGA      | 1718; 1819; 1920; 2021; 2122 | 20; 21; 22; 23; 24; 25 |

# Lord Howe Island Bush Fire Risk Management Plan

## Appendix 4 Map





# Lord Howe BFMC Bush Fire Risk Management Plan 2019

Lord Howe - Map Display Area

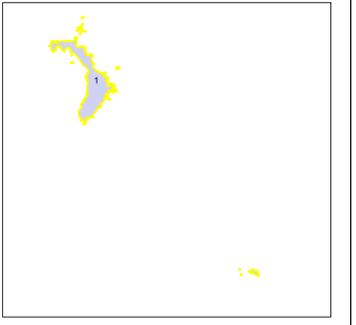
Map 1 of 1

This Bush Fire Risk Management Plan (BFRMP) has been prepared by the Lord Howe Bush Fire Management Committee (BFMC) pursuant to section 52 of the Rural Fires Act 1997.

The aim of this BFRMP is to reduce the 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 or the environment;
  - manage fuel to reduce the 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.

This map forms part of the BFRMP for the Lord Howe BFMC, covering the local government area(s) of . It should be viewed in conjunction with the accompanying BFRMP document which provides further details on the BFMC area, the assets assessed and the risk assessment process used.



**Review**  
Under the Rural Fires Act 1997 this plan must be reviewed and updated within each successive five year period following the constitution of the BFMC. The Lord Howe BFMC will also review this plan as necessary. 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.

**Assets**  
This BFRMP identifies the assets that are considered by the Lord Howe BFMC and community to be at risk from bush fires, assesses the bush fire risk to each asset and assigns treatments designed to mitigate the risk. Assets in the BFMC area identified as requiring treatments are listed in the assets table. Other assets within the BFMC area that were assessed as not requiring treatments within the life of this plan are listed in the appendix to the BFRMP document. The Map Ref number "NA" denotes non-spatial assets.

**Treatments**  
Specific treatments assigned to assets in the Lord Howe area are listed in the treatments table and linked to the assets which they are designed to protect. Standard BFMC wide treatments (i.e. not linked to a specific asset) which occur on an ongoing basis within the BFMC area are:

- reviewing the bush fire prone land map;
- ensuring developments in the bush fire prone land comply with Planning for Bush Fire Protection;
- using the Local Environment Plan's (LEPs) to control development in areas with a bush fire risk;
- varying the standard bush fire danger period as required;
- requiring permits during bush fire danger periods
- prosecution of arsonists/offenders
- investigation of bush fire cause;
- normal fire suppression activities;
- assessing and managing compliance with strategic fire-fighting resource allocation management systems;
- preparation of a S52 Operations Coordination Plan;

Note on LMZ: All areas not specifically mapped as an APZ, SFAZ or FEZ are considered as LMZ for this risk management plan. For areas identified by an LMZ polygon on the map, please refer to the BFRMP document for the specific-land management objectives.

| Zone                                 | Purpose  | Suppression   | Zone  |
|--------------------------------------|--|---|---|
| <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 Standards for Asset Protection Zones.   |
| <b>Strategic Fire Advantage Zone</b> | To provide strategic areas of fire protection advantage which will reduce the speed and intensity of bush fire, 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. To undertake mosaic burning. | Zone width related to suppression objectives and dependant upon:<br>- Topography<br>- Aspect<br>- Spotting propensity<br>- Location of adjacent fire breaks<br>- Mosaic pattern of treatment<br>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 area 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.   | 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.   | NA  | Variable dependant on size of fire sensitive area requiring protection.   |

**Disclaimer**  
The Lord Howe BFMC makes every effort to ensure the quality of the information available on this map. Before relying on the information on this map, users should carefully evaluate its accuracy, completeness and relevance for their purposes, and should obtain any appropriate professional advice relevant to their particular circumstances.

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Authorized by \_\_\_\_\_ of Lord Howe BFMC.  
Date created: Thursday, 11 April 2019  
BFRMP version 2.1.26.0

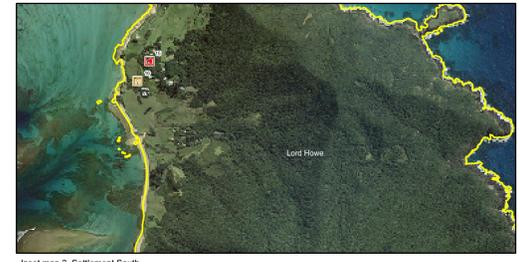
| Map Ref | Asset name                           | Asset type  | Subtype        | Risk level | Priority | Treatment |
|---------|--------------------------------------|-------------|----------------|------------|----------|-----------|
| NA      | Threatened species with catastrophic | Environment | Endangered     | Extreme    | 1B       | T2        |
| 1       | Waste Management Facility            | Economic    | Infrastructure | High       | 3A       | T3        |
| 2       | Blackburn Island                     | Environment | Endangered     | High       | 3C       | T5        |
| 3       | Muttonbird Point                     | Environment | Endangered     | High       | 3C       | T2,5      |
| 4       | Permanant Park Preserve              | Environment | Endangered     | High       | 3C       | T2,5,6    |
| 5       | Telstra Exchange                     | Economic    | Infrastructure | High       | 3C       | T7        |
| 6       | Tourist Accommodation                | Human       | Special Fire   | High       | 3C       | T4,2      |
| 7       | Gower Wilson Memorial Hospital       | Human       | Special Fire   | High       | 3C       | T4        |
| 8       | LHI Central School                   | Human       | Special Fire   | High       | 3C       | T4        |
| 9       | LHI Aerodrome                        | Economic    | Commercial     | High       | 3C       | T3,5      |
| 10      | Air Navigation Aid                   | Economic    | Infrastructure | High       | 3C       | T7        |
| 11      | Airport Fuel Store                   | Economic    | Infrastructure | Medium     | 4        | T3,5      |
| 12      | LHI Wharf and Freight Terminal       | Economic    | Infrastructure | Medium     | 4        | T3        |
| 13      | Settlement North                     | Human       | Residential    | Medium     | 4        | T8,3,4,9  |
| 14      | Settlement Central                   | Human       | Residential    | Medium     | 4        | T8        |
| 15      | Settlement South                     | Human       | Residential    | Medium     | 4        | T8        |
| 16      | LHI Back-up Generator                | Economic    | Infrastructure | Medium     | 4        | T3,5      |
| 17      | North Bay Visitor Facilities         | Economic    | Tourist and    | Medium     | 4        | T6        |
| 18      | LHI Power Generation Plant           | Economic    | Infrastructure | Medium     | 4        | T3,5      |
| 19      | Neds Beach Shelter Shed              | Economic    | Tourist and    | Low        | NA       | T6        |
| 20      | Catalina Crash Site                  | Cultural    | Non            | Low        | NA       | T10       |
| 21      | North Bay Archaeological Site        | Cultural    | Non            | Low        | NA       | T10       |
| 22      | Boat Sheds                           | Cultural    | Non            | Low        | NA       | T10       |
| 23      | Government House                     | Cultural    | Non            | Low        | NA       | T10       |
| 24      | War Memorial(s)                      | Cultural    | Non            | Low        | NA       | T10       |
| 25      | Cemeteries                           | Cultural    | Non            | Low        | NA       | T10       |



Inset map 1. Settlement North



Inset map 2. Settlement Central



Inset map 3. Settlement South



Inset map 4. Ball's Pyramid



| ID  | Treatment strategy  | Action   | Agencies (Support)       |
|-----|---------------------|--|--------------------------|
| T2  | Ignition Management | Close walking tracks on days of VH Fire Danger | LGA                      |
| T3  | Hazard Reduction    | Inspect fuel reduced area and maintain as      | LGA                      |
| T4  | Community Education | Implement Targeted Community Engagement        | LGA, RFS                 |
| T5  | Ignition Management | Prohibit smoking and all naked flame.          | LGA                      |
| T6  | Ignition Management | Solid fuel fire ban on days of VH Fire Danger  | LGA                      |
| T7  | Hazard Reduction    | Manage fuel in accordance with land            | Land Manager/Owner (LGA) |
| T8  | Community Education | Implement Community Engagement Strategy        | LGA, RFS                 |
| T9  | Community Education | Conduct an annual fire preparedness meeting    | LGA, RFS                 |
| T10 | Hazard Reduction    | Undertake General Site Maintenance             | LGA                      |

**Assets**

- Human - Residential
- Human - Other
- Special Fire Protection
- Economic - Agricultural
- Economic - Commercial
- Economic - Infrastructure
- Economic - Tourism and Recreational
- Economic - Mines
- Commercial - Forestry
- Drinking Water Catchments
- Environmental - Locally Important
- Environmental - Vulnerable (Species)
- Environmental - Endangered (Species)
- Cultural - Aboriginal Heritage
- Cultural - Other
- Cultural - Non-Indigenous

**Bush Fire Management Zones**

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

**Base Data Layers**

- Major Roads Sealed
- Major Roads Unsealed
- Secondary Road Sealed
- Secondary Road Unsealed
- Local Road Sealed
- Local Road Unsealed
- Local Road Unspecified
- AVD Track Unspecified
- Path
- Heavy Rail
- Light Rail
- Heavy Rail Siding
- Drainage Perennial
- Drainage Non Perennial
- Hydro-Line Perennial
- Hydro-Line Non Perennial
- Contour (10m)
- Contour (50m)
- Map Display Area
- Local Government Area
- Crown Land
- State Forests
- National Park

\*Note - Some base data layers may not be displayed on map