King Island Fire Management Area

Fire Protection Plan

2018

Document Control

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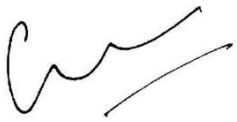

SFMC Chair – Ian Sauer
Date: 30 April 2018

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Glossary

Asset	A term used to describe anything valued by the community that may be adversely impacted by bushfire. This may include residential houses, infrastructure, agriculture, industry, environmental and heritage sites.
Asset Zone	The geographic location of assets of high value or importance and the physical boundary immediately around the asset.
Asset Protection Zone	An area of high strategic importance to protect values in the asset zone. Regular fuel reduction should be undertaken in the vicinity of specific assets. (Up to 1km wide around the asset).
Strategic Fuel Reduction Zone	An area of management that will increase the likelihood of controlling a bushfire within or the forward spread through the area. Located strategically in fuel types of high or greater flammability. Fuel to be managed by prescribed burning. Between 1km and 6km from a human settlement area.
Land Management zone	An area that is managed to meet the objectives of the relevant land manager, which can be planned fire for fuel reduction, biodiversity conservation or forest regeneration.
BRAM	Bushfire Risk Assessment Model – A computer based modelling tool that uses a series of inputs to assess the risk of bushfire to a specific area. The BRAM has a capacity to produce a series of outputs. It was developed and is managed by the Tasmanian Parks & Wildlife Service.
Bushfire	Unplanned vegetation fire. A generic term which includes grass fires, forest fires and scrub fires both with and without a suppression objective.[1]
Bushfire hazard	The potential or expected behaviour of a bushfire burning under a particular set of conditions, i.e. the type, arrangement and quantity of fuel, the fuel moisture content, wind speed, topography, relative humidity, temperature and atmospheric stability.
Community Bushfire Mitigation Plan	A strategic plan that focuses on addressing bushfire hazards, and improving the survivability of communities and assets. The Bushfire Mitigation Plan identifies key areas for fuel management, and provides tactical guidance regarding prescribed burning, fuel treatment, fire management infrastructure, and asset protection work.
Bushfire risk management	A systematic process to coordinate, direct and control activities relating to bushfire risk; with the aim of limiting the adverse effects

[1] Australasian Fire and Emergency Service Authorities Council 2012, *AFAC Bushfire Glossary*, AFAC Limited, East Melbourne, Australia

	of bushfire on the community.
Community Bushfire Protection Plan	A bushfire plan for community members that provides local, community-specific information to assist with bushfire preparation and survival. The focus of the Bushfire Protection Plan is on bushfire safety options, and the intent of the plan is to support the development of personal Bushfire Survival Plans.
Community Bushfire Response plan	An Emergency Management Plan for emergency managers and responders. The Bushfire Response Plan aims to better protect communities and their assets during bushfire emergencies, through the identification of protection priorities and critical operational information. These plans make firefighting resources safer and more effective.
Consequence	The outcome or impact of a bushfire event.
Fire Management Zoning	Classification system for the area to be managed. The zoning system indicates the primary fire management purposes for an area of land.
Human Settlement Area	Term given for the GIS (Geographic Information Systems) dataset used to define where people live and work. The dataset was developed for the purpose of risk modelling and was created using a combination of building locations, cadastral information and ABS data. Includes seasonally populated areas and industrial areas.
Likelihood	The chance of something occurring.
Risk	The effect of uncertainty on objectives.[2] (Note: Risk is often expressed in terms of a combination of the consequences of an event and the associated likelihood of occurrence.)
Risk acceptance	The informed decision to accept a risk, based on the knowledge gained during the risk assessment process.
Risk analysis	The application of consequence and likelihood to an event in order to determine the level of risk.
Risk assessment	The systematic process of identifying, analysing and evaluating risk.
Risk criteria	Standards (or statements) by which the results of risk assessments can be assessed. They relate quantitative risk estimates to qualitative value judgements about the significance of the risks. They are inexact and should be seen as guidelines rather than rules.[3]
Risk evaluation	The process of comparing the outcomes of risk analysis to the risk criteria in order to determine whether a risk is acceptable or tolerable.

[2] Standards Australia 2009, Risk management – Principles and guidelines, AS/NZS 31000:2009, Standards Australia, Sydney, Australia

[3] Emergency Management Australia 1998, Australian Emergency Manuals Series – Manual 3 Australian Management Glossary, Emergency Management Australia, Dickson, Australia

Risk identification	The process of recognising, identifying and describing risks.
Risk treatment	A process to select and implement appropriate measures undertaken to modify risk.

Acronyms

BPP	Bushfire Planning & Policy
BRN	Bushfire Ready Neighbourhoods
CPP	Community Protection Planning
FIAT	Forest Industry Association Tasmania
FMAC	Fire Management Area Committee
FPP	Fire Protection Plan
FRU	Fuel Reduction Unit
STT	Sustainable Timber Tasmania
LGA	Local Government Area
PWS	Parks and Wildlife Service
REMC	Regional Emergency Management Council
SEMC	State Emergency Management Committee
SFMC	State Fire Management Council
TFGA	Tasmania Farmers and Graziers Association
TFS	Tasmania Fire Service

Maps contained in this document may include data provided by DPIPWE (Information and Land Services Division (ILS), and Parks and Wildlife Service Fire Management Section), and Tasmania Fire Service. These map products have been produced by the Tasmania Fire Service. While all efforts have been taken to ensure the accuracy of these products, there may be errors and/or omissions in the data presented. Users of these products are advised to independently verify data for accuracy and completeness prior to use.

Chapter 1 Introduction

1.1 Background

Under Section 20 of the *Fire service Act 1979,* fire management area committees are required to submit to SFMC, on an annual basis, a fire protection plan for its fire management area commencing on 1 October 2014. The submission date was changed to the 1st of December for 2015 and beyond.

It is a requirement of the fire protection plan that it is consistent with the State Fire Protection Plan and the State Vegetation Fire Management Policy.

1.2 Aim and Objectives

The management of bushfire related risk is not the sole responsibility of any one land manager but is a collective responsibility of the whole community. All members within a community have a responsibility to assist with the management of bushfire risk.

The **aim** of this FPP is to document the cross tenure process of identifying and treating bushfire-related risk within the King Island Fire Management Area.

The **objective** of this FPP is to effectively manage bushfire related risk within the King Island Fire Management Area in order to protect people, assets and other things valuable to the community.

In the first instance, the main objective of fire protection plans is to identify risk and provide actions for the protection of communities at risk from bushfire. Risk based planning places the highest priority on protection of human life followed by protection of infrastructure and environmental values.

Specifically, the objectives of this plan are to:

- Guide and coordinate a tenure blind bushfire risk management program over a five (5) year period;
- Document the process used to identify, analyse and evaluate risk, determine priorities and develop a plan to systematically treat risk;
- Facilitate the effective use of the financial and physical resources available for bushfire risk management activities;
- Integrate bushfire risk management into the business processes of Local Government, land managers and other agencies;
- Ensure integration between stakeholders;
- Clearly and concisely communicate risk in a format that is meaningful to stakeholders and the community; and
- Monitor and review the implementation of the Plan, to ensure enhancements are made on an on-going basis.

1.3 Context

South eastern Australia, including Tasmania, is particularly prone to fire and is regarded as one of the most bushfire-affected regions in the world. It is neither possible nor desirable to eliminate bushfires in Tasmania. Whilst bushfires are part of the natural ecosystem processes of Tasmania and are essential for the maintenance of biodiversity, its affects can be catastrophic if uncontrolled. Tasmania has experienced periodic bushfire events that have caused devastating loss to life and property. In the aftermath of recent catastrophic bushfire events a heightened focus has been placed on bushfire risk identification and mitigation.

In recognition of the fact that bushfire is a landscape scale problem, the management of which is a shared responsibility across all levels of government and both the public and private arena, changes were made to the Fire Service Act 1979 that align the administrative responsibility for the management of bushfire fuels across the State. The fire management area committee (FMAC) structure, membership and committee boundaries were reviewed and there are now 10 fire management areas for the State. This reflects a broader landscape approach and strategic focus that is required to effectively manage and mitigate the risk of bushfire.

In accordance with Section 18 of the *Fire Service Act 1979*, the following organisations are represented on Fire Management Area Committees:

- Local Government Authorities
- Sustainable Timber Tasmania
- Tasmania Fire Service
- Tasmanian Parks and Wildlife Service
- Tasmanian Farmers and Graziers Association
- Tasmanian Networks
- Hydro Tasmania
- Forico
- TasWater
- Tasmanian Land Conservancy
- State Emergency Service
- Department of Defence
- State Fire Management Council

The principal aim of the FMAC's is to bring together the various stakeholders that manage land use across the State, to work together to effectively manage vegetation fuels for the mitigation of bushfires. The principle responsibility of a FMAC is to prepare a tenure blind fire protection plan for its Fire Management Area.

1.4 Tenure-blind fire management approach

Recent bushfire events across south eastern Australia have shown the importance of strategic fuel management regardless of land tenure. The fact that bushfires move through the landscape with no regard to property boundaries or tenure means that cooperation is needed across property boundaries between land management agencies and private property owners and occupiers in order to adequately address the threat of bushfires in Tasmania.

Over time the focus of fire management activities has largely ended up with government agencies managing public land. It is evident from recent fire events that focusing mitigation efforts on public land alone will not be effective in addressing the risk of bushfires. Managing the risks associated with bushfires will necessitate improving community understanding and acceptance of the need to use prescribed burning (together with a range of other treatment options) appropriately on private as well as public lands.

1.5 Policy, Standards and Legislation

The following policy, standards and legislation were considered to be applicable to the development and implementation of the FPP.

- Tasmanian Emergency Management Plan
- State Fire Protection Plan
- State Vegetation Fire Management Policy
- State Strategic Fuel Management Report
- Municipal Emergency Management Plans

Standards

- AS/NZS ISO 31000:2009 - Risk Management – Principles and Guidelines
- National Emergency Risk Assessment Guidelines (NERAG)

Legislation

- Aboriginal Relics Act 1975
- Fire Service Act 1979
- Emergency Management Act 2006
- National Parks and Reserve Management Act 2002
- Nature Conservation Act 2002
- Crown Lands Act 1976
- Forest Management Act 2013
- Threatened Species Protection Act 1995
- Environmental Management and Pollution Control Act 1994
- Local Government Act 1993
- Forest Practices Act 1985 and Forest Practices Code 2015
- Tasmanian Electricity Code

Chapter 2 Establishing the Context

2.1 Description of the King Island Fire Protection Plan Area

2.1.1 Location and Boundaries

This fire management area plan covers the whole of King Island, an area of 110,975 ha or 1095 square kilometres.

King Island is one of the 334 islands that make up the state of Tasmania. The island is 64km long by 27km wide and lies at the western entrance to the Bass Strait, midway between the state of Victoria and mainland Tasmania at 144^0 longitude and 40^0 latitude. This places the island in the path of the "Roaring Forties", a strong prevailing westerly wind that reaches over 100km per hour. The island is generally quite flat, with the highest point being 168m above sea level at Gentle Annie in the south east of the Island.

King Island Council is the sole local government authority within the fire planning area.

King Island has a land area of close to 110,000 ha. Just over 91,000 ha are under production from dryland agriculture and plantations. Close to 16,500 ha consist of natural environments or areas set aside for conservation. King Island has 1884 ha of inland water bodies.

A map showing the boundaries of the King Island Fire Management Area is contained in Appendix 1.

2.1.2 Population and Demographics

King Island has an estimated residential population of 1585 people (ABS 2016). Approximately 30% of the population are aged fewer than 24, with 50 % of the population aged between 25 years to 64 years of age. 20 % of the population aged 65 years or over.

A map showing the population distribution of the King Island Fire Management Area is contained in Appendix 2.

Currie, the largest town and administrative centre is situated on the west coast of the island.

Agriculture and fishing are the main industries and employers on the island, employing 45% of the total workforce. King Island has a strong reputation for its dairy and meat products and has a commercial fishing fleet for lobster (crayfish) and abalone. Public administration and retail trade are the next most significant sources of employment. Other industries providing employment include mining, kelp harvesting and tourism.

2.2 Land Tenure

Within the King Island Fire Management Area approximately 17% of the FMA is public land and 83% is private/freehold land. The management of fire risk on private land is a significant challenge for the King Island FMA.

Land tenure is important when considering how to manage bushfire risk on a landscape scale. Government agencies responsible for management of the State's public land generally have arrangements in place for mitigating bushfire risk together with the resources and necessary skills for planning for and responding to bushfire emergencies. Many private property land owners do not have the resources, skills, knowledge or experience to safely and effectively manage fire risk on their land. Further compounding the complex issue of managing fire risk on private land is the fact that it is not co-ordinated or carried out in a strategic manner.

A map showing land tenure within the FMA, together with a table containing a breakdown of land tenure in the King Island Fire Management Area is contained in Appendix 3.

Management of fire risk on private property

Under the *Fire Service Act 1979* private landowners/occupiers in Tasmania, have a number of legal responsibilities in relation to fire management, including undertaking fire maintenance activities to ensure fuels on their property do not pose a risk to neighbouring properties.

Privately owned land represents a considerable challenge to the effective management of fire because there are currently some major barriers that limit the extent to which landholders undertake planned burns. These include:

- The risk of fire escapes. Privately owned land tends to be where the highest value risk (human lives) are concentrated;
- Potential liability of property owners from fire escapes;
- Poor access to good weather/local forecast information;
- Lack of fire management knowledge, skills and experience;
- Lack of labour to manage the burn;
- Lack of appropriate equipment to safely manage the burn;
- Absentee land owners - many properties now have owners but not occupiers, for example hobby farms and holiday season shack communities.

Other Tasmania-wide issues:

- Over time, fire preparedness and damage mitigation has given way to a suppression-oriented approach. Communities have become reliant on fire management agencies suppressing fire however suppression is unlikely in extreme bushfire events.
- There is an inconsistent approach amongst local Councils in relation to enforcing fire abatement notices and provisions on private property.
- There appears to be some concern and confusion in the community about a range of fire related legal issues including vegetation clearing laws, fire permits requirements, backyard burning restrictions and threatened species permit requirements.
- Population mobility and ageing. The number of people choosing to live in bush-fire prone areas is increasing. As the population moves in and out of rural areas the knowledge and awareness of people living in bush-fire prone areas diminishes.
- Land use planning issues – in some areas residential development continues to be permitted in locations with potentially extreme fire risk.

2.3 Climate and Bushfire Season

The climate of the King Island Fire Management Area can be classified as temperate.

King Island has a mild maritime and frost free climate with temperatures ranging from 7.6°C in the coldest month of July to 21.3°C in the warmest month of February. The island recorded its hottest day with a maximum of 37.8°C on 4 January 2013.The lowest recorded temperature on the island is 0°C.

February is generally the hottest, driest month on the Island with a mean maximum temperature of 21.3°C.

Summary Climate Statistics:

Average Annual rainfall	861.5mm
Wettest months	July and August (July rainfall 116.3mm)
Driest Months	January and February (Feb rainfall 30.6mm)
Windiest Months	August and September
Months of least wind	March ,April and May
Cloudiest Month	May (Mean number of 16.9 cloudy days in the month)

Weather Observations

There is only one Bureau of Meteorology (BOM) weather observation station located within the King Island Fire Management Area from which weather data are collected on

a regular basis. It is located at King Island Airport, on the western side of the island (Latitude: -39.88, Longitude: 143.88, Height: 37.0 m), about 5 kilometres north of Currie township.

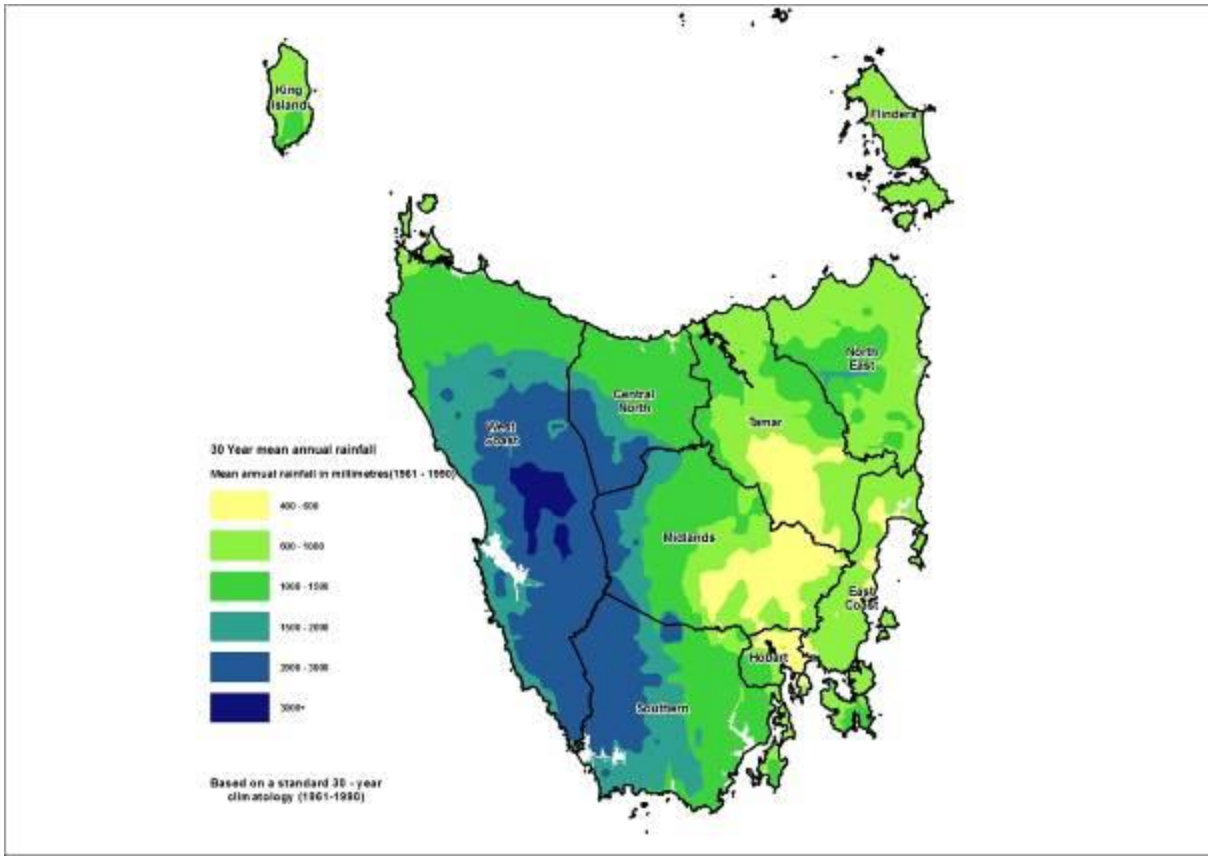
It should be noted that weather observations reported from individual stations are only representative of that station's local surroundings. Weather observations elsewhere across the Island may vary significantly under the influence of local topography.

The prevailing winds for the area are westerly although wind direction in summer is variable with no dominant direction. Spring is the windiest season with winds from the northwest increasing in the afternoons.

Rainfall

King Island has an average annual rainfall of 860mm. Rainfall is winter dominant due to the influence of passing cold frontal systems on the area. Figure 1 below illustrates Annual Rainfall for Tasmania.

Figure 1: Mean annual rainfall across Tasmanian Fire Management Areas.



The fire management area has an annual average of 10 thunder days with the western part of Tasmania receiving more frequent thunderstorm activity than the rest of the state. The area has very low lightning activity, resulting in fewer bushfires caused by lightning strike.

Bushfire season

A fire season is defined as the period of time in which fires are most likely to occur. Fire seasons can vary geographically and temporally. The fire season in the northern region of Tasmania extends from August to April. The fire season for King Island is traditionally from November to March, though fires can and do occur outside this peak season.

The bushfire threat for the King Island FMA increases in late December with January and February generally being the driest and hottest months when bushfires are more difficult to control. Thunderstorms are also more frequent within the area in summer.

2.4 Vegetation

Much of the vegetation of King Island has been modified into agricultural land since European settlement. Introduced and native pasture species now cover the majority of the island and are highly valued for their economic importance to the King Island community. The majority of remaining native vegetation on the island is largely contained in a number of forest conservation areas and state reserves including Lavinia State Reserve in the far north east, Seal Rocks State Reserve in the south of the island and Pegarah Permanent Timber Production Zone Land on the eastern side of the island.

Despite the modification to native vegetation from land clearing, fire and grazing, a number of broadly defined plant communities remain on the island including forest and woodland, scrub, grassland, heathland, wetland, saltmarsh and unique coastal vegetation communities.

The main vegetation associations in Tasmania have been mapped by the TasVeg mapping program coordinated by the Department of Primary Industries Parks Water and the Environment (DPIPWE). For the purposes of fire management, the complex vegetation associations used in TasVeg have been simplified into 21 types and fire-attributes (fire sensitivity and flammability ratings) have been developed for each type.

The broad native vegetation types and native forest communities occurring within the planning area include:

- Wet sclerophyll forest and woodland;
- Scrub communities (scrub, heathland and coastal complexes)
- Non eucalypt forest and woodland
- Dry sclerophyll forest and woodland;
- Other natural environments
- Native grassland
- Saltmarsh and wetland

Non native vegetation types occurring within the planning area include:

Agricultural, urban and exotic vegetation.

Broad Vegetation Group (TasVeg 3, 2013)	% of FMA	Veg Flammability
Agricultural, urban and exotic vegetation	65.3	Medium
Scrub, heathland and coastal complexes	26.7	High – Very High
Non eucalypt forest and woodland	2.8	High
Wet eucalypt forest and woodland	2.3	Medium
Dry eucalypt forest and woodland	1.2	Medium - High
Other natural environments	0.7	N/A
Native grassland	0.7	High
Saltmarsh and wetland	0.3	Low
Total	100	

A description of each of the broad vegetation community types contained in the TASVEG mapping dataset and found in the King Island FMA is contained in Appendix 4.

2.5 Bushfire Frequency and Causes of Ignition

Fire frequency is defined as the number of times any one point in the landscape has been affected by fire over a period of time. There is a paucity of data for fire frequency records within the King Island Fire Management Area and although the area is known to have been subject to a high frequency of fires, fire history records have only recently started to be documented.

Events

Fires have had dramatic and adverse effects on King Island's forest communities since the 1800s (PWS 2004). In 1880 (possibly 1896/97 pers. Comm. Rod McGarvie) a single fire left a moonscape of large stumps and blackened vegetation from Mount Stanley to the Fraser River (Barnes *et al.* 2002). Explorers used fire to clear paths through dense scrub, and settlers soon realised the potential of fire as a tool for clearing vast tracts of land for agriculture (Brown 1887). Frequent and intense fires over the Island's European history have eliminated most rainforest and wet forest associated flora and fauna from areas of the Island (Barnes *et al*. 2002).

In recent times, fires in 2001 and 2007 have burnt extensive tracts of the Island's remaining native vegetation, in particular within Lavinia State Reserve. *Melaleuca ericifolia* swamp forest has been especially affected, with important habitat for a number of threatened flora and fauna species being compromised (RMCD 2007), while a significant proportion of peat within Nook Swamp and on the plains to the west has been lost (RMCD 2007, Corbett & Corbett 2010).

More than 95% of the vegetation burnt in 2001 is thought to have burnt again in 2007, and the relatively short period between fires is likely to have disadvantaged the regeneration of a number of flora species (RMCD 2007). Source: King Island Biodiversity Management Plan

On 18 February 2007 a fire was ignited on King Island which subsequently burnt approximately 12500 ha from the Sea Elephant Estuary through to Penny's Lagoon in the north of the Island. It is estimated that 70% of the island's native vegetation was burnt during the fire, including areas of internationally recognised RAMSAR wetlands and orange bellied parrot feeding grounds within Lavinia State Reserve and significant tracts of remnant vegetation and pasture on private property.

Fires have been a frequent occurrence in the Lavinia Reserve over at least the last forty years resulting in severe organic leaf matter loss. Repeated damage to the Island's natural assets has resulted in a strong desire in the community to prevent and rapidly contain any bushfires in the future in order to protect the remaining natural environment as well as productive grassland environments on the island.

Major Fire events within the King Island FMA:

Fire name	Year	Area Burnt (ha)
Sea Elephant Road fires	2007	12,500
Lavinia State Reserve	2001	6000

A series of earlier fires is also known to have occurred on the Island, including:

- A December 1996 bushfire which burnt some 170 ha along the coast south of Lavinia Point;
- A 1992 bushfire which burnt the southern section of the Reserve, including much of Nook Swamp;
- A winter 1983 fire lit near Lavinia Point which burnt southwards for 10 km;
- A January 1978 fire from the Sea Elephant area which burnt some 5,000 ha of the reserve;
- A late 1972 fire which burnt 12,000 ha, including most of the Lavinia Reserve excluding the Nook Swamp, and followed an October fire in the same year which burnt part of the Nook Swamp from Lavinia Point.

(Source: Parks and Wildlife Service, 2002).

Fire Ignition Cause

The true causes of fire, either through ignition by lightning or caused by human actions have not been well documented in Tasmania. There is a paucity of historical data relating to both the cause and location of fires on King Island. TFS has not kept records relating to fire ignition causes until very recently. The vast majority of fires on King Island since European settlement appear to have been man made.

Arson is known to be a significant contributor to fires on the island.

In what is an unusual occurrence for the island a lightning strike in 2001 saw approximately 6,000 ha of Lavinia State Reserve burnt. The Sea Elephant Road fire was ignited deliberately on 18 February 2007 and continued to burn for three weeks.

Maps showing fire history, frequency and causes of ignition for the King Island Fire Management Area are contained in Appendix 5.

Chapter 3 Analysing and Evaluating Bushfire Risk

3.1 Analysing Bushfire Risk

Following the Australian Standard of risk (ISO 3100) bushfire risk has been considered spatially, assessing a combination of likelihood and consequence (PWS 2011). The Bushfire Risk Assessment Model (BRAM), model data run of November 2013 was used to analyse the landscape level risk for this plan. For a full analysis of the model, see Appendix 6.

To determine overall risk the NERAG (National Emergency Risk Assessment Guidelines August 2010) document (see Appendix 7) was used. The level of risk is determined by combining consequences and likelihood (see Appendix 6).

It must be noted that the BRAM and therefore the consequences, likelihood and risk outputs are based on available spatial data. The analysis has been undertaken on a state-wide basis, and maps are presented as complete for Tasmania. There are however gaps in the data inside and outside areas of public land. This includes fire history information, particularly on private land, which contributes to ignition potential information (likelihood), and many of the agricultural values have not been well captured (consequence). Notwithstanding these limitations, the model does provide an objective spatial analysis of bushfire risk in a landscape context.

3.2 Likelihood

Likelihood is defined as a qualitative method to assess the likelihood rating to the consequences occurring. The likelihood of an event was generated by calculating ignition potential, suppression capabilities and fire behaviour potential, followed by assigning these output values to categories in a likelihood matrix. This is taken to mean the likelihood of a fire occurring in a specific area which surpasses the ability of the fire agencies to contain within the first 24 hours.

Note – information contained in the Likelihood Map generated for King Island appears to conflict with the actual situation occurring on the island in the opinion of some FMAC members.

3.3 Consequence (values at risk)

Consequences are defined as a qualitative rating of damage from fire to values. The consequences were taken directly from the output generated through the Values at Risk spatial layer output of the BRAM.

While the values layer within the model identifies a wide range of values in the King Island FMA (including critical infrastructure), agricultural land including pastures and their economic significance are largely not part of the analysis. Damage to pastures from fire in the King Island FMA could have a major impact on the economy of the Island.

The natural values of remnant native vegetation are also of extremely high significance to the community of King Island.

A community consultation workshop held in 2009 as part of the preparation of the King Island Biodiversity Management Plan (KIBMP) identified a number of natural area sites on the island that are considered to be of extremely high value to the community of King

Island on both a natural and cultural basis . These areas were nominated as high priority sites for management on the basis of the priority species and vegetation communities which occur there. The location of these high priority areas are contained in Figure 2.

Other values that need to be understood when examining risk include:

Highly valued natural assets on King Island including:

- The Calcified forest
- Pegarah Permanent Timber Production Zone Land
- Threatened flora and fauna species, particularly those endemic to King Island

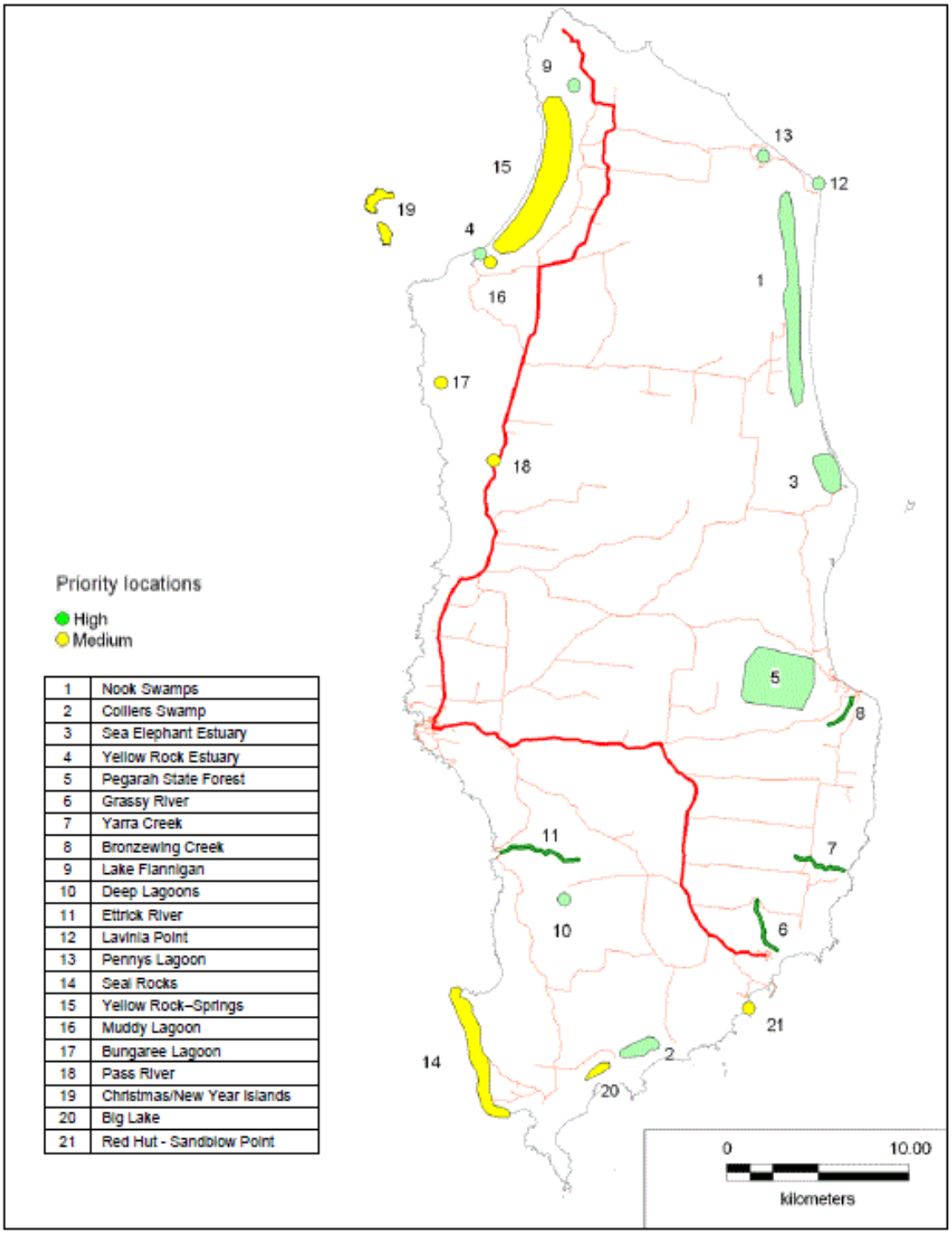
Critical infrastructure within the King Island FMA including:

- The King Island District Hospital and Health Centre at Currie (Multi-purpose centre)
- Hydro Tasmania's power generation facility at Currie
- King Island Airport
- Radio communications towers at Gentle Annie, Wickham and Council Hill

Significant Built assets (vital for the economy of the island) including:

- The King Island Dairy Factory at Loorana
- Kelp Industries Pty, Ltd at Currie
- King Island Ports Corp (Bulk fuel storage at risk)

Figure 2: High priority management areas for King Island (from values identified in the King Island Biodiversity Management Plan, 2012)



3.4 Overall Risk

A representation of risk (see Appendix **6**) is developed when you combine the factors of likelihood and consequence. The BRAM generated output map of risk shows qualitative areas of risk, not areas of perceived risk.

The model assists in objectively defining areas where genuine risk is present. In-depth analysis will indicate what factor is driving the risk for a given area

3.5 Risk Analysis for the King Island Fire Management Area

Following large and devastating fires on King Island in 2007, the **King Island Bushfire Management Plan** was produced in February 2009. Within the report, risks associated with bushfires on King Island were identified, analysed and evaluated against a number of criteria. A copy of the risk identification and analysis statements produced for the 2009 Bushfire Management Plan is contained in Appendix **8**.

For the current Fire Protection Plan, the bushfire risk model BRAM was utilised to examine risk across the fire management area. The results of this risk analysis are contained in a series of maps (BRAM - Bushfire Risk Assessment Model Maps) showing likelihood of ignition, consequences and overall risk within the King Island FMA in Appendix **9.**

BRAM modelling results for the King Island FMA (Figure **3**) indicate that areas of highest bushfire risk identified for the King Island FMA are located:

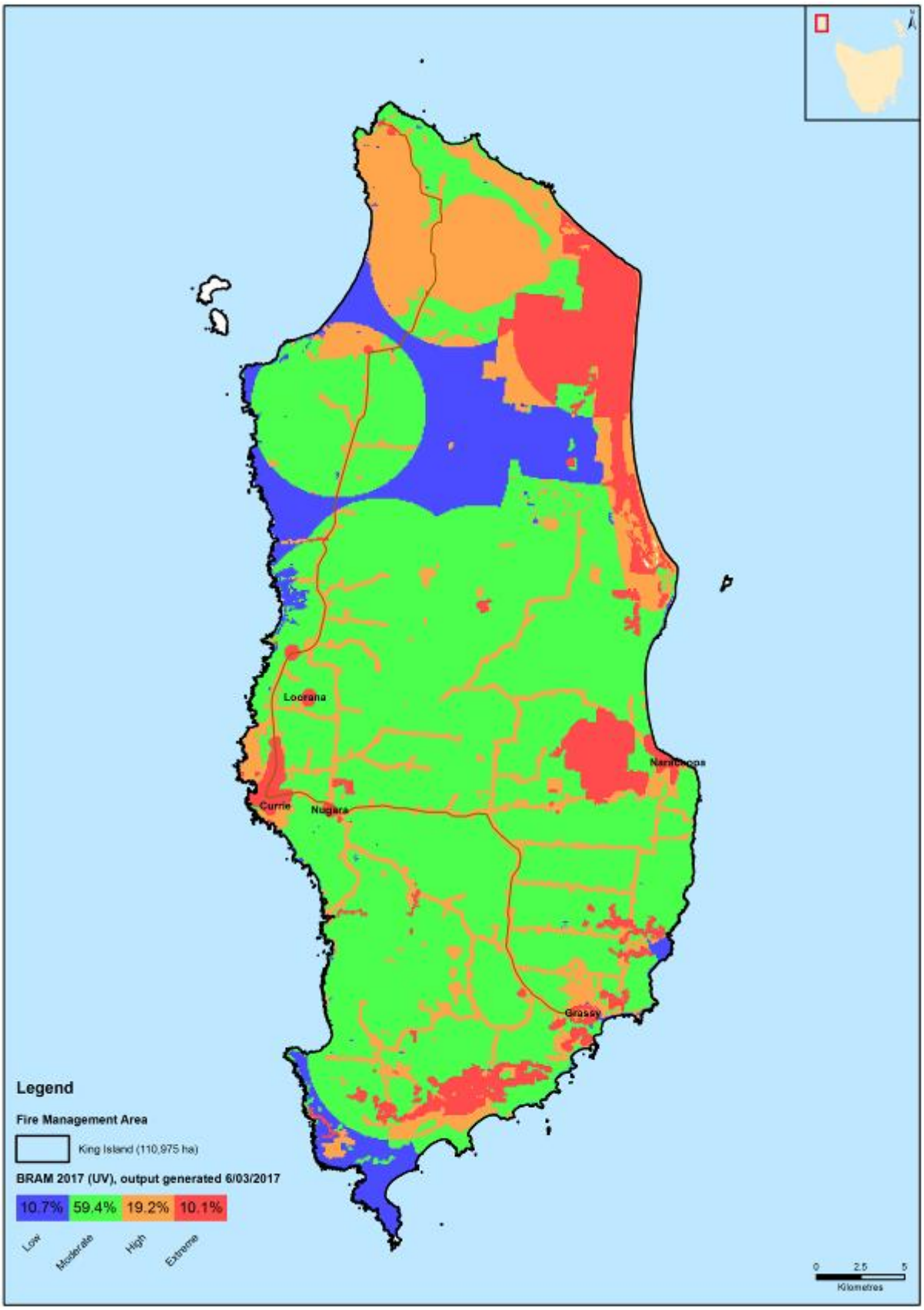
- In the far north eastern corner of the island (Lavinia State Reserve)
- Around the human settlement area of Currie in the central west of the island
- Around the human settlement area of Naracoopa in the central eastern part of the island
- In the far south eastern part of the island

A total of 10.3% of the fire management area was identified as being at extreme risk from fire under current fuel loads.

BRAM Bushfire Risk Assessment results for the King Island Fire Management Area:

BRAM level of Risk	Area (ha)	% of FMA
Low	12318	11.1 %
Moderate	65697	59.2%
High	21196	19.1 %
Extreme	11208	10.1 %

Figure 3: – BRAM Overall Risk analysis results – King Island FMA



3.6 Community Risk Assessment

Strategic assessment tools (including BRAM computer modelling) together with local knowledge have been used to conduct a broad scale assessment across the *King Island* Fire Management Area to identify communities vulnerable to bushfire. In addition, a more detailed assessment using locally specific processes was conducted by members of the FMAC during the preparation of the Kind Island Bushfire Management Plan (2009).

Tools that were used by the FMAC to identify communities vulnerable to bushfire include:

- Local knowledge obtained from Tas Fire Service District Officers and Brigades
- BRAM Risk rating for King Island FMA Human Settlement Areas
- Consultation with Tasmania Fire Service Community Protection Planners and Community Development Officers
- Expert opinion of fire practitioners
- Identification and consideration of existing and past fire management actions and plans (including the King Island Bushfire Management Plan 2009)
- Consultation of Council risk registers and the (draft) King Island Emergency Management Plan

Consideration was also given to other assets of particular significance to the King Island FMA:

- Agriculturally valuable locations/crops
- Community assets (Historic buildings, community halls etc.)
- Ecologically special areas
- Large employment centres

The results of the strategic assessment of communities at risk in the King Island Fire Management Area are outlined below in **Table 1.**

Suburb Name	BRAM Rating	FMAC priority rating
Currie	Extreme	High
Naracoopa	Extreme	High
Loorana	Extreme	High
Grassy	High - Extreme	High

Table 1 : Communities at risk from fire on King Island

Currie was assessed as being reasonably well protected by the existing cleared areas surrounding the settlement area. Grassy was considered to be reasonably well protected by the cleared perimeter surrounding the settlement area, with the exception of the potential 'wick' created by vegetation coming up from the mine to the south. Cleaning up of the vegetated area will further reduce the risk to Grassy from bushfire. Naracoopa has the potential to be exposed to risk from bushfires running into the area from elsewhere, with some individual properties closely surrounded by vegetation.

Chapter 4 Bushfire Risk Treatment

4.1 Region Wide Controls

The following controls are currently in place across the *King Island Fire Management Area* to assist in the strategic management of bushfire related risk:

- Legislative controls – including abatements, fire restrictions etc.
- Public education campaigns and the use of TFS Community Fire Safety Programs and SFMC state-wide programs tailored to suit local needs; e.g. Community Education – Bushfire Ready Neighbourhoods Program, Bushfire Planning and Policy – Community Protection Planning and private land burning programs (see Appendix 13 for further details).
- State-wide arson prevention programs developed in conjunction with TAS Police and TFS;
- Setting of appropriate land subdivision and building standards in line with State Bushfire Prone Area Building Standards;
- Performance monitoring and reporting of FPP outcomes to the relevant Emergency Management Council and State Fire Management Council as required by the Tasmanian Emergency Management Plan and the Fire Service Act

4.1.1 Bushfire-Ready Neighbourhoods Program – Tasmania Fire Service

A Community Development Coordinator and regionally based Community Development Officers (Hobart, Launceston and Burnie) have identified 22 communities/areas state-wide which are being targeted by the Bushfire-ready neighbourhoods program as part of round 2 (2016 to 2018) of the program. The program takes a community development (‘grass roots’) approach and recognises that there isn’t a one size fits all approach to bushfire preparedness, highlighting that ‘we all play a part’ (individuals, TFS, communities). Specifically the program takes a community led approach providing local community members in higher bushfire risk areas community engagement activities for preparing for and preventing bushfire/s. The program is facilitated by accessing existing community networks and resources and developing localised strategies in bushfire preparedness. Some of the planned community engagement activities include; community forums, information sessions for communities and brigades alike, workshops, property assessments, field days, focussed group activities and establishment of Bushfire-ready neighbourhood groups.

For more information about the Bushfire-Ready Neighbourhoods Program visit: fire.tas.gov.au/brn

King Island is included in Round 2 (2016-2018) of the Bushfire-Ready Neighbourhoods Program.

4.2 Asset Specific Treatment Strategies

There are five broad asset specific treatment strategies that have been used to manage the bushfire risks identified in the Community Risk Assessment. They include:

- Fuel management – Treatments include the reduction / modification of bushfire fuels through manual, chemical and prescribed burning methods;
- Ignition management - Treatments aim to reduce the occurrence of human induced ignitions in the landscape;
- Preparedness – Treatments focus on providing suitable access and water supply arrangements that will assist with firefighting operations;
- Planning – Treatments relate to the development of plans that will improve the ability of firefighters and the community to respond to bushfire; and
- Community Engagement – Treatments seek to build relationships, raise awareness and change behaviours relating to the management of bushfire related risks within the community.

4.3 Fire Issues specific to King Island:

King Island has a number of issues unique to the Island that are important in understanding the community's reluctance to introduce any further fire into the landscape in the near future (either through hazard reduction burning or through uncontrolled bushfire events).

For the most part, due to the history of intensive land clearing, high fire frequency and high value of pasture lands on the Island, coupled with relatively limited fire-fighting resources, fire is not currently seen as an acceptable management tool for reducing fire risk on King Island.

King Island has other unique characteristics that make the appropriate management of fire on the island an issue of high social, economic and environmental importance.

4.3.1 Vegetation clearing moratorium on King Island

Since permanent European settlement of King Island in the late 1800's, more than 70% of the native vegetation has been cleared for agricultural production, resulting in a loss of biodiversity values. Remaining native vegetation occurs across the island as fragmented patches, planted windrows, and two large stands in the northeast and south of the island.

King Island has had a vegetation clearing moratorium in place since 2004. The moratorium on broad scale land clearing was introduced by the state government's Forest Practices Authority to allow an assessment of the remaining native vegetation on King Island, and to decide on land management into the future.

The Tasmanian government regulates the clearing of native forest and vegetation on King Island through the provisions of the Forest Practices Act 1985 and the Policy for the Maintenance of a Permanent Native Forest Estate. The policy seeks to ensure native vegetation on King Island does not fall below 30% of the original cover. Figures indicate that as of 2011, the cover has reached 30% and, consequently, further broad scale clearing will not be permitted unless specific exemptions apply.

Forest vegetation cannot be cleared unless the landowner has a certified forest practices plan that permits the clearing, or the clearing is small scale and exempt from the requirements for a forest practices plan. Clearing includes felling, cutting, pushing, rolling, slashing or otherwise removing or destroying forest vegetation in any way.

Small scale clearing is exempt from the requirements for a forest practices plan on non-vulnerable land, providing the landowner has given consent and the clearing does not exceed 1 hectare or 100 tonnes in volume (whichever is the lesser) per property per year. (Forest Practices Authority Information Sheet 2011).

Other small scale clearing that may be conducted without a forest practices plan:

- **Maintaining existing fences, roads and firebreaks** – clearing of a reasonable buffer is exempt, providing that the clearing width is limited to that area that is necessary to provide safe vehicular access, or to protect the infrastructure from being damaged by falling timber.
- **Clearing for new fences, roads and firebreaks** – clearing up to 1 hectare per property per year is allowed for new infrastructure on non- vulnerable land, but clearing is not exempt for new infrastructure within vulnerable land. This means that fences and roads should avoid vulnerable land such as streams and threatened species habitat. Where stream crossings are required, the FPA is prepared to adopt practical tolerances and will not require a forest practices plan for cases where the fence or road crosses a stream at right angles, and clearing width is minimised, and there is no obstruction to the stream. Landowners should seek advice from the FPA where clearing may exceed these practical tolerances.

4.3.2 Equipment challenges

Until recently, due to the logistical challenges associated with island living, it has been difficult to source appropriate machines and operators with appropriate OH&S compliant machinery and training to undertake fire break and slashing operations in accordance with government requirements. At present STT is unable to source machinery on the Island that meets requirements of the Work Health and Safety Act 2012 for use under the forest canopy in STT's proposed 2014/15 maintenance program.

4.3.3 Livestock shelter belts – potential fire wicks:

A recognised issue specific to King Island is the potential for livestock shelter belts on the island (narrow rows or belts of trees and shrubs used to provide shelter to stock from wind) to act as 'wicks' and rapidly carry fire into adjoining thickly vegetated areas.

Shelter belts are highly valued by agricultural and livestock producers on King Island but those that run into adjoining heavily vegetated blocks require breaks within them – at least a vehicle width but preferably 10m to 20m wide. A shelter belt management program is required on King Island in order to create appropriate and effective breaks in these potential 'wicks'.

4.3.4 Threatened Species at risk from fire:

Bushfire continues to be a major ongoing threat to both the quality and extent of King Island's biodiversity and is considered to be a major threat to threatened species on King Island. Species at high risk from fire include: King Island Thornbill, King Island Scrubtit, Orange-bellied Parrot, King Island Green Rosella, and Southern Hairy Red Snail, Tasmanian blue gum, sassafras, musk daisy bush, slender and skirted tree ferns and scrambling ground fern. Fire is a significant threat to the two endemic bird species, the King Island Thornbill and King Island Scrubtit. For example, the area of habitat for the King Island Scrubtit at Nook Swamp prior to the 2007 fire was estimated to be 600 ha; the area post fire is estimated to be only 90 ha.

The loss of over 90% of forest and scrub habitat at Nook Swamp is also likely to have permanently removed a significant area of potential habitat for the King Island Thornbill (RMCD 2007). In addition, the following vegetation communities are particularly vulnerable to fire: Acacia melanoxylon swamp forest, Eucalyptus brookeriana wet forest, King Island eucalypt woodland, Eucalyptus globulus King Island forest and Melaleuca ericifolia swamp forest. Source: King Island Biodiversity Management Plan.

4.3.5 Peat

Peat is an organic soil which consists of the accumulated remains of dead plants. Peat or organic leaf matter in soils has both a high economic and environmental value but can also be an issue for extinguishment following bushfires. Bushfire poses a risk to peat deposits on King Island.

The organic soils underlying the pastures on King Island contribute significantly to the high productivity of the island and are likely to be at least hundreds if not thousands of years old.

The peat underlying Nooks Swamps and Deep Lagoons is known to provide critical habitat to the endangered Scrambling ground fern (Hypolepis distans) which is listed under the Commonwealth EPBC Act.

Where swamps have been drained for agricultural purposes or dry out during drought years, peat if exposed to fire can be burnt away and totally and permanently destroyed. A significant proportion of peat within Nook Swamp and on the plains to the west has been lost (KI BMP) due to draining of swamps, resulting changed hydrological regimes and subsequent loss of peat during fires.

4.3.6 Trigger Points for bushfire response on King Island

The remoteness of King Island from mainland Tasmania means that assistance from "off island" in the form of extra resources and crews that may be required to control a large scale bushfire on the island can take considerable time and money to organise. Experience has shown that early recognition of the likely need for assistance together with an early request for additional resources from off island represents the best opportunity for fast and effective response to large bushfires on the island. In response to issues faced by the community on King Island

during the 2007 bushfires, a trigger point has been identified for requesting assistance for bushfire suppression from 'off island' resources.

The Trigger for calling in resources and establishing a local IMT is as follows:

If containment of the fire is not expected within the first 12 hours and/or patrolling of the fire line will be required for multiple days, the following will take place:

1. A phone hook-up will be undertaken ASAP between King Island TFS, TFS Regional Officer and/or the PWS NW Region Fire Duty Officer to determine the type and level of assistance required. Organisation of appropriate support will then be undertaken. If required STT will be included in the phone link.

2. The establishment of a locally based IMT.

In the event that all King Island Fire Brigades are called out to an incident, the Group Officer will review the fire situation with Brigade Chiefs (Grassy, Naracoopa, Currie and North), King Island PWS Ranger and the King Island Municipal Emergency Management Coordinator against the following criteria:

- Location of fire, including:
  - Proximity to towns or other 'Island' assets,
  - Terrain, and
  - Level of identified risk of the site within KI Bushfire Management Plan.

- Potential for the fire to travel, including
  - Vegetation type surrounding fire site, together with how contiguous the vegetation is.

- Weather forecasts and fuel loads.
  - Note: FireComm to be contacted for relevant information, such as weather forecasts, soil dryness indicator etc.

- Resources (human, vehicles and equipment) available on the Island in relation to the size (or potential size) of the incident.

In addition GIS mapping will be used to inform decision-making and if deemed necessary a review of the fire from the air will be undertaken. Lead times for accessing resources from off the Island will also be considered.

The TFS Regional Officer, District Officer and/or the Parks and Wildlife Fire Duty Officer will be informed of the meeting.

Source: King Island Bushfire Management Plan, February 2009.

4.4 Treatment Options – Planned burning

4.4.1 Treatable and untreatable fuels

In Tasmania, only certain types of vegetation are suitable for planned burning, for example dry eucalypt forest, scrub, heathland and buttongrass. These are what can be called 'treatable' vegetation types. Other vegetation types are unsuitable for planned burning either because they are too wet to burn (such as sphagnum, swamp and wetland), are extremely fire sensitive (rainforest, alpine/sub alpine coniferous heathland) or have other characteristics such as land which is unvegetated or vegetation growing in urban areas which make them unsuitable for planned burning. These unsuitable vegetation types are considered 'non-treatable' for planned burning purposes.

Agricultural lands, whilst susceptible to the impact of bushfire, are also considered 'non -treatable' due to the land use priority for these vegetation types. This does not preclude these areas from burning however it means this area of land use type is not being included in the analysis of treatable and untreatable vegetation.

Within the King Island Fire Planning Area a total of 80,111 ha (72% of the fire planning area) including agricultural land has been classified as untreatable. The remaining 29,272 ha (or 28% of the total land area) although technically treatable by planned burning is not considered suitable for planned burning due to the fire history of the area.

Maps and a summary table showing treatability of land within the King Island FMA are contained in Appendix 10.

With the exception of some areas of reserved land on the Island, the preferred treatment method for the majority of vegetation on King Island is slashing of strategic trails and fire breaks.

4.4.2 Planned burning on King Island

Strategic fuel reduction burning is one treatment option that has the potential to reduce risk to some communities under typical circumstances (such as on the Tasmanian mainland). Due to the fire history on King Island together with the unique challenges of managing, resourcing and suppressing fire on the island, planned burning is generally not the preferred treatment option for managing fire risk on King Island at the present time. The exception may be for large areas of native vegetation contained within State Reserves, Conservation Areas and in the Permanent Timber Production Zone Land on the island once they have had sufficient time to recover from recent fires.

Planned burning on King Island may provide an effective means of overcoming vegetation clearing restrictions currently in place under the vegetation clearing moratorium on King Island. Narrow strips of fire applied immediately adjacent to either or both sides of permitted cleared fire breaks have the potential to allow the extension of breaks to a more effective width.

Figure 4: Example of widening an existing cleared fire break with a strip of fire.

The exclusion of fire completely from large areas of native vegetation exposes those areas to the possibility of complete and total devastation during a single large bushfire event. The maintenance of patch mosaic burning (maintaining patches of burnt and unburnt bushland across large areas of native vegetation) has the goal of fragmenting the landscape in order to reduce damage from single bushfire events in the future. Consideration of the benefits of a cyclic mosaic burning program for certain areas (not recently damaged from fire) on King Island may be of value.

4.5 Treatment options other than burning

In areas classified as untreatable by planned burning the risk of fire may still be mitigated through a range of other activities including:

- Mechanical fuel removal (slashing and mulching, mowing, trittering, poison spraying)
- Fire trail maintenance and construction of strategic fire breaks (grading/dozing)
- Intensive or 'crash' grazing of blocks by livestock including goats
- Weed control
- The creation of fuel modified zones (fuel reduced zones) around structures and assets
- Planning conditions and restrictions in areas adjoining heavily vegetated land
- Bushfire resistant building design and construction materials for new developments
- Individual property owners can undertake bushfire readiness preparation prior to each fire season (including the development of Bushfire Survival Plans)
- The Tasmania Fire Service can prepare community specific plans including Community Bushfire Response Plans (for use by emergency response agencies) and Community Bushfire Protection Plans (for use by community members).

4.6 Treatment Selection and Priorities

Key communities and assets considered to be at risk of bushfire on King Island have been identified and prioritised both as part of the current Fire Protection Plan process and previously during preparation of the King Island Bushfire Management Plan (February 2009).

A range of different treatment strategies were identified and a register of location specific treatment strategies was developed for the King Island Bushfire Management Plan (produced in February 2009). A copy of this Register of Treatment Strategies is contained in Appendix 11.

The fire and land use history on the Island together with the relative isolation of King Island has led to a preference for a treatment strategy that is specific to King Island and largely excludes the introduction of fire. Repeated damage to the islands natural assets from fire has led to a desire in the community on King Island to prevent future bushfires and contain them to an absolute minimum into the future. Areas where planned burning (either for fuel reduction purposes or ecological requirements) may potentially be of use are generally limited to publically managed lands and conservation reserves on the island. The preferred treatment selection method for communities at risk on the island is to create and maintain strategic fire breaks through slashing of vegetation, particularly in areas surrounding the main townships and adjacent to heavily vegetated areas including the main forest conservation areas and state reserves.

The Fuel Reduction Unit will deliver community protection and response plans for the Island communities in 2018.

Bushfire Risk Mitigation programs – other agencies

A number of different organisations including Parks and Wildlife Service Tasmania, STT, local Council, Hydro and private enterprises have annual or cyclic programs which aim to mitigate risk from fire through activities including line trimming, mowing, slashing and fire trail and fire break maintenance.

A comprehensive map showing the location of the entire range of mitigation activities currently carried out or planned for the future within the FMA will assist in developing a co-ordinated approach to landscape scale fire risk mitigation in future Fire Protection Plans.

Other fire management related programs:

A number of current and historic fire management plans and fire related reports have already been prepared for use within the King Island FMA. A list of these plans is contained in Appendix 12.

4.7 Annual Implementation Program

The 2017/18 Implementation Program for the King Island FMA is identified in Appendix 13. The implementation program will be coordinated by the Fire Management Area Committee (FMAC) which will also liaise with relevant land managers (including private property owners) to implement the risk mitigation strategies. The FMAC will liaise with the State Fire Management Council to develop a strategy to address funding and resourcing requirements for works associated with the identified risk mitigation actions and program.

4.8 Implementation

When the treatments identified in this FPP are implemented there are a number of issues that need to be considered by the responsible agency including:

- Environmental impact (particularly in relation to the Island's numerous threatened species)
- Prescribed burn plans and approvals
- Community consultation
- Community partnerships
- Aboriginal and European heritage sites

Chapter 5 Monitoring and Review

Monitoring and review processes are in place to ensure that the FPP remains current and valid. These processes are detailed below to ensure outcomes are achieved in accordance with the Implementation Schedule.

5.1 Review

Fire Protection Plans, including appendices are to be submitted annually for each fire management area and will be subject to a comprehensive review every five (5) years from the date of approval, unless significant circumstances exist to warrant earlier review. This would include:

- Changes to the FPP area, organisational responsibilities or legislation;
- Changes to the bushfire risk in the area; or
- Following a major fire event.

The Community Risk Assessments contained in the appendices of this FPP will be developed and reviewed annually.

5.2 Monitoring

The Implementation Program at Appendix 13 is a living document and progression towards completion of the treatments will be monitored and reviewed at least every six (6) months. The Implementation Program will be updated as treatments are progressed and completed.

5.3 Reporting

A report detailing progress towards implementation of this FPP will be provided annually.

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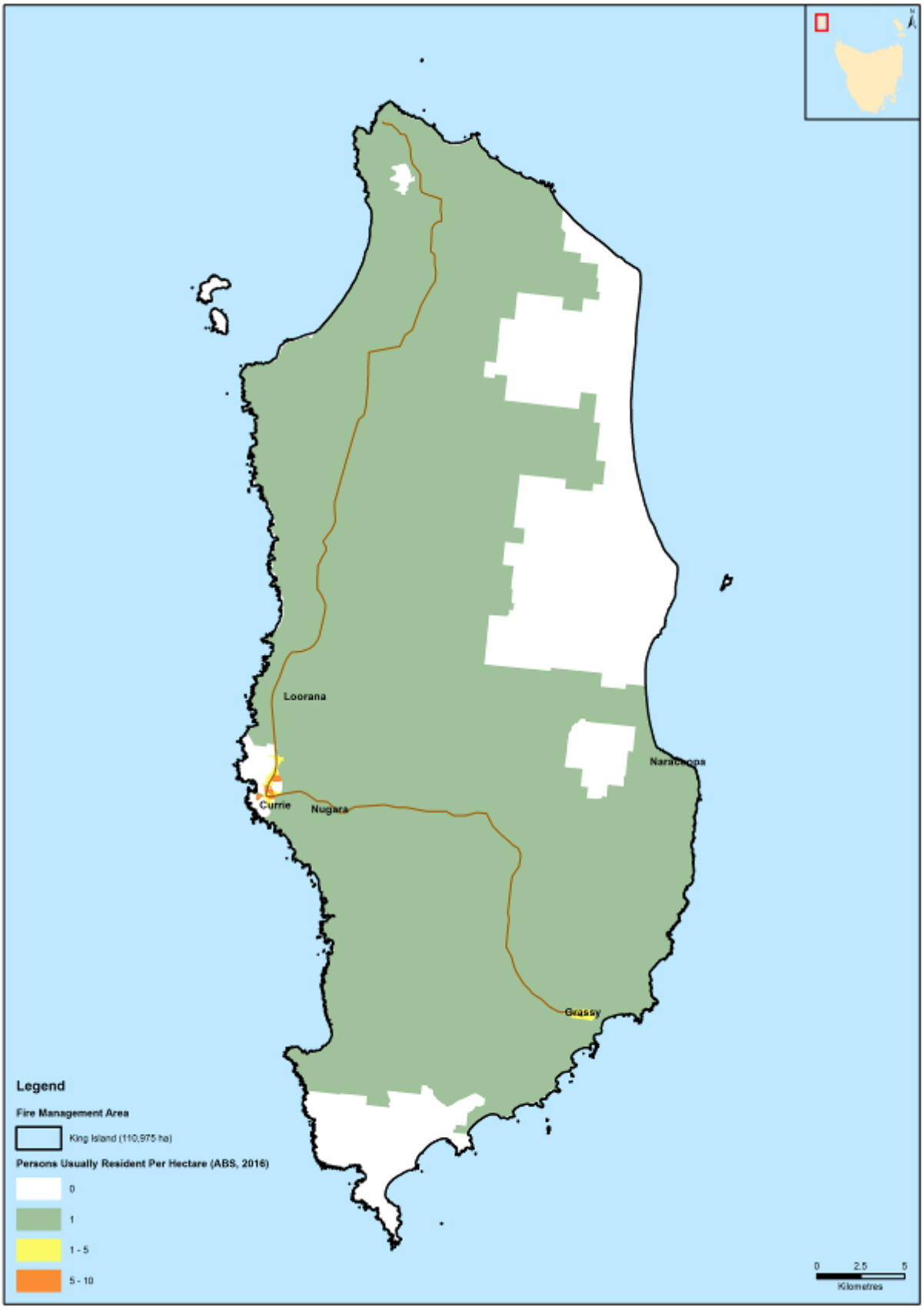
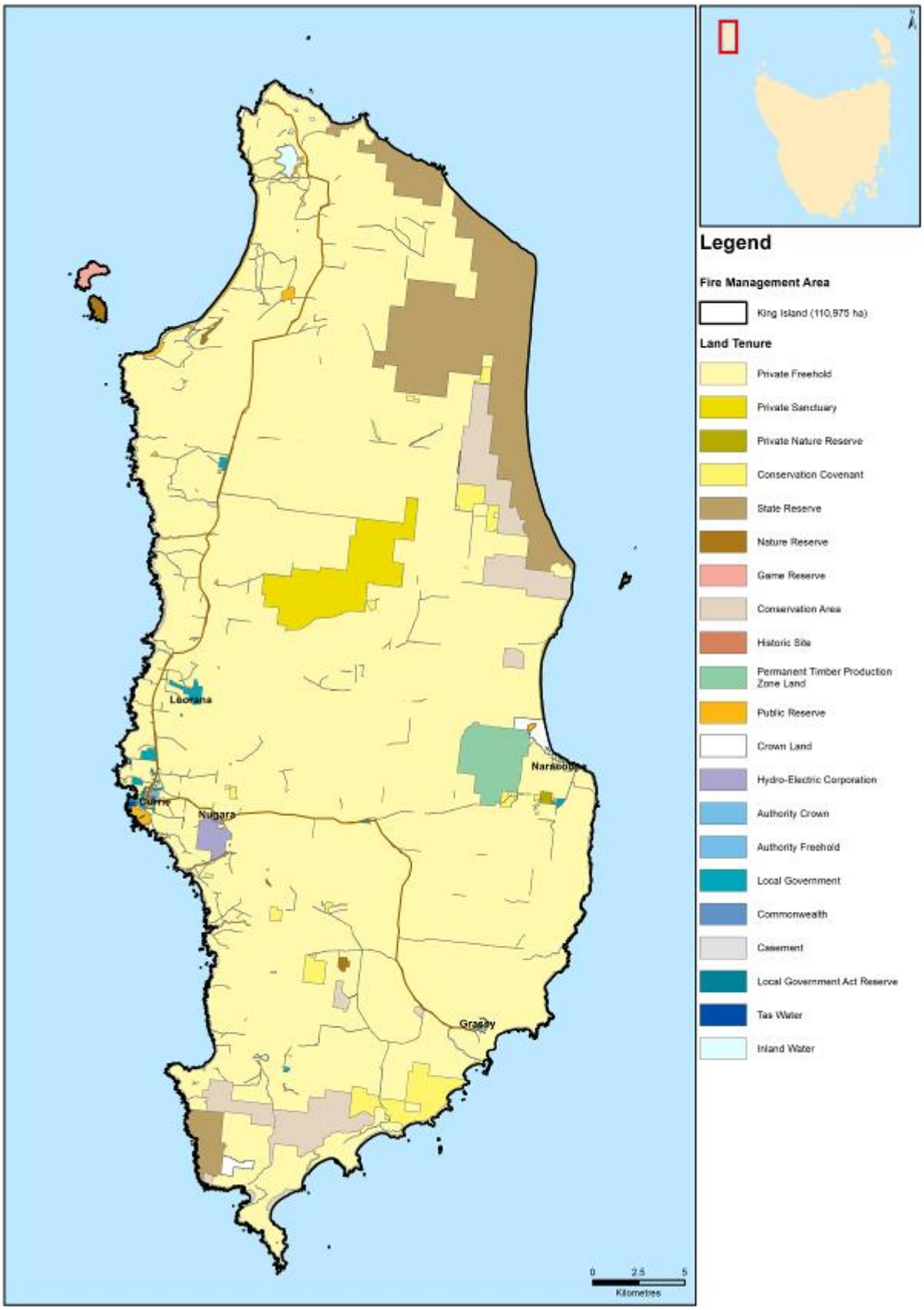
Appendices

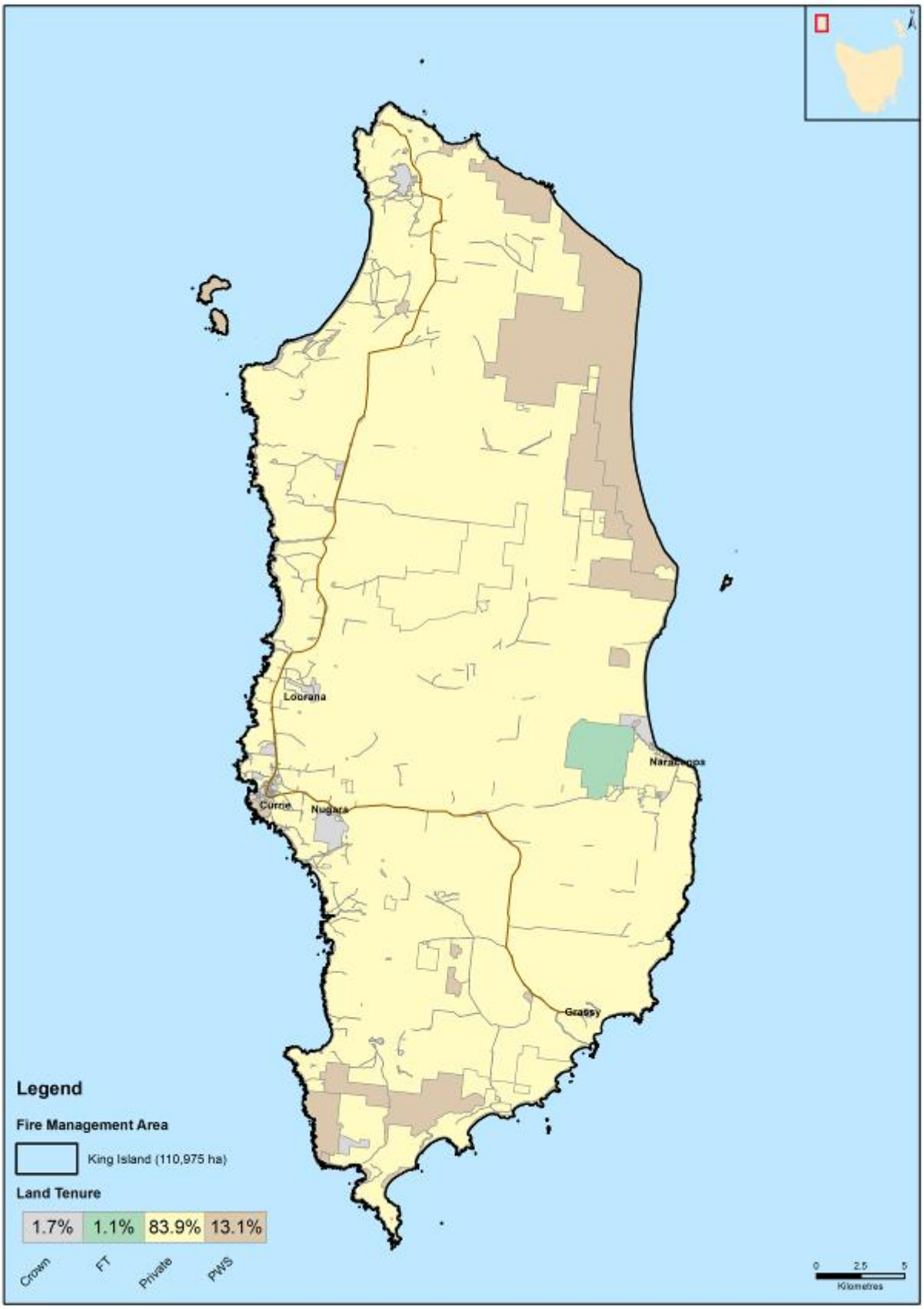
Appendix 1 – Map of King Island Fire Management Area boundary

Appendix 2 – King Island population distribution map



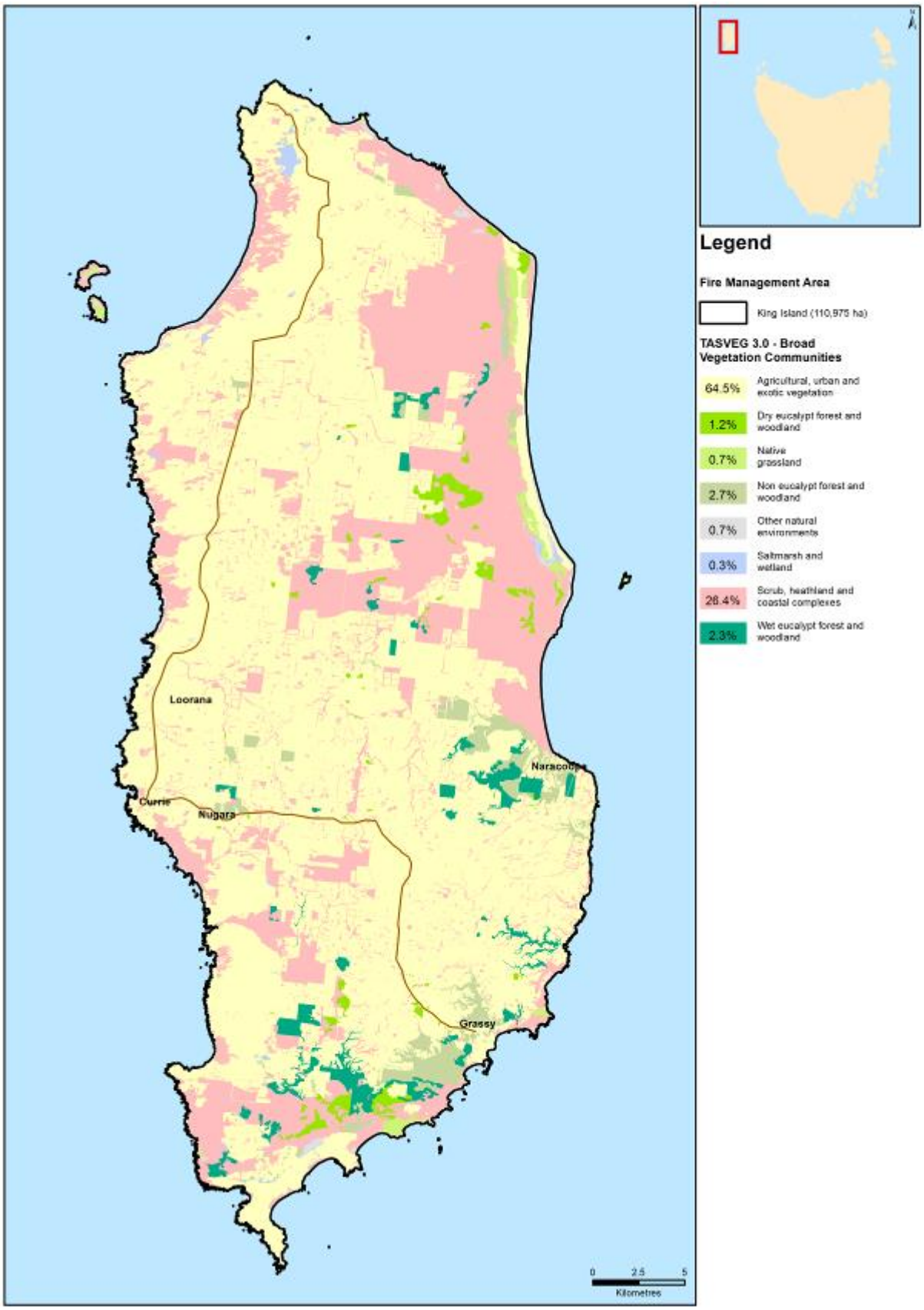
Appendix 3 – Land tenure




Lourana
Curnie
Nugara
Grassy
Legend
Fire Management Area
King Island (110,975 ha)
Land Tenure
1.7%
1.1%
83.9%
13.1%
Crown
FT
Private
PWS
0
2.5
5
Kilometres

Tenure Type	Hectares	Percentage
Private Freehold	88,978	80.36
State Reserve	8,537	7.71
Conservation Area	5,232	4.73
Private Sanctuary	2,448	2.21
Conservation Covenant	1,640	1.48
Permanent Timber Production Zone Land	1,240	1.12
Casement	690	0.62
Public Reserve	440	0.40
Crown Land	320	0.29
Hydro-Electric Corporation	297	0.27
Local Government	283	0.26
Nature Reserve	213	0.19
Inland Water	158	0.14
Game Reserve	130	0.12
Private Nature Reserve	40	0.04
Authority Crown	36	0.03
TasWater	29	0.03
Local Government Act Reserve	3	0.00
Commonwealth	2	0.00
Authority Freehold	1	0.00
Historic Site	1	0.00

Appendix 4 – TasVeg Vegetation map and community descriptions



Description of each of the broad vegetation community types found in the King Island Fire Management Area as contained in the TASVEG mapping dataset and:

Wet Sclerophyll Forest communities:

Wet sclerophyll forests are typically dominated by eucalypts and have an understorey dominated by broad-leaved (soft-leaved) shrubs. Trees in mature forest generally exceed 40 m in height. As with the related mixed forest, wet sclerophyll forests typically contain only one or two eucalypt age classes - these relate to period since fire or other major disturbance (including intensive logging and regeneration burning). Often only one species of eucalypt is present. The shrub understorey is dominated by broad-leaved shrubs and is generally dense, preventing continuous regeneration of shade-intolerant species such as eucalypts. Ferns are often prominent in the ground layer.

Scrub Heathland and coastal complexes:

Scrubs, heathlands and the diverse complexes that they may form are, with a few notable exceptions, dominated by extremely woody (drought resistant) species with hard leaves. Dominant genera within this vegetation unit include *Leptospermum, Melaleuca* and *Acacia*. The canopy structure of the woody plants in these communities varies from 30 to 100% solid crown cover and is usually 5 m or less in height.

Scrub and heathland communities typically have only two strata; a dominant layer of shrubs comprising one to many species; and a ground layer of herbs, orchids, prostrate shrubs, ferns and occasionally grasses and/or sedges. The ground layer is often sparse in vegetation cover and species richness, although it may be diverse and/or dense in the more open-canopy communities.

Fire is a significant management issue for heathlands and scrubs that rely on it to maintain species diversity and a short-structure (i.e. especially those away from the coast and below the high altitude tree-line).

Note: Coastal complex on King Island (SCK) has been revised (2013) and renamed Spray zone coastal complex (SSZ). The redefined unit excludes coastal scrub and heathland. SSZ has been broadened to map spray zone vegetation in exposed coastal areas of Tasmanian and its off-shore islands.

Agricultural, urban and exotic vegetation:

This broad vegetation group is mainly non-native vegetation and includes agricultural land, marram grassland, Spartina marshland, plantations for silviculture, regenerating cleared land, urban areas and weed infested areas. It also includes *Pteridium esculentum* fernland which is dominated by the native bracken fern, and Permanent easements, which may be occupied by native vegetation.

Non- Eucalypt forest and Woodland:

These forest and woodland communities are grouped together either because they are native forests and woodlands not dominated by eucalypt species or because they do not fit into other forest groups. Dominant species within these communities include species of the genera *Acacia, Allocasuarina, Banksia and Leptospermum*.

Some of these communities have been referred to as “dry rainforests”. The understorey in all these communities is generally sparse.

All the communities in the Non-eucalypt forest and woodland section may be maintained by episodic fire. Many of the communities typically regenerate episodically following fire and thus form even-aged stands.

Dry sclerophyll (eucalypt) forest and woodland:

Dry sclerophyll forests and woodlands are typically dominated by eucalypts under 40 m in height, and have a multi-layered understorey dominated by hard-leaved shrubs, including eucalypt regeneration .Dry sclerophyll forests are mainly found on dry, infertile and exposed sites and are largely confined to coastal areas.

Other natural environments:

This mapping unit includes land which is largely bare of vegetation such as sand, mud, water, or sea. Natural rocky areas such as scree slopes, boulders and exposed bedrock (and associated lichen species) are also included in this broad vegetation community type.

Native grassland:

Native grasslands are defined as areas of native vegetation dominated by native grasses with few or no emergent woody species. Different types of native grassland can be found in a variety of habitats, including coastal fore-dunes, dry slopes and valley bottoms, rock plates and subalpine flats. The lowland temperate grassland types have been recognised as some of the most threatened vegetation communities in Australia.

Some areas of native grassland are human-induced and exist as a result of heavy burning, tree clearing or dieback of the tree layer in grassy woodlands.

Saltmarsh and Wetland:

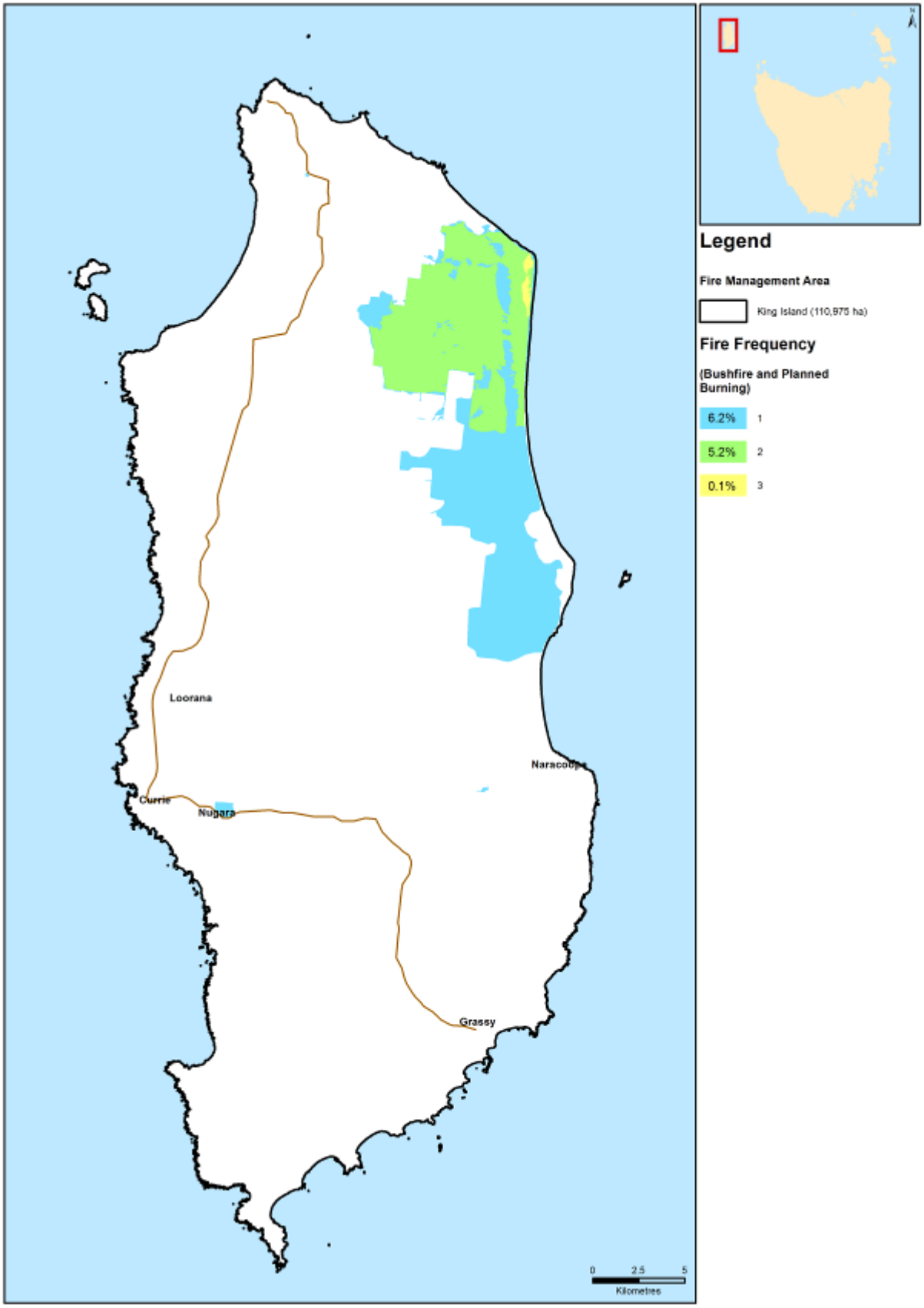
Wetlands and saltmarshes are characterised by the presence of water, either permanently or periodically. Wetlands and saltmarsh are distinctive vegetation communities, and can be broadly differentiated in that saltmarshes are saline (salt laden) types of wetlands (as opposed to freshwater wetlands). Saltmarshes occur predominantly in tidal flats on low-energy coastlines where wave action does not hinder the establishment of vascular plants. In Tasmania saltmarshes mainly occur in small patches and are generally found in sheltered inlets and bays and are regularly flushed by the sea but may also be found inland. Saltmarshes are characterised by a dominance of highly specialised flora (halophytes or salt tolerant species) such as succulent shrubs, herbs, grasses, rushes and sedges.

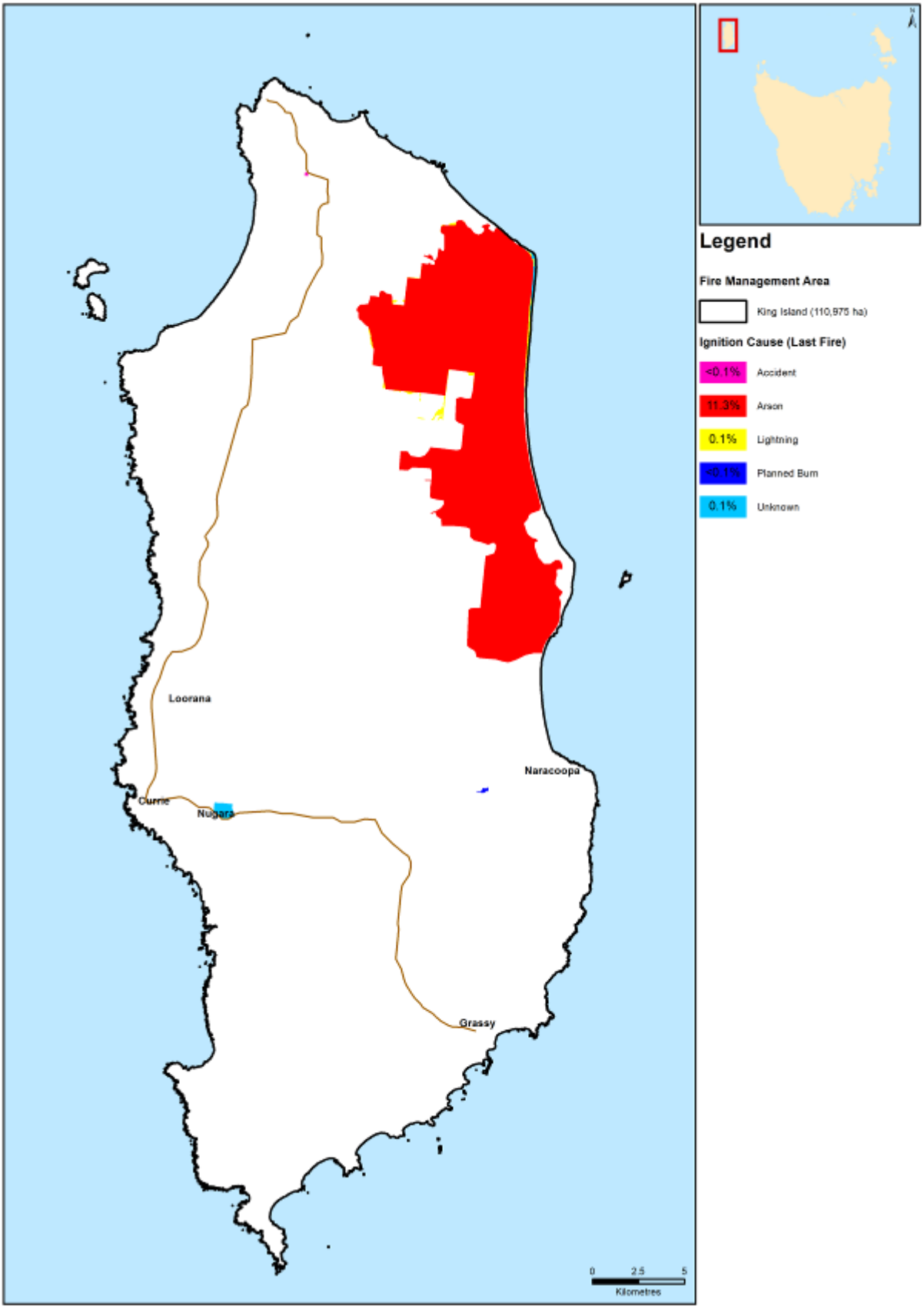
Wetlands typically occur in the upper estuary (where brackish conditions sometimes occur) and in some places occur inland of, or on sites adjacent to, saltmarsh vegetation. Wetlands typically support fresh water aquatic sedgeland and rushland.

Source:

1. Forest Practices Authority (2005). Forest Botany Manual. Forest Practices Authority, Tasmania.
2. http://dpipwe.tas.gov.au/conservation/vegetation-of-tasmania/from-forest-to-fjaedlmark-descriptions-of-tasmanias-vegetation-(edition-2)

Appendix 5 – Fire Frequency, History and Ignition Causes maps




Legend
Fire Management Area
King Island (110,975 ha)
Ignition Cause (Last Fire)
<0.1%
Accident
11.3%
Arson
0.1%
Lightning
<0.1%
Planned Burn
0.1%
Unknown
Loorana
Naracoopa
Currie
Nugara
Grassy
0
2.5
5
Kilometres

Appendix 6 - BRAM (Bushfire Risk Assessment Model) explanation

Background

The Bushfire Risk Assessment Model (BRAM) is a software product that was developed by the Fire Management Section of the Parks and Wildlife Service (Department of Primary Industries, Parks, Water and Environment). The aim of the model is identify bush fire risk at a strategic level as well as to identify the elements driving actual bush fire risk.

A stakeholder group was set up to oversee the process. Stakeholders involved in developing the process included:

- Parks and Wildlife Service;
- Tasmania Fire Service;
- Sustainable Timber Tasmania;
- Tasmanian Farmers and Graziers Association;
- State Emergency Service:
- Forest Industries Association of Tasmania;
- Local Government Association of Tasmania;
- Resource management and conservation , DPIPWE;
- NRM ;
- Tasmanian Aboriginal Land and Sea Council

Additional working groups were set up to advice on specialist areas such as values at risk, suppression capabilities, ignition potential, and fire behaviour.

The process is aligned to the Australian/New Zealand Standard AS/NZS 4360:2004 Australian Standard Risk Management and the updated standard AS/*NZS ISO 31000:2009 Risk management – Principles and guidelines*. Risk is defined as the" effect of uncertainty on objectives" with a focus of the effect on the objectives

The process

The model is built in a geographic information system that utilizes various spatial orientated data, fire behaviour and fuel accumulation models and climate records. The data and values were developed by consensus of a range of stakeholders

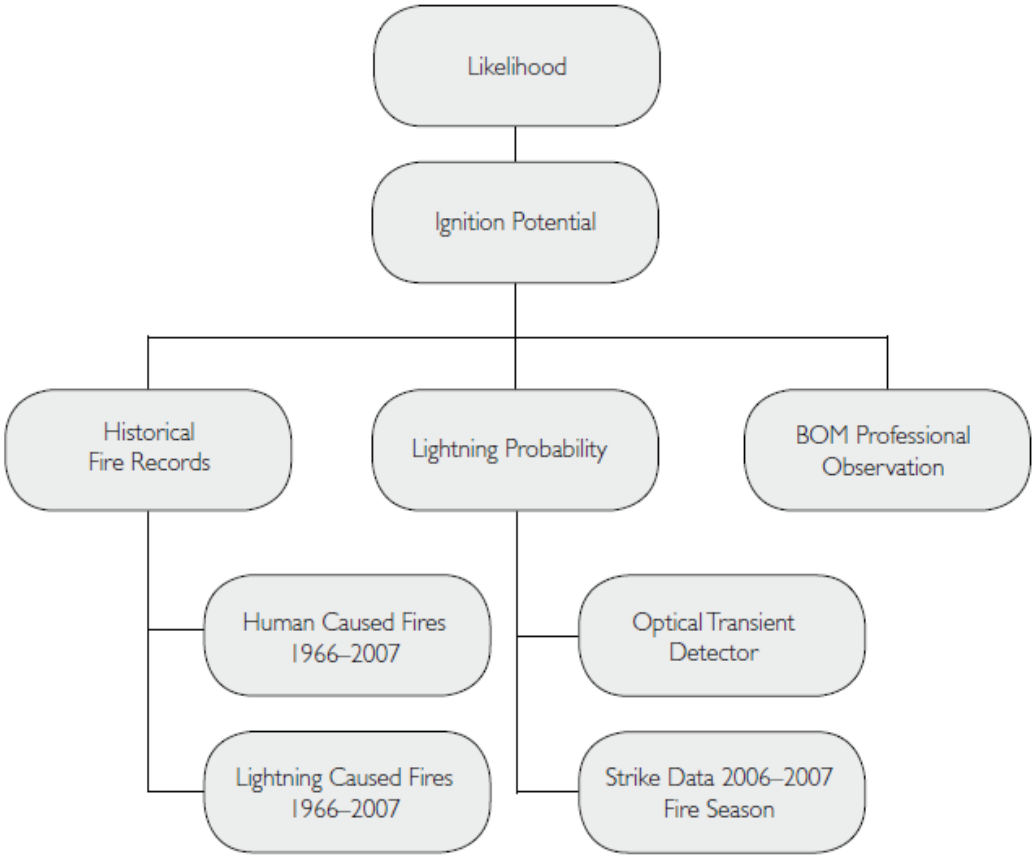
The process applies the same set of assessment rules to the data contained in the model, thus it can be applied across the state. The process is tenure blind

The BRAM identifies the **likelihood and consequence of a fire** at a particular point. The risk is determined through the use of a qualitative risk matrix incorporating likely hood and values at risk (consequences). The process identifies the actual risk at that point not the perceived risk. The output is in the form of layers identifying the likelihood, values at risk and actual risk

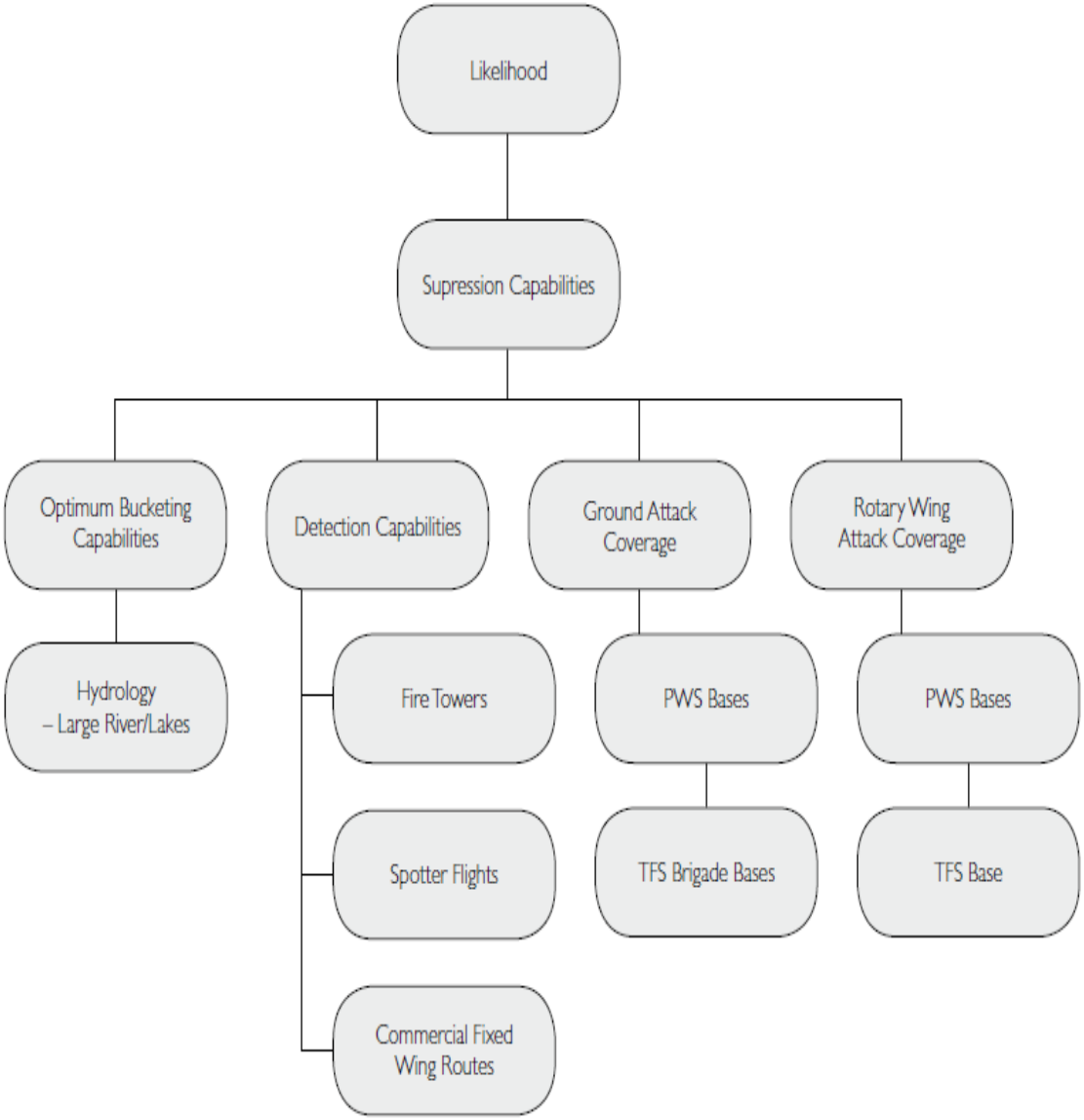
The model uses 4 major areas to calculate risk:

- Fire behaviour potential - the manner in which fuel ignites, flame develops, and fire spreads and exhibits other related phenomena (likelihood).
- Ignition potential - the probability or chance of fire starting as determined by the presence of causative agents (likelihood).
- Suppression capability - the factors and limitations that are related to the ability to contain a bushfire upon detection (likelihood).
- Values at risk - a specific or collective set of natural resources and man-made improvements and/or developments that have measurable or intrinsic worth, and which could potentially be destroyed or otherwise altered by fire in any given area (consequence).

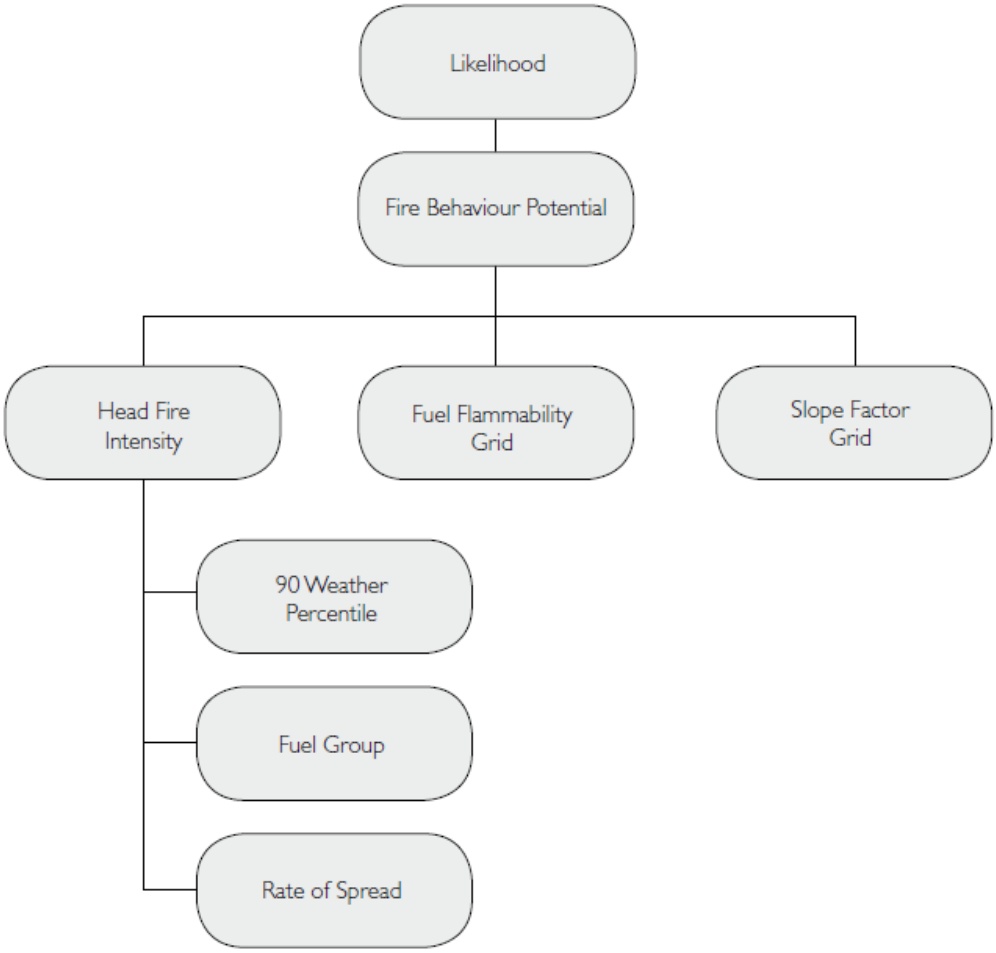
Ignition potential



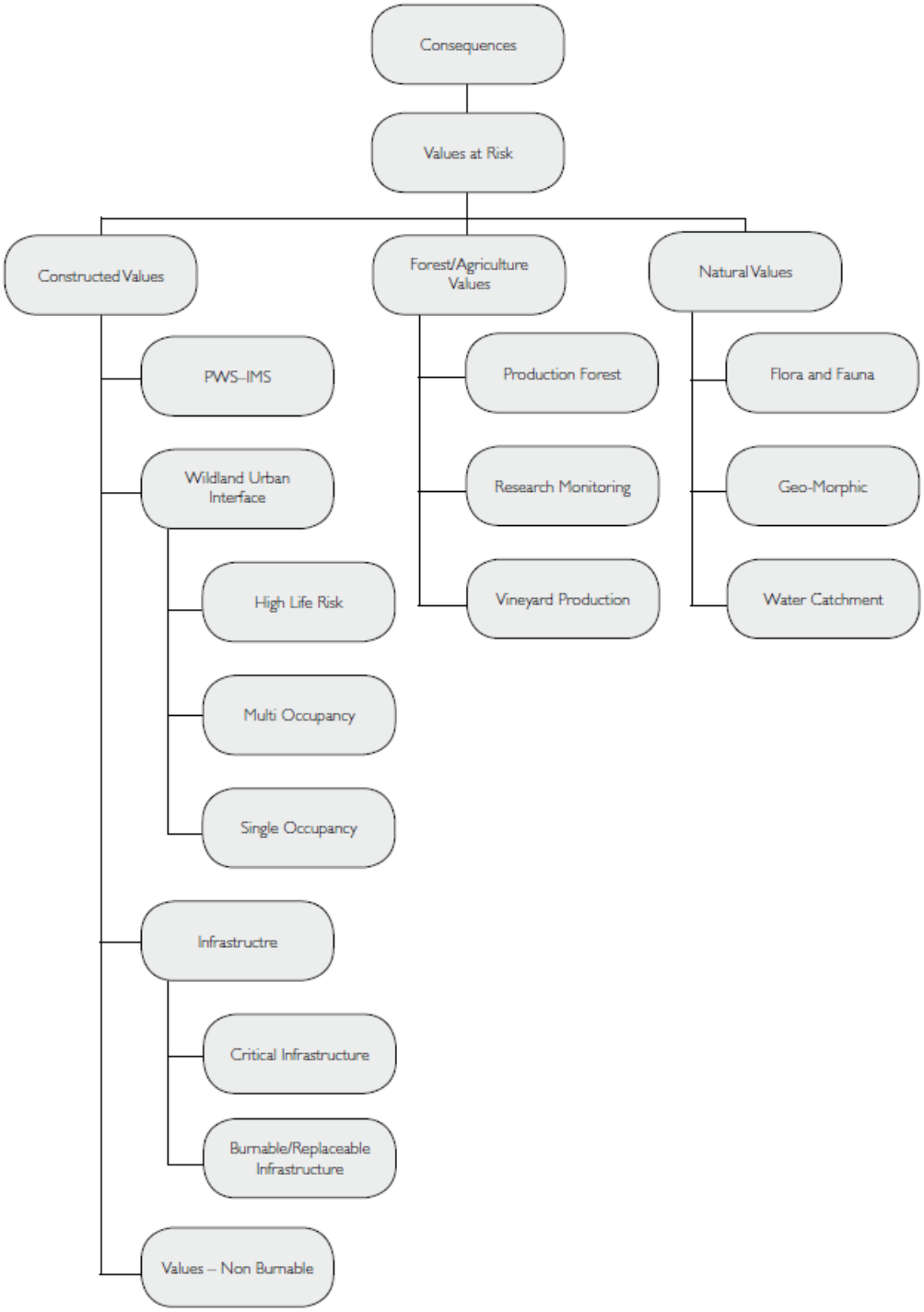
Suppression capabilities



Fire Behaviour Potential



Values at risk



Limitation of the process

- BRAM **does not** incorporate the likelihood and consequence **at the same point** from a fire occurring in an adjacent area.
- BRAM does not display the risks posed by an area adjacent to a particular point.
- Mitigation works undertaken on adjacent areas do not change the risk at a particular point.
- The process is based on available data, there are significant gaps in data e.g. fire history on private lands,
- Untested assumptions – may over/underestimate risk

Appendix 7 – NERAG risk assessment approach

(Derived from the National Emergency Management Committee (2010), *National Emergency Risk Assessment Guidelines*, Tasmanian State Emergency Service, Hobart)

The NERAG provide a methodology to assess risks from emergency events and are principally concerned with risk assessment**.** The NERAG methodology was utilised in development of the BRAM to develop the final risk profile

The guidelines are not intended to address the entire risk management framework or the risk management process as outlined in AS/NZS ISO 31000:2009. However, because they focus on the assessment of risks from emergency events, they ultimately direct the management of emergency risks in line with the international standards for risk management.

The guidelines aim to provide a risk assessment methodology that:

- enables focus on risks in small (e.g. municipal) or large (e.g. regional and/or state and/or national) areas
- is useable for both risk 'from' and risk 'to' (e.g. risk from bushfire, risk to infrastructure from all or specific sources of risk)
- uses a scenario-based approach
- samples risk across a range of credible consequence levels
- identifies current risk under existing controls and residual risk assuming implementation of additional controls or control improvements
- provides base-line qualitative risk assessments and triggers for more detailed analysis
- allows risk evaluation at varying levels of confidence
- Provides outputs that are comparable, which rate risk and suggests means to reduce risk.

Risk analysis is the element in the process through which the level of risk and its nature is determined and understood. Information from risk analysis is critical to rank the seriousness of risks and to help decide whether risks need to be treated or not. In this phase, control opportunities are also identified. The analysis involves consideration of possible consequences, the likelihood that those consequences may occur (including the factors that affect the consequences), and any existing control that tends to reduce risks. During this phase the level of confidence in the analysis is assessed by considering factors such as the divergence of opinion, level of expertise, uncertainty, quality, quantity and relevance of data and information, and limitations on modelling. At the conclusion of this step, all identified risks are categorised into risk levels and given a risk rating, and statements concerning existing controls and their adequacy are made.

NERAG takes an all hazards approach and provides a method that is suitable for considering other sources of risk beside fire.

Consequence table

Consequence level	People	Environment	Economy	Public Administration	Social Setting	Infrastructure
Catastrophic	Widespread multiple loss of life(mortality > 1 in ten thousand), Health systems unable to cope, Displacement of people beyond a ability to cope	Widespread severe impairment or loss of ecosystem functions across species and landscapes, irrecoverable environmental damage	Unrecoverable financial loss > 3% of the government sector's revenues, asset destruction across industry sectors leading to widespread failures and loss of employment	Governing body unable to manage the event, disordered public administration without effective functioning, public unrest, media coverage beyond region or jurisdiction	Community unable to support itself, widespread loss of obj3ects of cultural significance, impacts beyond emotional and psychological capacity in all parts of the community	Long term failure of significant infrastructure and service delivery affecting all parts of the community, ongoing external support at large scale required
Major	Multiple loss of life (mortality > 1 in 0ne hundred Thousand), Heath system over stressed, Large numbers of displaced people(more than 24 hours)	Serious impairment or loss of ecosystem functions affecting many species or landscapes, progressive environmental damage	Financial loss 1-3% of the governments sector's revenues requiring major changes in business strategy to (partly) cover loss, significant disruptions across industry sectors leading to multiple business failures and loss of employment	Governing Body absorbed with managing the event, public administration struggles to provide merely critical services, loss of public confidence in governance, media coverage beyond region jurisdiction	Reduces quality of life within the community, significant loss or damage to objects of cultural significance, impacts beyond emotional and psychological capacity in large parts of the community	Mid- to long term failure of significant infrastructure and service delivery affecting large parts of the community, initial external support required
Moderate	Isolated cases of loss of life (mortality > 1 in one million), Health system operating at maximum capacity, isolated cases of displacement of people(less than 24 hours)	Isolated but significant cases of impairment or loss of ecosystem functions, intensive efforts for recovery required	Financial loss 0.3 – 1% of the governments sector's revenue requiring adjustments to business strategy to cover loss, disruptions to selected industry sectors leading to isolated cases of business failures and multiple loss of employment	Governing body manages the event with considerable diversion from policy, public administration functions limited by focus on critical services, widespread public protests, media coverage within region or jurisdiction.	Ongoing reduced services within community, permanent damage to objects of cultural significance, impacts beyond emotional and psychological capacity in some parts of the community	Mid-term failure of(significant) infrastructure and service delivery affecting some parts of the community, widespread inconveniences
Minor	Isolated cases of serious injury, heath system operating within Normal parameters	Isolated cases of environmental damage, one off recovery efforts required	Financial loss 0.1-0.3% of the governments sector's revenues requiring activation of reserves to cover loss, disruptions at business level leading to isolated cases of loss of unemployment	Governing body manages the event under emergency regime, Public administration functions with some disturbances, isolated expressions of public concern, media coverage within region or jurisdiction	Isolated and temporary cases of reduced services within the community, repairable damage to objects of cultural significance, impacts within emotional and psychological capacity of the community	Isolated cases of short– to mid-term failure of infrastructure and service delivery. Localised inconveniences

Consequence level	People	Environment	Economy	Public Administration	Social Setting	Infrastructure
Insignificant	**Near misses or minor injuries, no reliance on health system**	**Near missis or incidents without environmental damage , no recovery efforts required**	**Financial loss , 0.1% of the governments sector's revenues to be managed within standard financials provisions, inconsequential disruptions at business level**	**Governing body manages the event within normal parameters, public administration functions without disturbances, public confidence in governance, no media attention**	**Inconsequential short-term reduction of services, no damages to objects of cultural significance, no adverse emotional and psychological impacts**	**Inconsequential short-term failure of infrastructure and service delivery, no disruption to the public services**

Impact Category Definitions

Impact Category Definitions	
People	Relates to the direct impacts of the emergency on the physical health of people/ individuals and emergency services(i.e. health systems) ability to manage Mortality defined as the ration of deaths in a an area of the population to the population of that area; expressed as per 1000 per years
Environment	Relates to the impacts of the emergency and its effects on the ecosystem of the area, including fauna and flora
Economy	Relates to the economic impacts of the emergency on the governing body as reported in the annual operating statement for the relevant jurisdiction, and industry sectors as defined by the Australian Bureau of statistics
Public Administration	Relates to the impacts of the emergency on the governing body's ability to govern
Social setting	Relates to the impacts of the emergency on society and its social fabric, including its cultural heritage, resilience of community
Infrastructure	Relates to the impacts of the emergency on the areas infrastructure/ lifelines/utilities and its ability to service the community Long term failure = repairs will take longer than 6 months Mid-to long term failure = repairs may be undertaken in 3 to 6 months Mid-term failure = repairs may be undertaken in 3 to 6 months Short to mid-term failure = repairs may be undertaken in 1 week to 3 months Short-term failure = repairs may be undertaken in less than 1 week

Likelihood table

Likelihood level	Frequency	Average Recurrence Interval	Annual Exceedance probability
Almost certain	One of more per year	< 3 years	.0.3
Likely	Once per 10 years	3 – 30 years	0.031 – 0.3
Possible	Once per one hundred years	31- 300 years	0.0031 – 0.03
unlikely	One per thousand years	301 – 3,000 years	0.00031 – 0.003
Rare	One per ten thousand years	3,001 – 30,000 years'	0.000031 – 0.0003
Very Rare	Once per hundred thousand years	30,001 - 300,000 years	0.0000031 – 0.0003
Almost Incredible	Less than one per million years	>300,000 years	<0.0000031

Qualitative risk matrix

The qualitative risk matrix combines a level of consequence with a level of likelihood to determine a level of risk. The risk level, together with the confidence in the overall assessment process and other factors, will determine the need for detailed analysis and inform the treatment of risks

	Consequence level				
Likelihood level	**Insignificant**	**Minor**	**Moderate**	**Major**	**Catastrophic**
Almost certain	Medium	Medium	High	Extreme	Extreme
like	Low	Medium	High	High	Extreme
Possible	Low	Low	Medium	High	High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Medium	Medium
Very Rare	Low	Low	Low	Low	Medium
Almost incredible	Low	Low	Low	Low	low

Appendix 8 – Risk Identification Statements (from 2009 Bushfire Management Plan)

3. Appendices

3a. Risk Identification and Analysis

Risk Statements

ID	Risk Statement
001	Wildfire posses a risk to the Grassy Township.
002	Wildfire posses a risk to rural dwellings, tourist sites and native vegetation, from Attrill's Road to Seal Rocks through the Red Hut District to the Grassy Township. This includes the following: a. The significant stands of *Melaleuca ericifolia* swamp forests at Colliers Swamp and within the adjacent unallocated Crown Land b. The geomorphically significant calcified forest c. Big Lake d. A number of gorges in this district e. *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries.
003a 003b	Wildfire posses a risk to the native vegetation from Bold Head to the Grassy Township, including *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries. Wildfire posses a risk to the Grassy River Catchment, including the town water supply for Grassy.
004	Wildfire posses a risk to the Grassy Port facility, including the bulk fuel storages.
005	Wildfire posses a risk to *Eucalyptus brookerianna* wet forest in Kentford Forest Nature Reserve, *E. ovata* forest and woodland in Kentford Forest Conservation Area and other vegetation on adjoining rural properties.
006a 006b 006c 006d	Wildfire posses a risk to the township of Currie. Wildfire posses a risk to properties on Charles Street in the vicinity of Devils Gap, including the waste management facility and Bell Hill. Wildfire posses a risk to the Camp Creek Reserve, including the nearby gas storage yard. Wildfire posses a risk to the coastal vegetation and housing north from the mouth of the Ettrick River, through British Admiral Beach, Kelp Industries Pty Ltd and to the township of Currie.
007	Wildfire posses a risk to the township of Naracoopa.
008	Wildfire poses a risk to the fire sensitive values in Lavinia State Reserve, Seal Rocks State Reserve and adjoining Public Reserves and unallocated crown land as identified in the *King Island Reserves and Crown Land Fire Management Plan* (DTPHA; 2002) and *King Island 2007 Fires: Impact on natural values* (DPIW; 2007) including; 1. Visitors to the reserves at the following sites; a. Lavinia SR – carpark and picnic area (incorporating Pennys Lagoon and Lake Martha Lavinia) b. Lavinia SR – Sea Elephant Road c. Lavinia SR – Nook Swamp 4WD track and foreshore d. Lavinia SR – Nine Mile Beach (incorporating Lavinia Beach) e. Lavinia SR – campsites f. Seal Rocks SR – Seal Rocks Road and Calcified Forest Track g. Seal Rocks SR – Minor walking tracks 2. Parks managed assets including, walking tracks, viewing platforms, picnic shelters, tables, toilets and signage at the following sites; a. Lavinia SR – carpark and picnic area (incorporating Pennys Lagoon and Lake Martha Lavinia) b. Lavinia SR – Sea Elephant Road c. Seal Rocks SR – Seal Rocks Road and Calcified Forest Track 3. The following vegetation communities a. Coastal scrub b. *Eucalyptus globulus* King Island forest c. *E. brookeriana* wet forest d. King Island sedge/heath/scrub complex e. *Melaleuca ericifolia* swamp forest 4. The following flora species; a. *Elaeocarpus reticulates* (Blueberry ash) 5. The following fauna species and their habitats; a. *Acanthiza pusilla archibaldi* (King Island brown thornbill) b. *Acanthornis magnus greenianus* (King Island scrubtit) c. *Austrochloritis victoriae* (Southern Hairy Snail) d. *Neophema chrysogaster* (Orange-bellied parrot) 6. The following geoconservation sites a. Lavinia Peatland Complex

ID	Risk Statement
009	Wildfire posses a risk to the Pegarah State Forest including the landfill site and surrounding vegetation and housing.
010	Wildfire posses a risk to the King Island Airport.
011	Wildfire posses a risk to the power station and wind turbines.
012	Wildfire posses a risk to power distribution lines and poles.
013	Wildfire posses a risk to the King Island Dairy.
014	Wildfire posses a risk to abattoirs on King Island.
015	Wildfire posses a risk to the coastal vegetation and housing from Porky Beach to Bungaree Creek.
016	Wildfire posses a risk to the coastal vegetation and housing from Victoria Cove to the mouth of Yellow Rock River including: c) *Neophema chrysogaster* (Orange-bellied parrot) and its associated habitat. d) *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries.
017	Wildfire posses a risk to the coastal vegetation, camping sites, tourist visiting sites and shacks from Disappointment Bay to the Lavinia State Reserve, including *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries.
018	Wildfire posses a risk to gorges on King Island, in particular Yarra Creek, Barrier Creek, Grassy River, Fraser River and Sea Elephant River.
019	Wildfire posses a risk to peat deposits on King Island.
020	Wildfire posses a risk to high priority vegetation, including tree lanes, remnant vegetation and threatened vegetation community types on rural properties.
021	Wildfire posses a risk to farm fences, stock and pasture.
022	Wildfire posses a risk to road and bridge infrastructure on King Island.
023	Wildfire posses a risk to the Reekara Community Complex.
024	Wildfire posses a risk to rural housing and associated structures.
025	Wildfire posses a risk to Airservices Australia NDB, SGS, Regional Express Airlines and KIC communication infrastructure at the King Island Airport.
026	Wildfire posses a risk to Telstra and the Tasmania Police communication infrastructure at the 'Old Power Station' via Grahams Rd, Grassy.
027	Wildfire posses a risk to Telstra Radio Terminal at Cape Wickham.
028	Wildfire posses a risk to communication infrastructure used by Telstra and the Tasmania Police at Counsel Hill.
029	Wildfire posses a risk to Telstra and King Island Dairy communication infrastructure at the King Island Dairy, North Road and to Promo Radio communication infrastructure.
030	Wildfire posses a risk to Hydro Tasmania's wind monitoring infrastructure at Huxley Hill.
031	Wildfire posses a risk to communication infrastructure used by Telstra, King Island Ports, State Fire Commission and television networks at Gentle Annie and to the Bureau of Meteorology infrastructure at Mount Stanley.
032	Wildfire posses a risk to Telstra communication infrastructure at Yambacoona.
033	Wildfire posses a risk to communication infrastructure at Lymwood.
034	Wildfire posses a risk to communication infrastructure at the Naracoopa Hill.
035	Wildfire posses a risk to 6-communication infrastructure sites within the township of Currie.

Qualitative Measures Of Consequence

Descriptor	Description
Insignificant	No injuries or fatalities. Small number or no people displaced and only for a short duration. Little or no personal support required (support not monetary or material). Inconsequential or no damage. Little or no disruption to community. No measurable impact on environment. Little or no financial loss.
Minor	Small number of injuries but no fatalities. First aid treatment required. Some displacement of people (less than 24 hours). Some personal support required. Some damage. Some disruption (less than 24 hours). Small impact on environment with no lasting effects. Some financial loss.
Moderate	Medical treatment required but no fatalities. Some hospitalization. Localised displacement of people who return within 24 hours. Personal support satisfied through local arrangements. Localised damage that is rectified by routine arrangements. Normal community functioning with some inconvenience. Some impact on environment with no long term effect or small impact on environment with long-term effect. Significant financial loss.
Major	Extensive injuries, significant hospitalisation, large number displaced (more than 24 hours duration) Fatalities. External resources required for personal support. Significant damage that requires external resources. Community only partially functioning, some services available. Some impact on environment with long-term effects. Significant financial loss-some financial assistance required.
Catastrophic	Large number of severe injuries. Extended and large numbers requiring hospitalisation. General and widespread displacement for extended duration. Significant fatalities. Extensive personal support. Extensive damage. Community unable to function without significant support. Significant impact on environment and / or permanent damage.

Qualitative Measures Of Likelihood

Descriptor	Description
Almost Certain	It is expected to occur in most circumstances and / or high level of recorded incidents: and / or strong anecdotal evidence: and / or a strong likelihood the event will recur: and / or great opportunity, reason, or means to occur may occur once every year or more.
Likely	Will probably occur in most circumstances: and / or regular recorded incidents and strong anecdotal evidence: and / or considerable opportunity, reason or means to occur: may occur once every five years.
Possible	Might occur at some time: and / or few, infrequent, random recorded incidents or little anecdotal evidence: and / or very few incidents in comparable organisations, facilities or communities: and / or some opportunity, reason or means to occur, may occur once every twenty years.
Unlikely	Is not expected to occur: and / or no recorded incidents or anecdotal evidence: and / or no recent incidents in associated organisations, facilities or communities: and / or little opportunity, reason or means to occur, may occur once every one hundred years.
Rare	May occur only in exceptional circumstances: may occur once every five hundred or more years.

Qualitative Risk Analysis Matrix – Level Of Risk

Likelihood	Consequence				
	Insignificant	**Minor**	**Moderate**	**Major**	**Catastrophic**
Almost Certain	*High*	*High*	*Extreme*	*Extreme*	*Extreme*
Likely	*Moderate*	*High*	*High*	*Extreme*	*Extreme*
Possible	*Low*	*Moderate*	*High*	*Extreme*	*Extreme*
Unlikely	*Low*	*Low*	*Moderate*	*High*	*Extreme*
Rare	*Low*	*Low*	*Moderate*	*High*	*High*

Risk Analysis and Existing Controls

ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
001	Wildfire posses a risk to the Grassy Township.	Major	Possible	**EXTREME**	• Fire hydrants throughout township. • Brigade in township. • Fire permit periods. • Total Fire Ban days.
002	Wildfire posses a risk to rural dwellings, tourist sites and native vegetation, from Attrill's Road to Seal Rocks through the Red Hut District to the Grassy Township. This includes the following: a. The significant stands of *Melaleuca ericifolia* swamp forests at Colliers Swamp and within the adjacent unallocated Crown Land b. The geomorphically significant calcified forest c. Big Lake d. A number of gorges in this district e. *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries.	Moderate	Possible	**High**	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
003a	Wildfire posses a risk to the native vegetation from Bold Head to the Grassy Township.	3a Minor	Possible	**Moderate**	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
003b	Wildfire posses a risk to the Grassy River Catchment, including the town water supply for Grassy.	3b Moderate	Possible	**High**	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.

ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
004	Wildfire posses a risk to the Grassy Port facility, including the bulk fuel storages.	Major	Possible	**EXTREME**	• Access from Ports Road and through old mining tracks. • Grass kept low by King Island Ports. • Sprinkler system with a 40,000-litre tank maintained by King Island Ports. • King Island Ports have a poly pipe system and pumps in place to douse the area with water if required. • Fire hydrant system. • Area around navigational markers slashed. • Golf course provides a cleared area around the King Island Ports. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days
005	Wildfire posses a risk to *Eucalyptus brookerianna* wet forest in Kentford Forest Nature Reserve, *E. ovata* forest and woodland in Kentford Forest Conservation Area and other vegetation on adjoining rural properties.	Moderate	Possible	**High**	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.

ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
006a	Wildfire posses a risk to the township of Currie.	6a Major	Possible	**EXTREME**	• Annual slashing of Bell Hill by KIC. • Existing fire hydrant system within the township of Currie. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
006b	Wildfire posses a risk to properties on Charles Street in the vicinity of Devils Gap, including the waste management facility and Bell Hill.	6b Moderate	Likely	**High**	• Annual slashing of Bell Hill by KIC. • Existing fire hydrant system within the township of Currie. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
006c	Wildfire posses a risk to the Camp Creek Reserve, including the nearby gas storage yard.	6c Moderate	Possible	**High**	• Good network of fire hydrants in and around the Camp Creek area, such as Shaw Street with 3 fire hydrants. • Good access to Camp Creek, from roads, 'the old stock route', through open paddocks and the school grounds. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.

ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
006d	Wildfire posses a risk to the coastal vegetation and housing north from the mouth of the Ettrick River, through British Admiral Beach, Kelp Industries Pty Ltd and to the township of Currie.	6d Moderate	Possible	**High**	• Kelp Industries have a standpipe that connects to 2 concrete tanks. The factory has a reticulated fire pump and 4 hydrants. • Fire Permit periods. • Area fire brigades • Total Fire Ban days.
007	Wildfire posses a risk to the township of Naracoopa	Major	Likely	**EXTREME**	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
008	Wildfire poses a risk to the fire sensitive values in Lavinia State Reserve, Seal Rocks State Reserve and adjoining Public Reserves and unallocated crown land as identified in the *King Island Reserves and Crown Land Fire Management Plan* (DTPHA; 2002) and *King Island 2007 Fires: Impact on natural values* (DPIW; 2007) including; 1. Visitors to the reserves at the following sites; a. Lavinia SR – carpark and picnic area (incorporating Pennys Lagoon and Lake Martha Lavinia) b. Lavinia SR – Sea Elephant Road c. Lavinia SR – Nook Swamp 4WD track and foreshore d. Lavinia SR – Nine Mile Beach (incorporating Lavinia Beach) e. Lavinia SR – campsites f. Seal Rocks SR – Seal Rocks Road and Calcified Forest Track g. Seal Rocks SR – Minor walking tracks 2. Parks managed assets including, walking tracks, viewing platforms, picnic shelters, tables, toilets and signage at the following sites; a. Lavinia SR – carpark and picnic area (incorporating Pennys Lagoon and Lake Martha Lavinia) b. Lavinia SR – Sea Elephant Road c. Seal Rocks SR – Seal Rocks Road and Calcified Forest Track 3. The following vegetation communities a. Coastal scrub	 1a Moderate 1b Moderate 1c Minor 1d Minor 1e Moderate 1f Moderate 1g Minor 2a Moderate 2b Moderate 2c Moderate 3a Minor	 Likely Likely Possible Possible Likely Likely Possible Likely Likely Likely Possible	 **High** **High** *Moderate* *Moderate* **High** **High** *Moderate* **High** **High** **High** *Moderate*	• Ranger for Parks and Wildlife Service based on King Island • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.

ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
	b. *Eucalyptus globulus* King Island forest	3b Moderate	Possible	**High**	
	c. *E. brookeriana* wet forest	3c Moderate	Possible	**High**	
	d. King Island sedge/heath/scrub complex	3d Minor	Likely	**High**	
	e. *Melaleuca ericifolia* swamp forest	3e Moderate	Possible	**High**	
	4. The following flora species;				
	a. *Elaeocarpus reticulates* (Blueberry ash)	4a Minor	Likely	**High**	
	5. The following fauna species and their habitats;				
	a. *Acanthiza pusilla archibaldi* (King Island brown thornbill)	5a Catastrophic	Possible	**EXTREME**	
	b. *Acanthornis magnus greenianus* (King Island scrubtit)	5b Catastrophic	Possible	**EXTREME**	
	c. *Austrochloritis victoriae* (Southern Hairy Snail)	5c Moderate	Possible	**High**	
	d. *Neophema chrysogaster* (Orange-bellied parrot)	5d Catastrophic	Possible	**EXTREME**	
	6. The following geoconservation sites				
	a. Lavinia Peatland Complex	6a Major	Possible	**EXTREME**	
009	Wildfire posses a risk to the Pegarah State Forest including the landfill site and surrounding vegetation and housing.	Moderate	Possible	**High**	• Water supply at entry from Pegarah Rd. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
010	Wildfire posses a risk to the King Island Airport.	Minor	Likely	Low	• Surrounded by cleared agricultural land. • Hydrant system, water on hand. • Slashing of the area. • Fire Permit period • Area fire brigade • Total Fire Bar days

ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
011	Wildfire posses a risk to the power station and wind turbines.	Moderate	Unlikely	*Moderate*	• Area around power station maintained as low grass. • Hydrant system and pumps, with water on hand • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
012	Wildfire posses a risk to power distribution lines and poles.	Moderate	Likely	**High**	• Removal of vegetation from power lines. • General line maintenance. • Fire Permit periods. • Area fire brigades. • Total Fire Ban days.
013	Wildfire posses a risk to the King Island Dairy.	Moderate	Unlikely	*Moderate*	• Surrounded by cleared agricultural land. • Internal fire suppression system, including water supply. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
014	Wildfire posses a risk to abattoirs on King Island.	Moderate	Unlikely	*Moderate*	• Surrounded by cleared agricultural land. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.

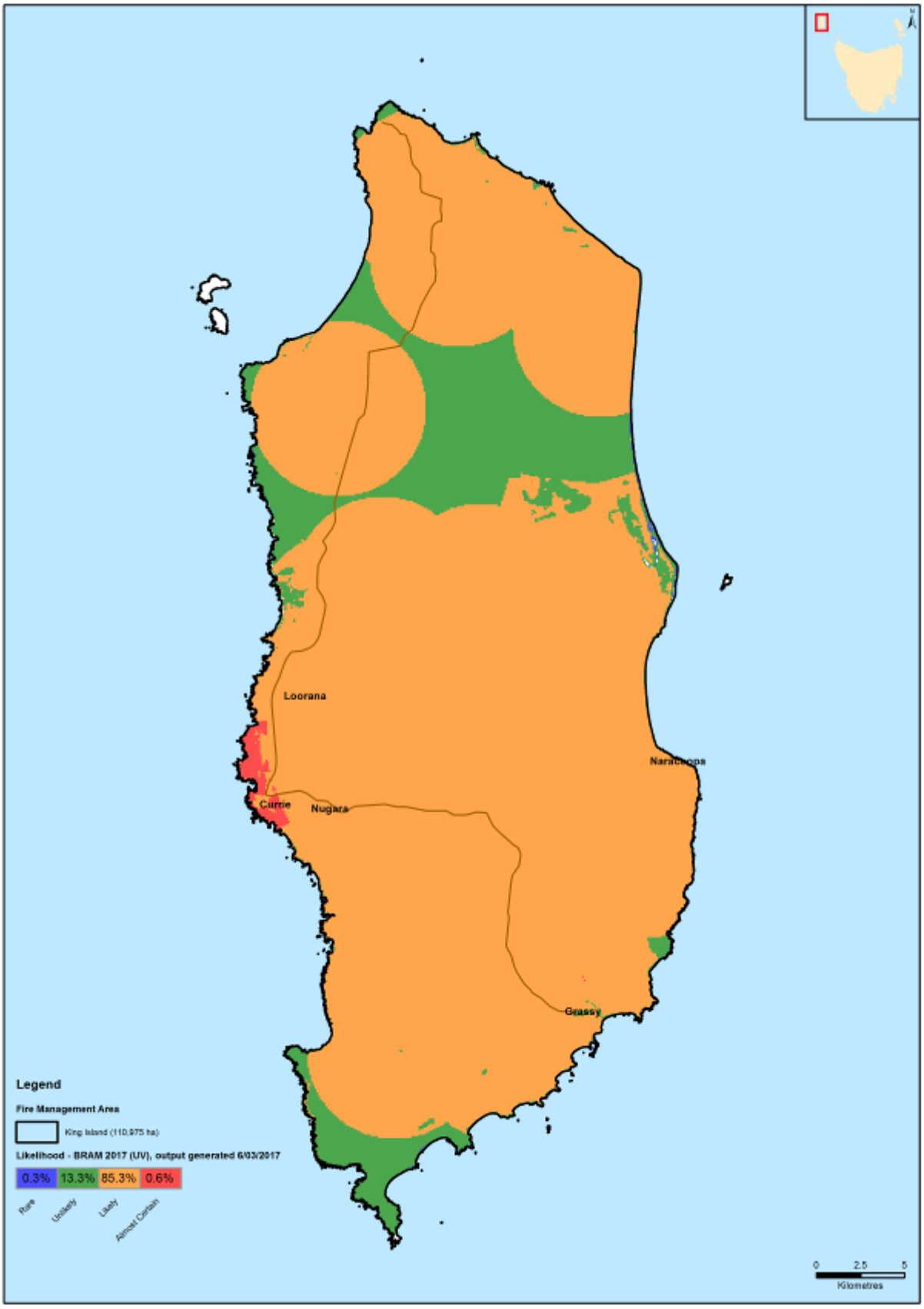
ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
015	Wildfire posses a risk to the coastal vegetation and housing from Porky Beach to Bungaree Creek.	Minor	Possible	*Moderate*	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
016	Wildfire posses a risk to the coastal vegetation and housing from Victoria Cove to the mouth of Yellow Rock River including: e) *Neophema chrysogaster* (Orange-bellied parrot) and its associated habitat. f) *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries.	Moderate	Possible	**High**	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
017	Wildfire posses a risk to the coastal vegetation, camping sites, tourist visiting sites and shacks from Disappointment Bay to the Lavinia State Reserve, including *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries.	Minor	Likely	**High**	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
018	Wildfire posses a risk to gorges on King Island, in particular Yarra Creek, Barrier Creek, Grassy River, Fraser River and Sea Elephant River.	Major	Unlikely	**High**	• Most are surrounded by cleared agricultural land. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days
019	Wildfire posses a risk to peat deposits on King Island.	Moderate	Likely	**High**	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
020	Wildfire posses a risk to high priority vegetation, including tree lanes, remnant vegetation and threatened vegetation community types on rural properties.	Moderate	Likely	**High**	• Individual property preparation by owners. • Fire Permit period • Area fire brigade • Total Fire Ban days
021	Wildfire posses a risk to farm fences, stock and pasture.	Minor	Possible	*Moderate*	• Individual property preparation by owners. • Fire Permit period • Area fire brigade • Total Fire Ban days

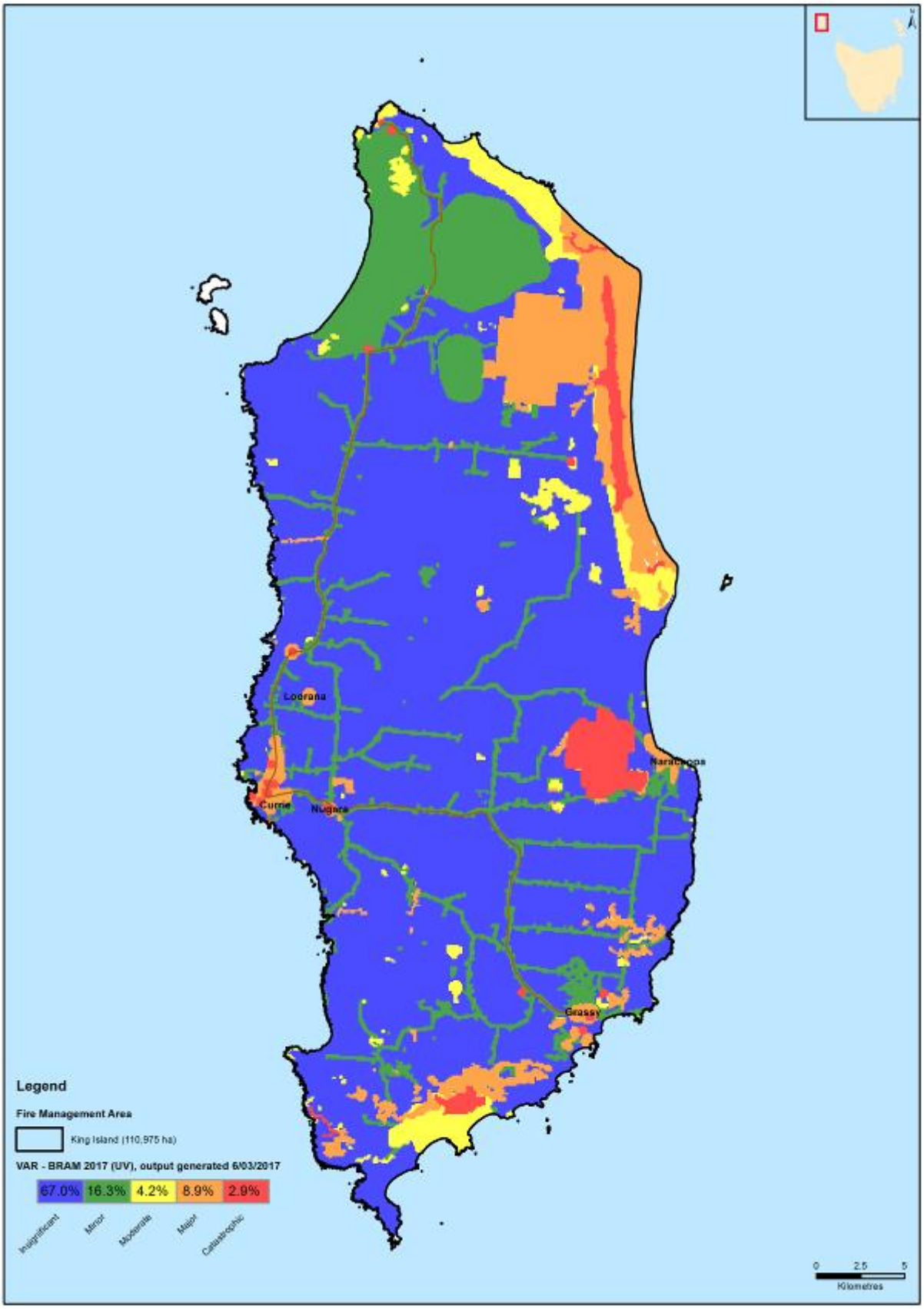
ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
022	Wildfire posses a risk to road and bridge infrastructure on King Island.	Minor	Unlikely	Low	• Roadside slashing of main roads. • Roadside spraying • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
023	Wildfire posses a risk to the Reekara Community Complex.	Minor	Rare	Low	• Regularly slashed. • Surrounded by cleared agricultural land. • Fire station adjoining. • Good water supply. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
024	Wildfire posses a risk to rural housing and associated structures.	Moderate	Possible	High	• Individual property preparation by owners. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
025	Wildfire posses a risk to Airservices Australia NDB, SGS, Regional Express Airlines and KIC communication infrastructure at the King Island Airport.	Minor	Rare	Low	• Surrounded by cleared agricultural land. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
026	Wildfire posses a risk to Telstra and the Tasmania Police communication infrastructure at the 'Old Power Station' via Grahams Rd, Grassy. Wildfire posses a risk to Telstra and the Tasmania Police communication infrastructure at the 'Old Power Station' via Grahams Rd, Grassy.	Minor	Rare	Low	• Surrounded by cleared agricultural land. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.

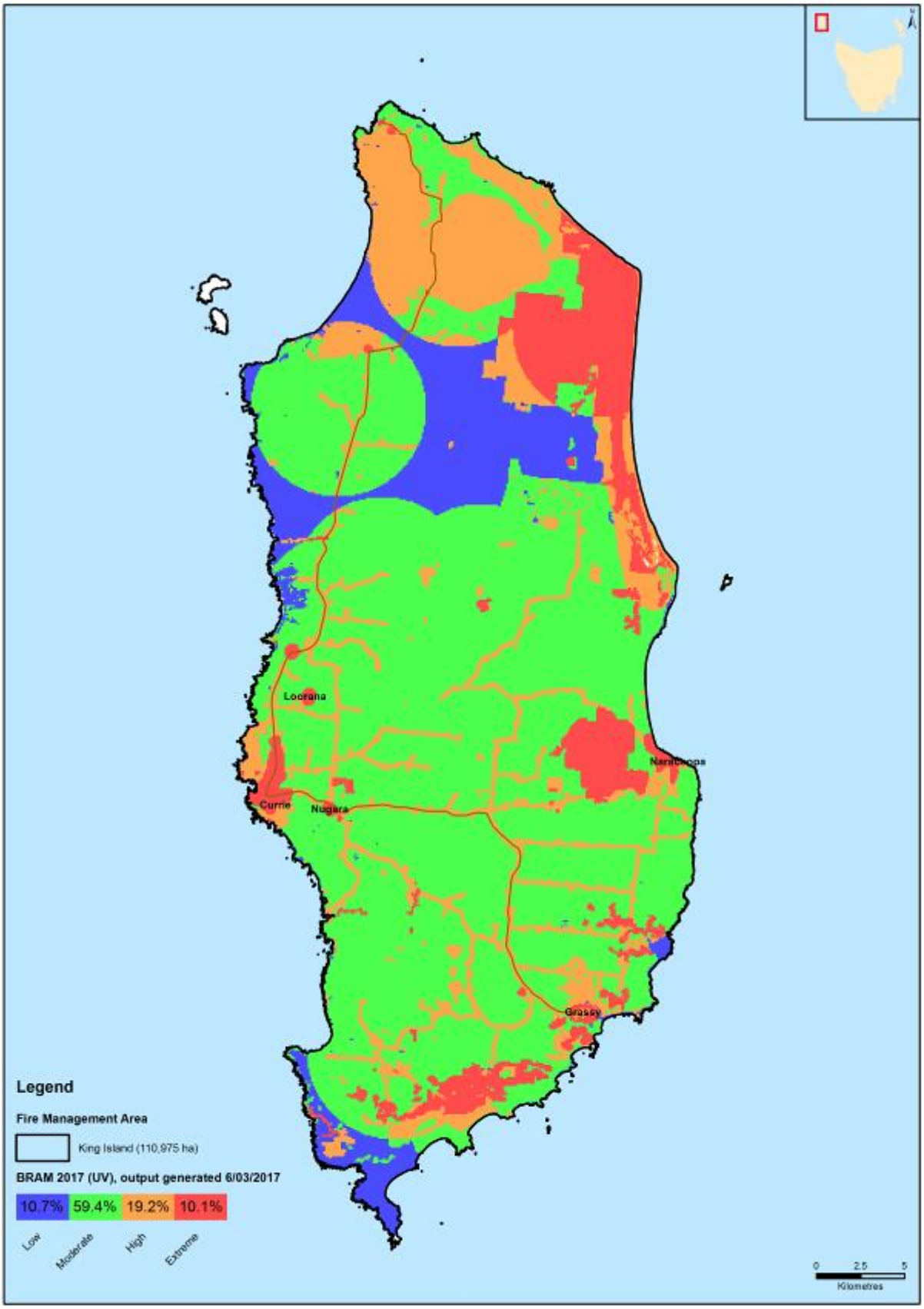
ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
027	Wildfire posses a risk to Telstra Radio Terminal at Cape Wickham.	Minor	Rare	Low	• Surrounded by cleared agricultural land. • Fire Permit periods • Area fire brigade. • Total Fire Ban days.
028	Wildfire posses a risk to communication infrastructure used by Telstra and the Tasmania Police at Counsel Hill.	Moderate	Likely	**High**	• Currently cleared • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
029	Wildfire posses a risk to Telstra and King Island Dairy communication infrastructure at the King Island Dairy, North Road and to the Promo Radio communication infrastructure.	Minor	Rare	Low	• Surrounded by cleared agricultural land. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
030	Wildfire posses a risk to Hydro Tasmania's wind monitoring infrastructure at Huxley Hill.	Minor	Rare	Low	• Area around power station maintained as low grass. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
031	Wildfire posses a risk to communication infrastructure used by Telstra, King Island Ports, State Fire Commission and television networks at Gentle Annie and to the Bureau of Meteorology infrastructure at Mount Stanley.	Major	Unlikely	**High**	• Surrounded by cleared agricultural land. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.

ID	Risk Statement	Consequence	Likelihood	Level of Risk	Existing Controls
032	Wildfire posses a risk to Telstra communication infrastructure at Yambacoona.	Minor	Rare	Low	• Surrounded by cleared agricultural land. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
033	Wildfire posses a risk to communication infrastructure at Lymwood.	Minor	Rare	Low	• Surrounded by cleared agricultural land. • Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
034	Wildfire posses a risk to communication infrastructure at the Naracoopa Hill.	Minor	Unlikely	Low	• Fire Permit periods. • Area fire brigade. • Total Fire Ban days.
035	Wildfire posses a risk to 6-communication infrastructure sites within the township of Currie.	Major	Unlikely	High	As per Risk 006

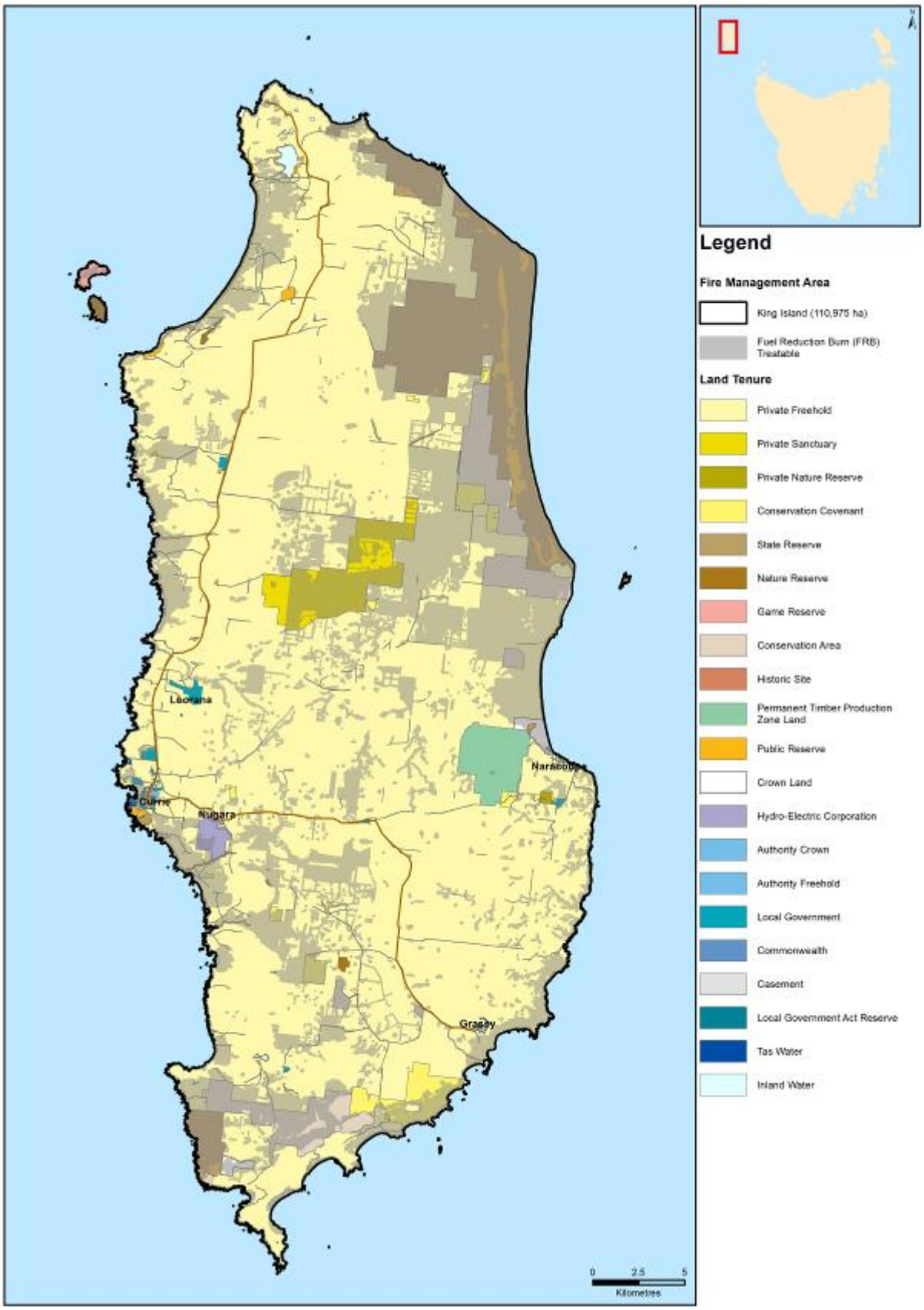
Appendix 9 – BRAM Risk Assessment Maps – Likelihood, Consequence, Risk



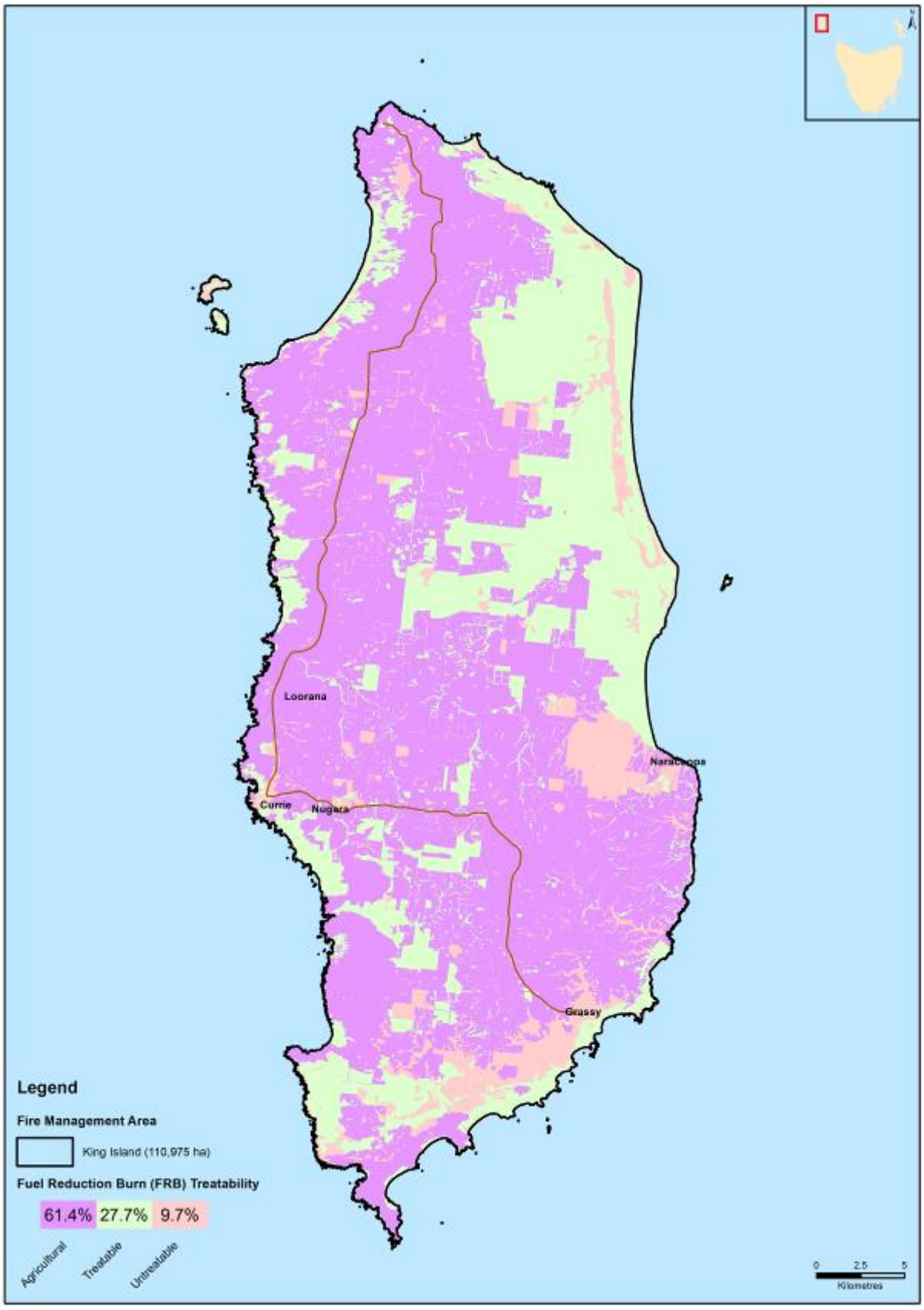

Loorana
Currie
Nugara
Grassy
Legend
Fire Management Area
King Island (110,975 ha)
VAR - BRAM 2017 (UV), output generated 6/03/2017
67.0%
16.3%
4.2%
8.9%
2.9%
Insignificant
Minor
Moderate
Major
Catastrophic
0
2.5
5
Kilometres


Legend
Fire Management Area
King Island (110,975 ha)
BRAM 2017 (UV), output generated 6/03/2017
10.7%
59.4%
19.2%
10.1%
Low
Moderate
High
Extreme
Loorana
Currie
Nugara
Grassy
0
2.5
5
Kilometres

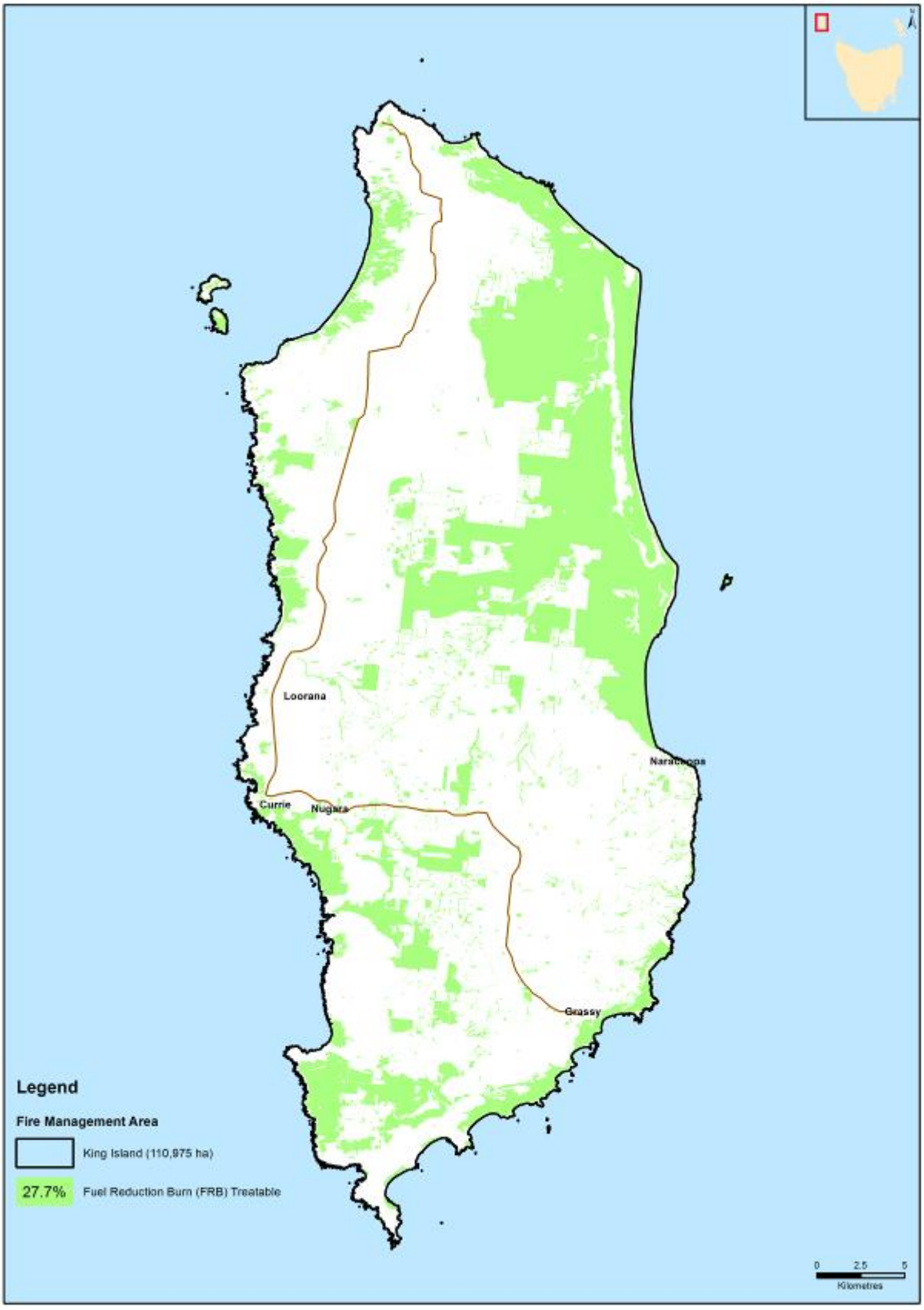
Appendix 10 – Treatable/untreatable areas



Treatable Agriculture



Treatable FRB



Appendix 11 – Register of Treatment strategies (from 2009 Bushfire Management Plan)

2. Treatment Strategies and Implementation Timeframes

Register of Treatment Strategies and Implementation Timeframes

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
001	Wildfire posses a risk to the Grassy Township. **EXTREME RISK**	***Prevention:*** 1. Abatement officer at the KIC, periodically investigate abatement issues in consultation with the TFS. ***Preparedness:*** 2. Fire trail 1 around the Grassy Township for defence purposes as per Figures 2 and 3. 3. Widen track 2 along the powerlines to Grassy catchment to protect the power supply for the provision of water to Grassy as per Figures 2 and 3. 4. Identification and mapping of fire hydrants on reticulated water supply. Grassy Brigade to check annually and faults to be reported to KIC for appropriate maintenance. 5. Progressive upgrading of Grassy town water system to 4-6 inch mains. 6. Identify priority houses (including Ballarat and Claredon College Campus) to undertake annual TFS Structure Survival Assessment. Provide ongoing support and encouragement to property owners in these priority locations for the development and maintenance of individual bushfire plans. 7. Develop Grassy Tactical Response Guide. ***Response:*** 8. Utilise fire trail 1as a control line where appropriate. 9. Early notification of need for recovery to the King Island Community Recovery Team. 10. Minimum two brigade response to vegetation and structural fires. 11. Use of King Island Fire Response Guidelines and Grassy Tactical Response Guide. ***Recovery:*** 12. Existing controls (King Island Community Recovery Plan).	1. KI Council 2. Landowners / managers (KI Council, KI Ports Authority) 3. KI Council and Aurora 4. KI Council and Grassy TFS brigade 5. KI Council 6. Grassy TFS Brigade 7. Grassy TFS Brigades/TFS	1. Prior to 08/09 fire season 2. Prior to 08/09 fire season, then annually) 3. Prior to 08/09 fire season, then annual maintenance 4. Prior to 08/09 fire season, then annual check 5. Ongoing upgrading 6. Prior to 08/09 season 7. Prior to 08/09 season then annual as applicable
002	Wildfire posses a risk to rural dwellings, tourist sites and native vegetation, from Attrill's Road to Seal Rocks through the Red Hut Area to the Grassy Township. This includes the following: a. The significant stands of *Melaleuca ericifolia*	***Prevention:*** ***Preparedness:*** 1. PWS and adjoining landholder(s) enter into agreement for maintenance of the joint boundaries. 2. Widening and maintenance of Red Hut Road to be used as fire trail 3 as per Figure 2 and 3. 3. Creation of fire trail 4 from Red Hut Road to Sand blow beach as per Figures 2 and 3.	1. Private landowners and PWS 2. KI Council 3. PWS and Private landowners 4. PWS in conjunction with private landholder. KIC (South Rd)	1. 2010 2. 2010 - Subject to negotiation of road ownership issues 3. 2010 - Subject to successful negotiations with landholders, regulatory approvals

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
	swamp forests at Colliers Swamp and within the adjacent unallocated Crown Land b. The geomorphically significant calcified forest c. Big Lake d. A number of gorges in this district e. *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries. **High Risk**	4. Widening and maintenance of South Road from Pearshape to Seal Rocks Road so that it can be used as fire trail 5 as per Figures 2 and 3. Annual maintenance of track 6 from Red Hut Road along Colliers Swamp to Seal River Road as per Figures 2 and 3. 5. Investigate and if feasible establish fire / access trail 7 from Big Lake along fern bank to Millers Road as per Figures 2 and 3. 6. Widening and maintenance of Seal Rocks Road as fire trail 8 as per Figures 2 and 3. 7. Annual maintenance of track 9 from the northwest boundary of Bowling's to Cataraquai airstrip as illustrated in Figures 2 and 3. 8. Identify dwellings, particularly those that are occupied and mark on map(s) for response activities. 9. Annual TFS Structure Survival Assessment of properties within priority locations. Ongoing support and encouragement to property owners in these priority locations for the development and maintenance of individual bushfire plans. 10. Identify potential water points near proposed defence lines. If necessary construct water points. ***Response:*** 11. Use of King Island Fire Response Guidelines and Grassy Tactical Response Guide. 12. Control lines: • Red Hut Road (fire trail 3) • Red Hut Road East to Sandblow beach (fire trail 4) • South Road (fire trail 5) • Track from Red Hut Road along Colliers Swamp to Seal River Road (fire trail 6) • Seal Rocks Road (fire trail 8) • Ports Road 13. Access tracks: • Proposed track from Big Lake to Millers Road. (Fire trail 7). Subject to successful approvals to develop the Fire trail. • Seal Rocks Link Firetrail from the northwest boundary of Bowling's to Cataraquai airstrip. (Fire trail 9). Subject to successful approvals to develop the Fire trail. ***Recovery:*** 14. Existing controls (King Island Community Recovery Plan)	5. PWS in conjunction with private landholder 6. PWS in conjunction with private landholder 7. PWS in conjunction with private landholder 8. Grassy Fire Brigade 9. TFS in conjunction with Grassy Fire Brigade 10. Grassy Fire Brigade in liaison with KIC.	and finance. 4. 2010 - Subject to successful negotiations with landholders, regulatory approvals and finance. 5. 2010 - Subject to successful negotiations with landholders, regulatory approvals and finance. 6. 2010 – Subject to regulatory approvals and finance. 7. 2010 8. 2010 9. 2010 10. 2010

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
003a 003b	Wildfire posses a risk to the native vegetation from Bold Head to the Grassy Township. **Moderate Risk** Wildfire posses a risk to the Grassy River Catchment, including the town water supply for Grassy. **High Risk**	As per risk 001	As per risk 001	As per risk 001
004	Wildfire posses a risk to the Grassy Port facility, including the bulk fuel storages. **EXTREME RISK**	***Prevention:*** ***Preparedness:*** ***Response:*** 1. Existing controls including that King Island Ports to be self-sufficient until Brigade(s) arrive. Note: Power supply is vital to ports, and Grassy township. ***Recovery:*** 2. Existing controls (King Island Community Recovery Plan).	Existing controls	Existing controls
005	Wildfire posses a risk to *Eucalyptus brookerianna* wet forest in Kentford Forest Nature Reserve, E. ovata forest and woodland in Kentford Forest Conservation Area and other vegetation on adjoining rural properties. **High Risk**	**Prevention:** **Prevention:** 1. Maintain access tracks on northern and eastern boundaries of the Nature Reserve. 2. Gate or restrict access into conservation area off Mt Stanley Rd. 3. Investigate constructing additional water holes. 4. PWS and adjoining landholder(s) enter into agreement for maintenance of the joint boundary ***Response:*** ***Recovery:*** 5. Existing controls (King Island Community Recovery Plan).	1. Private landowners 2. PWS 3. PWS in conjunction with Grassy Fire Brigade 4. PWS and landholders	1. Ongoing 2. 2010 3. 2010 4. 2010
006a	Wildfire posses a risk to the township of Currie. **EXTREME RISK**	***Prevention:*** 1. Firebreak around tip. 2. Brigade located within the township.	1. KIC 2. TFS 3. KIC 4. KIC in collaboration with landowner(s)	1. Prior 08/09 season 2. Ongoing 3. Ongoing 4. Prior 08/09 season 5. Annual 6. Prior to 09/10

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
		Preparedness: 3. Abatement officer at the KIC, periodically investigate abatement issues in consultation with the TFS. 4. Development of access track10J to defend from at the back of housing in Lighthouse Street, as illustrated in Figures 2 and 4. 5. Annual slashing and maintenance of Lighthouse Street access track J by KIC. 6. Development of access track 11 to defend from and provide access to water at Devils Gap, as illustrated in Figures 2 and 4. 7. Annual maintenance of Devils Gap access track 11 by KIC. 8. Investigate the status of well at Devils Gap, as illustrated in Figures 2 and 4 and either re-instate or install new well for water supply. 9. Continue existing control of annual slashing of Bell Hill (track 12). 10. Installation of 3 new fire hydrants in Currie, 1 in Lighthouse Street and 2 in Wharf Road. 11. Annual TFS Structure Survival Assessment of properties in -Henry Street, -Huxley Street, -the Main Street *(including commercial properties such as Parers Hotel)*, -Lighthouse Street and -Beach Road. Ongoing support and encouragement to property owners in these priority locations for the development and maintenance of individual bushfire plans. Furthermore where the property is tourist accommodation, encourage managers to display bushfire plans to occupants of the accommodation. ***Response:*** 12. Use of King Island Fire Response Guidelines and Currie Tactical Response Guide. 13. Protection of priority roads/properties, in particular Henry Street properties in the event of a northerly wind. 14. Use of Charles Street to defend from if the fire is to the North of Devils Gap. 15. Defend off Wharf Road and 'Bell Hill Track 12'. If required fall back to Lighthouse Street for property protection, including the use of new access track at the back of Lighthouse Street. ***Recovery:*** 16. Existing controls (King Island Community Recovery Plan).	5. KIC in collaboration with landowner(s) 6. KIC to act as the lead agency in conjunction with Currie Fire Brigade. 7. KIC 8. KIC to act as the lead agency in conjunction with Currie Fire Brigade. 9. KIC 10. KIC in collaboration with Currie Fire Brigade 11. TFS and Currie Fire Brigade	season, subject to regulatory approvals. 7. Annually from 2010 8. Prior to 09/10 season 9. Ongoing 10. Prior to 08/09 season, then annual maintenance 11. Prior to 08/09 seasons, then annually.

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
006b	Wildfire posses a risk to properties on Charles Street in the vicinity of Devils Gap, including the waste management facility and Bell Hill. **High Risk**	As per Risk 006a	As per Risk 006a	As per Risk 006a
006c	Wildfire posses a risk to the Camp Creek Reserve, including the nearby gas storage yard. **High Risk**	Existing controls.	Existing controls.	Existing controls.
006d	Wildfire posses a risk to the coastal vegetation and housing north from the mouth of the Ettrick River, through British Admiral Beach, Kelp Industries Pty Ltd and to the township of Currie. **High Risk**	***Prevention:*** ***Preparedness:*** 1. Abatement officer at the KIC, periodically investigate abatement issues in consultation with the TFS. 2. Annual TFS Structure Survival Assessment of priority properties. Ongoing support and encouragement to these property owners to develop and maintain individual bushfire plans. 3. GPS and map existing shacks (including A frame) and housing / development. Review and update annually. Place mapping in all King Island fire trucks / vehicles. 4. GPS and map existing water points in the 'risk area'. Review and update annually. Place mapping in all King Island fire trucks / vehicles. 5. Annual maintenance of track 13 on private property from South Road to Badger Box Creek to ensure that it could be used for access for all classes of fire vehicles. 6. Negotiate with private landowner to develop fire trail 12 utilising the minor track from Netherby Road through to cleared paddocks near Huxley Hill as identified in Figures 2 and4. 7. Local command pre-authorised to access and utilise resources eg excavators, helicopter etc, as deemed necessary given the High to Extreme Risk situation. Authorisation to be specified in King Island Fire Response Guidelines. ***Response:*** 8. Use of King Island Fire Response Guidelines and Currie Tactical Response Guide. 9. Determine if shack(s) are currently being camped in and if so evacuate. 10. Defensive strategy would be the main approach at this point in time due to accessibility and the area of land that the vegetation covers.	1. KIC 2. TFS and Currie Fire Brigade 3. Currie Fire Brigade and KIC 4. Currie Fire Brigade and KIC 5. KIC and Currie Fire Brigade to oversee in consultation with private landholder(s). 6. KIC and Currie Fire Brigade to oversee in consultation with private landholder(s).	1. Ongoing 2. Prior to 08/09 season, then annually 3. Prior to 09/10 season, then annual updates as required 4. Prior to 09/10 season, then annual updates as required 5. 2010 6. 2010

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
		11. The following tracks would be utilised for defence: - track 13 from South Road to Badger Box Creek - track 12 from Netherby Road through to cleared paddocks near Huxley Hill - Rifle Range Road - Netherby Road - Kelp track from Kelp Industries, around the front of the golf course through to Beach Road / Lighthouse Street. 12. Use of resources eg excavators, helicopters etc, according to the situation on hand. ***Recovery:*** 13. Existing controls (King Island Community Recovery Plan).		
007	Wildfire posses a risk to the township of Naracoopa **EXTREME RISK**	***Prevention:*** 1. Abatement officer at the KI Council periodically investigate abatement issues in consultation with the TFS. ***Preparedness:*** 2. Fire trails: - Trail 15, upgrade and maintenance of the Bicentennial Link Rd and Sea Elephant Rd, as identified in Figures 2 and 5. - Trail 16, track along Sea Elephant River to provide access to water, as identified in Figures 2 and 5. - Put in a Fire Trail 17, from corner of paddock, across Sea Elephant Rd to Fraser Beach, as identified in Figures 2 and 5. - Put in Trail 20, from Pegarah Rd (Pegarah Hill) to the Esplanade, including putting in a gateway, as show in Figures 2 and 5. - Investigate putting in an access track (Trail 21), from Pegarah Rd to Millwood Rd as per Figures 2 and 5. If feasible construct track. - Investigate feasibility of using the old tip track as a fire trail. - Investigate feasibility of Cowper Point Track as a fire trail. 3. Work with priority properties and residents within the township of Naracoopa to complete annual TFS Structural Survival Assessment of properties. Ensure that this is an opportunity to work with and support householders, rather than taking an authoritative approach. 4. Training of brigade members. 5. Provision of maps, aerial photographs and plans within fire vehicles and provide Naracoopa information to other brigades on the Island. 6. Identify water access in close proximity to identified defence lines and access trails. If appropriate investigate creating additional water points.	1 KIC 2 KIC, PWS and Naracoopa Fire Brigade to oversee in consultation with private landholder(s). 3 TFS and Naracoopa Fire Brigade 4 TFS 5 Naracoopa Fire Brigade and KIC 6 Naracoopa Fire Brigade and KIC 7 Naracoopa Fire Brigade and KIC	1. Ongoing 2. 2010 – Subject to regulatory approvals and funding. 3. Prior to 08/09 season then annually 4. Ongoing 5. Prior to 09/10 season, then annual updates as required 6. 2010 7. 2010

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
		7. Create access track T from the old Kibuka Dam to Fraser Rd. Explore installing pipe from dam to Fraser Rd. ***Response:*** 8. Use of King Island Fire Response Guidelines and Naracoopa Tactical Response Guide. 9. Defence lines: - Fire trial 15 - Fire trail 17 - Fire trail 20 - Sea Elephant Rd (firetrail 18) and Fraser Rd (firetrail 19) as illustrated in Figures 2 and 5. - Millwood Rd (firetrail 23), as illustrated in Figures 2 and 5 - Defence of assets only along Pegarah Rd, particularly adjoining the Pegarah State Forest. ***Recovery:*** 10. Existing controls (King Island Community Recovery Plan). 11. Landholders undertake activities as appropriate.		
008	Wildfire poses a risk to the fire sensitive values in Lavinia State Reserve, Seal Rocks State Reserve and adjoining Public Reserves and unallocated crown land as identified in the *King Island Reserves and Crown Land Fire Management Plan* (DTPHA; 2002) and *King Island 2007 Fires: Impact on natural values* (DPIW; 2007) including; 1. a-g 2. a-c 3. a-e 4. a 5. a-d 6. a	***Prevention:*** ***Preparedness:*** 1. Fire trails as nominated in the King Island Reserves and Crown Land Fire Management Plan (PWS 2002), as illustrate in Figures 2,3, 5 and 6. 2. Permanent aerial on the tower at Counsel Hill 3. Establishment of communication line infrastructure, to enable phone connection within 24 hours. 4. PWS and adjoining landholder(s) enter into agreement for maintenance of the joint boundary ***Response:*** 5. Use of King Island Fire Response Guidelines and Naracoopa Tactical Response Guide. ***Recovery:*** 6. Existing controls (King Island Community Recovery Plan).	1. PWS 2. TFS 3. KIC 4. PWS	1. 2010 – Subject to regulatory approvals and finance. 2. 2009 3. 2009 4. Prior to 09/10 season

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
009	Wildfire posses a risk to the Pegarah State Forest including the landfill site and surrounding vegetation and housing. **High Risk**	As per risk 007	As per risk 007	As per risk 007
010	Wildfire posses a risk to the King Island Airport. Low Risk	Existing controls.	Existing controls.	Existing controls.
011	Wildfire posses a risk to the power station and wind turbines. *Moderate Risk*	Existing controls	Existing controls.	Existing controls.
012	There is a risk that power distribution lines and poles will be affected by wildfire. **High Risk**	Existing controls	Existing controls.	Existing controls.
013	Wildfire posses a risk to the King Island Dairy. Low Risk	Existing controls	Existing controls.	Existing controls.
014	Wildfire posses a risk to abattoirs on King Island. Low Risk	Existing controls	Existing controls.	Existing controls.
015	Wildfire posses a risk to the coastal vegetation and housing from Porky Beach to Bungaree Creek. *Moderate Risk*	***Prevention:*** ***Preparedness:*** ***Response:*** Defend dwellings as required. ***Recovery:*** Existing controls (King Island Community Recovery Plan).	Brigades	Ongoing

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
016	Wildfire posses a risk to the coastal vegetation and housing from Victoria Cove to the mouth of Yellow Rock River including: a) *Neophema chrysogaster* (Orange-bellied parrot) and its associated habitat. b) *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries. **High Risk**	***Prevention:*** ***Preparedness:*** 1. Upgrade and maintain existing track 34 from North Road west to the coast as illustrated in Figures 2 and 7. Track 7 to terminate prior to coastal reserve. 2. Construct Fire trail 35, as illustrated by Figures 2 and 7. 3. Construct Fire trail 36, south of Lake Flannigan as illustrated in Figures 2 and 7. 4. Annual TFS Structure Survival Assessment of priority properties. Ongoing support and encouragement to these property owners to develop and maintain individual bushfire plans. ***Response:*** 5. Aerial support due to the difficulty of the terrain. ***Recovery:*** 6. Existing controls (King Island Community Recovery Plan).	1. Private landholders, KIC in consultation with North Fire Brigade. 2. Private landholders, KIC in consultation with North Fire Brigade. 3. Private landholders, KIC in consultation with North Fire Brigade. 4. TFS and North Fire Brigade	1. 2010 – Subject to regulatory approvals and finance 2. 2010 – Subject to regulatory approvals and finance 3. 2010 – Subject to regulatory approvals and finance 4. Prior to 08/09 seasons, then annually.
017	Wildfire posses a risk to the coastal vegetation, camping sites, tourist visiting sites and shacks from Disappointment Bay to the Lavinia State Reserve, including *Eudyptula minor* (Little Penguin) and *Puffinus tenuirostis* (Short-tailed Shearwater) rookeries. **High Risk**	***Prevention:*** ***Preparedness:*** 1. Upgrade and maintain track 33, as illustrated in Figures 2 and 6 ***Response:*** 2. Defend to clear ground. Determine if shack(s) are currently being camped in and if so evacuate. ***Recovery:*** 3. Existing controls (King Island Community Recovery Plan).	1. Private landholders, KIC in consultation with North Fire Brigade.	1. 2010 – Subject to regulatory approvals and finance

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
018	Wildfire posses a risk to gorges on King Island, in particular Yarra Creek, Barrier Creek, Grassy River, Fraser River and Sea Elephant River. **High Risk**	Gorges are of high value to King Island, but by their nature the response strategy would require defending to clear ground.	Brigades	Ongoing
019	Wildfire posses a risk to peat deposits on King Island. **High Risk**	Island Wide Treatments, specifically the use of permit periods and community education to discourage burning on peat.	As per Island Wide Treatment Options	As per Island Wide Treatment Options
020	Wildfire posses a risk to high priority vegetation, including tree lanes, remnant vegetation and threatened vegetation community types on rural properties. **High Risk**	***Prevention:*** ***Preparedness:*** 1. Individual property plans. Advice and support to properties to prepare plans. ***Response:*** 2. Note: Vegetation high priority for protection where practicable. 3. Enabling of landholders to participate in fire suppression activities. Protocols to be specified in King Island Fire Response Guidelines. 4. Good communication with landholders during the fire, keeping them informed and supported. ***Recovery:*** 5. Existing controls (King Island Community Recovery Plar). 6. Support services and debriefing for landholders. 7. Support to landholders with land and vegetation recovery as applicable.	1. Property owner	1. 2010
021	Wildfire posses a risk to farm fences, stock and pasture. *Moderate Risk*	***Prevention:*** ***Preparedness:*** 1. Individual property plans. Advice and support to properties to prepare plans. ***Response:*** 2. Note: Vegetation high priority for protection where practicable. 3. Enabling of landholders to participate in fire suppression activities. 4. Good communication with landholders during the fire, keeping them informed and supported. ***Recovery:*** 5. Existing controls (King Island Community Recovery Plar). 6. Support services and debriefing for landholders. 7. Support to landholders with land and vegetation recovery as applicable.	1. Property owner	1. 2010

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
022	Wildfire posses a risk to road and bridge infrastructure on King Island. Low Risk	***Prevention:*** ***Preparedness:*** ***Response:*** ***Recovery:*** Existing controls (King Island Community Recovery Plan). Post fire assessments and works programs as required.	Existing controls	Existing controls
023	Wildfire posses a risk to the Reekara Community Complex. Low Risk	Existing controls	Existing controls	Existing controls
024	Wildfire posses a risk to rural housing and associated structures. **High Risk**	***Prevention:*** ***Preparedness:*** 1. Annually visit the school and undertake activities with the children with regard to preparing properties for a wildfire scenario. 2. Individual property protection plans. 3. Brigades to familiarise themselves with properties in their area. ***Response:*** ***Recovery:*** 4. Existing controls (King Island Community Recovery Plan).	1. TFS 2. Property owners 3. King Island Fire Brigades	1. Ongoing 2. Ongoing 3. Prior to 08/09 season, then as required
025	Wildfire posses a risk to Airservices Australia NDB, SGS, Regional Express Airlines and KIC communication infrastructure at the King Island Airport. Low Risk	The communication infrastructure is of high value to King Island, but the risk is low with existing controls in place.	Existing controls	Existing controls

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
026	Wildfire posses a risk to Telstra and the Tasmania Police communication infrastructure at the 'Old Power Station' via Grahams Rd, Grassy. Low Risk	The communication infrastructure is of high value to King Island, but the risk is low with existing controls in place.	Existing controls	Existing controls
027	Wildfire posses a risk to Telstra Radio Terminal at Cape Wickham. Low Risk	The communication infrastructure is of high value to King Island, but the risk is low with existing controls in place.	Existing controls	Existing controls
028	Wildfire posses a risk to communication infrastructure used by Telstra and the Tasmania Police at Counsel Hill. **High Risk**	***Prevention:*** ***Preparedness:*** 1. Permanent repeater station at Counsel Hill 2. Maintain cleared area of approximately 50 metres surrounding the tower. ***Response:*** 3. Note as a high value to King Island. ***Recovery:*** Existing controls (King Island Community Recovery Plan).	1. TFS 2. Erickson	1. 2009 2. Ongoing
029	Wildfire posses a risk to Telstra and King Island Dairy communication infrastructure at the King Island Dairy, North Road and to the to Promo Radio communication infrastructure. Low Risk	The communication infrastructure is of high value to King Island, but the risk is low with existing controls in place.	Existing controls	Existing controls
030	Wildfire posses a risk to Hydro Tasmania wind monitoring infrastructure at Huxley Hill. Low Risk	The monitoring equipment is of high value to King Island, but the risk is low with existing controls in place.	Existing controls	Existing controls

ID	Risk Statement	Identified Treatment Options	Responsibility for Treatment	Implementation Timelines
031	Wildfire posses a risk to communication infrastructure used by Telstra, King Island Ports, State Fire Commission and television networks at Gentle Annie and to the Bureau of Meteorology infrastructure at Mount Stanley. **High Risk**	The communication infrastructure is of very high value to King Island, but the risk is low with existing controls in place.	Existing controls	Existing controls
032	Wildfire posses a risk to Telstra communication infrastructure at Yambacoona. Low Risk	The communication infrastructure is of high value to King Island, but the risk is low with existing controls in place.	Existing controls	Existing controls
033	Wildfire posses a risk to communication infrastructure at Lymwood. Low Risk	The communication infrastructure is of high value to King Island, but the risk is low with existing controls in place.	Existing controls	Existing controls
034	Wildfire posses a risk to communication infrastructure at the Naracoopa Hill. Low Risk	***Prevention:*** ***Preparedness:*** 1. Maintain cleared area of approximately 50 metres surrounding the tower. ***Response:*** ***Recovery:*** 2. Existing controls (King Island Community Recovery Plan).	1. Ericksons	1. Ongoing
035	Wildfire posses a risk to 6-communication infrastructure sites within the township of Currie. **High Risk**	As per Currie Treatments (risk nos.6a-6d)	As per Currie Treatments (risk nos.6a-6d)	As per Currie Treatments (risk nos.6a-6d)

Appendix 12 – List of fire management related documents for the King Island Fire Management Area

Existing fire management related reports – King Island FMA

A number of fire related plans have already been prepared for use within the King Island Fire Management Area including:

- King Island Wildfire Management Plan, King Island Fire Management Area Committee, February 2009.
- Bushfire Risk Assessment and Management Plan for Hydro Assets (August 2013). Prepared for Hydro Tasmania, by AVK Environmental Management, Sandford.
- King Island Biodiversity Management Plan 2012 – 2022. (2012) Department of Primary Industries, Parks, Water and Environment, Hobart.
- King Island Council Community Recovery Plan (sub-plan of the King Island Municipal Emergency Management Plan), March 2009
- King Island Emergency Management Plan. Issue 12. July 2014 – Draft Document. Prepared by King Island Municipal Emergency Management Committee.
- King Island 2007 Fires: Impact on Natural Values. Unpublished report to the Tasmanian Parks and Wildlife Service. Biodiversity Conservation Branch, Resource Management and Conservation Division, Department of Primary Industries and Water, Hobart.
- King Island Reserves and Crown Land Fire Management Plan (2002), Parks and Wildlife Service, Department of Tourism, Parks, Heritage and the Arts.
- Staier, E (2014). Lavinia State Reserve, King Island. Fire Break/Fire Trail Options Cost Benefit Analysis. Tasmania Parks and Wildlife Service, Ulverstone, Tasmania.
- Corbett, K (2010) Lavinia State Reserve, King Island post-fire geomorphology and vegetation assessment Report 1, Assessment of peat deposits, fire damage and drainage features. A report for Cradle Coast NRM.
- Corbett, S (2010) Lavinia State Reserve, King Island post-fire geomorphology and vegetation assessment Report 2. Vegetation. A report for Cradle Coast NRM.
- Murchison Forest District Tactical Fire Management Plan, September 2013. Forestry Tasmania.

King Island FMA

Appendix 13 – Annual Implementation Program 2017/18

Location	Issue	Owner	Previous Treatment	Action required	Timeframe for completion	Funding Source	Who to action	FMAC Priority rating
COMMUNITIES								
Currie	Well protected - surrounded by cleared grassland	Public/private	Council mowing program - annual	Continue to maintain cleared break around settlement. Review of Local Government Reserve for weed management.	Ongoing/annual program	KI Council	KI Council	Med
Naracoopa	Reasonably well protected - greatest risk is from fire running into township from elsewhere. Some individual houses very close to bush interface.	Public/private	Council mowing program - annual	Continue to maintain cleared break around settlement. Review of Local Government Reserve for weed management.	Ongoing/annual program	KI Council	KI Council	Med
		Public/private	Grounds maintenance by landowner	Concept Burn North of Naracoopa (Blowhole Road) planned for Spring 2018.	Autumn 2018	FRU	FRU	Med
		Public/private	Grounds maintenance by landowner	Investigate further fuel reduction burns/mitigation to the North and West of township.	2018	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	FMAC	Med
Grassy	Well protected apart from a 'wick' of flammable vegetation coming up from the mine to the south of the township. Increase fuel loads/risk within township on private and local government reserve.	Public/private	Council mowing program - annual. Intermittent issuing of fire abatement notices. Minor weed control	Continue to maintain cleared break around settlement. Increase width of cleared break around settlement area. Review of fire abatement process Clearing of woody weeds and broadleaf weeds within local government reserve within township. Investigate further fuel reduction burns/mitigation to the South/West of township.	Ongoing/annual program	KI Council Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	All stakeholders involved in FMAC	Med

Location	Issue	Owner	Previous Treatment	Action required	Timeframe for completion	Funding Source	Who to action	FMAC Priority rating
All communities on King Island	None of the communities on King Island have a specific bushfire response or protection plan in place.	N/A	None	TFS Fuel Reduction Unit has will commence community Response and Community Protection Plans for select community areas in 2018. King Island is included in Round 2 (2016-2018) of the Bushfire-Ready Neighbourhoods Program.	2018 fire season	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	BPP BRN and FRU North West Regional Planner	Med - High
FIRE TRAILS								
Trail 24 (in 2009 bushfire Plan) Counsel Hill to Salt water Creek	Strategic access route for PWS - overgrown with bracken	PWS	There was a 15m wide trail in the reserve before 2007 fire in park. Some areas of high vegetation have been widened to 30m.	Work has commenced, further earthworks required from Counsel Hill to the sea. FMAC to provide application to FRU for Risk Assessments for trail extension.	Nov-16	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	PWS/TFS	Very High
Lavinia State Reserve Fire Trail/extension of trail 24)	Need to establish and maintain a fire break to protect the Lavinia State Reserve from the impact of further bushfires	PWS	No previous treatment	FMAC to provide application to FRU for Risk Assessments for trail extension. PWS staff to investigate and prioritise access tracks for improvement.	Ongoing until funded	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	FMAC & PWS	High
Trail 14 (in 2009 bushfire Plan)	Protects against fire coming from South into Currie	Council & private	Track has been widened, works completed. Scheduled maintenance	Continue maintenance program (Slashing/Mowing)	Ongoing	KI Council	KI Council	High
Cyclic fire break maintenance (Grassy, Currie, Naracoopa)	Cleared/mowed area surrounding townships provides protective buffer against fire.	Council	Scheduled maintenance	Continue maintenance program (Slashing/Mowing)	Sept to March annually	Council	Council	High
Road maintenance in Pegarah Permanent Timber Production Zone Land	The existing trail provides access in event of fire in Pegarah Forestry block	Forestry Tasmania	Trees have been cleared	Existing trail needs further clearing of fallen trees and widening of roadside scrub to a width of 10m to 15m.	Ongoing	Sustainable Timber Tasmania	Sustainable Timber Tasmania	High
Trail 6 & 7 (in 2009 bushfire Plan) - Seal River Road	Strategic access route for PWS - overgrown with bracken	PWS	Scheduled maintenance	Continue maintenance program (Slashing/Mowing)	Nov-17	PWS	PWS	High

Location	Issue	Owner	Previous Treatment	Action required	Timeframe for completion	Funding Source	Who to action	FMAC Priority rating
Trail 29 & 32 (in 2009 bushfire Plan)- 9 Mile Beach	Provides access for firefighting - to protect Nook Swamp/Penny's Lagoon	DPIPWE/PWS	Scheduled maintenance	Requires widening of the trail. FMAC to provide application to FRU for Risk Assessments for trail extension.	Nov-17	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	PWS	High
New operation at Naracoopa sand mine	Will likely clear vegetation if sand mining resumes. Presents an opportunity for creating a new trail during final rehab process when mining operations cease.	Private and Fraser Creek Conservation Area	Eddie Staier has spoken to EPA	Mine owner needs to maintain fire protection around mine site. Council/PWS/TFS staff to discuss during any opportunistic contact with landowner.	Nov-17	Owner of mine operation.	KI Council and PWS to monitor activity and engage in opportunistic contact.	Medium
Trail 26 extend south to Reekara Road	Follows reserve boundary, overdue for maintenance	Privately owned/PWS	Cleared in 2011	Requires ongoing maintenance FMAC to provide application to FRU for Risk Assessments for trail extension.	Nov-17	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	PWS	High
Trail 34 (in 2009 bushfire Plan) -Springs Road/Phoques Bay	Fire	Road reserve/private	Scheduled maintenance Trail has been widened June 2017. Trail converted to gazetted road.	Continue maintenance program	ongoing	Council	Council	Medium
Firebreaks whole island	Effectiveness of firebreaks and fire trails in vegetated areas	Public & private	Updates to the community through notifications.	Assess effectiveness of existing firebreaks and fire trails, with recommendations for maintenance, options (Herbicide application, vegetation modification and burning strips adjacent to trails). Provide opportunities to educate the community about the effectiveness of this approach. Improved notification process.	Ongoing	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	FMAC	High
NATURAL ASSETS								

Location	Issue	Owner	Previous Treatment	Action required	Timeframe for completion	Funding Source	Who to action	FMAC Priority rating
RAMSAR Wetlands & Lavinia Peatland Complex	Need to continue to maintain a fire break to protect the RAMSAR Wetlands/ Lavinia State Reserve from the impact of further bushfires	PWS	Severely damaged by 2 previous bushfires & require decades free from fire to recover.	Rapid response to prevent fire from entering this area in future. Consider pre-deployment of fire crews to King Island when Extreme Fire Danger days are forecast. FMAC to provide application to FRU for Risk Assessments for trail maintenance work.	No fire for 50 - 100 years+	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	Local brigades to assume role of first responders until PWS arrive on scene. FMAC to seek funding/resources.	Very High
Penny's Lagoon	High social value for community	PWS	Damaged by previous fire (especially around picnic area)	No burn' area due to community and social values of this area. Rapid response required to prevent fires from reaching this area in the future. Introduce maintenance program. FMAC to provide application to FRU for Risk Assessments for trail extension.	Ongoing	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	Local brigades to assume role of first responders until PWS arrive on scene	High
BUILT ASSETS								
Loorana	The King Island Dairy factory at this location is a major employer on the island and contributor to the Island's economy.	Private	Scheduled maintenance by private contractors	Continue maintenance program	Ongoing/annual program	Private enterprise	King Island Dairy operators	Med
Construction of water points	Water points are required at multiple locations across the island.	Public & private	KI Council have investigated. Construction of new pipeline from Grassy to Currie underway.	Provide locations of water point along pipeline, to integrate into LIST mapping.	2018	KI Council.	FMAC aided by TFS	Medium
Livestock shelter belts - whole island	Livestock shelter belts (narrow rows of trees and shrubs used to provide shelter to stock from wind) can act as fire 'wicks' and rapidly carry fire into heavily vegetated areas.	Private	None	FMAC to request a risk assessment be complete by the FRU on the potential 'wicks' caused by the shelter belts to determine level of risk on HAS and essential infrastructure.	Ongoing review by TFS/PWS/KI Council etc.	Planned burns/projects which achieve Fuel reduction program objectives may be funded by the Fuel Reduction Program.	FRU	High