SFMC
STATE FIRE MANAGEMENT COUNCIL

Flinders Island Fire Management Area Bushfire Risk Management Plan 2020

Document Control

Document History

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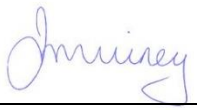
Agency Endorsements

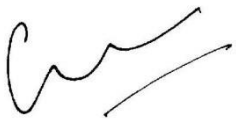
Agency	Name & Title	Signature	Date
Flinders Council	Jacci Viney Development Services Coordinator		24/2/2020

Document Endorsement

Endorsed by Flinders Island Fire Management Area Committee

Jacci Viney
Development Services Coordinator
Date: 24 February 2020

Accepted by State Fire Management Council



Ian Sauer
Chair, SFMC
Date: 7 May 2020

Cover Page Photo Acknowledgement: Cultural Burning on Cape Barren Island/Truwana, L Dean, TFS

Contents

Glossary

Asset	A term used to describe anything valued by the community that may be adversely impacted by bushfire. This may include houses, infrastructure, agriculture, production forests, industry, and environmental and heritage sites.
Asset Zone (AZ)	The geographic location of asset(s) and values of importance requiring bushfire exclusion.
Asset Protection Zone (APZ)	An area adjacent to or near Asset Zones, the primary management purpose of which is to protect human life, property and highly valued assets and values. Treatment can include intensive fuel reduction, manipulation of fuel moisture or response plans.
Bushfire	Unplanned vegetation fire. A generic term which includes grass fires, forest fires and scrub fires both with and without a suppression objective.
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.
Bushfire risk management	A systematic process to coordinate, direct and control activities relating to bushfire risk with the aim of limiting the adverse effects 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 operational information.
Consequence	Impact(s) of an event on the five key areas: environment, economy, people, social setting and public administration.
Control	A measure that modifies risk. This may be an existing process, policy, device, practice or other action that acts to minimise negative risk or enhance positive opportunities.
Fire management zoning	Classification system for the areas to be managed. The zoning system indicates the primary purposes for fire management for an area of land.
Fuel break	A natural or manmade change in fuel characteristics which affects fire behaviour so that fires burning into them can be more readily controlled.
Hazard management area	The area between a building and the bushfire-prone vegetation that provides access to a fire front for firefighting, which is maintained in a minimal fuel condition and in which there are no other hazards present that will significantly contribute to the spread of a bushfire.
Human Settlement Area	Term given for the 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.

Land Management Zone (LMZ)	An area that is managed to meet the objectives of the relevant land manager such as: Traditional Owner practices, biodiversity conservation, production forestry, farming or recreation. Management can include planned burning, experimental treatments, fire exclusion or no planned action.
Likelihood	Chance of something happening. It is used as a general description of probability and may be expressed qualitatively or quantitatively.
Risk register	A document usually presented in a tabular form which lists concisely the following information for each risk: the risk statement, source, hazard, impact area, prevention/preparedness controls, recovery/response controls, level of existing controls, likelihood level, risk level, confidence level and treatment strategy.
Risk treatment	Process of selection and implementation of controls to modify risk. The term 'risk treatment' is sometimes used for the controls themselves.
Strategic Fire Management Zone (SFMZ)	An area located close to or some distance away from assets (e.g. the urban–rural interface), the primary management purpose of which is to provide a mosaic of areas of reduced fuel in strategic locations to reduce the speed and intensity of bushfires, potential for spot-fire development, and size of bushfires. Treatment is by fuel reduction burning and other bushfire protection measures such as fire trails, water points, detection measures and response plans.
Treatable vegetation	Types of vegetation which are suitable for fuel reduction burning, for example, dry eucalypt forest, scrub, heathland and button grass.
Treatment plan	A document related to the risk register presented in a tabular form which lists concisely the following information for each risk: the agreed strategies to manage the risk (i.e. treatments), the responsible organisations, proposed completion date and comments.

Acronyms

BRMP	Bushfire Risk Management Plan
CBIAA	Cape Barren Island Aboriginal Association
DPIPWE	Department of Primary Industries, Parks, Water and Environment
FFDI	Forest Fire Danger Index
FMA	Fire Management Area
FMAC	Fire Management Area Committee
LGA	Local Government Area
PWS	Parks and Wildlife Service
SFMC	State Fire Management Council
STT	Sustainable Timber Tasmania
TFS	Tasmania Fire Service

Maps contained in this document may include data provided by DPIPWE (Land Tasmania), 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 their accuracy, 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 before use.

Executive Summary

This Bushfire Risk Management Plan (BRMP) identifies priorities for the treatment of bushfire risk in the Flinders Fire Management Area (FMA). It was developed by the Fire Management Area Committee (FMAC) as required under sections 18 and 20 of the *Fire Service Act 1979*. This plan aims to coordinate and influence the treatment of bushfire risk in the FMA.

The plan is strategic level and does not include all details of bushfire risk treatments, but does identify which organisations or individuals are responsible for implementing them. The Flinders Island FMAC will prepare a written report at least yearly for the State Fire Management Council on the progress of implementation.

The treatment plan (Appendix 1) lists the actions determined by the FMAC required to treat bushfire risk in the FMA.

The Flinders FMA consists of an area of approximately 206,046 hectares, extending approximately 10 kilometres from Wilson Promontory in Victoria to the North East tip of the Tasmanian mainland. An archipelago of 52 islands, the largest Island is Flinders Island, followed by Cape Barren Island/Truwana and Clarke Island. More than half of the Flinders FMA is private freehold land tenure.

There is a mix of vegetation within the Flinders FMA which ranges from heaths, scrub and dry woodlands through to dry sclerophyll forest interposed with wet sclerophyll forest gullies and remnant rainforest on Mt Strzelecki and the Darling Range.

Flinders Island is home to approximately 900 residents, with a population increase in the warmer months. Visitors usually seeking an eco-tourism experience. The economy is mainly based on agriculture and tourism. Agricultural, tourism, natural and cultural assets are highly valued by the Flinders FMA community.

The two highest priority risk areas identified by the Flinders FMAC are Mt Tanner and the Darling Range. Fuel reduction is identified as a treatment for these areas including fuel breaks and fuel reduction burning.

1. Introduction

1.1 Background

It is a requirement of Section 20 of the *Fire Service Act 1979* that the Fire Management Area Committee (FMAC) prepare a fire protection plan for its Fire Management Area (FMA). This Bushfire Risk Management Plan (BRMP) fulfils that requirement. The BRMP is submitted to and approved by the State Fire Management Council (SFMC).

The *Fire Service Act 1979* requires that the fire protection plan is consistent with the State fire protection plan and the State vegetation fire management policy.

Under the terms of reference for the *Flinders Island* FMAC, the purposes of the committee are:

- Provide a forum for communication and collaboration between key stakeholders in the FMA
- Enable a holistic and consistent approach, incorporating local knowledge, to identify strategic priorities to reduce bushfire risk
- Coordinate efforts and facilitate resource sharing to implement the strategic risk reduction priorities
- Link the local community and the SFMC through 'ground-truthing' the bushfire risk assessment and mitigation strategies
- Through their advisory function, provide input into decisions and outcomes beyond the Fire Management Area

1.2 Purpose of this Plan

The management of bushfire-related risk is a collective responsibility of the whole community, with contributions made by numerous individuals, landowners and organisations.

An overriding aim of this BRMP is to document a coordinated approach to the identification and treatment of bushfire risk in the Flinders Island FMA Specific objectives include:

- Guide and coordinate bushfire risk management on all land within the FMA
- Provide a reference point for the prioritisation and justification of bushfire treatment actions, as well as supporting evidence for funding requests
- Facilitate the integration of bushfire risk management into the business processes of councils, organisations and land managers
- Facilitate cooperation and the coordination of treatment actions between stakeholders
- Clearly and concisely communicate bushfire risk to stakeholders and the community
- Provide a basis for monitoring and reporting of implementation of bushfire risk treatments in the FMA

This BRMP is a strategic-level document that does not provide detail on treatment actions. Individual organisations and landowners, or collaborative groups, may have developed plans and processes for implementation of bushfire risk treatment; these can be considered to be linked to the strategic priorities identified here. This is an interim version of the BRMP – future versions will be based on a more comprehensive risk assessment.

2. Establishing the Context

2.1 Description of the Flinders Island Fire Management Area

The Flinders FMA consists of an area of approximately 206,046 hectares, extending approximately 10 kilometres from Wilson Promontory in Victoria to the North East tip of the Tasmanian mainland, including the major land components of the Furneaux group, Hogan group and the Kent group of Islands (map 1).

The Furneaux Group is an archipelago of 52 islands located in the Bass Strait between mainland Australia and Tasmania. The largest Island is Flinders Island followed by Cape Barren Island/Truwana and Clarke Island.

The Flinders FMA covers the Flinders local government area (LGA). More than half of the Flinders FMA is private freehold land tenure as shown in table 1 (map 2).

Land Tenure Type	Area (ha)	% Land Tenure within FMA
Private Freehold	128.248	62.74
Conservation Area	34,616	16.94
Nature Reserve	11,721	5.73
Game Reserve	10,378	5.08
National Park	10,004	4.89
Nature Recreation Area	5,265	2.58
Inland Water	1,404	0.69
Local Government	723	0.35
Casement	512	0.25
Conservation Covenant	427	0.21
Public Reserve	344	0.17
Crown Land	279	0.14
Private Sanctuary	121	0.06
Private Nature Reserve	100	0.05
State Reserve	73	0.04
Authority Freehold	71	0.03
Hydro-Electric Corporation	45	0.02
Historic Site	35	0.02
Authority Crown	23	0.01
Tas Water	5	0.00
Local Government Act Reserve	2	0.00
Commonwealth	1	0.00

Table 1: Overview of land tenure within the Flinders FMA

2.2 Fire Environment

The vegetation of the Flinders FMA is complex. It is a mix, ranging from heaths, scrub and dry woodlands through to dry sclerophyll forest interposed with wet sclerophyll forest gullies and remnant rainforest on Mt

Strzelecki and the Darling Range. Phytophthora cinnamomi (dieback) and peat soils are also present in within the Flinders FMA.

The region is considered to be important biogeographically as it is indicative of an ecotone between the Tasmanian and mainland vegetation complexes. Some of the vegetation species present on the Islands are at the most southern point of its range if a mainland species or the most northern aspect of Tasmanian endemic species.

The vegetation can also be categorised into broad groups that represent broad vegetation or landscape types (Kitchener & Harris, 2013), as summarised in table 2 and map 6. The majority of the vegetation groups in the Flinders FMA can be considered to be of a high to very high flammability classes with a low to moderate sensitivity to fire (Pyrke and Marsden-Smedley, 2005). Rainforest complexes on Mt Strzelecki and Melaleuca ericifolia swamp forest scattered around the Island are very sensitive to fire though of low flammability.

Vegetation Group (Kitchener & Harris, 2013)	**Flammability (Pyrke & Marsden-Smedley 2005)**	**% FMA**
Scrub, Heathland and Coastal Complexes	High – very high	41.0
Agricultural, Urban and Exotic Vegetation	Moderate	24.9
Dry Eucalypt Forest and Woodland	Moderate - high	14.1
Non Eucalypt Forest and Woodland	Moderate	6.5
Native Grassland	High	3.2
Saltmarsh and Wetland	Low	3.4
Other Natural Environments	Moderate	3.1
Moorland, Sedgeland, Rushland and peatland	Moderate - high	0.4
Rainforest and Related Scrub	Low	0.1

Table 2: Vegetation groups and flammability present within the Flinders FMA as a percentage of FMA total area.

The vegetation can also be considered in terms of its "treatability" with regards to fuel reduction program burning (map 5)**.** Treatable fuels suitable for fuel reduction burns are typically dry eucalypt forest, scrub complexes, heath complexes and button grass. Agricultural lands while susceptible to the impact of bush fires are not consider treatable due to the nature of the land use. However this does not preclude agricultural land from being incorporated into burning operations. The majority of fuels within the Flinders FMA are considered to be treatable.

Prior to major settlement within the Flinders FMA, lightning strikes were assumed to be a cause of ignition. Available records show that there are various causes of ignitions for bushfires in the Flinders FMA. These causes include accidental ignitions, lightning, arson and escapes from planned burns.

Previous fire incidents have been located near communities or in an agricultural landscape. Table 3 displays the major bushfires that have occurred within the Flinders FMA since 1990.

Fire Name	Ignition Date	Area (ha)
Sellers Point	1990	578
Darling Range	2003	17,058
Cameron Lagoon	2003	4,261
Reedy Lagoon	2006	1,716
Cape Barren Island (Apple Orchard Point)	2006	39,760
Five Mile Road	2008	6,690
Clarke Island	2013	8,100
Lackrana Road	2016	4,641
Thunder and Lightning Bay, Cape Barren Island	2016	31,770
Foo Chow Conservation Area	2019	2736

Table 3: Major fires Flinders Island Fire Management Area

Bushfires within the Flinders FMA are wind driven, with predominantly north easterly wind directions on bad fire danger days during summer. Changes of wind direction are also commonly observed.

The presence of flammable fine fuels (i.e. coastal vegetation) and peat soils influences fire behaviour. The undulating landscape within the Flinders FMA also playing a role due to the influence of slope on fire behaviour.

A summary of Flinders FMA values, concerns and priorities can be drawn from a focus on the protection of:

Agricultural and tourism assets and values, as the Flinders FMA economy is based mainly on agriculture and tourism. Agricultural land and grasslands are considered important assets to the community;

Important natural values. The local community places high importance on the unique natural values of the Islands in the Flinders FMA. These natural values include but are not limited to fauna species such as the Wombat, Cape Barren Geese, Forty-Spotted Pardalote, Hooded Plover. Raptor nests and habitat are also important. Nature-based tourism relies on these natural values, evoking catch phrases such as "un touched", "wild" and "go where no one has been before";

Community and cultural assets and values. These values include community facilities, such as the Flinders island Multi-purpose Centre, Flinders Island Emergency Services Building (Whitemark), Cape Barren Health Centre, Cape Barren Island community centre, pub, Flinders island District High School. Also includes other places of cultural and community significance, such as Wybalenna and the Furneaux Museum; and

Critical infrastructure assets. This includes the Flinders Island Airport (including fuel (Av Gas and Jet A1)), the Hydro Tasmania Power Station on Flinders Island, wind turbines, solar array, fuel storage Lady Barron, Lady Barron jetty/ wharf, TasWater supply infrastructure and treatment plants at Whitemark and Lady Barron, UHF/VHF repeater networks - Walkers lookout, Water Reservoir the Corner (Cape Barren Island/truwana). Telecommunications (Telstra) infrastructure at Hays Hill, Blue Rocks, Lady Barron and West End & Palana is also important.

2.3 Climate Bushfire Season

The Flinders FMA experiences a climate that can be considered a mixture of a Mediterranean and an oceanic climate that is composed of warm dry summers and mild wet winters. Under the moderating influences of low elevation and the maritime effects, the Islands generally have a milder climate compared to that of Tasmania, with rainfall possible in all seasons. The Flinders FMA is also in the path of the “roaring forties” winds. Weather stations exist at the Flinders Island airport and on Hogan Island.

Fire seasons and prescribed burning seasons vary geographically and temporally. The fire season is traditionally from November through to March though fires can and do occur outside this peak period.

Fuel reduction burning usually occurs in the seasonal months of autumn or spring, contingent on suitable weather conditions, soil and fuel moisture, and controls being in place. Within the Flinders FMA, cultural cool season burning has also occurred to some extent in addition to traditional fuel reduction burning activities.

Climate is changing in Tasmania and it is evident from bushfire climate indicators (Fox-Hughes et al. 2015) that we can expect destructive bushfires to become more frequent.

2.4 Population and Community

The estimated resident population of the Flinders Island is approximately 900 people. The population increases in the warmer months due to a seasonal influx of visitors and residents. Visitors are usually seeking an eco-tourism experience.

A smaller population of approximately 90 persons reside on Truwana/Cape Barren Island. The outer Islands have transient populations based around agricultural needs and Mutton-bird season.

The community profile of the Flinders FMA indicates that there is a lower proportion of youth (0-17 years) and a higher proportion of persons at post retirement (+60 years). There is also, a strong aboriginal presence and culture within the Flinders FMA, particularly on Cape Barren Island.

On Flinders Island there are two major population centres, Whitemark and Lady Barron. These centres are home to the Island’s primary built environment and facilities, residential properties, businesses and industrial properties, with Whitemark being the administrative and commercial centre for the Furneaux region. Other settlement areas include Emita, Palana, Memana, Lackrana, Killiecrankie and Badger Corner/Ranga. Outside the settlement areas, the population is based around Flinders farm holdings. Holiday homes are scattered throughout Flinders Island, utilised as short-term accommodation.

The economy is based mainly on agriculture and tourism. Agricultural assets are based mainly on the eastern side of the Island while the western and southern areas are dominated by residential villages and nature-based tourism activities such as bushwalking, bird watching, flora/fauna research and boating activities.

2.5 Community Engagement

It is anticipated that there will be further community engagement by the Flinders FMAC with the wider FMA community on topics not limited to fuel treatments, the role of the FMAC, risk assessment and cultural cool burning practices. A community public education/awareness event is proposed as a medium for engagement.

Engagement with the Cape Barren Island Aboriginal Association, the Truwana rangers and other relevant parties (e.g. farmers/farm managers) regarding fuel reduction via cool season burning on Flinders and outer islands is expected.

It is also anticipated, that there be continued engagement between FMAC agencies in order to discuss funding and the implementation of treatments. E.g. Flinders Council and other relevant agencies to combine the need for fire trails with that of walking tracks.

Community engagement has previously been undertaken by the Bushfire Ready Neighbourhoods with the communities of Lady Barron, Emita, The Corner (Truwnana/Cape Barren Island), Killiecrankie, Palana, West End, Blue Rocks, Big River and Whitemark.

3. Identifying the risks

3.1 Bushfire and Impact Scenarios

To set the scene for this plan, the bushfire scenarios under consideration are very large events, typically 10,000 to 20,000 hectares, occurring when fuel dryness and weather conditions combine to create one or more days of very significant fire weather. Some important examples for the Flinders Island FMA include:

- Dry lightning on a day of FFDI 46 ignites fuels on Mount Tanner, a bushfire spreads and destroys the communications tower, with subsequent on and off island impacts. Also impacts the townships of Whitemark and Emita.

3.2 Statewide Controls

The following controls are currently in place across Tasmania to help manage bushfire-related risk:

- Legislative controls – including *Fire Service Act 1979* (e.g. Fire permit period, Total Fire Ban days, campfires), *National Parks and Reserves Management Act 2002* (e.g. fires and campfires), abatement notices;
- TFS public education (e.g. Bushfire Ready Neighbourhoods, media campaigns);
- TFS planning – community protection planning (e.g. Community Response Plans);
- Inter-agency Fuel Reduction Program – funding and coordination of fuel reduction burning;
- SFMC programs (e.g. Red Hot Tips training program for fuel reduction burning on private land);
- FMAC – performance monitoring and reporting on this BRMP;
- Tasmania Police and TFS – state-wide arson prevention programs;
- Land subdivision and building standards (Bushfire-Prone Areas Code, Building Code of Australia);
- Suppression response preparedness – e.g. TFS local volunteer brigades, STT and PWS crews, aircraft, pre-positioning of firefighting resources; and
- Weather forecasting (Bureau of Meteorology) and fire behaviour prediction (TFS, STT, PWS).

3.3 Fire Management Area Controls

Summary of existing control measures for bushfire within FMA include but are not limited to:

- 5 brigades on Flinders and 1 on Cape Barren Island;
- Fire appliances:
  - Cape Barren Island/Truwana: 1 x 4.1 vehicle; and
  - Flinders: PWS (2 x 6.1); TFS (3 x 3.1; 2 x 4.1; 3 x 5.1; 1 x 3.1 Flinders Island Aboriginal Association; and other private appliances).
- Fuel reduction burning, undertaken by the Fuel Reduction Program by TFS, PWS and STT. Recent burns including Vinegar Hill, the Airport (partial completion);
- Cape Barren cultural burning at Chimney Hill;
- Fire trails, Fuel breaks/Firebreaks for asset protection that are managed by relevant land agencies including STT, PWS and private forestry companies. Fire Trails (all required to be class 5 standard) include Logan's lagoon, Haulands Gap, Brougham Sugarloaf, Wallanipi to Badger, Summers Road to Sellers Point, Sawyers Bay track, Mt Tanner to Boat Harbour, and Wingaroo to Foochow Beach. Fuel breaks include Wingaroo and Lady Barren;
- Strategic roads (links to strategic fire trails and control lines). Five Mile road, Cameron Inlet road, Logan Lagoon road, Summers road and Memana road to Patriarchs Inlet;

- Community engagement programs, including Bushfire Ready Neighbourhoods, community development opportunities, and support for bushfire recovery;
- PWS Reserve closures on bad fire days;
- Slashing by relevant authority;
- Community Preparedness Planning initiatives through the development of Bushfire Protection Plans and Bushfire Response Plans; and
- TFS Bushfire mitigation plans.

4. Analysing and Evaluating Bushfire Risk

4.1 Analysing Bushfire Risks

The analysis of bushfire risk for this plan considers the following:

- Consequences – what values and assets are at risk given the bushfire scenario under consideration
- Existing controls – how effective the existing controls are at reducing the risk and how much they are used
- Likelihood – how the likelihood of the consequence occurring is quantified, based on weather, topography, fuels and ignition potential
- Confidence level – how certain we are about the evidence and data used

5. Bushfire Risk Treatment

5.1 Treatment Plan

The FMAC considered the costs, benefits, practicalities and environmental impacts of various control options for the highest priority risks. The risk treatments that were determined from these deliberations are recorded in the treatment plan (Appendix 1).

Individual landowners and organisations are usually responsible for implementing the treatments; these are indicated in the treatment plan. One exception is fuel reduction burning that is planned and conducted by the Inter-agency Fuel Reduction Program with the agreement of landowners.

The Flinders FMAC has identified high priority areas/asset locations and treatment options. The two highest priority risk areas identified are Mt Tanner and the Darling Range. Further details of the key risks identified can be sourced from Appendix 1: Treatment Plan.

Mitigation activities included in the treatment plan that will reduce the risk include:

- Conducting fuel reduction burns and other fuel reduction treatments around towns, suburbs and larger communities at high risk of impact from bushfires. This work will be undertaken by the fire agencies, in collaboration with landowners;
- Conducting fuel reduction burns and other fuel reduction treatments in strategic areas to minimise the likelihood of a fire run impacting communities. This work will be undertaken by the fire agencies and land owners/managers, in collaboration with landowners;
- Conducting cool season cultural burns on Cape Barren Island/Truwana;
- Constructing and maintaining fire trails and fuel breaks;
- Developing Community Protection Plans and Bushfire Response Plans to support communities when a bushfire is threatening their area. These plans will be developed by the TFS Bushfire Risk Unit in collaboration with local communities and stakeholders;
- Establishment or enhancement of Community Education initiatives, in order to enhance community preparedness and promote positive behaviour change. This work will be undertaken by the TFS Bushfire Risk Unit in collaboration with local communities and stakeholders;
- Conducting ongoing preparedness maintenance activities such as checking and protecting radio towers, fire detection towers, waterholes, and water and sewerage treatment plants. As well as ongoing maintenance of road networks, fire trails, firebreaks and fuel breaks by relevant agencies; and
- Slashing road side verges by the responsible agency.

5.2 Implementing Treatments

This BRMP does not guarantee a source of funding for treatment actions, nor does it provide a process for seeking funding. The organisations and individuals that are responsible for delivering the bushfire risk controls are responsible for developing further plans for implementation, as well as arranging resources and funding.

The BRMP is, however, intended to provide evidence and justification for where funding and resources are most appropriate to be committed by stakeholders to mitigate bushfire risk.

Many treatments identified in this plan will require environmental and cultural impact assessment. These assessments are the responsibility of the individual organisations and are not covered by this BRMP.

The following barriers have been identified with implementing several treatment types:

- Prioritisation and lack of funding and/or resources for treatments (e.g. fire trails, fuel breaks, fuel reduction burns) and for ongoing maintenance (e.g. fire trails and fuel breaks);
- A lack of communication between different community groups and management agencies presents some barriers where trying to present a unified approach to risk treatment throughout the FMA;
- Remoteness/accessibility issues and a lack of appliance availability/capability. E.g. aircraft capability and ground appliance capability on Cape Barren Island (1 x 4.1);
- Fuel reduction burns not being undertaken due to potential issues with:
    - Short weather windows for prescribed burning, due to variability in weather, earlier and longer fire season, shorter weather windows, burning weather prescriptions and potential smoke impacts;
    - Landowner unwillingness to have their land burnt or are not contactable as they live interstate or overseas and have outdated cadastral records;
    - Major tourism events and holiday periods in the middle of key burning windows delaying planned burns;
    - Ongoing challenges in obtaining sufficient smoke units to progress burning in some air catchments during stable weather conditions;
    - Limited resource availability to complete targeted high priority burns;
    - Untreatable/unsuitable vegetation for fuel reduction burning. E.g. Strezleki National Park;
    - Community concerns around environmental, visual and/or cultural impacts. E.g. Wedge tailed eagle's nests, sand blow, karst system damage, erosion;
    - Public perception of risk and opposition to burning.
- Cool season fuel reduction or mosaic burning not widely applied by fire management agencies at large;
- Effectiveness of planned burning in some areas is limited due to highly flammable nature and fast return period of vegetation;
- Remoteness and limited TFS resources available for requested community engagement;
- Issues with implementing other treatments on private property such as fuel breaks (fuel managed buffer zones); and
- Legislative restrictions and liability. May restrict potential collaborative efforts between agencies and private landholders to implement treatments.

5.3 Strategic Fire Infrastructure

Strategic fire infrastructure includes access roads, fire trails, tracks and water sources. These fire trails provide important access routes for firefighting, through or along the perimeter of bushland areas, and are potential control lines for major bushfires. This strategic fire infrastructure can be viewed through LISTmap.

5.4 Fuel Reduction Burning

Individual burn units may not been specifically identified in this interim BRMP but will need to be identified by further planning from the organisations responsible for carrying out the fuel reduction burning.

There are many kinds of vegetation for which it is not appropriate or practical to conduct fuel reduction burning (SFMC 2019); these vegetation communities are described as 'untreatable' and indicated on Map 5. The broad vegetation communities within the FMA can be seen on Map 6.

The Fuel Reduction Program that is funded, coordinated and implemented by TFS, PWS and STT is undertaken on behalf of and with the agreement of individual landowners or organisations (e.g. councils). The priorities of the Fuel Reduction Program are guided by the priorities identified in the treatment plans across all FMAs.

6. Monitoring and Review

6.1 Review

This Bushfire Risk Management Plan (BRMP), including appendices and maps, will be subject to a comprehensive review in 2020. The revised BRMP will be based on a new risk assessment that may include revised input methods. The review process will include examination of:

- Changes to the FMA, organisational responsibilities or legislation
- Changes to the bushfire risk in the area
- Major bushfire events
- Shortcomings in data that can be improved
- Change of usage of the area
- New or changed asset values within the FMA

Additional and changed data and values (both community and natural) identified by the review process will be supplied to the Bushfire Risk Unit (TFS) for inclusion in ongoing risk modelling being carried out at the state level.

6.2 Monitoring and Reporting

Progress towards completion of the treatments proposed will be monitored and reviewed at least every 12 months by the FMAC; this will be documented in the Implementation Status Report which should address as a minimum:

- Progress on implementation of treatments listed in the treatment plan, including
- Planning outcomes including mitigation plans, community protection plans, community response plans
- Implementation progress of community programs
- Completed fuel reduction burns
- Development and maintenance of Asset Protection Zones (APZ)
- Development and maintenance of strategic fire infrastructure

At a state-wide level, the SFMC will examine the impacts of the strategic burning program on risk management as part of the strategic fuel management program.

7. References

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8. Appendices

Appendix 1: Treatment Plan

Map Ref No.	Asset Name & Location	Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
	Flinders FMA	High		Fuel Reduction	Investigate potential to introduce cool burning as a treatment option on Flinders and outer Islands	FMAC	Revisit in 2020	
	Mt Tanner	High		Fuel Reduction	Fuel reduction burning Plan being developed. Delayed due to private property issues.	PWS (with support from TFS Bushfire Risk Unit if needed) Will require Hydro Tasmania collaboration	Autumn 2020	Difficult to burn due to flammable vegetation difficult to burn within prescriptions, wedge-tailed eagles etc. May need to reassess burn – downsize or burn in strategic sections High risk area and critical communication infrastructure Access and power issues
	Mt Tanner	Very High		Fuel Reduction	Investigate the potential for asset protection zone – strategic fuel breaks (buffer zone) & ongoing maintenance schedule (funding)	PWS (potential for collaboration with council for funding)	Revisit in 2020	Issue of ongoing maintenance of proposed fuel breaks – onus of responsibility lies with PWS. Subject to funding arrangements for implementation and ongoing maintenance.
	Castle Rock Point	High		Fuel Reduction	Fuel reduction burning	TFS Bushfire Risk Unit	Autumn 2020 *subject to land	Investigate strategic importance to provide protection to communities including Emita

Map Ref No.	Asset Name & Location	Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
							landowner approval	Community concern – sand blow, karst system, erosion are limitations to burning
	Castle Rock Point	High		Fuel Reduction	Investigate alternative mechanical fuel reduction treatments	TFS Bushfire Risk Unit	Revisit in 2020	Investigate strategic importance to provide protection to communities including Emita
	Darling Range	Very high		Fuel Reduction	Investigate fuel reduction burning& fire trails	PWS	Ongoing	Not had any fuel reduction treatment since 2003 bushfires. High re-accumulation of fuel Important values – communication tower – Walkers Look out, agricultural land etc.
	Wingaroo	*High (risk modelling required to check)		Fuel Reduction	Continue fuel reduction burning(15% completed in autumn 2015)	PWS	Autumn 2020	Nature reserve of high conservation value Strategic position – break is already done, fuel reduction burning ready to be implemented
	Wingaroo	High		Fuel Reduction	Risk modelling to check the priority of Wingaroo	TFS Bushfire Risk Unit	May 2020	
	Blue Rocks	High		Fuel Reduction	Fuel reduction burning	TFS Bushfire Risk Unit	Autumn 2020	Strategically important to provide protection to communities including Blue Rock and Whitemark

Map Ref No.	Asset Name & Location	Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
								Also protection of communications tower – Blue Rocks Tower 15-20 houses close together (house to house spread potential)
	Blue Rocks	High		Behaviour Change	Investigate the potential for further BRN – community engagement	TFS Community Development Unit	Revisit in 2020	Previous BRN involvement has occurred
	Lady Barron North	High		Fuel Reduction	Complete the rest of the fuel reduction burn (if within prescription for soil moisture) and/or investigate mechanical treatment (fuel break)	TFS (Bushfire Risk Unit with assistance of the local brigade)	Autumn 2020 (to complete remainder)	Strategically important to provide protection to communities including Lady Barron Treatment plant is critical asset to protect Prescriptions (low soil moisture) and presence of peat were original and possibly ongoing impediments to the completion of the entire burn
	Flinders Island Airport	High		Fuel Reduction	Continue with fuel reduction burn. Part of burn has already been completed on council land.	TFS (Bushfire Risk Unit & local brigade)	Autumn 2020 *Subject to absentee land owner approvals	Strategically important to provide protection to Airport infrastructure and communities including Whitemark Asset protection and break if cannot get to Darling Range

Map Ref No.	Asset Name & Location	Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
								Issues – smoke, resources
	Shag Lagoon	High		Fuel Reduction	Continue with fuel reduction burning (Flinders North and SHLCA002SFR burn units)	PWS	Autumn 2020	High priority for PWS
	Strzelecki	Low		Preparedness	Community Response/evacuation Plan =	PWS	Revisit in 2020	McCloud Forest Refugia Evacuation of walkers
	Patriarch	High		Fuel Reduction	Continue with fuel reduction burning (Eastern side of Patriarch Conservation Area)	PWS	Autumn 2020	Protection of Communication tower & Patriarch animal sanctuary Stop run to Lady Barren Already funded
	truwana (Cape Barren Island)	High		Cultural Burning & Fuel Reduction	Cape Barren Island Aboriginal Association (CBIAA) & truwana Rangers implementing plan and conducting multiple cultural burns to protect island assets.	CBIAA	Ongoing	
	Cape Barren Island	High		Preparedness	Investigate community response plans (Truwana & surrounding islands) & resource options/ availability.	TFS with collaboration with other agencies and CBIAA		Resourcing issues (1 x 4.1) and water supply
	Pot Boil Road	High		Fuel Reduction	Fuel reduction burning	TFS Bushfire Risk Unit	Autumn 2020	Strategically important to provide protection to communities including Lady Barron

Map Ref No.	Asset Name & Location	Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
	Logan's Lagoon	High		Fuel Reduction	Slashing road side verges	Flinders Council	ongoing continue existing schedule	Strategically important for emergency access / egress and protection of power infrastructure
	Summers Road	High		Fuel Reduction	Slashing road side verges	Flinders Council	ongoing continue existing schedule	Strategically important for emergency access / egress and protection of power infrastructure
	Memana Road to Patriarch Inlet	High		Fuel Reduction	Slashing road side verges	Flinders Council	ongoing continue existing schedule	Strategically important for emergency access / egress and protection of power infrastructure
	Cameron's Lagoon Road	High		Fuel Reduction	Roadside clean-up of woody debris left over from bushfire *Needs funding and permission and understanding of land tenure boundaries	Flinders Council & PWS	ongoing (revisit in 2020)	Strategically important for emergency access / egress and protection of power infrastructure Fuel break north -south
	Haulands Gap	High		Preparedness	Strategic Fire Trial ongoing maintenance to a class 5 standard	PWS	ongoing	Subject to funding
	Brougham's Sugarloaf	High		Preparedness	Strategic Fire Trail reopen to class 5 standard	PWS	ongoing	Subject to funding
	Sawyers Bay Track	High		Preparedness	Strategic Fire Trail reopen to class 5 standard	PWS	Ongoing	Subject to funding

Map Ref No.	Asset Name & Location	Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
	Summers road to Sellers Lagoon	High		Preparedness Strategic Fire Trail	Priority trail for east coast. Clear and bring back to Mineral earth, Class five standard.	PWS	Ongoing	Track reinstated by PWS after Lackrana wildfire Oct 2015. Works and maintenance program to be developed (subject to availability of resources) PWS to continue to seek funding
	Wallinipi to Badger Corner road	High		Preparedness Strategic Fire Trail	Clear and bring back to Mineral earth, Class five standard.	PWS	Ongoing	Works and maintenance program to be developed (subject to availability of resources) PWS to continue to seek funding
	Patriarch inlet road	High		Preparedness Strategic Fire Trail	Priority trail for east coast. Clear and bring back to Mineral earth, Class five standard.	PWS	Ongoing	Track reinstated by PWS after Lackrana wildfire Oct 2015. Works and maintenance program to be developed (subject to availability of resources) PWS to continue to seek funding
	Five Mile to beach	High		Preparedness Strategic Fire Trail	Priority trail for east coast. Reform to class 5 track standard	PWS	Ongoing	Works and maintenance program to be developed (subject to availability of resources) PWS to continue to seek funding
	Mt Tanner to Boat harbour road	High		Preparedness Strategic Fire Trail	Reform to class 5 track standard	PWS	Ongoing	Works and maintenance program to be developed (subject to availability of resources) PWS to continue to seek funding

Map Ref No.	Asset Name & Location	Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
	Logan's road to coast	High		Preparedness Strategic Fire Trail	Priority trail for east coast. Reform to class 5 track standard	PWS	Ongoing	Works and maintenance program to be developed (subject to availability of resources) PWS to continue to seek funding
	Wingaroo	Medium		Fuel Reduction	Annual slashing	PWS	Ongoing - continue existing schedule	
	Lady Barron	Medium		Fuel Reduction	Annual slashing	DPIPWE - Property Services	Ongoing - continue existing schedule	
	truwana / CBI	Medium		Fuel Reduction	Annual slashing	CBIAA	Ongoing - continue existing schedule	
	Grassland – Flinders Island	High		Fuel Reduction	Investigate options for giving authority for individual private property owners (neighbours) to slash adjacent to own property on crown land (PWS)	PWS / Property Services & TFGA	Ongoing - continue existing schedule	Grasslands are an important asset
	Power station	High		Fuel Reduction	Investigate the protection of critical infrastructure and ongoing routine maintenance	Hydro	Ongoing - continue existing schedule	Potential for grassland fires Solar panels surrounded by grass etc
	Whitemark TasWater Treatment Plant	High		Fuel Reduction	Establish buffer zones around infrastructure and ongoing maintenance	TasWater	Ongoing	

Map Ref No.	Asset Name & Location	Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
	Lady Barron TasWater Treatment Plant	High		Fuel Reduction	Establish buffer zones around infrastructure and ongoing maintenance	TasWater	Ongoing	
	Waste Landfill sites	High		Fuel Reduction	Investigate options (removal, other …)	Flinders Council	Revisit in 2020	
	Transfer station – Lady Barren	High		Fuel Reduction	Continue with treatment	Flinders Council	Ongoing	

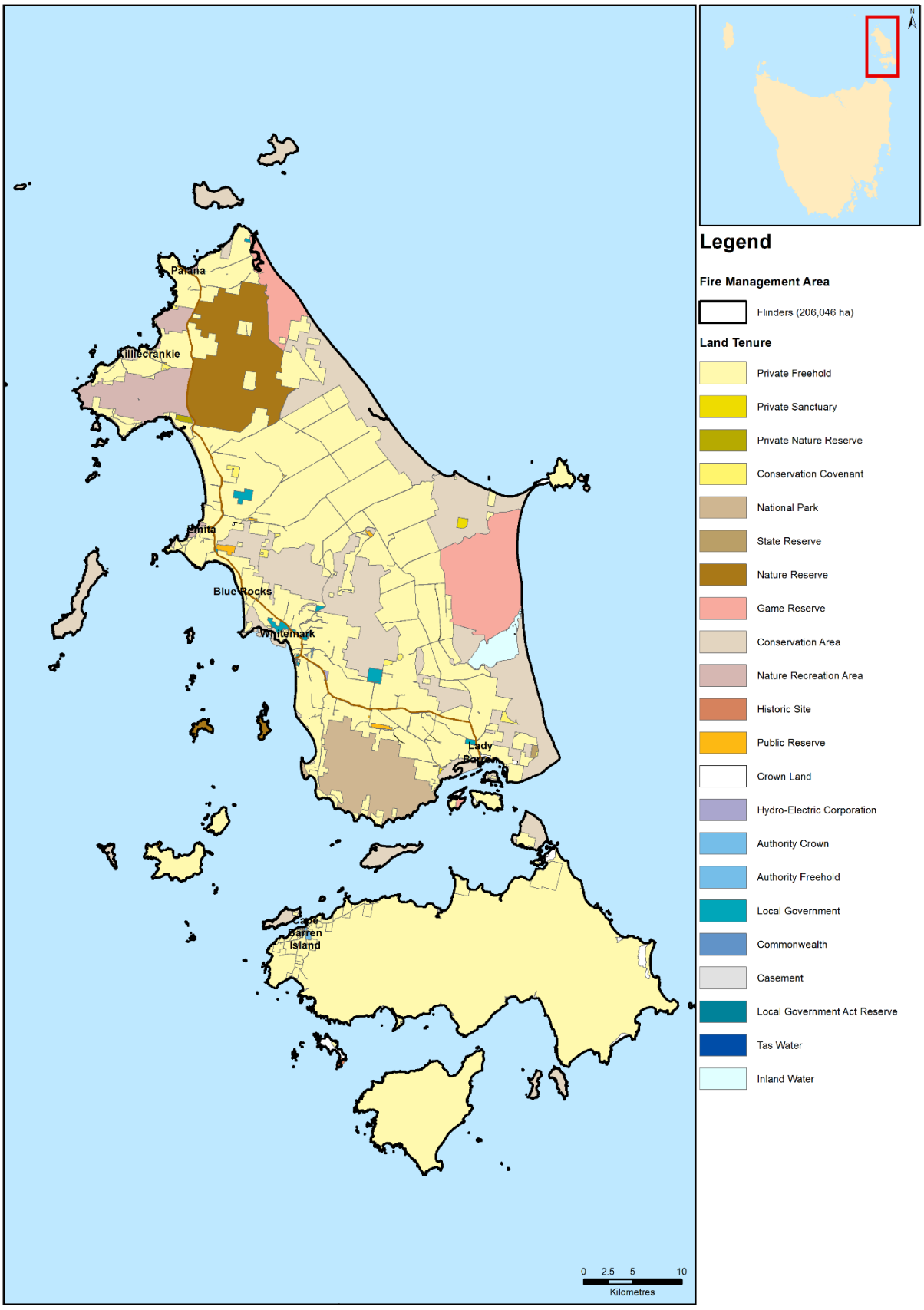
Appendix 2: Current Implementation Plans

Plan owner	Plan title	Year
Mitigation Plans		
TFS	Community Bushfire Mitigation Plan truwana/Cape Barren Island (Including Water Reservoir)	2015
TFS	Community Bushfire Mitigation Plan Lady Barron	2015
Response Plans		
TFS	Community Bushfire Response Plan Palana	2014
TFS	Community Bushfire Response Plan Killiecrankie Area (including West End and Leeka)	2014
TFS	Community Bushfire Response Plan Emita Area (including Lughrata)	2014
TFS	Community Bushfire Response Plan Whitemark Area (including Blue Rocks and Long Point)	2014
TFS	Community Bushfire Response Plan Lady Barron Area (including Badgers Corner)	2013
Protection Plans		
TFS	Community Bushfire Protection Plan Palana Area (including North East River)	2014
TFS	Community Bushfire Protection Plan Killiecrankie Area (including Chummys Cnr, Old Mans Head, Tanners Bay And West End)	2014
TFS	Community Bushfire Protection Plan Emita Area (including Lughrata and Fairhaven Road)	2014
TFS	Community Bushfire Protection Plan Whitemark Area (including Blue Rocks and Long Point)	2014
TFS	Community Bushfire Protection Plan Lady Barron (including Badger Corner)	2013
TFS	Community Bushfire Protection Plan truwana/Cape Barren Island	2015
Other		
PWS	Northern Region Strategic Fire Management Plan	2009
PWS	Fire Action Plan	Updated annually
Flinders Island Council	Flinders Island Emergency Management Plan	2015

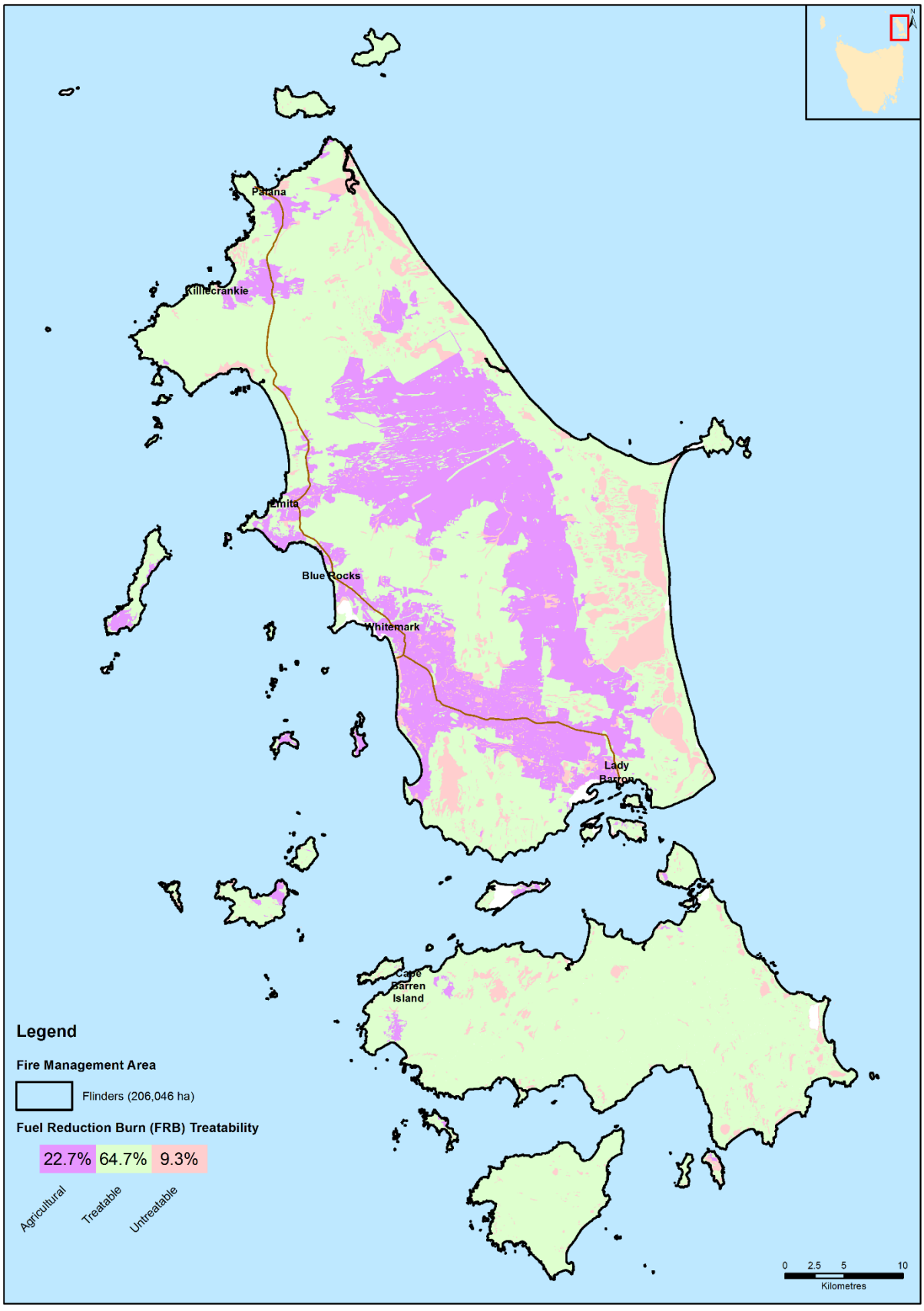
9. Maps

Map 1: Flinders Island Fire Management Area Location

Map 2: Tenure Summary Map for Flinders Island Fire Management Area



Map 5: Fuel Treatability for Flinders Island Fire Management Area



Map 6: Vegetation for Flinders Island Fire Management Area