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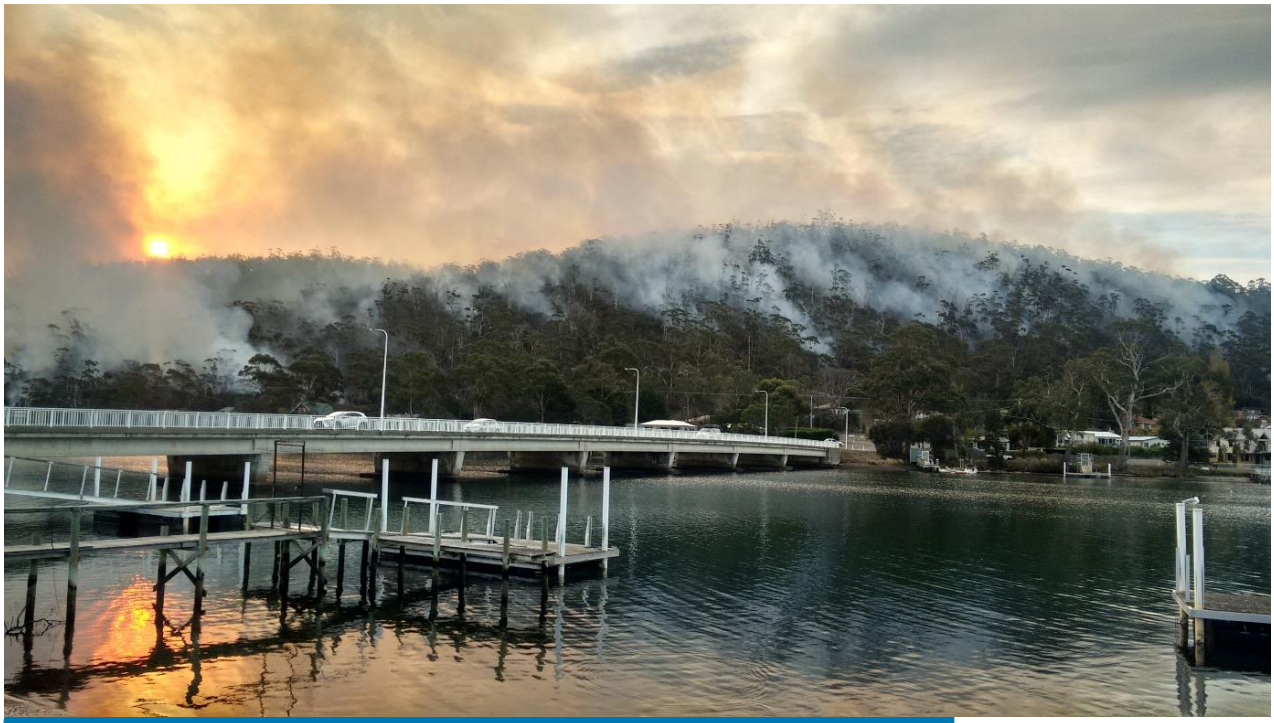

East Coast Fire Management Area Bushfire Risk Management Plan 2020

Tasmanian Government

Document Control

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Agency Endorsements

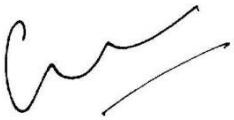
Agency	Name & Title	Signature	Date

Document Endorsement

Endorsed by East Coast Fire Management Area Committee

Mark Klop
Acting Chair, East Coast FMAC
Date: 6 April 2020

Accepted by State Fire Management Council



Ian Sauer
Chair, SFMC
Date: 7 May 2020

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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
DPIPWE	Department of Primary Industries, Parks, Water and Environment
DoD	Department of Defence
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 East Coast 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 East Coast FMAC will prepare a written report at least yearly for the SFMC 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.

This FMA covers the whole of the local government areas of Tasman, Sorell and Glamorgan-Spring Bay. The East Coast FMA comprises an area of 393,000 hectares, along the east coast of Tasmania, from the Tasman Peninsula in the south to Bicheno in the north. The entire area has a total permanent population of around 22,000 people, with 70% of this population residing in the Sorell municipality. However, tourists increase the population dramatically, e.g. 300,000 visitors are recorded annually to the Freycinet Peninsula. Most of this visitation occurs during the summer, when bushfire risk is highest.

In the Tasman and Glamorgan-Spring Bay Local Government Areas, the population is low and dispersed, which correlates with the major land uses, particularly the large proportion of land used for agriculture, forestry and conservation. The landscape of the East Coast FMA includes an almost continuous band of dry eucalypt forest stretching almost the entire length of the FMA. This could see a major fire impact a large proportion of the FMA under serious fire weather conditions.

The majority of recorded fires have been caused by human actions, however lightning strikes are an increasing cause of unplanned fires. There have been three very large fires (>10,000 ha) in the East Coast FMA in the past 30 years, occurring at Waters Meeting, Kellevie and Forcett.

Tourism is a major part of the economy in the East Coast FMA and is rapidly increasing. Many tourism hotspots are associated with iconic natural landscapes and have single, bushfire-prone access routes which places large numbers of people at risk of bushfires. The increase in tourism has also resulted in increased infrastructure in bushfire-prone areas, which combine to place additional pressure on already stretched, predominantly volunteer-based initial fire response capabilities.

The East Coast FMAC has reviewed the results of computer modelling to identify the following areas at highest risk of bushfire:

- Towns and larger communities within the FMA, including: Coles Bay, Bicheno, Dolphin Sands, Triabunna, Orford, Dunalley, Nubeena and Port Arthur.
- Broader areas including Nugent/Orielton/Forcett, Tasman and Forestier Peninsulas, and the Buckland Military Training Area.

Mitigation activities that have been recommended by the East Coast FMAC for reducing bushfire risk includes:

- Conducting fuel reduction burns and other fuel reduction treatments around towns 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 in strategic areas to minimise the likelihood of a fire run impacting communities. This work will be undertaken by the fire agencies, in collaboration with landowners.
- 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 Community Fire Safety Division 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 Community Fire Safety Division in collaboration with local communities and stakeholders.
- Other prescribed activities specific to community needs.

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 East Coast 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 FMA.

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 East Coast 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 East Coast Fire Management Area

The plan area covers approximately 393,000ha, including the entire local government areas of Tasman, Sorell and Glamorgan-Spring Bay (Map 1). The plan area follows the coastline from the Tasman Peninsula in the South to Bicheno in the North, and extends inland approximately 35km at its widest point. Altitude varies from sea level along the coast to 742m above sea level at Moaners Tier, located just to the east of Tooms Lake. The major towns within the East Coast FMA include Nubeena, Dunalley, Dodges Ferry, Sorell, Orford, Triabunna, Swansea, Coles Bay and Bicheno.

Over half of the East Coast FMA consists of private property, with public land including PWS Reserves, and timber production areas making up the majority of the remaining area (Map 2).

Table 1 shows the composition of different land tenures within the East Coast FMA.

Land Manager/Agency	% of Land Managed within the FMA
Private Property	55
DPIPWE (including Parks and Wildlife Service and Crown land Services)	30
Sustainable Timber Tasmania	10
Other	5

Table 1: Overview of land tenure in the East Coast FMA.

2.2 Fire Environment

The East Coast FMA is dominated by dry Eucalypt forest (55%) and agricultural areas (23%). Wet Eucalypt forests (10%) exist on more productive soils in higher rainfall areas, which are predominantly located around the Tasman Peninsula and higher elevations of the Eastern Tiers. Highly flammable coastal complexes are common around Coles Bay, the Freycinet Peninsula and the Tasman Peninsula. The vegetation in the East Coast FMA can be categorised into 11 broad groups, shown in Map 4.

The landscape of the East Coast FMA includes an almost continuous band of dry eucalypt forest stretching almost the entire length of the FMA. This could see a major fire run impacting a large proportion of the FMA under serious fire weather conditions.

The causes of fire, either through ignition by lightning or caused by human actions have not been well documented prior to 1990. Records show that the causes of ignition for the majority of fires were unknown, escaped recreational fires (e.g. campfires), arson and escapes from privately managed planned burns.

There have been a number of major bushfires in the East Coast FMA since 1994. Planned burning undertaken as part of the Fuel Reduction Program has occurred since 2014. Larger fires of both types are summarised in Table 2.

Fire Name	Area Burnt (ha)
Wildfires	
Phipps Road, Runnymede 2016	2870
Inala Rd 2013	23400
Tasman Highway Bicheno 2013	4830
Douglas Apsley escaped FRB 2007/08	8900
Kellevie 2006	16000
Oakwood Hill 2003	4500
Thirty Acre Creek 1995	4000
Waters Meeting 1994	12400
Baldy Hill 1994	6900
Donkeys Track 1994	8327
Major Planned Burns Undertaken:	
Station Creek, NW Orford 2018 and 2019	1160 and 435
Simpsons Hill, Buckland 2015	740
Apslawn Conservation Area 2015	445
Tin Mine, Coles Bay 2014	1280

Table 2: East Coast FMA major bushfires since 1982, and large planned burns since 2014.

The economy of the East Coast FMA is driven by agriculture/aquaculture and tourism, with the area seeing a major and rapid increase in tourist numbers over the past ten years. Many tourism hotspots are associated with iconic natural landscapes, e.g. Tasman peninsula and Freycinet National Park, with tourist numbers massively increasing the population size during the warmer months of the year. This increase in population has resulted in an increase in development and infrastructure, which combine to place additional pressure on already stretched, predominantly volunteer-based initial fire response capabilities.

Many access routes to major tourist destinations are in bushfire-prone areas, with a single road in and out. This presents additional issues for community safety during both wildfires and planned burns, with road closures having potentially major impacts on the local economy.

Timeframes and locations available for fuel reduction burns in some parts of the East Coast FMA are restricted due to the potential impact on tourism. An expansion in the viticulture industry throughout the East Coast FMA also impacts the available timeframes for fuel reduction burns due to the potential for smoke to taint grapes prior to autumn harvest.

2.3 Climate and Bushfire Season

For much of the year Tasmania's weather is dominated by westerly weather patterns. This results in moist air being forced over rugged mountains in western and central areas of Tasmania causing heavy rainfall in these areas as the air moves eastward. The result is relatively dry air reaching eastern parts of Tasmania. The exception to this is the East Coast Low that forms in the Tasman Sea and brings moist easterly winds, often causing heavy localised rainfall events. Falls in excess of 100 mm in a 24 hour period are not uncommon. On average one or two of these events is experienced each year. Within the East Coast FMA average annual rainfall varies from 593 mm at Swansea to 1148 mm at Palmers lookout on the Tasman Peninsula. The East Coast FMA can experience long periods of dryness with the Soil Dryness Index (SDI) being above 100 mm for much of the year.

Temperatures at coastal sites are moderated by the maritime influence with areas further inland experiencing more extremes of temperature.

Fire weather can be experienced in parts of the FMAC throughout the year, June/July possibly being the exceptions. Weather conditions suitable for prescribed burning can occur throughout the year, depending on fuel moisture content and appropriate controls in place to extinguish the fire. However, typically conditions suitable for prescribed burning occur from late winter to the end of spring, and throughout autumn.

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. Projections from climate change models adapted for Tasmania suggest increases in hot days and warm nights; increases in dry days and longer dry spells; more warm spells and heat waves; and more wet days but fewer cold spells and cold waves. The number of total fire ban days occurring due to severe fire weather each summer has also started to increase, with these also occurring earlier in the fire season (White, et al. 2010).

Change in climate over the past decade has also seen the occurrence of dry lightning strikes causing fire ignitions, as a combined result of dry thunderstorms and consistently dry fuel conditions. In addition, changes in climate have reduced the availability of water for firefighting, reduced the predictability of timeframes for fuel reduction activities and resulted in protracted fire seasons.

2.4 Population and Community

The East Coast FMA has a low total population and low population densities across the area. The entire area has a total permanent population of around 22,000 people (Australian Bureau of Statistics – ABS, 2016), with 70% of this population residing in the Sorell municipality. The highest population densities occur around towns and in the southwest of the area, closest to the outer settlements of Hobart, with much of this population commuting to the greater Hobart area daily for work.

Many areas within the East Coast FMA experience a dramatic increase in visitation during the summer tourism period. As an example, the Freycinet Peninsula has annual visitor numbers of around 300,000 individuals, with most of this visitation occurring during the summer when bushfire risk is highest.

In the Tasman and Glamorgan-Spring Bay Local Government Areas, the population is low and dispersed, which correlates with the major land uses, particularly the large proportion of land used for agriculture, forestry and conservation. Major sources of employment include accommodation and food services, retail trade, agriculture/aquaculture and construction (NIEIR 2018). This is reflected in the >50% of unoccupied dwellings in the Glamorgan-Spring Bay and Tasman Local Government Areas (ABS, 2016), with these dwellings predominantly used for either short-term visitor accommodation or are family owned shacks.

The main areas of population growth are focussed around Dodges Ferry and Sorell with many new residential housing developments occurring in these areas. In more regional areas, the population is aging and becoming more transient, which has impacted on the recruitment and retention of volunteer firefighters. There has also been an increase in community expectations of the responsibility of the fire service to protect people and dwellings from bushfires, with a decreased expectation of personal responsibility. This places additional pressure on local brigades to respond to incidents across an increased population and infrastructure with fewer volunteers and no additional resources.

2.5 Community Engagement

The East Coast FMAC aims to reduce the risk of the community from bushfires. This will be implemented by:

- FMAC members providing valuable local knowledge about bushfire risks and opportunities for fuel mitigation treatment,
- Working with communities to improve their bushfire protection strategies through the delivery of the Bushfire Ready Neighbourhoods program and other community activities, in partnership with local fire brigades, community organisations and Councils,
- Engaging with industry organisations to improve outcomes of bushfires and planned burns, for example:
    - the wine industry around the issue of smoke taint,
    - tourism operators/networks to improve tourist safety during bushfires and assist in developing plans to manage the impacts of bushfire,
    - TFGA to support farmers with bushfire management,
- Engaging with utility companies and local councils to improve bushfire safety of critical infrastructure.

Since the inception of the TFS Fuel Reduction Program in 2014, Community Engagement has been undertaken in the East Coast FMA. This has included the Bushfire Ready Neighbourhoods program being run throughout the Tasman Peninsula and in Dolphin Sands from 2014-2016. Additional community engagement activities have been undertaken as requested by local volunteer fire brigades or the community. Several local volunteer brigades also actively undertake engagement work within their local communities.

The East Coast FMAC noted particular concerns that bushfires in Tasmania are becoming bigger and less predictable, while volunteer resources to manage bushfires is decreasing in the East Coast FMA. Tasmania's reliance on shared resources with interstate fire agencies may also be problematic when large fires are occurring in multiple states at the same time. It was also noted that the local economy may take many years to recover after a large bushfire, with the economy dependent on tourism focussed on iconic wilderness features (e.g. Freycinet and Tasman peninsulas), and with single access roads.

The East Coast FMAC also identified the need for a holistic approach to risk management, with the need to share identified risks with local government Emergency Management Committees.

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 East Coast FMA may include:

- A vehicle fire on a day of FFDI 44 ignites a bushfire that spreads and impacts the town of Orford, resulting in destruction of numerous houses, community buildings and tourist accommodation.
- A lightning strike on a day of FFDI 52, following on from a several years of below average rainfall, ignites a bushfire that spreads quickly and cuts off the town of Coles Bay, resulting in loss of lives and the destruction of numerous houses, tourist accommodation. Loss of accommodation, critical infrastructure and the aesthetic values of the landscape results in a long-term impact to tourism industry.
- A fire on a day of FFDI 60 ignites a bushfire near Eaglehawk Neck, shutting down the only access road and causing major disruption of access and services for several days.

3.2 State-wide 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)
- Private lands managed for nature conservation with a conservation covenant registered on the land title are permitted to have planned burns undertaken with authorisation from the Minister
- Suppression response preparedness – e.g. TFS local volunteer brigades, STT and PWS crews, aircraft, pre-positioning of firefighting resources, including aircraft and strike teams
- Weather forecasting (Bureau of Meteorology) and fire behaviour prediction (TFS, STT, PWS)

3.3 Fire Management Area Controls

The following controls are in place, or being developed, to assist in the management of bushfires within the East Coast FMA:

- 19 volunteer fire brigades, plus crews from PWS and STT, supported by
- Fuel reduction burns have occurred around Bicheno, Orford/Spring Beach, Nugent, Eaglehawk Neck, Nubeena
- Fuel breaks for asset protection are managed by land management agencies and landowners, including STT, PWS, private forestry companies and others
- PWS reserves closures on bad fire days
- Community engagement programs, including Bushfire Ready Neighbourhoods, and community development opportunities
- Preparedness planning – Community Protection Plans, Bushfire Response Plans
- PWS Emergency Management Plans
- Department of Defence Bushfire Risk Management Plan, including a “Prepare, Act, Survive” Plan

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

4.2 Evaluating Bushfire Risks

The East Coast FMAC has reviewed the results of computer modelling to identify the following areas at highest risk of bushfire. These areas are detailed further in Appendix 1.

- Towns and larger communities within the FMA are at risk of being heavily impacted by a bushfire. This may be because of their proximity to bushfire-prone vegetation, a single access road, or access roads being within bushfire-prone vegetation. These towns and communities include: Coles Bay, Bicheno, Dolphin Sands, Triabunna, Orford, Dunalley, Nubeena and Port Arthur.
- Broader strategic areas including Nugent/Orielton/Forcett, the Tasman and Forestier Peninsulas, and the Buckland Military Training Area. These areas are generally large areas of bushfire-prone vegetation that, if unmanaged, will develop fuels that will allow a fire to spread into a very large fire that has the potential to impact on many towns or communities.

Mitigation activities that have been recommended by the East Coast FMAC for reducing bushfire risk includes:

- Conducting fuel reduction burns and other fuel reduction treatments around towns 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 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.
- Supporting landowners to develop their own fire management and response plans or property protection plans. This work will be undertaken strategically by the TFS Community Fire Safety Division where communities support the process.
- 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 Community Fire Safety Division 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 Community Fire Safety Division in collaboration with local communities and stakeholders.
- Other prescribed activities specific to community needs.

5 Bushfire Risk Treatment

5.1 Treatment Plan

The East Coast 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.

5.2 Implementing Treatments

This Bushfire Risk Management Plan (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 since the inception of the Fuel Reduction Program:

- Planned burns not being undertaken due to potential issues with:
    - Short weather windows for prescribed burning, due to less predictable weather, earlier fire season, shorter weather windows and potential impacts of smoke taint on vineyards
    - Landowner unwillingness to have their land burnt
    - Issues with replacement costs of old rural fencing
        - High-levels of visitation/tourism at critical sites (e.g. Freycinet peninsula, Tasman National Park) occurring during key burning windows reducing opportunities to undertake planned burning safely
        - Ongoing challenges in obtaining sufficient smoke units to progress burning in some air catchments during stable weather conditions.
        - A lack of a process for prioritisation of burn units across fire agencies to assist in targeting high priority burns when available fire resources are limited.
- Effectiveness of planned burning in some areas is limited (e.g. Dolphin Sands) due to highly flammable nature and fast return period of vegetation
- Limited resources available for initial suppression of fires, due to volunteer capacity
- Limited TFS resources available for requested community engagement
- Limited uptake and retention of community engagement programs, due to competing priorities/low interest levels of the community, and limited support from key community groups (e.g. local brigades).

5.3 Strategic Fire Infrastructure

Strategic fire infrastructure includes access roads, fire trails, tracks and water sources. Given the suitability of vegetation for fuel reduction burning or other forms of treatment, no strategic fire infrastructure has been identified for the East Coast FMA. This does not preclude strategic fire infrastructure being identified in the future.

5.4 Fuel Reduction Burning

Individual burn units are not identified in this 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 4. The broad vegetation communities within the FMA can be seen on Map 5.

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 Community Fire Safety Division (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.

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Appendices

Appendix 1: Treatment Plan

Asset Name & Location	Treatment Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
Coles Bay	High	18	Fuel Reduction, Preparedness	PWS have a local fire management strategy in place and have completed some burning. Investigate mitigation options in a tenure blind approach. BRU to provide advice on procedures to be used when planning and undertaking burning on Private Property.	TFS, PWS	Ongoing	Popular tourist town. Many shacks and holiday units as well as permanent residents. Gateway to Freycinet Peninsula. Transient population, isolated area. Challenges for response resources - high numbers of people during summer, low numbers of volunteers.
Coles Bay	High	18	Preparedness	TFS Community Bushfire Protection and Response Plans prepared. Provide advice and assistance to tourists during bushfires.	TFS	Completed	Many tourists have limited English; limited access/egress routes. Tourist pamphlets developed, including in Mandarin, to help tourists make decisions during bushfires. Tourism Network assists with providing info to tourists.
Coles Bay	High	18	Preparedness	TFS District Officers to include info from risk register/treatment plan in annual Risk To Resource Project. Consider having IMT stood up for evacuation on hot days.	TFS	Oct 2019 - ongoing	Response capability in Coles Bay is very low during summer, including by police, etc., but risks are elevated due to high visitor numbers.
Coles Bay	High	18	Behavioural Change Initiatives	BRU to provide technical advice to private landowners on asset protection planning.	TFS	Ongoing	

Asset Name & Location	Treatment Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
Triabunna/ Orford/ Shelly Beach	High	26	Fuel Reduction	TFS Bushfire Mitigation Plan developed for Orford and Shelly Beach – numerous FRB's implemented and planned. Continue to undertake burning in areas as per the TFS Bushfire Mitigation Plan. Assess adjacent areas including the Thumbs Reserve, Alma Hill and parts of the BMTA and identify priority areas for treatment based on risk. PWS - MacLaines Creek FRB planned for Autumn 2020, including multiple tenures. BRU to provide advice on procedures to be used when planning and undertaking burning on Private Property.	TFS, PWS	Ongoing	Popular seaside town in close proximity to dry forest.
Triabunna/ Orford/ Shelly Beach	High	26	Preparedness	TFS Bushfire Protection and Response Plans prepared for Orford and Shelley Beach.	TFS	Completed	
Triabunna/ Orford/ Shelly Beach	High	26	Behavioural Change Initiatives	Bushfire Ready Neighbourhoods event run in 2017, plus one-off community events/activities when required. BRU to provide technical advice to private landowners on asset protection planning.	TFS		
Bicheno	Moderate	16	Fuel Reduction	TFS Bushfire Mitigation Plan developed. Multiple FRB's have been undertaken since 2014 with further FRBs currently being planned by PWS. Review areas burnt in 2014/15 to assess fuel accumulation. Continue investigating mitigation options and undertaking mitigation works. BRU to provide support to local brigades and PWS to ensure that planned mitigation activities occur.	TFS/PWS	Ongoing	Popular seaside town in close proximity to dry forest.
Bicheno	Moderate	16	Preparedness	There may be potential for strategic fire breaks around Bicheno - assess fire trails/breaks for	TFS/PWS	Ongoing	

Asset Name & Location	Treatment Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
				strategic importance. Consider reviewing Mitigation Plan.			
Bicheno	Moderate	16	Preparedness	Bushfire Protection and Response Plans undertaken. BRU to provide technical advice to private landowners on asset protection planning.	TFS	Ongoing	
Eaglehawk Neck/ Doo Town	High	20	Fuel Reduction	Continue investigating mitigation options and undertaking mitigation works. BRU to provide advice on procedures to be used when planning and undertaking burns on private property.	TFS	Ongoing	Popular coastal town with many shacks and holiday homes. Permanent residents and several accommodation providers. High visitation during tourism season. Surrounded by heavy forested areas and coastal vegetation.
Eaglehawk Neck/ Doo Town	High	20	Fuel Reduction	PWS have a current fire management plan for this area. A number of FRB's have been undertaken and more are planned. Appropriate support to be provided to allow PWS to continue implementing current fire management plans.	TFS/PWS	Ongoing	Burn completed at Doo Town Autumn 2019. Others planned for Devils Kitchen/Tasman Arch. Challenge: identifying burns to critical assets, e.g. Three Capes
Eaglehawk Neck/ Doo Town	High	20	Preparedness	TFS Bushfire Protection and Response Plans prepared.	TFS	Completed	
Eaglehawk Neck/ Doo Town	High	20	Behavioural Change initiatives	Bushfire Ready Neighbourhoods program undertaken for Tasman Peninsula towns 2014-2015. Tourism Network relationship is working to provide info to travellers.	TFS	Completed	
Eaglehawk Neck/ Doo Town	High	20	Behavioural Change Initiatives	BRU to provide technical advice to private landowners on asset protection planning.	TFS	Completed	
Nubeena (including White Beach and Roaring Beach)	Med	23	Fuel Reduction	BRU to prepare Bushfire Mitigation Plan. Continue investigating mitigation options and undertaking mitigation works. Norske completed burning 150 ha around Stormlea Rd. BRU to provide advice on procedures to be used when planning and undertaking burns on private property. Consideration to be given to Roaring	TFS	Ongoing	Main town for the Tasman Peninsula. Location of important community facilities.

Asset Name & Location	Treatment Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
				Beach area - assess impacts through to Saltworks.			
Nubeena (including White Beach and Roaring Beach)	High	23	Behavioural Change Initiatives	Bushfire Ready Neighbourhoods program undertaken for Tasman Peninsula towns 2014-2015. Tourism Network relationship is working to provide info to travellers. Property preparation and assessment day undertaken by BRN.	TFS	Completed	
Nubeena (including White Beach and Roaring Beach)	Med	23	Preparedness	TFS Bushfire Protection and Response Plans prepared.	TFS	Completed	
Port Arthur	High	27	Fuel Reduction	PWS have undertaken one FRB with more planned. Appropriate support to be provided to allow PWS to continue implementing current fire management plans. Continue investigating mitigation options and undertaking mitigation works. BRU to provide advice on procedures to be used when planning and undertaking burns on Private Property. FRB undertaken by historic site along the Port Arthur township (Carnarvon, Stewarts Bay)	TFS	Ongoing	Popular tourist destination. Surrounding vegetation has limited opportunities for large scale fuel reduction burning.
Port Arthur	High	27	Preparedness	TFS have prepared Bushfire Protection and Response plans for this area. BRU to provide technical advice on asset protection planning.	TFS	Ongoing	
Taranna	Med	28	Fuel Reduction	Continue investigating mitigation options and undertaking mitigation works.	TFS	Ongoing	Small town that is a popular point for tourists. Has had fires impact on areas adjacent to the town in the past.

Asset Name & Location	Treatment Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible Organisation	Completion Date Proposed	Comment
Taranna	Med	28	Preparedness	Bushfire Protection Plans prepared. TFS to prepare Community Bushfire Response Plan. BRU to provide technical advice to private landowners on asset protection planning.	TFS	Ongoing	
Taranna	Med	28	Behavioural Change Initiatives	Bushfire Ready Neighbourhoods program undertaken 2014-2019.	TFS	Ongoing	
Dolphin Sands	Med	19	Fuel Reduction	FRBs undertaken by TFS with one more planned. Investigate mitigation options for this area. BRU to coordinate fuel reduction burning in association with the TFS District. BRU to provide advice on procedures to be used when planning and undertaking mitigation works on Private Property.	TFS	Ongoing	Small coastal community surrounded by dry forest types and coastal vegetation.
Dolphin Sands	Med	19	Behavioural Change Initiatives	Bushfire Ready Neighbourhoods program undertaken 2016-2018.	TFS	Completed	Community have become active post-BRN to decrease risk.
Dolphin Sands	Med	19	Preparedness	TFS have prepared Bushfire Protection and Response plans for this area. BRU to provide technical advice on asset protection planning.	TFS	Ongoing	Community concern that there is no Nearby Safer Place identified. This is an indication of the level of risk of living in that area. The beach is the best option, but does not meet standards of a Nearby Safer Place in severe fire weather.
Dunalley	High	N/A	Fuel Reduction	Develop fuel reduction options and plan burns if required.	TFS	Ongoing	Coastal community impacted by 2013 Inala Road fire. Fuel loads in forested area to the north west are beginning to recover
Dunalley	High			Consider BRN for future round, run events as required to support community preparedness.	TFS	Ongoing	
Dunalley	High	N/A	Preparedness	TFS Bushfire Protection and Response plans are currently in place.	TFS	Completed	

STRATEGIC AREAS

Asset name & Location	Treatment Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible organisation	Completion date proposed	Comment
Eastern Tiers west of Swansea	High	21	Fuel Reduction	Draft mitigation plan prepared by SFM for area. Prepare operational burn plans for priority Fuel Management Units. BRU to provide further advice in relation to resourcing for large scale FRB planning and implementation. PWS planning burns around Tooms Lake (2,500 ha - 5,000 ha), but considering breaking up into smaller blocks.	TFS/PWS	Ongoing	Strategically important in overall fire management of the East Coast FMA
Swanport/ Triabunna/ Orford	High	29	Fuel reduction	Buckland Military Training Area has current fire management plans in place. DoD to implement current BMTA plans, consider including neighbouring private property where appropriate with BRU assistance. BRU to provide advice on procedures to be used when planning and undertaking mitigation works on private property. Potential impacts down to Copping.	Dept of Defence/TFS	Ongoing	Strategically important to provide protection to communities of Triabunna and Orford
Buckland Military Training Area	Mod	17	Fuel Reduction	DoD have a fire management plan covering the Buckland Military Training Area. Implement current DoD fire management plan. DoD lease requires burns to be run past PWS first. Fire Management Plan requires renewal in 2020 - will not prescribe specific burns, but will provide fire trails, etc. Provide necessary support to DoD to allow current plan to be implemented. Investigate mitigation options areas surrounding Triabunna and Orford.	Dept of Defence/TFS	Ongoing	Surrounding forested areas pose a risk to the town, but also are strategically important to East Coast fire management. Fire history data indicates numerous un-reported bushfires and fuel reduction burns have been completed in the forested areas to the north of Buckland since 2014.
Buckland Military Training Area	Mod	17	Fuel Reduction	BRU have prepared a bushfire mitigation plan for area north west of Buckland. BRU to provide advice on procedures to be used when planning and undertaking burning on Private Property.	TFS	Ongoing	

Asset name & Location	Treatment Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible organisation	Completion date proposed	Comment
Mayfield/ Rocky Hills	High	22	Fuel Reduction	Draft mitigation plan prepared by SFM for the area. Prepare operational burn plans for priority Fuel Management Units. BRU to provide further advice in relation to resourcing for large scale FRB planning and implementation.	TFS	Ongoing	Strategically important in overall fire management of the East Coast FMA
Nugent/ Orielton/ Forcett/ Wielangta	High	24/25	Fuel Reduction	One fuel reduction burn completed near Orielton. Multiple bushfires since 2013 have reduced fuel loads in strategic areas. TFS to co-ordinate assessment of bushfire risk and identify priority areas for treatment. PWS are planning a number of burns in the Wielangta and Maria Island area. Relevant agencies to investigate and implement mitigation options in priority areas, based on tenure. BRU to provide advice on procedures to be used when planning and undertaking burning on private property.	TFS, PWS, Norske	Ongoing	Mainly dry forest and grasslands with many residences located throughout the area. Many rural holdings are also located in these areas. Norske undertaken/planning 450 ha burning (Nugent/Wattle Hill). Maria Island has very high fuel loads and high visitation.
Nugent/ Orielton/ Forcett/ Wielangta	High	24/25	Preparedness	BRU to provide technical advice on asset protection planning.	TFS	Ongoing	

Asset name & Location	Treatment Priority	Treatment Number	Treatment Category	Treatment Type & Detail	Responsible organisation	Completion date proposed	Comment
Tasman/ Forestier	Med	N/A	Fuel Reduction	PWS and forestry have burn plans in place for high visitation areas associated with Three Capes Track and assets. PWS have undertaken burns at Lime Bay and around Tasman National Park. TFS to co-ordinate assessment of bushfire risk and identify priority areas for treatment. Relevant agencies to investigate and implement mitigation options in priority areas, based on tenure. BRU to provide advice on procedures to be used when planning and undertaking burning on private property.	TFS	Ongoing	Strategically important to provide protection to communities on the Tasman Peninsula. Mixture of vegetation types, including Eucalypt plantations.
Tasman/ Forestier	Med	N/A	Behavioural Change Initiatives	TFS Bushfire Ready Neighbourhoods Program has covered the lower Tasman area, and several brigades have active volunteer community engagement officers who undertake regular activities.	TFS	Ongoing	
Dodges Ferry/ Dunalley/ Boomer Bay	Med	138	Fuel Reduction	Liaise with local brigades, monitor fuel loads and investigate mitigation options.	TFS	Ongoing	Area impacted by Inala Road Fire 2013. Forest fuel loads are recovering and modelling indicates potential for bushfire to again impact human settlement areas
Dodges Ferry/ Dunalley/ Boomer Bay	Med	138	Preparedness	TFS Bushfire Protection and Response plans are currently in place for Dunalley/Boomer Bay and Dodges Ferry/Lewisham/Carlton.	TFS	Ongoing	
Dodges Ferry/ Dunalley/ Boomer Bay	Med	138	Behavioural Change Initiatives	Potential BRN program in next round	TFS	Ongoing	

Appendix 2: Current Implementation Plans

Plan Owner	Plan Title	Year	Treatment Number
TFS	Coles Bay: Community Bushfire Protection Plan and Bushfire Response Plan	2013	18
PWS	Freycinet National Park Emergency Response Plan	2011	18
TFS	Bicheno: TFS Bushfire Mitigation Plan	2013	16
TFS	Bicheno: Community Bushfire Protection Plan and Bushfire Response Plan	2013	16
TFS	Swansea: Community Bushfire Protection Plan and Bushfire Response Plan	2013	21
TFS	Cranbrook: Community Bushfire Protection Plan and Bushfire Response Plan	2013	21
TFS	Dolphin Sands: Community Bushfire Protection Plan and Bushfire Response Plan	2013	19
TFS	Triabunna: Community Bushfire Protection Plan and Bushfire Response Plan	2013	29
Department of Defence	Buckland Military Training Area Fire Management Strategy	2019	17
TFS	Copping: Community Bushfire Protection Plan and Bushfire Response Plan	2015	24/25
TFS	Taranna: Community Bushfire Protection Plan and Bushfire Response Plan	2014	28
TFS	Nubeena: Community Bushfire Protection Plan and Bushfire Response Plan	2014	23
TFS	Port Arthur: Community Bushfire Protection Plan and Bushfire Response Plan	2014	27
TFS	Eaglehawk Neck/Doo Town: Community Bushfire Protection Plan and Bushfire Response Plan	2013	20
PWS	Tasman National Park Emergency Response Plan	2018	20
PWS	PWS Southern Region Strategic Fire Management Plan	2011	N/A
TFS	Dodges Ferry: Community Bushfire Protection Plan and Bushfire Response Plan	2018	138
TFS	Dunalley/Boomer Bay: Community Bushfire Protection Plan and Bushfire Response Plan	2018	138

Explanation of Plans:

Community Bushfire Response Plan: The purpose of a Bushfire Response Plan is for emergency managers to better protect communities and their assets during bushfire emergencies.

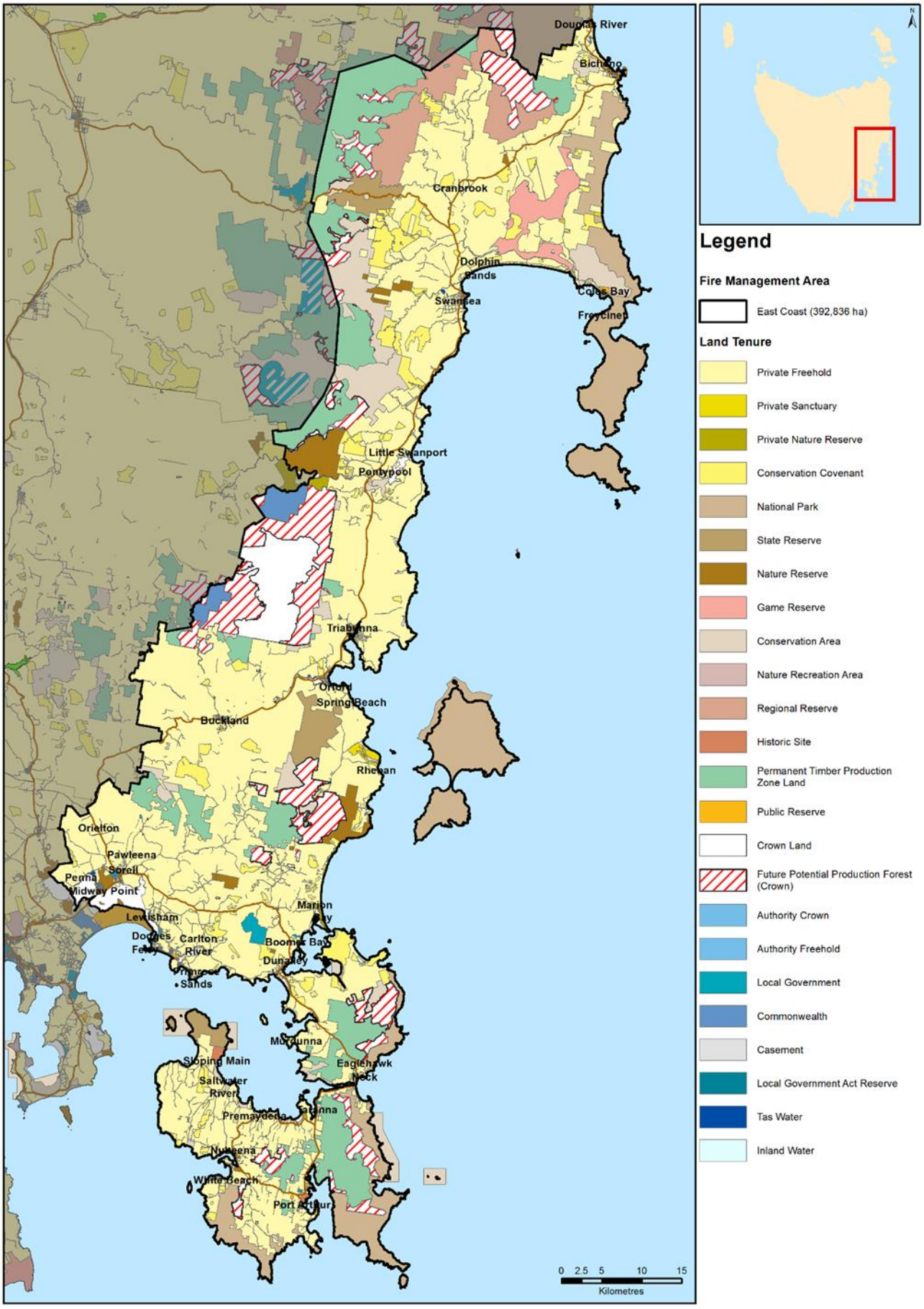
Community Bushfire Protection Plan: The purpose of a Community Bushfire Protection Plan is for community members to be provided with local information to assist with bushfire preparation and survival.

Community Bushfire Mitigation Plan: The purpose of a TFS Bushfire Mitigation Plan is to provide guidance regarding bushfire fuel management; to increase community bushfire safety and provide protection to important community assets.

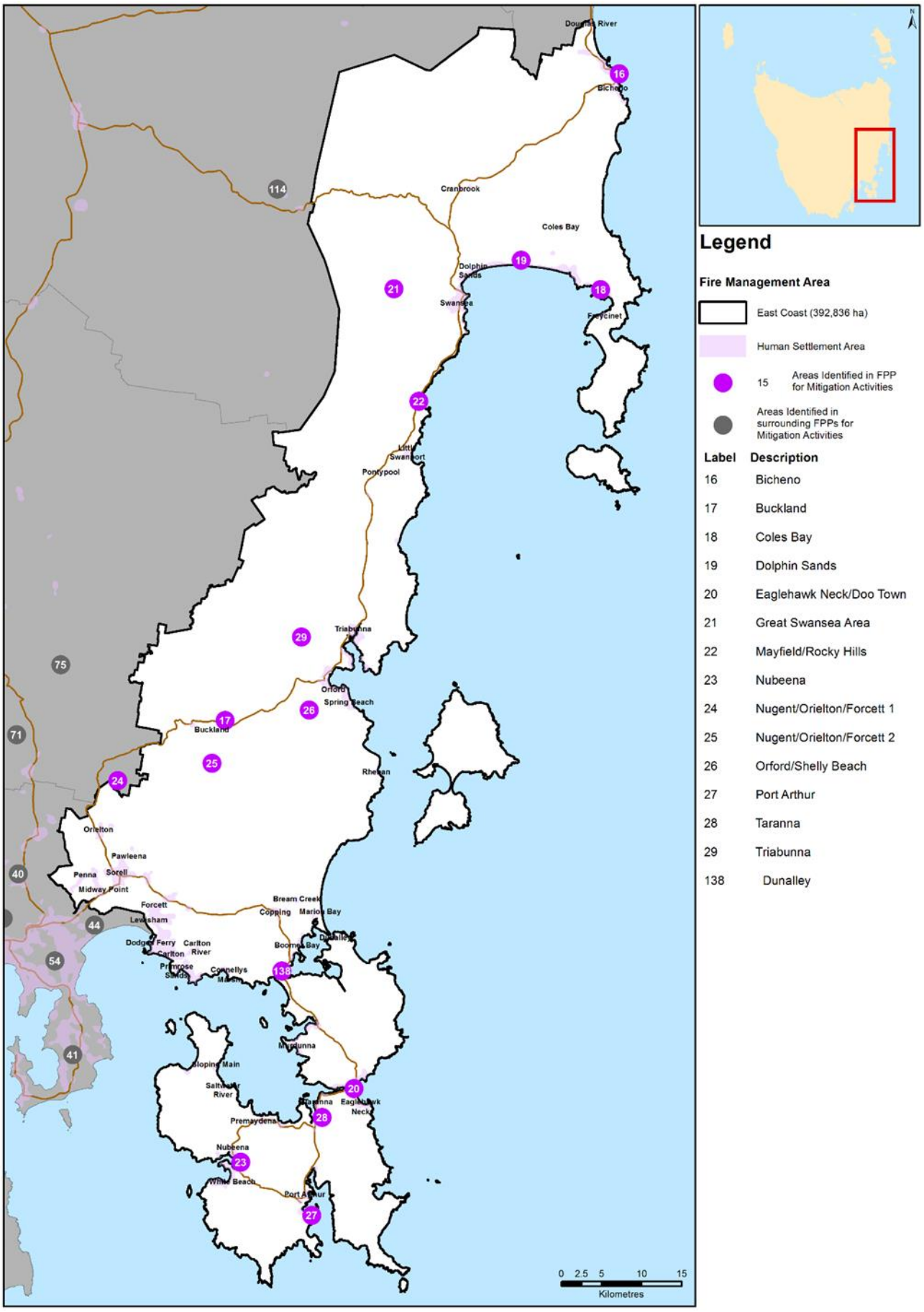
Maps

Map 1: East Coast Fire Management Area Location

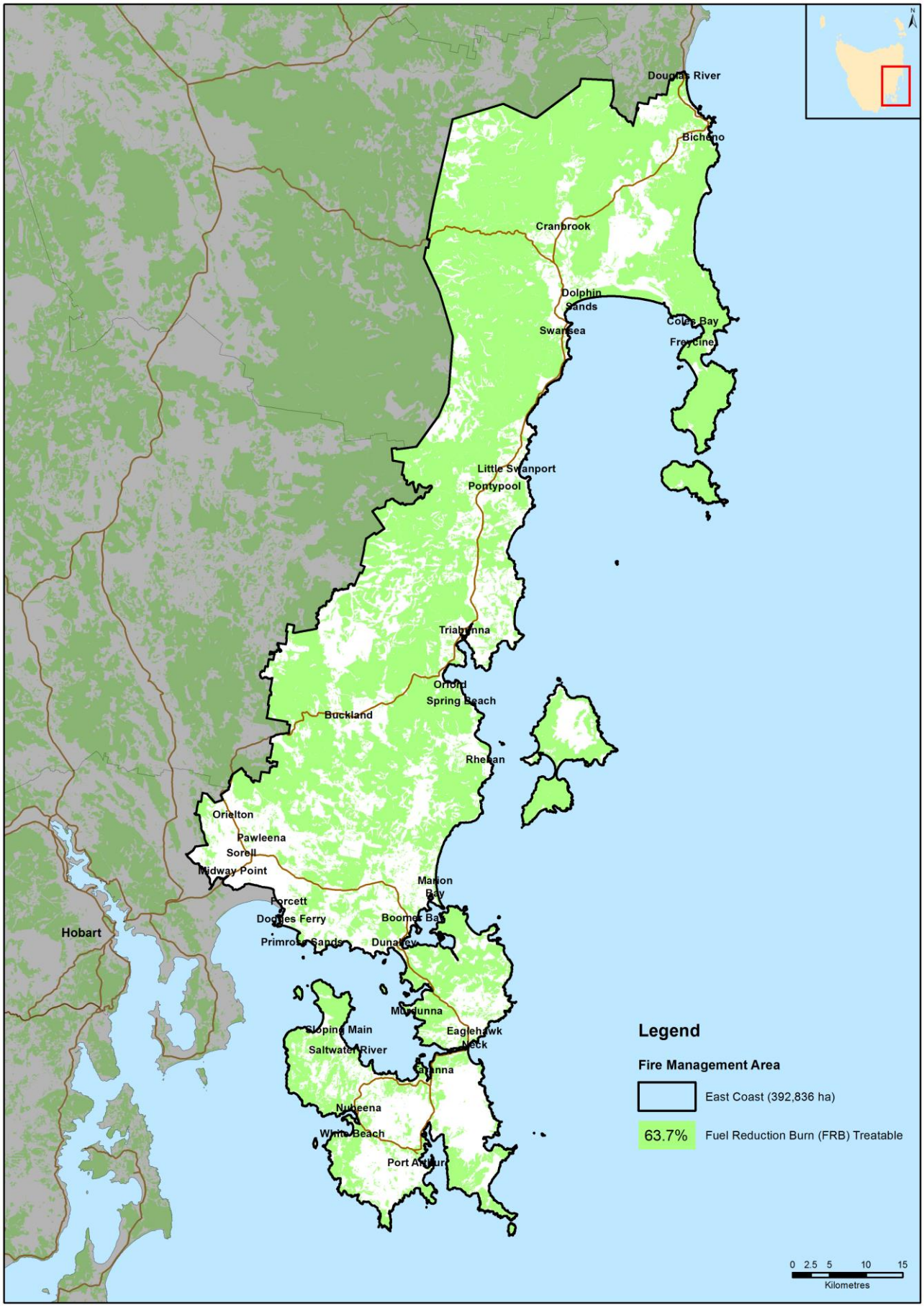
Map 2: Tenure Summary Map for East Coast Fire Management Area



Map 3: Assets and values from the Treatment Plan for East Coast Fire Management Area

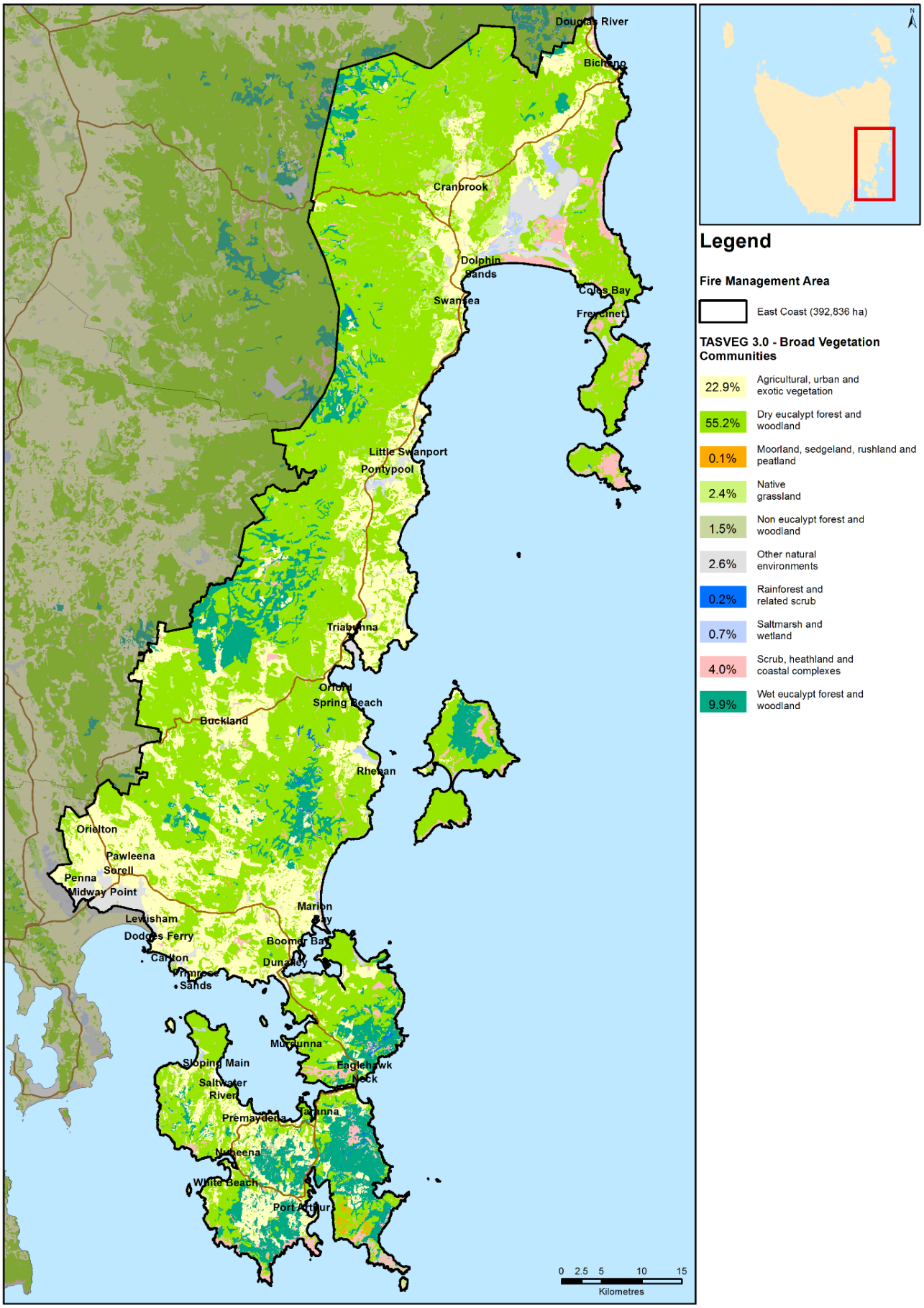


Map 4: Fuel Treatability for East Coast Fire Management Area



Treatability of fuels through fuel reduction burning in the East Coast FMA.

Map 5: Vegetation for East Coast F Fire Management Area



Vegetation types across the East Coast FMA (based on grouped TASVEG vegetation mapping units).