Proposed Fire Management Zones Consultation process

East Central Bushfire Risk landscape

VICTORIA State Government | Environment, Land, Water and Planning

Contents

Fire Management Zone Review consultation

The latest fire simulation modelling has led to proposed changes in Fire Management Zones in the East Central Bushfire Risk landscape.

Introduction

The East Central Bushfire Risk Landscape team, DELWP, in consultation with the community, developed their Strategic Bushfire Management Plan in 2014. This plan highlighted large areas where, according to analysis using fire simulation modelling, fuel reduction on public land would have a significant bushfire risk reduction to human life, property and ecological values. Since 2014 DELWP and Parks Victoria have done further analysis to refine these areas based on much smaller burn units to create a set of proposed changes to the Fire Management Zones in a number of areas situated in the landscape. These proposed changes were made available for stakeholders, such as the Country Fire Authority and community members, to review and provide feedback.

The purpose of this document is to:

- explain the principles of reviewing FMZs
- describe the processes in which stakeholders and community members were informed and consulted with about the proposed FMZs changes
- discuss the feedback received and DELWP's (incl Parks Victoria) response
- provide a summary of the rezoning proposal
- explain the endorsement process.

Aim of the Fire Management Zones Review

The aim of the Fire Management Zones (FMZs) review was to examine the existing FMZ arrangement. The desired outcome was an improved arrangement of FMZs that align with DELWP and Parks Victoria staff knowledge of fire behaviour and ecology, and uses Phoenix RapidFire simulation data to complement this knowledge. The result was proposed changes in the arrangement of FMZs to achieve the best risk reduction outcomes.

Principles of the Fire Management Zones Review

1. Changes to Fire Management Zones are informed by evidence and scientific research

Fire history in the landscape is considered when examining FMZs. Any evidence of historical influences of FMZs on bushfire behaviour is taken into account when exploring the effectiveness of a zone. As a result historical ignitions and zones that were placed due to these ignitions may still be justified and were maintained, even though predicting human behaviour for arson or accidental ignitions is difficult. Fire simulation provides the opportunity to explore possibilities where fires have not yet occurred. It provides a more objective assessment of the potential impact of different fuel reduction options on the potential spread, intensity and impacts of major bushfires through quantitative assessments.

2. Final decisions about changes to Fire Management Zones are transparent and values based

As decisions are made over the potential change in FMZs, the key points about each area and the final decision trade-offs are clearly outlined and recorded. This may include trade-offs between risk reduction levels and ecosystem resilience.

3. DELWP fire district, DELWP biodiversity division and Parks Victoria staff are engaged and review options

DELWP fire districts, Parks Victoria land managers and biodiversity staff have considerable knowledge about existing FMZs. This includes reasons justifying current zoning arrangements that may not be captured by Phoenix RapidFire simulation modelling or the ecological analysis of the fire management locality in question. Staff have detailed knowledge about local level risk reduction benefits and burn unit specific features such as fire sensitive flora and fauna. This knowledge was documented along with the decision making process if an area was considered for a zone change.

4. Investigate different arrangements and combinations of zones

Ideally, Asset Protection Zones and Bushfire Moderation Zones should exist where we have historical evidence of ignitions or their contribution to ease of bushfire suppression. We also need to be prepared for ignitions and bushfires in areas where we have not experienced them as yet. Phoenix RapidFire can be used to examine each burn unit and combination of burn units to validate the potential contribution to risk reduction. Once modelling has been completed the East Central landscape team discussed the results with DELWP and Parks Victoria staff, as it is important to validate any bushfire simulations.

The areas where the proposed Fire Management Zones changes are

The areas where there are proposed changes to the FMZs include; the Dandenong Ranges, Lysterfield, Warrandyte, Mornington Peninsula, Healesville, Gembrook and Bunyip State Park, Powelltown, Neerim Valley, Latrobe Valley, South Gippsland, Tallarook, Kinglake, Marysville and around Lake Eildon.

Our consultation

Between December 2015 and September 2016 the East Central Bushfire Risk Landscape team provided information about the proposed FMZs changes to the DELWP staff in the Metropolitan, Yarra, Murrindindi and Latrobe Fire districts and Parks Victoria. Then between August 2016 and October 2016 consulted with Country Fire Authority and community members. The information provided included

- maps showing the current and proposed FMZs changes,
- information about Strategic Bushfire Management Planning,
- a definition of what FMZs are,
- why public land is being rezoned,
- how the fire management rezoning was done, and
- the process of how we considered ecological values.

The East Central Bushfire Risk Landscape team sought localised feedback from DELWP fire districts, DELWP biodiversity division, Parks Victoria, CFA and community members about what the changes might mean for each area. This was achieved through online conversations, online surveys, eight sessions with DELWP fire district staff and Parks Victoria, eight face to face community information sessions and other community events.

The timeline for consultation

- Parks Victoria and Murrindindi, Yarra, Metropolitan and Latrobe Fire district staff consultation began in December 2015 and continued through 2016
- Community consultation and feedback period opened on 12 August 2016 and concluded on 27 October 2016
- East Central landscape response to feedback will conclude 30 November 2016

The community sessions were held in the evenings and on Saturday mornings as follows:

Metro Fire district

16-Aug-16 Community Civic centre, 21 Main Road, Monbulk
20-Aug-16 Warrandyte Community Centre, 168 - 178 Yarra Street, Warrandyte

Murrindindi Fire district

10-Sep-16 Marysville Visitor Centre, 11 Murchison St, Marysville
13-Sep-16 Kinglake Service Centre, 19 Whittlesea-Kinglake Rd, Kinglake

Yarra Fire district

17-Sep-16 Gembrook Community Centre, 1 Beenak East Road, Gembrook, Vic, 3783
20-Sep-16 Parks Vic, 6/7-9 Symes Road, Woori Yallock

Latrobe Fire district

5-Oct-16 DELWP, Parker's Corner, 3264 Moe-Rawson Road, Rawson
26-Sep-16 CFA Station Neerim South. 199 Main Neerim Road, Neerim South

Additional consultation sessions

25-Sep-16 Noojee 90th Birthday Event, CFA Station Noojee.
7 & 8-Oct-16 Living with Bushfire Conference, Lilydale

We used a variety of mediums to ensure stakeholders and community members were aware of the consultation period for the proposed FMZs changes. Information about the consultation was widely publicised through

- Facebook pages of DELWP Port Phillip, Gippsland and Hume regions
- Facebook pages for local CFAs, local councils, industry eg wineries
- Facebook pages for community and environmental groups
- through the East Central landscape newsletter
- via local newspapers
- by direct invitation; and by word of mouth.

Local DELWP and Parks Victoria from the Murrindindi, Yarra, Metropolitan and Latrobe Fire districts with bushfire behavioural analysts and biodiversity officers from the East Central landscape team were available at the community sessions to answer any questions and explain the rezoning process and to also demonstrate Pheonix RapidFire modelling. Consultation also took place at events such as the Living with Bushfire Conference (Lillydale 2016) and at the Noojee CFA 90th Birthday event.

Community feedback process

Approximately 100 people spoke with us. These people included CFA volunteers and community and environmental groups such as Friends of Bunyip State Park, Friends of Leadbeater's Possum, Friends of Wrights Forest and Friends of Kurth Kiln. Local staff from the DELWP Fire districts and Parks Victoria staff and staff from the East Central landscape team were available to discuss the proposed FMZs changes and answer questions.

Consultation analytics

There were 215 people who visited the East Central Bushfire Risk landscape website. 176 visitors were aware of the online consultation – meaning that they visited at least one page from the website. 70 people were informed – they either viewed a video, photo, FAQs, key dates, multiple project pages or downloaded a document; only one community member participated in the discussion forum. This same person submitted three submissions via the online survey. Formal responses were provided to each person who requested information and/or provided feedback.

Community feedback content and DELWP and Parks Victoria response

Overall, community members mainly sought clarity about what the proposed changes to FMZs meant and the impact of this on biodiversity assets, ecological vegetation classes and about the additional level of protection of planned burning could provide to their properties. Community members also sought to broaden their understanding or receive an update as to what DELWP is doing to manage bushfire risk and ecosystem resilience.

Community and environmental groups raised the following concerns. DELWP and Parks Victoria responses are in italics.

1. Concerns about the walking track assets in the Dingo Ridge Bushfire Management Zone proposed burn unit (Tonimbuk area)

- *DELWP and Parks Victoria are committed to mitigating risks to built assets and ecological values.*
- *In the burn planning process when burns are identified, assets within the burns are taken into account. Lighting patterns and exclusion zones are some ways risks to these assets are managed.*

2. Concern whether the Burgess Track band of Bushfire Moderation Zones (Bunyip State Forest) will have unburnt vegetation representatives in the park area that will not get treated

- *The band of Bushfire Moderation Zone along Burgess Track in the Bunyip State Forest is predominantly Lowland Forest and Damp Heathy Woodland Ecological Vegetation Classes (EVCs). These EVCs are deemed fire dependent and require fire as part of their life cycles, and as such are tolerable to specific fire regimes.*
- *As part of the proposed rezoning process, bushfire risk modelling highlighted the importance of this band of Bushfire Moderation Zone at reducing the risk to human life and property; therefore it was recommended that this area remain as Bushfire Moderation Zone.*
- *In areas of the park west of Tonimbuk there is a band of EVCs similar in composition to that of the area in question, which are a mixture of Landscape Management Zone and Planned Burning Exclusion Zone. Both of these zones are managed for ecological reasons and as such have either no burning or burning carried out within tolerable fire intervals.*
- *DELWP and PV are working on a project which identifies the longest unburnt areas of different vegetation types across the East Central landscape. These areas are*

being excluded from planned burning, to ensure older growth stages of vegetation are represented across the landscape.

3. Concern with potential risk from a large patch of private land near Woori Yallock.

- *As this is private land, any fuel treatments are the responsibility of the landholders. However under Safer Together, the CFA, with partner agencies, are working with the community to explore opportunities for cross tenure planned burning on private land*

4. Concern about the planned burning on Pooley Road, Maryknoll

- *We were able to change the Bushfire Moderation Zone to Landscape Management Zone due to limited risk reduction in this area.*

5. A community member asked for details about the FMZs review method.

- *A copy of the FMZs review method was provided and posted on the website. This was made available for four weeks of the consultation period. A copy of the document is available upon request from the East Central landscape team, email: east.central@delwp.vic.gov.au.*

6. Requests for an analysis of the predicted outcomes of the proposed rezoning on ecosystem resilience.

- *Analysis of ecosystem impacts were based on the Leadbeaters Possum Occupancy model (Lumsden, Nelson, Todd, Scroggie, McNabb, Raadik, Smith, Acevedo, Cheers, Jemison and Nicol, 2013), spatial mapping of Environment Protection and Biodiversity Conservation Act 1999 and Flora and Fauna Guarantee Act 1988 listed species and discussions with Parks Victoria Rangers and DELWP Biodiversity staff who have extensive knowledge of these areas. The outcomes of these discussion in areas that have proposed changes were provided on the consultation website. A copy of the document is available upon request from the East Central landscape team, email: east.central@delwp.vic.gov.au.*
- *Proposed changes to FMZ in the Kurth Kiln Regional Park involved changing one Bushfire Moderation Zones to a Landscape Management Zone. This will decrease the frequency of burning in the park. The remaining Bushfire Moderation Zones have strong support from neighbouring communities and risk analysis modelling. An increase in Landscape Management Zones means more areas in the park will be treated on an ecological basis, as described above, not necessarily for fire risk mitigation.*
- *The timeframes for treatment within a zone are approximate and are based on the objective of the zone. In a Bushfire Moderation Zone, this may be whether fuel accumulation reaches a hazard level deemed inappropriate for that zone. Accumulation of fuel is influenced by environmental variables. For a Landscape Management Zone, treatment may be triggered when a species may benefit from a fire to assist in germination and recruitment. Adding fire into any FMZ is a carefully considered action.*
- *Flora Vital Attributes inform the minimum and maximum tolerable fire intervals (TFI) for each ecological vegetation divisions and are still a component of the ecosystem resilience metrics. Depending on the fuel accumulation rates at each individual site the majority of Bushfire Management Zones areas will not be burnt below the recommended minimum TFI.*
- *Our modelling is consistent with accepted fuel accumulation models but when it comes to actual planned burning, the areas will be field checked by staff to ensure that the area has actually met the trigger for planned burning.*

- *Measuring fuel hazard and fuel accumulation is a key outcome of our Monitoring, Evaluation and Reporting plan so over time we will refine and improve our fuel accumulation modelling.*
- *DELWP is currently using a linear programming tool to develop a 40 year burning program, built on the premise of burning areas that are consistent with their zone classification, fuel accumulation as well as building in some constraints (mostly ecologically based). This will give us an idea on areas that may be treated with planned burning more frequently over the long term.*

7. Request for scientific information about ecologically desirable fire regimes that can be achieved by planned burning.

- *Natural regimes have changed since Indigenous occupation and later European settlement. Since European settlement, areas have seen either an increase in fire frequency due to activities such as land clearing or a decreased fire regime from suppression in inhabited areas (Whelan, Kanowski, Gill and Andersen 2006). In Landscape Management Zones, DELWP aims to increase ecological resilience by either limiting fire or reintroducing an appropriate fire regime for the species living there. These fire regimes are based on research by scientists and land managers in the Arthur Rylah Institute, The University of Melbourne, Latrobe University, Deakin University and DELWP. The following resources can be used to describe ecologically desirable fire regimes and DELWP's method to achieve these:*
    - *McCarthy, M. 2012 'Review of Resilience Concepts and Their Measurement for Fire Management' in Fire and Adaptive Management report no 90, The University of Melbourne, Melbourne*
    - *Cheal, D. 2010 'Growth Stages and Tolerable Fire Intervals for Victoria's Native Vegetation Data Sets' in Fire and Adaptive Management, report no. 84, Arthur Rylah Institute for Environmental Research, Melbourne*
    - *Foothills Fire and Biota Project – a collaborative research project between the Arthur Rylah Institute, DELWP, La Trobe University, the University of Melbourne and Deakin University: http://www.bushfirecrc.com/resources/poster/foothills-fire-and-biota-project-providing-biodiversity-inputs-fire-management-plan*
- *We are continuously trying to improve our understanding of ecosystem responses to fire and build ecosystem resilience measures into our planned burning program. In the future we will compare the state of growth stage distributions within ecological vegetation classes and further develop an understanding of ecological health trends and impacts.*

8. A request for a list of species vulnerable to fire areas within the Kurth Kiln Catchment.

- *Significant ecological assets within the park include various Environment Protection and Biodiversity Conservation Act 1999 and Flora and Fauna Guarantee Act 1988 listed species, including:*

Common Name	Scientific name
Tall Astelia	*Astelia australiana*
Growling Grass Frog	*Litoria raniformis*
Powerful Owl	*Ninox strenua*
Sooty Owl	*Tyto tenebricosa*
Hooded Robin	*Melanodryas cucullata cucullata*

- *The park contains a range of forest types, the following are a list of EVCs that are fire sensitive within the Kirth Kiln Regional Park:*

18 Riparian Forest
20 Damp Forest
30 Wet Forest
31 Cool Temperate Rainforest
38 Montane Damp Forest
39 Montane Wet Forest

9. Toolangi Bushland Reserve was identified by the community as an issue due to environmental assets. This area is currently an Asset Protection Zone and was not proposed to be changed.

- *Due to responses from the community about this area not wanting to be treated with planned burning, and combined with Phoenix RapidFire modelling which indicated only having a limited risk reduction, we are now proposing to change this area to Landscape Management Zone.*

10. Also a resident within the Murrindindi Fire district expressed more planned burning and fuel treatment to be done in Eucalypt Ash forests.

- *Planned burning cannot be undertaken in a safe manner as these are wet forests, weather conditions would need to be quite dry and out of planned burning prescriptions. Burning in these forests is also undesirable due to their low tolerance to regular fire regimes.*

Most community members were reassured by DELWP's commitment to mitigation of risk to human life, property and environmental assets. Formal responses were provided to each request and feedback whether it came from the community information sessions, via email, via the online forum or survey.

The rezoning outcome

The review has resulted in a proposed new set of zoning arrangements for the East Central Bushfire Risk Landscape. The main effect of the proposed update is to better align zoning to fuel management priorities set out in the East Central Strategic Bushfire Management Plan, first released in 2014.

The changes deliver an overall equivalent level of risk reduction across the landscape and overall better performance against the objectives of the Code of Practice for Bushfire Fuel Management on Public Land:

- Minimise the impact of major bushfires on human life, communities, essential and community infrastructure, industries, the economy and the environment: human life will be afforded priority over all other considerations.
- Maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products.

Targeting fuel management to higher risk areas in line with the Strategic Bushfire Management Plan means that this will be achieved through a smaller average planned burning program (about 1,500ha less per year).

The biggest benefits are in the Latrobe Fire District, where the proposed FMZs yields a fuel management program which will be significantly better targeted to risk. This will enable lower bushfire risk for this district with an overall 15 per cent reduction in program size.

Fuel management zones have also been updated in the Murrindindi district to reflect limited opportunities for planned burning in the wetter forest prevalent in this area (particularly in the vicinity of Mount Disappointment and north of Lake Eildon). This type of vegetation does not burn readily – additionally, tree hazard poses a significant risk to the safety of firefighters working in these areas, further limiting opportunities for fuel management. Zoning has been updated to reflect actual opportunities for fuel

management. The new zoning will still enable a fuel management program that delivers district risk reduction targets.

In the Metropolitan and Yarra fire districts, implementing the proposed changes would result in only minor changes in total fuel management program size, with only small changes to bushfire risk in these districts.

Endorsement process

The recommendations for changes to FMZs have been reviewed and accepted by Parks Victoria and DELWP fire district staff located in the East Central landscape. As there were no specific issues raised with any proposed amendments to FMZs we are now seeking endorsement for their adoption.

The next stage is for the Assistant Chief Fire Officers from DELWP's regions of Port Phillip, Gippsland and Hume to endorse the proposed changes to FMZs as well as endorsing the process that we used for stakeholder and community consultation. We hope to achieve this by late December 2016. Once the recommendation for the changes to FMZs have been endorsed, the four Fire Districts will incorporate the changes to FMZs into their next year's Fire operation planning program.

Further information

If you require further information about the rezoning process or clarification about the above please email east.central@delwp.vic.gov.au.

Glossary

Term	Definition
Fire Management Zone	Fire Management Zones (FMZs) are areas of public land where fire is used for specific asset, fuel and overall forest and park management objectives. Each of the four FMZs differs in its intended fuel treatment aims and associated performance measures. Although the name of the zone indicates the primary purpose for that zone, it is recognised that multiple goals can be achieved when undertaking activities in a given zone. For example, a burn undertaken primarily for land management purposes may also have asset protection results.
Asset Protection Zone (APZ)	Using intensive fuel treatment, the APZ aims to provide the highest level of localised protection to human life and property and key community assets. The goal of fuel treatment is to reduce radiant heat and ember attack in the event of a bushfire. To do this the fuel (vegetation) hazard needs to be reduced and kept at low levels, requiring more frequent fuel treatment. Fuel treatment will be carried out in the APZ through a combination of planned burning and other methods such as mowing, slashing or vegetation removal. Achieving the objectives of this zone may have negative impacts, such as to ecosystems. Where this is likely, DELWP will seek to moderate the negative impact as far as practicable.
Bushfire Moderation Zone (BMZ)	This zone aims to reduce the speed and intensity of bushfires. This zone complements the APZ in that the use of planned burning in the BMZ is designed to protect assets which could include human life, property, biodiversity assets such as Leadbeater's Possum habitat or water infrastructure, particularly from ember spotting during a bushfire. Fuel reduction by planned burning or other techniques is undertaken less frequently than in an APZ. Where practicable the BMZ will aim to achieve ecological outcomes by seeking to manage for ecologically desirable fire regimes, provided bushfire protection objectives can still be met. This may include using other fuel management methods.
Landscape Management Zone (LMZ)	Within this zone, planned burning will be used for three broad aims: 1. bushfire protection outcomes by reducing the overall fuel and bushfire hazard in the landscape 2. ecological resilience through appropriate fire regimes 3. management of the land for particular values including forest regeneration and protection of water catchments at a landscape level. The frequency of the fuel management that is undertaken is less frequent than what occurs for the zones, APZ and BMZ. Other fuel reduction methods will be used within this zone as

	appropriate.
Planned Burning Exclusion Zone (PBEZ)	This zone excludes the use of planned burning primarily in areas intolerant to fire.
Burn Unit	All public land has been divided into burn units. These burn units are logical boundaries for potential planned burning or other fuel treatment operations. A burn unit can be any size depending on the environment. Each burn unit has a Fuel Management Zone.
Bushfire Catchments	Bushfire catchments are areas that drive most of the bushfire risk in the landscape. The major bushfire catchments focus around high risk towns, where many properties may be vulnerable to impact from possible bushfires. The catchment determines the area where all modelled ignitions occur that could impact that particular asset. Towns that are adjacent are put together into bushfire catchments to avoid scenarios that overlap.
Fire History	The recorded bushfires and planned burning operations that have occurred in Victoria.
Geometric Mean of Abundance (GMA)	GMA is an index to assess species diversity by examining species presence and abundance in an area.
Treatability	The likelihood based on flammability and operational feasibility of burning different forest types (ecological vegetation class) under planned burning conditions.
Ecological Vegetation Class (EVC)	Ecological Vegetation Classes (EVC) are the standard unit for classifying vegetation types in Victoria. EVCs are described through a combination of floristics, lifeforms and ecological characteristics, and through an inferred fidelity to particular environmental attributes.
Phoenix RapidFire	Phoenix Rapidfire is a computer based bushfire characterisation tool that can model fire including flame height, ember density, spotting distance, convection column strength and fire intensity and provide a visualisation of fire dynamics for community warning, education and fire planning.
Residual Risk	Phoenix Rapidfire can be used to determine the risk reduction to an asset based on scenarios such as actual fire history or by simulating changes in the fire management zoning. For example if a fire impacts ten properties with no fuel modification then the risk is at 100%. If with some fuel modification the fire impacts six properties, then four less houses have been impacted, so the residual (or remaining) risk is 60%
Flora Vital Attributes	Flora Vital Attributes database curated by the Arthur Rylah Institute for Environmental Research which identifies life history traits of plants that can be used to determine their susceptibility to fire

Reference List

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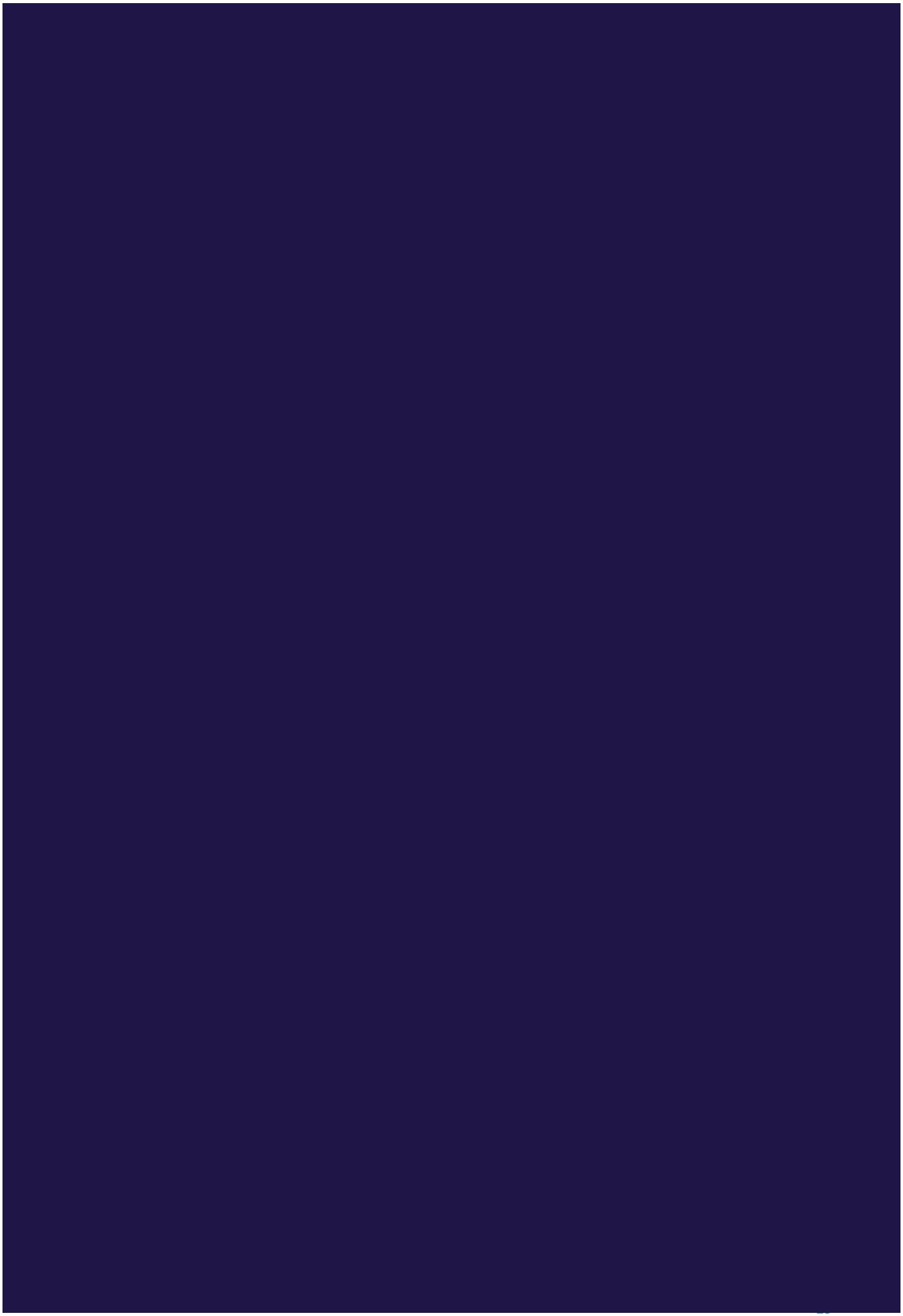

East Central Bushfire Risk landscape