VICTORIAN NATIONAL PARKS ASSOCIATION

WILDLIFE OF THE CENTRAL HIGHLANDS WOTCH

Friends of Leadbeater's Possum Inc

Wilderness Society Life. Support.

Greater Glider. *JUSTIN CALLY*

SUBMISSION TO

Commonwealth Draft National Recovery Plan for Greater Gliders

Submission, feedback & recommendations from the VNPA, WOTCH, FLbP & TWS

10 December 2025

Commonwealth Draft National Recovery Plan for Greater Gliders

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Executive Summary

This submission is made in response to the Commonwealth's public release of the Draft National Recovery Plan for Greater Gliders, and the consultation documents provided online.[1] It's made on behalf of the Victorian National Parks Association (VNPA), Wildlife of The Central Highlands (WOTCH), Friends of Leadbeater's Possum (FLbP) and The Wilderness Society-Victoria (TWS).

We welcome the long-awaited draft Recovery Plan for Greater Gliders and provide input for the refinement of this roadmap to recovery through our feedback and recommendations detailed in this submission.

Collectively, our groups have a long and rich history advocating for the protection of Greater Gliders at both state and national levels. Our involvement with Greater Gliders spans well over a decade involving citizen science surveying, community engagement, public advocacy, government lobbying and when required, legal action to help conserve and protect Greater Gliders from key threats.[2] [3] [4]

Much of our campaigning and advocacy for Greater Gliders in Victoria has focused on mitigating the (now) historical threat of commercial native forest logging on public land. Our focus has since shifted to new and emerging threats to Greater Gliders in Victoria. Namely, the logging of Greater Glider habitat on private land and the comprehensive scope of threatening fire preparation activities (not just planned burning) impacting Glider habitat outside of fire emergency periods. Critically, the draft Recovery Plan does not adequately identify, address and mitigate these ongoing and compounding threats. We provide recommendations to rectify these oversights.

Our submission focuses on the key actions required to arrest and reverse Greater Glider decline in the Victorian context. The format of this submission addresses the objectives, strategies and actions currently drafted in the Recovery Plan. We provide action-specific feedback, context and recommendations where refinements and improvements are necessary.

In addition to the Action-specific recommendations summarised below, we highlight the following broader key recommendations that underpin our submission.

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[1] Draft National Recovery Plan for greater gliders - Department of Climate Change, Energy, Environment and Water.
[2] Wilderness Society | Landmark court win: Federal Environment Minister...
[3] The possums case - Environmental Justice Australia.
[4] WOTCH v VicForests — Wildlife of the Central Highlands.

Key Recommendations:

- There needs to be a Recovery Team (and ideally one in each state) with mechanisms for coordination to monitor the implementation, enforcement and effectiveness of the Recovery Plan.[5] Currently, there's only one mention of a Recovery Team in Action 3.3.

- There appears to be no budget allocations or implementation costs detailed for the suite of key actions to be implemented. At the very least, indicative estimates must be provided[6] with a key focus on the urgent and essential priority actions.

- There needs to be a greater acknowledgement and focus on mitigating threats from fire prevention activities which are occurring outside of fire emergency periods, including but not limited to planned burns. Strategic Fuel Breaks, hazardous tree removals and storm recovery (salvage) logging are ongoing and emerging threats which are not identified, acknowledged or mitigated in the draft Recovery Plan.

- There needs to be a greater acknowledgement and focus on mitigating threats from logging on private land within Greater Glider habitat. This includes proper ecological surveying, monitoring, regulation and oversight, and stringent requirements to protect Greater Gliders and their habitat from logging (in accordance with the findings of the Supreme Court of Victoria).

- The Recovery Plan must set clear and stringent prescriptions to protect Hollow-bearing Trees for gliders. It's clear from the Leadbeater's Possum Recovery Plan that even with clear and enforceable prescriptions in place, more oversight, regulation and enforcement is needed to protect hollow-bearing trees and prevent their removal.

- The Recovery Plan must emphasise that habitat restoration efforts and vegetation management be fundamentally guided by relevant ecological restoration science, principles and methodologies. The protection of existing ecological values must be prioritised, and the impacts of intervention efforts be broadly monitored to assess, inform and adapt future management.

- More stringent and prescriptive requirements for expansions to the National Reserve System are critical. Expansions must provide confidence that long-term risks of Greater Glider extinction are acceptably low (<1% probability over a 100-year period). It's clear from the Leadbeater's Possum Recovery Plan that even with clear and enforceable guidelines in place, more oversight, regulation and enforcement is needed to ensure that state governments expand reserve systems to a standard that suffices population viability models.

[5] Consistent with Action 7.1 of the Leadbeater's Possum Recovery Plan.
[6] Consistent with the Commonwealth's Leadbeater's Possum Recovery Plan.

Summary of Action-specific key recommendations detailed in this submission:

Action 1.1 – Practical guidance survey documents should also be targeted towards land holders seeking to undertake forestry operations on private land, providing clarity on when (and to what standard) Greater Glider and HBT surveys are required.

Action 1.2 – Detailed surveys and monitoring should incorporate a diversity of land tenures (including private land), disturbance events and varying habitat qualities. The results of these surveys should be made publicly available in the centralised national database (A1.3). Fire management authorities and private land holders should be added as leading partners to rectify the lack of Greater Glider surveys and monitoring in the context of ongoing threatening processes (fire preparation works and logging on private land).

Action 1.3 – A centralised national database should provide pathways for user-friendly public data input and should continuously cross-pollinate with centralised state databases (VBA). In the absence of this cross-pollination, Fire management authorities should be added as a leading partner and should stay up-to-date with the centralised national database for informed decision-making.

Action 2.4 – It should be made clear that any implementation of selective thinning and vegetation management must be guided by relevant ecological science and principles. It should also be made clear that the retention of 60% forest stand cover during logging is not in itself, enough to prevent habitat loss and degradation for Greater Gliders. This action must place additional requirements on protecting Greater Glider home ranges during vegetation management (e.g. logging) to reflect the findings of both Victorian government research and the Supreme Court.

Action 2.7 – Further clarity is needed to show how planning overlays and strengthened vegetation clearing controls will protect Greater Gliders and their habitats from logging on private land. Fire management authorities should be added as a leading partner and exercise informed decision-making and operational sensitivity in key Glider corridors and linkages.

Action 2.8 – The Recovery Plan must acknowledge and emphasise the significance of HBT removals resulting from fire preparation activities. This includes SFBs, planned burning, hazardous tree removals and storm recovery (salvage logging) operations. Fire management authorities should be added as a leading partner and prioritised at the forefront of enhanced land management practices to protect HBTs. Clear and stringent HBT prescriptions are required, with greater enforcement and oversight required.

Action 2.9 – In accordance with Supreme Court findings, clear and stringent requirements should be set to protect 60% forest stand cover and identify/exclude Greater Glider home ranges during logging. Land holders should be added as a leading partner to protect Greater Gliders from logging on private land.

Action 2.10 – It should be made clear that restoration efforts must be fundamentally guided by relevant ecological restoration science, principles and methodologies. Sites selected for restoration should first be subject to biodiversity surveys to identify existing ecological legacy values, which should be prioritised and protected throughout restoration efforts. Broad and ongoing monitoring of restoration impacts (biodiversity, carbon, water) should be undertaken to inform future management. Avenues should be provided for public input and public transparency.

Summary of Action-specific key recommendations detailed in this submission (continued):

Action 2.11 – More stringent and prescriptive requirements for expansions to the NRS are critical. This should prescribe a NRS enhancement which provides confidence that long-term risks of Greater Glider extinction are acceptably low (<1% probability over a 100-year period). Inclusion of the following habitats should also be required and emphasised within the NRS: Identified critical habitats (A2.11), mapped climate refugia (A4.8), key habitat linkages and corridors (A2.5) as well as important and marginalised populations (A2.3). Fire management authorities should be added as a leading partner for informed decision-making and operational sensitivity in high-quality habitat outside of the NRS.

Action 2.13 – Broaden, to enhance fire management practices across the planning and implementation of all fire preparation activities outside of emergency periods. Introduce restrictions on planned burning of Greater Glider habitat below scientifically informed Tolerable Fire Intervals. Growing concern about the effectiveness of planned burning is growing amongst academics. Clear, stringent and enforceable prescriptions are required to protect and buffer HBTs from the impacts of all fire preparation activities, including known denning/nesting trees for Greater Gliders. Integrate this action with the National Monitoring Program (A1.1-1.3) incorporating pre and post treatment surveys and monitoring of all fire preparation activities. Where hazardous HBTs require treatment, engage arborists to 'stump' trees and retain hollows instead of felling the tree at base.

Action 2.14 – Needs to be broadened to enhance fire management practices across the planning and implementation of all fire preparation activities outside of emergency periods. Integrate this action with the National Monitoring Program (A1.1-1.3) incorporating pre and post treatment surveys and monitoring of all fire preparation activities. Introduce requirements for fauna spotting when removing HBTs in Greater Glider habitat (e.g. hazardous tree removals).

Action 2.15 – Prioritise the protection of long unburnt forests, Reference Areas, critical habitat, climate refugia, habitat corridors and key linkages, marginal habitat and important populations within fire exclusion zones. Mandate the implementation of exclusion zones to ensure survival of a viable populations of SGGs in that area for every operation if Greater Glider habitat including, other threatening fire preparation activities in Southern Greater Glider corridors and habitats (e.g. SFB exclusion zones, storm recovery (salvage logging) exclusion zones). Avoid all threatening fire preparation activities in known movement corridors, not just high intensity planned burning.

Action 3.1 – Key stakeholders (e.g. ENGOs, community groups) also be provided input and involvement opportunities across the program(s) of habitat restoration works (A2.10).

Action 4.8 – There should be greater prioritisation of climate-informed expansions to the NRS and increased protections to climatic refugia on private land (Priority 2 at minimum). Previously identified climatic refuges that fall outside of the NRS should be prioritised for inclusion (e.g. the Errinundra & Nunniong Plateaus in East Gippsland). Fire management authorities should be added as a leading partner and should be restrained from undertaking threatening land management practices in climatic and thermal Greater Glider refugia.

Glossary:

Department of Energy, Environment & Climate Action (DEECA)

Diameter at Breast Height – 1.3m (DBH)

Ecological Vegetation Class (EVC)

Eminent Panel for Community Engagement (EPCE)

Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act)

Environment Protection Authority (EPA)

Environmental Non-Government Organisation (ENGO)

Forest Fire Management Victoria (FFMV)

Freedom of Information (FOI)

Friends of Leadbeater's Possum Inc (FLbP)

Great Outdoors Taskforce (GOT)

Hollow-bearing Tree (HBT)

Immediate Protection Area (IPA)

Leadbeater's Possum (LbP)

Matters of National Environmental Significance (MNES)

National Reserve System (NRS)

Regional Forest Agreement (RFA)

Southern Dandenongs Landcare Group (SDLG)

Strategic Fuel Break (SFB)

The Wilderness Society (TWS)

Victorian Biodiversity Atlas (VBA)

Victorian Environment Assessment Council (VEAC)

Victorian National Parks Association (VNPA)

Warburton Environment (WE)

Wildlife of The Central Highlands Inc (WOTCH)

Feedback and key recommendations on the draft Objectives, Strategies and Actions

Objective 1. Population size and trends of the greater glider are effectively monitored, and the population shows a measurable increase (Strategy 1) [Actions 1.1 – 1.3]

A summary of our recommendations and feedback below is as follows:

Under Objective 1, we support the strategies and actions in the draft Recovery Plan and view these as critical steps in monitoring, measuring and achieving the overall recovery of Greater Gliders. We agree that the development and implementation of a National Monitoring Program should be a primary and priority action in the Recovery Plan, and that it should be funded appropriately. We highlight and emphasise the need for public transparency and input within the national monitoring program. We also highlight the need for surveys and monitoring in the context of ongoing and compounding threats (e.g. logging on private land & fire preparation activities) throughout the distribution of Greater Gliders and their habitat.

Key Recommendations:

Action 1.1 – Practical guidance survey documents should also be targeted towards land holders seeking to undertake forestry operations on private land, providing clarity on when (and to what standard) Greater Glider and HBT surveys are required.

Action 1.2 – Detailed surveys and monitoring should incorporate a diversity of land tenures (including private land), disturbance events and varying habitat qualities. The results of these surveys should be made publicly available in the centralised national database (A1.3). Fire management authorities and private land holders should be added as leading partners to rectify the lack of Greater Glider surveys and monitoring in the context of ongoing threatening processes (fire preparation works and logging on private land).

Action 1.3 – A centralised national database should provide pathways for user-friendly public data input and should continuously cross-pollinate with centralised state databases. In the absence of this cross-pollination, fire management authorities should be added as a leading partner and should stay up-to-date with the centralised national database for informed decision-making.

Design a National Monitoring Strategy across the species range that will ensure consistency of gathered information, metrics used, survey frequency and reporting approaches; and conduct detailed surveys across known sites throughout the greater glider's range (Actions 1.1 & 1.2)

In the Victorian context, we partially agree with the statement that "*There has been limited survey effort across both species' distribution*". We agree in the sense that historically, coordinated and targeted survey efforts have largely been lacking. However, since the Greater Glider's listing as Vulnerable under the *Environment Protection & Biodiversity Conservation Act 1999* (EPBC Act) in 2016, citizen scientists, environmental non-government organisations

(ENGOs) and the Victorian Government [7] have ramped up coordinated survey efforts for Greater Gliders.

Importantly, these survey efforts have focused primarily on Victoria's state forests in areas historically targeted for timber harvesting. Coordinated and targeted survey efforts for Greater Gliders remain extremely limited across other tenures, including within the National Reserve System (NRS) (e.g. national parks) and on private land.

For example, in the last 20 years there have only been 25 recorded sightings of Greater Gliders in the Dandenong Ranges National Park and immediate surrounds[8] – a population likely impacted by peri-urban fragmentation and edge effects, amongst other threats. Here, coordinated surveys and monitoring would help to increase our currently limited understanding of the population size, extent and trends, and help to inform any conservation interventions required to support Greater Glider recovery.

Coordinated surveys and monitoring also remain extremely limited in the context of ongoing human-induced threats which impact Greater Gliders (*see Appendices 1 & 2*). This includes planned burning, hazardous tree removals, strategic fuel breaks (SFBs) and storm recovery (salvage logging) operations, all undertaken by Victoria's fire management authority Forest Fire Management Victoria (FFMV) for fire preparation. It also includes a lack of Greater Glider surveys and monitoring in the context of logging on private land. Action 1.2 should seek to rectify these issues.

Despite the Victorian Government's ban on public native forest logging in 2024, logging is continuing (and escalating) on private land within modelled Greater Glider habitat.[9] The terminated Regional Forest Agreements (RFAs) show that there are nearly 2 million hectares of native forest on private land[10], and the draft Recovery Plan appropriately highlights a large overlap between Greater Glider populations and habitat, with private land.

Historically, citizen scientists, ENGOs and community groups have picked up the slack in the absence of pre-logging Greater Glider surveys on public land, but this is not so straightforward on private land due to access constraints.

Actions 1.1 & 1.2 provide meaningful actions to rectify these issues, however coordinated survey and monitoring efforts must incorporate the full range of disturbance events impacting on Greater Gliders and their habitat (not just planned burning).

As above, Action 1.2 could be improved by including private land holders and fire management authorities as leading partners requiring enhanced surveys and monitoring for Greater Gliders. Action 1.1 could also be improved by tailoring practical guidance survey documents to account for private land holders seeking to undertake native forest logging operations on their land. Clarity on when Greater Glider and hollow-bearing tree (HBT) surveys are required, and to what

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[7] The Victorian Government commenced targeted Greater Glider surveys under its Forest Protection Survey Program (FPSP) in 2018.
[8] Victorian Biodiversity Atlas, viewed 4 November 2025.
[9] Government passes responsibility of approving private native timber logging to councils - ABC News.
[10] Table 1a of the Central Highlands RFA (as amended 2020), pp 61-62, <CH RFA>; Table 1a of the North-East RFA (as amended 2020), pp66-68, <NE RFA>; Table 1a of the Gippsland RFA (as amended 2020), pp71-73, <Gippsland RFA>; Table 1a of the East Gippsland RFA (as amended 2020), pp48-49, <East Gippsland RFA>; Table 1a of the West RFA (as amended 2020), pp66-75, <West RFA>.

standard, would help to mitigate the threat of native forest logging on private land and its impacts on Greater Gliders and their recovery.

Develop and maintain a centralised, publicly accessible database for greater glider populations, habitat, and distribution data (Action 1.3)

From 2015 and until recently, a similar database was regularly maintained, updated and managed for the Leadbeater's Possum (LbP) in the form of a publicly accessible interactive map.[11] This was a collaboration between Federation University and the Victorian Government which greatly assisted ENGOs and citizen scientists in coordinating site selection and priority areas for future survey efforts. For many years there was a simple process in which the public could submit LbP survey data to the Victorian Government, who would then verify detections and upload the data to Victoria's centralised databases (Victorian Biodiversity Atlas (VBA) and the LbP interactive map).

We strongly advocate for similar arrangements that would allow the public to feed-in Greater Glider survey data to the centralised national repository in a user-friendly manner. Ideally, this centralised national repository would then cross-pollinate data to the state's centralised databases (e.g. VBA), or vice versa.

Within both state and local governments of Victoria, it appears weight is only given to data in the VBA during the planning and implementation of works likely to impact Greater Gliders (e.g. planned burning, SFBs, logging). To best inform the decision-making process of governments, it's therefore essential that any data within the centralised national repository is also reflected in the state's VBA. In the absence of this cross-pollination, fire management authorities should be added as a leading partner for Action 1.3 and be kept up-to-date with the centralised national database for Greater Glider data to inform decision-making in real time.

As key stakeholders, ENGOs, citizen scientists and community groups that wish to feed data into the centralised national repository should be supported as much as possible. Currently, key stakeholders wishing to submit survey data into the state's VBA must undertake a time-intensive and not-so user-friendly process, often deterring or preventing them from submitting critical data. State and federal governments should help to relieve this burden on volunteer-based and resource-limited stakeholders by assisting with the data-sharing process.

[11] CeRDI develops spatial map for endangered Leadbeater's Possum.

Objective 2. The extent, quality, and connectivity of greater glider habitat is maintained and increased to support population persistence (Strategies 2 a-d) [Actions 2.1 - 2.15]

A summary of our recommendations and feedback below is as follows:

Under Objective 2, we largely support the strategies and actions in the draft Recovery Plan to maintain and increase Greater Glider habitat extent, quality and connectivity. We highlight oversights of the Recovery Plan in the context of logging and requirements to protect Greater Gliders and their habitats, underpinned by Victorian government research and Supreme Court findings. We seek further clarity on how the Recovery Plan will increase Greater Glider habitat protection from logging on private land.

We highlight and emphasise the need for vegetation management (e.g. thinning) and habitat regeneration efforts to be guided by relevant ecological principles and science using methods that conserve and protect existing ecological values. We also recommend clearer prescriptions, guidelines and requirements for the protection of HBTs and increases to the NRS.

We support and make recommendations on the urgent priority to enhance planning and implementation of all fire preparation activities in Greater Glider habitat (not just planned burning). We highlight the need to integrate the National Monitoring Program for Greater Gliders with fire preparation activities, private land logging, vegetation management and regeneration activities.

Key Recommendations:

Action 2.4 – It should be made clear that any implementation of selective thinning and vegetation management must be guided by relevant ecological science and principles. It should also be made clear that the retention of 60% forest stand cover during logging is not in itself, enough to prevent habitat loss and degradation for Greater Gliders. This action must place additional requirements on protecting Greater Glider home ranges during vegetation management (e.g. logging) to reflect the findings of both Victorian government research and the Supreme Court.

Action 2.7 – Further clarity is needed to show how planning overlays and strengthened vegetation clearing controls will protect Greater Gliders and their habitats from logging on private land. Fire management authorities should be added as a leading partner and exercise informed decision-making and operational sensitivity in key Glider corridors and linkages.

Action 2.8 – The Recovery Plan must acknowledge and emphasise the significance of HBT removals resulting from fire preparation activities. This includes SFBs, planned burning, hazardous tree removals and storm recovery (salvage logging) operations. Fire management authorities should be added as a leading partner and prioritised at the forefront of enhanced land management practices to protect HBTs. Clear and stringent HBT prescriptions are required, with greater enforcement and oversight required.

Action 2.9 – In accordance with Supreme Court findings, clear and stringent requirements should be set to protect 60% forest stand cover and identify/exclude Greater Glider home ranges during logging. Land holders should be added as a leading partner to protect Greater Gliders from logging on private land.

A summary of our recommendations and feedback below is as follows:

Key Recommendations (continued):

Action 2.10 – It should be made clear that restoration efforts must be fundamentally guided by relevant ecological restoration science, principles and methodologies. Sites selected for restoration should first be subject to biodiversity surveys to identify existing ecological legacy values, which should be prioritised and protected throughout restoration efforts. Broad and ongoing monitoring of restoration impacts (biodiversity, carbon, water) should be undertaken to inform future management. Avenues should be provided for public input and public transparency.

Action 2.11 – More stringent and prescriptive requirements for expansions to the NRS are critical. This should prescribe a NRS enhancement which provides confidence that long-term risks of Greater Glider extinction are acceptably low (<1% probability over a 100-year period). Inclusion of the following habitats should also be required and emphasised within the NRS: Identified critical habitats (A2.11), mapped climate refugia (A4.8), key habitat linkages and corridors (A2.5) as well as important and marginalised populations (A2.3). Fire management authorities should be added as a leading partner for informed decision-making and operational sensitivity in high-quality habitat outside of the NRS.

Action 2.13 – Broaden, to enhance fire management practices across the planning and implementation of all fire preparation activities outside of emergency periods. Introduce restrictions on planned burning of Greater Glider habitat below scientifically informed Tolerable Fire Intervals (The usefulness of planned burning in reducing fire risk is becoming increasingly questioned by academics. Clear, stringent and enforceable prescriptions are required to protect and buffer HBTs from the impacts of all fire preparation activities, including known denning/nesting trees for Greater Gliders. Integrate this action with the National Monitoring Program (A1.1-1.3) incorporating pre and post treatment surveys and monitoring of all fire preparation activities. Where hazardous HBTs require treatment, engage arborists to 'stump' trees and retain hollows instead of felling the tree at base.

Action 2.14 – Needs to be broadened to enhance fire management practices across the planning and implementation of all fire preparation activities outside of emergency periods. Integrate this action with the National Monitoring Program (A1.1-1.3) incorporating pre and post treatment surveys and monitoring of all fire preparation activities. Introduce requirements for fauna spotting when removing HBTs in Greater Glider habitat (e.g. hazardous tree removals).

Action 2.15 – Prioritise the protection of long unburnt forests, reference areas, critical habitat, climate refugia, habitat corridors and key linkages, marginal habitat and important populations within fire exclusion zones. Broaden exclusion zones to include and mitigate other threatening fire preparation activities in Greater Glider corridors and habitats (e.g. SFB exclusion zones, storm recovery (salvage logging) exclusion zones). Avoid all threatening fire preparation activities in known movement corridors, not just high intensity planned burning.

Manage habitat quality through targeted vegetation management and protection of key forest structures (Action 2.4)

Targeted vegetation management (e.g. selective thinning) seeking to restore Greater Glider habitat must be based on the best and most relevant ecological science, not on historical silvicultural and forestry techniques. Such management should be incorporated into a well-funded and strategic ecological restoration program, such as that described in Action 2.10. Ecological Vegetation Class (EVC) benchmarks and Reference Areas should be considered as guidance pathways towards the ecological restoration of Greater Glider habitat.

In accordance with Action 2.10, any targeted vegetation management should be monitored to understand the impacts of habitat restoration efforts on biodiversity, carbon sequestration and water yields, and to inform and adapt future management. Results of monitoring efforts should be publicly transparent.

As above, we recommend the following adjustment (or similar) to improve the outcomes of Action 2.4 for Greater Gliders:

"*Guided by the most relevant ecological science and principles, implement and monitor ~~selective thinning and~~ vegetation management to promote preferred forage and denning tree species*".[12]

Further, we note the following description under Action 2.4: "*Prevent incremental habitat loss and degradation by retaining key habitat thresholds (e.g. ≥60% forest stand cover)…".*

It's currently unclear in the draft Recovery Plan as to where this key habitat threshold (60% forest stand cover) has been sourced from. We highlight evidence supporting the inadequate nature of this threshold below.

We emphasise new research by Victoria's Department of Energy, Environment and Climate Action (DEECA).[13] This research conducted pre- and post-harvest Greater Glider surveys across 33 logged coupes[14] at varying degrees of logging intensity (e.g. percentage forest stand cover retained), including circumstances where the alleged key threshold of forest stand retention was met for Gliders (60%). The post-harvest surveys took place between 1–3.6 years following logging and thus only documented the short to medium term impacts of logging on Gliders.

The study found that the predicted number of Greater Gliders that persisted post-harvest was positively associated with the amount of retained vegetation. Critically, the study found predicted declines of Greater Glider densities in coupes with 60% or more forest stand cover retained during logging (Figure 1). Two coupes, logged at or just within the alleged threshold (e.g. 60% retention), resulted in predicted reductions of Greater Glider densities between 0.5 and 1 Glider per hectare (Figure 1). We note that the predicted declines of Greater Gliders are likely to be more severe in the long-term.

[12] Additions in underlined text, omissions in strikethrough-text.
[13] DEECA, Unpublished Research: *Assessment of protection prescriptions for Southern Greater Gliders and Leadbeater's Possums (Pia Lentini, Jenny Nelson, Michael Scroggie and Justin Cally).*
[14] And 32 control coupes (unlogged).

This research suggests that the retention of 60% forest stand cover during logging is not in itself sufficient to prevent habitat loss and degradation and a reduction in Greater Glider populations.

Concerningly, the Victorian Government is yet to release this research publicly. However, VNPA obtained this research through a Freedom of Information (FOI) request.

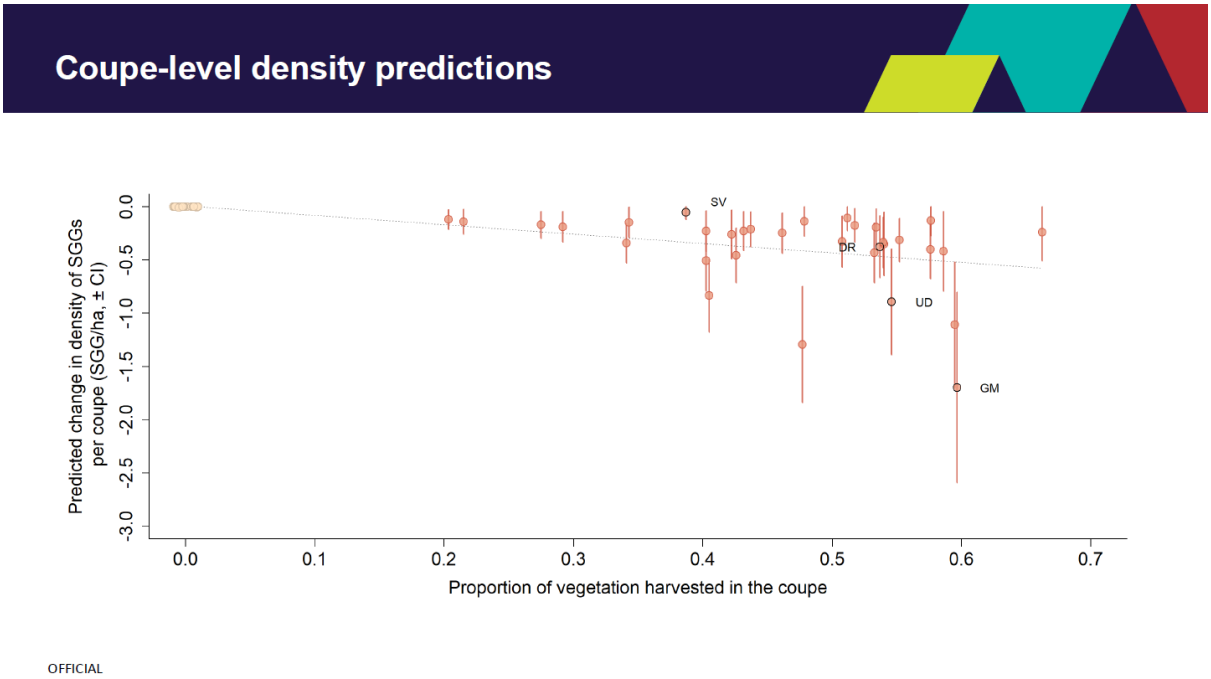

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Figure 1. Declines in Greater Glider densities across varying levels of logging intensity (DEECA, unpublished research).

DEECA's research is consistent with the findings of the honourable Justice Richards in the Supreme Court (2022). She found and ruled that in addition to the retention of 60% forest stand cover, Greater Glider home ranges were also required to be identified and excluded from logging in order to avoid serious or irreversible damage to Greater Gliders and their habitat.[15] Critically, these proper mitigations are not being applied during ongoing logging of Greater Glider habitat on private land (*see Appendix 1*). The Recovery Plan should seek to rectify this issue.

Based on the above, the draft Recovery Plan could be improved by incorporating the findings of DEECA and the Supreme Court when discussing key habitat thresholds and the protection of key forest structures, particularly in the context of vegetation management and forestry operations. We recommend the following adjustment (or similar) to improve the outcomes of Action 2.4 for Greater Gliders:

"Prevent incremental habitat loss and degradation by retaining key habitat thresholds (e.g. ≥60% forest stand cover <u>and protection of Greater Glider home ranges</u>) and minimise fine-scale clearing, particularly in high-value or intact forest areas". [16]

[15] glider+case+judgement+nov+4+2022.pdf (para 377).
[16] Additions in underlined text.

Integrate land-use planning that prioritises protection of high-value connected habitat for greater gliders (Action 2.7)

We support increased protections of Greater Glider corridors and linkages through regional environment plans, planning overlays and strengthened vegetation clearing controls. These actions should be applied across both public and private lands.

As detailed throughout this submission, fire preparation works including planned burning, SFBs, hazardous tree removals and storm recovery (salvage logging) are acting as major threats to Greater Gliders and their habitats in Victoria (*see Appendix 2*).

These threatening land management practices should be restricted from key Glider corridors and linkages, or at the very least be applied with additional mitigations and the utmost ecological sensitivity. In relation to public land, Action 2.7 could be improved by embedding fire management agencies as a leading partner to ensure best-informed land-use planning.

Regarding private land, it's unclear how this action will allow for Greater Glider recovery in the face of ongoing and intensive native forest logging. Such operations appear exempt from the relevant clauses of planning schemes in place to avoid, minimise and offset the removal and destruction of native vegetation.[17]

Effectively, local governments are giving the tick of approval to clear Greater Glider habitat on private land provided that trees are planted/regenerated afterwards.[18] This appears entirely inconsistent with the Victorian Planning Scheme objective "*to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.*"[19] It's unclear if planning overlays provide any protection to Greater Gliders from logging on private land.

The Recovery Plan should seek to rectify this logging loophole of Greater Glider habitat on private land. Further clarity is needed to show how the Recovery Plan will protect Greater Gliders and their habitat from this ongoing and escalating threat in Victoria. Expert planning advice commissioned by environment groups highlights a simple solution to close this logging loophole, but the Victoria government is yet to implement the simple planning scheme amendments necessary, keeping Greater Gliders at risk.[20]

Conserve and promote recruitment of hollow-bearing trees across land tenures (Action 2.8)

Victoria has now phased-out the commercial logging of Greater Glider habitat on public land. As outlined below and throughout this submission, the greatest ongoing and human-induced threat to HBTs now stems from FFMVs scope of fire preparation activities.

Planned burning, SFBs, hazardous tree removals and post-storm recovery (salvage logging) are all exacerbating the natural declines of HBTs throughout Greater Glider habitat (*Appendix 2*), and the Recovery Plan should seek to rectify and mitigate these threats.

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[17] Clause 52.17 of the Victorian Planning Scheme.
[18] Government passes responsibility of approving private native timber logging to councils - ABC News.
[19] Clause 12.01 of the Victorian Planning Scheme.
[20] VPNA Private Land Logging - Planning Advice 22112024 V3.

The Recovery Plan acknowledges planned burning as a threatening process but does not adequately emphasise the impacts of planned burning on HBTs. Victorian government research in 2016 reported rates of HBT collapse at 25.6% for HBTs directly exposed to planned fire, compared to 0.9% across all HBTs not directly exposed to fire. The study reports the following: "*Accordingly, direct exposure to fire is associated with a 27.9-fold increase in the rate of HBT collapse (relative risk)*" [21].

This research is appropriately emphasised in the Commonwealth's Conservation Advice for the Greater Glider[22] but remains an oversight in the draft Recovery Plan. The collapse rates of HBTs following planned burning should be emphasised.

In regard to the other threatening fire preparation activities, the Recovery Plan makes little-to-no mention of their threat and impacts on Greater Gliders and HBTs. In one example, SFB operations have resulted in the direct removals of over 888 HBTs including known denning/nesting trees for Greater Gliders. Individual mortalities of Greater Glider(s) have been documented and the reductions in available denning/nesting sites for Greater Gliders are significant (*see Appendix 2*).

In our view this is a major oversight which must be addressed. We provide some case studies in *Appendix 2* that highlight the significance of these ongoing threats to Greater Glider habitat and populations.

These threats are acting on a wide range of land tenures including within the NRS and Victoria's esteemed national parks. Fire preparation activities are targeting and removing HBTs outside of fire emergency periods in the absence of proper animal welfare standards, biodiversity surveys as well as referrals and approvals through federal nature laws. There is no excuse for poor land management practices which come at the expense of Greater Gliders and their key ecological structures (e.g. HBTs).

To effectively conserve and promote HBT recruitment, fire management authorities (e.g. FFMV) need to be a leading partner of Action 2.8 and prioritised at the forefront of enhanced land management practices. We are concerned that the draft Recovery Plan currently does not set out clear and stringent HBT prescriptions for fire management authorities to follow, offering little-to-no confidence in enhanced land management practices and Greater Glider recovery.

In contrast, the Commonwealth's Recovery Plan for the LbP did set out clear and stringent prescriptions for the protection of HBTs. It listed the following urgent action: "*Action 2.9 Protect and buffer all large (over 150 cm DBH) and hollow bearing trees (where over 80 cm DBH).*" [23] This Recovery Plan was released and came into effect on the 6th of March 2024, and DEECA was listed as an implementation partner for this urgent action to protect HBTs for LbP.

In the ensuing months, DEECA proceeded to remove over 888 HBTs throughout LbP habitat in the Yarra Ranges National Park under its SFB renewal program (*see Appendix 2*). Surveys from

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[21] *Reducing the effect of planned burns on hollow-bearing trees Fire and adaptive management report no. 95* (DELWP, 2016), pp26, <Report-95-Reducing-the-effect-of-planned-burns-on-hollow-bearing-trees-2016.pdf>.
[22] *Conservation Advice for Petauroides volans (greater glider (southern and central))* (DCCEEW, 2022), pp10, <Conservation Advice for Petauroides volans (greater glider (southern and central))>.
[23] National Recovery Plan for Leadbeater's possum, pp68.

Wildlife of The Central Highlands (WOTCH) and Warburton Environment (WE) identified 54 breaches of that HBT prescription along the Loch Valley-Forty Mile SFB alone (*see Appendix 2*).

It's clear that even with clear and enforceable HBT prescriptions in place, more oversight, regulation and enforcement is needed to keep fire management authorities in check and HBTs standing. Community groups such as the Victorian National Parks Association (VNPA) are pushing for enhanced transparency, regulation and oversight of fire preparation activities which would benefit Greater Glider recovery and HBT protections. We attach these recommendations in *Appendix 3*.

Apply best-practice land management and forestry practices to maintain greater glider habitat (Action 2.9)

As a matter of principle, we do not support the ongoing logging of Greater Glider habitat. Across Victoria, this threat has shapeshifted from logging on public land, to logging on private land (*Appendix 1*). Despite the jump across the fence, the impacts of logging on Greater Glider habitat, populations and HBTs remains well understood and significant in nature.

As discussed previously, the Supreme Court of Victoria has determined what is required to adequately protect Greater Gliders from logging. Greater than 60% of the forest stand cover must be protected, and critically, the home ranges of resident Gliders must also be identified and excluded from logging [24].

Currently, these prescriptions are not being enforced during the logging of Greater Glider habitat on private land. Action 2.9 should seek to rectify this issue, adding land holders as a leading partner and putting them at the forefront of enhanced forestry prescriptions and stringent requirements. This would require comprehensive Greater Glider surveys prior to the commencement of logging to identify the whereabouts of resident Greater Gliders and their home ranges, as discussed in the judgement of the honourable Justice Richards.

Further, 'variable retention harvesting' is in no way best-practice land management nor does it provide Greater Gliders with any conservation benefits and outcomes. Justice Richards made the following findings in relation to variable retention harvesting in Greater Glider habitat:

"*VicForests' variable retention harvesting methods were not shown to be effective to conserve greater glider populations in harvested coupes…Far from demonstrating that variable retention harvesting is effective to conserve greater gliders, the available evidence is that it is of no short or medium term benefit to them.*"[25]

"*VicForests' current approach falls well short of what the precautionary principle requires for the conservation of greater gliders. The ecological evidence was clear - greater gliders that live in coupes that are harvested in accordance with VicForests' current practices will probably die as a result of the harvesting operations.*" [26]

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[24] glider+case+judgement+nov+4+2022.pdf (para 377).
[25] glider+case+judgement+nov+4+2022.pdf (para 224).
[26] glider+case+judgement+nov+4+2022.pdf (para 228).

References and actions supporting the use of Variable Retention Harvesting do not belong in the Greater Glider Recovery Plan. Action 2.9 should be improved by setting stringent requirements for logging to identify and protect Greater Glider home ranges in addition to the retention of 60% forest stand cover, consistent with the findings of the Supreme Court.

Restore and enhance glider habitat through targeted revegetation and regeneration (Action 2.10)

We support and call for coordinated and targeted efforts to ecologically restore Greater Glider habitat with prioritisation of degraded areas and logged landscapes. We do, however, hold concerns over governments' implementation of regeneration activities in the absence of proper input from scientific experts in the field of ecological restoration, and from key knowledge-holders such as ENGOs and community groups.

In 2023, community groups investigated one area of forest where the government was undertaking regeneration activities of logged forests. This area was inside the government announced Immediate Protection Areas (IPAs).

Citizen scientists identified and documented endangered Tree Geebungs (*Persoonia* arborea) that had been destroyed during these regeneration activities, including one tree estimated to be hundreds of years old (Figure 2).[27] Significant foraging habitat for LbP was also destroyed in the process of 'regeneration activities'.

Figure 2. Endangered Tree Geebung destroyed during regeneration activities (Wildlife of the Central Highlands and the Victorian Forest Alliance, 2023).

[27] Endangered species found 'smashed up' under bulldozed trees: 'Grave concerns'.

The approach to regeneration efforts did not appear to prioritise the protection of existing key ecological values (e.g. endangered plants and threatened species habitat) throughout the site, resulting in a backwards step towards true ecological recovery.

This could have been avoided by first undertaking biodiversity surveys and then implementing sensitive ecological restoration methodologies. Community consultation and input would have also helped to improve restoration outcomes, as ENGOs and citizen scientists were aware that this area was a hotspot for endangered Tree Geebungs and that it contained LbP habitat.

We acknowledge the scientific studies which estimate there to be between 8,000-13,000 hectares of logged forests requiring ecological restoration.[28] [29] The task ahead is large, and it's important that ecological restoration efforts for the Greater Glider do not compromise the restoration, recovery and conservation outcomes for other threatened species and communities in the process. This is particularly important under the application of any site preparation or assisted regeneration techniques that could impact key ecological values.

It's critical that the restoration program described in Action 2.10 be developed and implemented based on the best and most relevant ecological science, not silvicultural and forestry techniques. EVC benchmarks and Reference Areas should be considered as guidance pathways towards the ecological restoration of Greater Glider habitat.

Sites selected for ecological restoration and regeneration efforts should first be subject to biodiversity surveys to understand existing ecological legacies requiring protection and sensitive management. Sites should then be subject to ongoing monitoring to understand the impacts of restoration efforts on biodiversity, carbon sequestration and water yields, and to inform and adapt future management. Results of monitoring efforts should be publicly transparent and provide avenues for public input.

Safeguard areas of high-quality habitat not currently managed for conservation (Action 2.11)

We support and emphasise the need to safeguard high-quality habitat for Greater Gliders through expansions and enhancement of the NRS, conservation agreements, covenants and the registering and protection of critical habitats. We agree that this should be an urgent priority action for the Recovery of Greater Gliders and other Matters of National Environmental Significance (MNES).

The Victorian Government has just announced its policy on the Future of State Forests[30] following lengthy assessments, investigations and public consultation from the Victorian Environment Assessment Council (VEAC), the Eminent Panel for Community Engagement (EPCE) and the Great Outdoors Taskforce (GOT).

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[28] Satellite AI analysis finds thousands of hectares of 'magnificent forests' in Victoria that haven't regenerated after logging - ABC News.
[29] Logging devastated Victoria's native forests – and new research shows 20% has failed to grow back | ANU Fenner School of Environment & Society.
[30] https://www.deeca.vic.gov.au/futureforests/future-forests.

Disappointingly, the new government policy largely ignores key recommendations to increase and enhance the NRS throughout the range of Greater Gliders east of Melbourne (Figures 3 & 4). The announcements states that "*The Great Outdoors Taskforce did not consider large-scale change to land tenures and the creation of new national parks*." Concerningly, the Victorian Government's new announcement provides little-to-no confidence in achieving the necessary future expansions to the NRS required to protect and conserve Greater Gliders in accordance with population viability models.

The inadequacy of this new policy is summarised eloquently by Lindenmayer & Taylor (2025):

"*The Victorian Government has released its policy on the Future of State Forests. The report was preceded by exhaustive studies assessing the conservation and other values of forests such as those in the Central Highlands of Victoria – home to some of the world's tallest forests. One of these reports, led by the Eminent Panel for Community Engagement, made clear recommendations for new parks and reserves.*

But a closer look shows that the Future of State Forests policy largely ignored those recommendations. The EPCE recommended 68,570 ha of new national parks, 8121 ha of state parks, and 105,371 ha of forest parks. Our spatial analysis revealed the Victorian Government announced protection for just 6.9% of the area recommended by the EPCE. Somehow, some of the most significant areas for conservation, such as the mountainous escarpments surrounding the Baw Baw Plateau, remain completely unprotected.

This is a poor outcome not only for Victoria, but also for Australia. Other analyses show Victoria is a now one of the weakest contributors to the national goal of protecting 30% of the continent by 2030." [31]

The government's minimal additions to the NRS are clearly inadequate to protect and conserve Greater Gliders, LbP and other MNES into the future. This is reinforced under previous studies from Lindenmayer & Taylor (2023).[32] Additional expansions and enhancement of the NRS throughout the Greater Glider's range are required.

In the context of other MNES, for example the LbP, it's unclear how the currently limited and inadequate expansions to the NRS could possibly satisfy the recovery objectives, actions and performance measures in the LbP National Recovery Plan. For example, the stated urgent priority actions and deliverables to be achieved by the end of the second year:

"*The reserve system is expanded consistent with distribution and population viability models, and land-use planning, to a level that provides confidence that long-term risks of extinction are acceptably low (less than 1% probability) over a 100-year period).*" [33]

Once again, the LbP Recovery Plan placed more stringent and prescriptive guidelines on the NRS enhancements required to achieve LbP recovery, compared to that of the Greater Glider draft Recovery Plan. It set out quantitative requirements of the NRS enhancement relative to

[31] Focusing on the EPBC but dropping the ball on protection | Pearls and Irritations.
[32] How well do Immediate Protection Areas conserve biodiversity in Victorian forests? - The Australian National University.
[33] National Recovery Plan for Leadbeater's possum, pp55.

population viability modelling (e.g. <1% probability of extinction over a 100 year period), whereas the Greater Glider Recovery Plan does not.

Even with more guidelines in place, the implementation of the LbP National Recovery Plan is on a trajectory towards failure under current government policies and commitments. All levels of government responsible for its implementation should be working to rectify this issue and to re-establish a positive trajectory, including the urgent priority for NRS enhancement. This would also benefit the recovery outlook for the Greater Glider as there is a large overlap between habitats in Victoria's Central Highlands and the areas recommended for NRS additions (Figures 3 & 4).

We recommend the draft Recovery Plan for Greater Gliders place more stringent and prescriptive requirements for expansions to the NRS across Greater Glider habitat. Consistent with other National Recovery Plans, this should prescribe a NRS enhancement which provides confidence that long-term risks of Greater Glider extinction are acceptably low (<1% probability over a 100-year period). It should also emphasise requirements to protect the following habitats on public land through expansions to the NRS: Identified critical habitats (Action 2.11), mapped climate refugia (Action 4.8), key habitat linkages and corridors (Action 2.5) as well as important and marginalised populations (Action 2.3).

To safeguard high-quality habitat that falls outside of the current NRS system, fire management authorities will need to be added as a leading partner of Action 2.11 and avoid the use of intensive fire preparation activities in high-quality habitats.

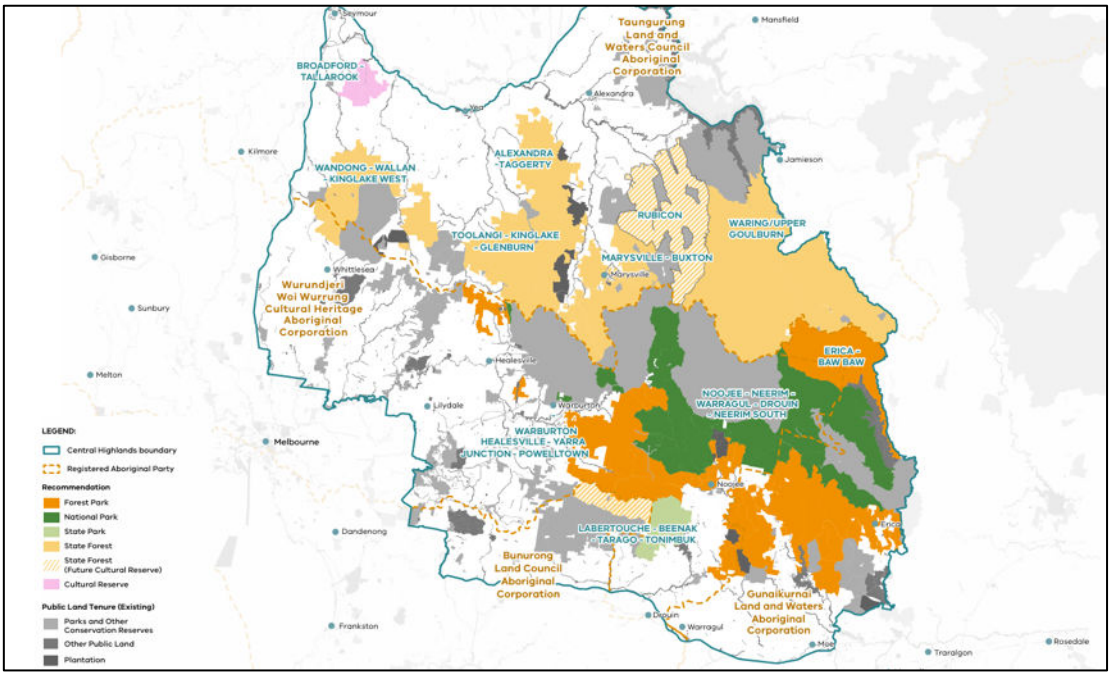

Figure 3. Recommended enhancement of the NRS in Victoria's Central Highlands. New and expanded National Parks in dark green. State Parks in light green (EPCE, 2025)[34]

[34] deeca.vic.gov.au/__data/assets/pdf_file/0040/768991/Eminent-Panel-for-Community-Engagement-Central-Highlands-Final-Report.pdf, pp8.

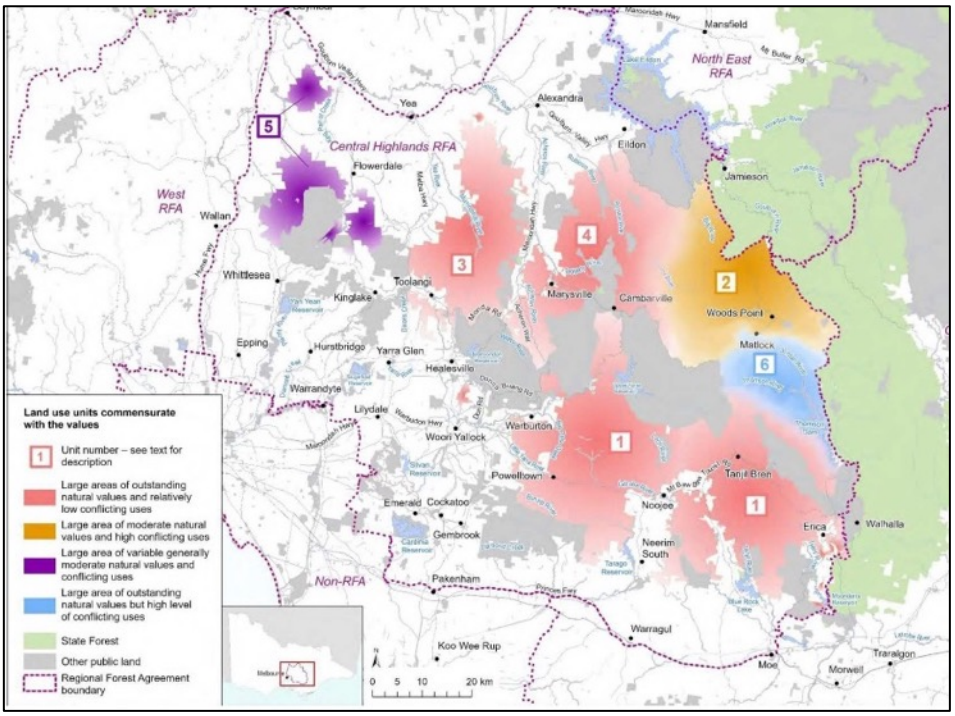

Figure 4. Recommended enhancement of the NRS in Victoria's Central Highlands. Large areas with values commensurate with National Park status in red (VEAC, 2023)[35]

Review and revise fire management prescriptions; Reduce direct mortality during planned burns; and Apply fire management practices that maintain corridor integrity (Actions 2.13, 2.14 & 2.15)

We support and emphasise the need for improved management practices of FFMV to protect Greater Gliders and their habitats from threatening operations. Currently, Actions 2.13, 2.14 and 2.15 have a limited focus on enhancing protections during the planning and implementation of planned burning. As discussed throughout this submission, planned burning is not the only fire preparation activity threatening Greater Glider populations, habitats and HBTs on a major scale (*see Appendix 2*).

We agree that significant improvements are required to protect Greater Gliders during planned burns. However, these actions need to be broadened to enhance fire management practices across the planning and implementation of all fire preparation activities outside of emergency periods, not just planned burning. This includes SFBs, hazardous tree removals and storm recovery (salvage logging) operations (*see Appendix 2*).

A review, revision and enhancement of fire management prescriptions is a critical priority action for the recovery of Greater Gliders. The Victorian Government updated its Code of Practice for

[35] Current Assessments & Advice - VEAC | Victorian Environmental Assessment Council, pp107.

Fire Management Practices on Public land in 2025.[36] In a public submission, the VNPA summarises the updates as follows:

"*a small improvement on the previous code as it more explicitly recognises conservation issues but in many ways still repeats the mistakes and flaws of the previous code and does little to improve the transparency, accountability or oversight and consistency with national and state environmental laws.*" [37]

Action 2.13 should seek to ensure that all fire preparation activities (SFBs, hazardous tree removals & storm recovery (salvage logging)) are ecologically appropriate for Greater Gliders and their habitat. This includes planned burning which should not be permitted below scientifically informed Tolerable Fire Intervals for Greater Gliders and their habitat. Significant improvements in the planning and implementation of these activities are required, including best-informed mitigation measures and protective prescriptions to protect key habitat attributes.

Clear and stringent prescriptions are required to protect and buffer HBTs from the impacts of all fire preparation activities, including known denning/nesting trees for Greater Gliders. Similarly to those prescribed (but not implemented) in the LbP Recovery Plan, we recommend that these be clearly enforceable and prioritised for enhanced regulation.

Pre and post-treatment Greater Glider surveying and HBT monitoring is critical for all fire preparation activities. Mitigation measures and prescriptions should be assessed for their effectiveness in protecting HBTs, foraging trees and recruitment HBTs, as well as their effectiveness in avoiding long-term Greater Glider declines and direct mortalities. Actions 2.13 and 2.14 could be improved by integrating all fire preparation activities with the National Monitoring Program (Actions 1.1-1.3).

As evidenced by DEECA's actions to willingly remove known denning/nesting trees for Greater Gliders, remove over 1014 HBTs and cause direct mortality(s) of Greater Glider(s) in the Yarra Ranges National Park (*see Appendix 2*), there remains a clear inadequacy with the prescriptions in place to guarantee protection of Greater Gliders and their habitat during fire preparation activities. We provide a list of recommendations to improve the transparency, oversight and regulation of fire management activities in *Appendix 3*.

This includes the following recommendations which could improve Actions 2.13 & 2.14:

- Independent and on-ground ecological values assessments should be undertaken prior to fire preparation works to identify significant values that are present or likely to be present on site which require mitigations in the planning and operational phases

- If hazardous trees are to be impacted and/or removed, an independent fauna spotter must be engaged and present on-site to ensure wildlife welfare concerns are appropriately mitigated

[36] code-of-practice-for-bushfire-mangement-on-public-land-2025.pdf.
[37] VNPA-Submission-Code-of-Practice-for-Bushfire-Management-on-Public-Land.pdf.

- Arborists should be engaged for the treatment of hazardous trees so that trees can be 'stumped' in a way that both reduces the risk of harm, whilst also retaining habitat values and hollows through appropriate pruning.

We support the establishment of fire exclusion zones to protect Greater Glider habitat and corridor integrity. Action 2.15 could be improved by prioritising the protection of long unburnt forests, reference areas, critical habitat, climate refugia, habitat corridors and key linkages, marginal habitat and important populations within fire exclusion zones.

As above, Action 2.15 could be improved by broadening 'fire exclusion zones' to include other threatening fire preparation activities. For example, in addition to fire exclusion zones, there should be SFB exclusion zones and storm recovery (salvage logging) exclusion zones established and maintained to protect the integrity of Greater Glider corridors and habitats.

All threatening fire preparation activities should be avoided in known movement corridors, not just high-intensity planned burning.

Objective 3. The participation of stakeholders in the implementation of recovery actions is increasing (Strategy 3 a-b) [Actions 3.1 – 3.5]

A summary of our recommendations and feedback below is as follows:

Under Objective 3, we support the strategies and actions in the draft Recovery Plan and the strengthening of first nations and community involvement with the recovery of Greater Gliders. We agree with the statement in the recovery plan that the "*Conservation of the greater glider is also led by dedicated champions and researchers and many community groups that play an active role in surveys, monitoring and education*."

We acknowledge and emphasise the need to keep community groups and ENGOs involved and up-to-date with recovery actions and progress, including the primary actions of the recovery plan (national monitoring program and habitat restoration). We make recommendations to strengthen the draft recovery plan's stakeholder engagement and involvement in the context of habitat restoration works.

Key Recommendations:

Action 3.1 – Key stakeholders (e.g. ENGOs, community groups) should also be provided input and involvement opportunities across the program(s) of habitat restoration works (A2.10).

Engage the public in greater glider conservation (Action 3.1)

The Victorian Government is currently undertaking forest regeneration activities following their decision to end native forest logging on public land in 2024. According to a recent government announcement,[38] they have regenerated over 1,200 hectares of logged forests since 2024.

[38] Future of State forests.

The announcement also states, "*Tree planting and regeneration are most powerful when communities are part of it. We'll be working alongside our passionate community volunteers, Traditional Owners and environmental groups to regenerate local forests. By working side by side with volunteers, we're helping people connect deeply with the places they love and take ownership of their future.*"

If true, we acknowledge these 1,200 hectares as a positive step towards the overall ecological restoration task at hand. However, despite the Victorian government's claims above, they're keeping the public entirely in the dark when it comes to details about these regeneration works.

ENGOs, community groups and other key stakeholders have no understanding of which areas have been regenerated, which areas will be regenerated in the future, and what methods are being applied during regeneration activities. To the best of our knowledge, no community groups or ENGOs have been consulted with nor have been provided with physical opportunities for involvement in ongoing regeneration works.

As discussed throughout this submission, ENGOs, community groups and citizen scientists hold key information that can help inform best practice land management and recovery outcomes for Greater Gliders and other key ecological values.

We acknowledge the scientific studies which estimate there to be between 8,000-13,000 hectares of logged forests requiring ecological restoration.[39] [40] The task ahead is large, and community groups and ENGOs would like to contribute to the recovery of Greater Glider habitat through this program of works.

Action 3.1 could be improved by not only providing the community with opportunities to contribute to Greater Glider surveys, but to also provide opportunities in community involvement, consultation and participation during habitat restoration and regeneration works.

[39] Satellite AI analysis finds thousands of hectares of 'magnificent forests' in Victoria that haven't regenerated after logging - ABC News.
[40] Logging devastated Victoria's native forests – and new research shows 20% has failed to grow back | ANU Fenner School of Environment & Society.

Objective 4. Key knowledge gaps are addressed, and information is used to improve decision-making, conservation action and recovery of greater gliders (Strategy 4 a-e) [Actions 4.1 – 4.12]

A summary of our recommendations and feedback below is as follows:

Under Objective 4, we support the strategies and actions in the draft recovery plan to address knowledge gaps, and to use updated information to best guide informed decision-making and conservation action for the recovery of Greater Gliders.

We support and emphasise the draft recovery plan's commitment in achieving the following: "*Climate-informed habitat planning guides reserve design, restoration priorities, and threat mitigation, with key climate refugia protected*".

We recommend increasing the prioritisation of climate-informed expansions to the National Reserve System and increased protections to climatic refugia on private land. We also recommend that data depicting climatic and thermal refuges for Greater Gliders be continuously incorporated into the centralised national database (A1.3). This will help guide and inform land managers and prevent threatening land management practices occurring within climatic refuges. We recommend fire management authorities be added as a leading partner for Action 4.8.

Key Recommendations:

Action 4.8 – There should be greater prioritisation of climate-informed expansions to the NRS and increased protections to climatic refugia on private land (Priority 2 at minimum). Previously identified climatic refuges that fall outside of the NRS should be prioritised for inclusion (e.g. the Errinundra & Nunniong plateaus in East Gippsland). Fire management authorities should be added as a leading partner and should be restrained from undertaking threatening land management practices in climatic and thermal Greater Glider refugia.

Use climate modelling techniques to investigate the potential influence climate change has on species distribution (Action 4.8)

There have been recent and highly relevant scientific studies undertaken to identify climate refugia for Greater Gliders in Victoria. For example, Wagner et al., 2020 identified critical climatic refuges in the forests of East Gippslands' Errinundra & Nunniong plateaus. These plateaus acted as critical fire refuges during the 2019-20 bushfires. The study found that:

"... mid-to high-elevation areas in East Gippsland have shown an opposite trend and may already be acting as climatic refugia for greater gliders... These areas, where high densities of animals have been observed, are critical for the conservation of this species: In East Gippsland, more than 80% of suitable habitat lies above 500-m elevation and more than a third above 1000 m... In higher elevation areas, fewer but larger patches with higher clumpiness...indicate intact and interconnected habitat for the greater glider... Developing a network of bioclimatic refugia across these landscapes would be critical to the long-term viability of their populations in the region. Identifying these areas and protecting them will foster not only greater glider

populations, but also with them a wide range of fauna and flora species relying on similar mature forest ecosystems and climatic conditions." [41]

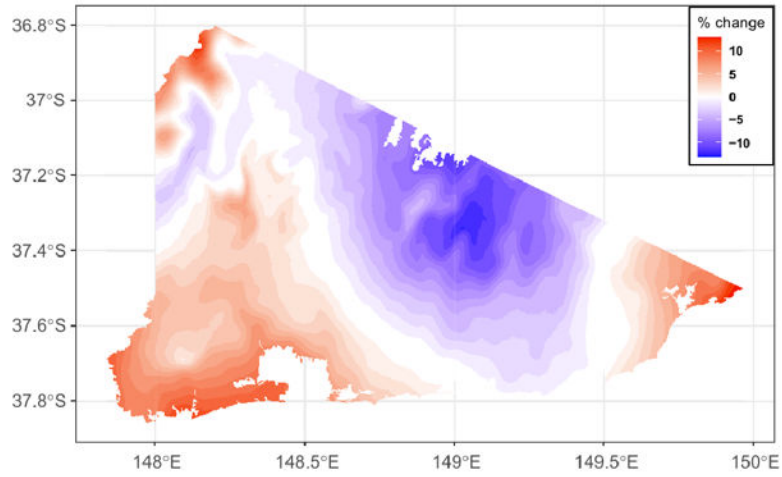

Fig. 5. Percent change in Annual Heat Moisture Index (AHMI) between 1981–1992 and 2003–2014 in the East Gippsland study region. Negative changes (blue colors) in AHMI indicate development of cooler and wetter conditions, suggesting the formation of climatic refugia for the greater glider. Positive changes (red colors) illustrate development of hotter and drier conditions, likely reducing habitat suitability (Wagner et al., 2020) [42]

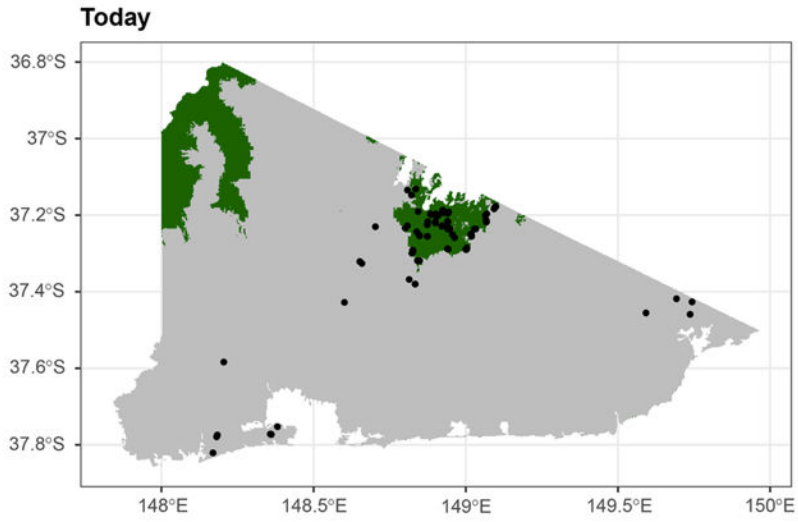

Figure 6. Example of suitable habitat decrease for the variable hot nights (number of nights >20°C) according to variable threshold for 1981–1992 with historic records from the Victorian Biodiversity Atlas and 2003–2014 (today) with presence records from this study in East Gippsland. Dark green represents suitable, gray represents unsuitable areas, and black dots are greater glider observations (Wagner et al., 2020) [43]

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[41] Climate change drives habitat contraction of a nocturnal arboreal marsupial at its physiological limits (Wagner et al., 2020), pp15, <Climate change drives habitat contraction of a nocturnal arboreal marsupial at its physiological limits>.
[42] Climate change drives habitat contraction of a nocturnal arboreal marsupial at its physiological limits (Wagner et al., 2020), pp14, <Climate change drives habitat contraction of a nocturnal arboreal marsupial at its physiological limits>.
[43] Climate change drives habitat contraction of a nocturnal arboreal marsupial at its physiological limits (Wagner et al., 2020), pp13, <Climate change drives habitat contraction of a nocturnal arboreal marsupial at its physiological limits>.

Critically, the study also found that "*… large areas of suitable habitat in both East Gippsland and the Central Highlands study regions still lie outside any protected area, while areas with low or no suitability contribute large percentages to the protected area network. We found ~360,000 ha of currently suitable habitat for greater gliders across all three study regions to still be outside the protected area network…*" [44]

This study reinforces that the current NRS is inadequate to protect Greater Gliders into the future, particularly in the context of a changing climate. As emphasized by Wagner et al. (2020), identifying, developing and protecting a network of bioclimatic refugia for Greater Gliders is a critical step in securing the long-term viability of Greater Glider populations. The Recovery Plan should reflect and give justice towards the urgency and importance of this priority action.

We recommend increasing the prioritisation of climate-informed expansions to the NRS and increased protections to climatic refugia on private land (Priority 2 minimum). This critical step will protect Greater Glider refuges from the threat of extractive industries (logging and mining), whilst also improving protections from other ongoing and compounding threats into the future (e.g. fire preparation activities, pest species management).

Additions of climatic refugia to the NRS should prioritise those which have already been identified. For example, the Errinundra & Nunniong plateaus in East Gippsland (Wagner et al., 2020). In Victoria's Central Highlands, this includes the Baw Baw & Toorongo plateaus which have been recommended for additions to the NRS by the EPCE and VEAC (Figures 3 and 4). Further climatic refuges should also be assessed for, identified and protected throughout the distribution of Greater Gliders.

Acknowledging that changes to public land tenure can take time, updated information on climatic refugia should be consistently communicated to land managers to ensure that land management practices threatening refugia are avoided at the planning phase (e.g. planned burning, SFBs, hazardous tree removals). This could be achieved through the establishment of fire management exclusion zones as discussed previously in this submission (Action 2.15), and their incorporation into the centralised national repository (Action 1.3).

[44] Climate change drives habitat contraction of a nocturnal arboreal marsupial at its physiological limits (Wagner et al., 2020), pp16, <Climate change drives habitat contraction of a nocturnal arboreal marsupial at its physiological limits>.

Appendix 1. Case Studies on Private Land Logging (key ongoing threat)

Intensive logging is occurring and escalating on private land, including within modelled Greater Glider habitat. Such logging is occurring in the absence of targeted pre-harvest surveys or monitoring for Greater Gliders.

One such logging operation has recently been referred to the Commonwealth for assessment and approval under the EPBC Act.[45] Nearly half of the 120 hectare property on Mount Horsfall has been clearfelled, yet there have been no targeted surveys for Greater Glider (or LbP). A compliance audit for this property under the Forest Stewardship Council found both major and minor non-conformities. Amongst the findings were that the certificate holder (CH) had not adequately surveyed for threatened species, including Greater Gliders.

"*During the assessment, it was confirmed that the CH had not used best available information to identify specific locations of habitat of endangered and critically endangered species that are present or likely to be present within and adjacent to the Management Unit.*"[46]

In another example, the logging of Greater Glider habitat within 51 hectares of native forest was approved by the East Gippsland Shire Council in March 2025 [47]. Despite the findings of the Supreme Court, prescriptive requirements to protect Greater Gliders from logging (60%+ retention + home range exclusions) are not being implemented on private land.

Figure 5. Clearfell logging of Greater Glider habitat on private land (ABC, 2025)[48]

[45] Project Decision · EPBC Act Public Portal.
[46] Assessment Detail.
[47] Government passes responsibility of approving private native timber logging to councils - ABC News.
[48] Woodchips from endangered possum habitat sold to Domino's for woodfired pizza - ABC News.

Appendix 2. Case Studies on Fire Preparation Activities (key ongoing threats)

Strategic Fuel Breaks & Hazardous Tree Removals

In 2024, community groups were alerted to the planned removals of HBTs under FFMVs program of works for SFB 'renewals'. For the 2023-24 season, FFMV had planned widespread HBT removals along 115kms of SFBs in and adjacent the Yarra Ranges National Park, with removals occurring up to one tree length from these SFBs. Trees were allegedly being identified and removed as hazardous trees. The areas planned for treatment are mostly completed and largely coincide with modelled Greater Glider habitat.

Critically, FFMV did not undertake pre-treatment fauna surveys for Greater Gliders. FFMV did not adequately identify denning/nesting trees for Greater Gliders prior to commencing the removal of HBTs. They also failed to assess, monitor and record the number of HBTs removed throughout these works. Citizen scientists from community groups including WOTCH and WE stepped in to undertake extensive pre and post treatment survey work and assess the impacts to Greater Gliders and other wildlife.

Citizen scientists identified HBTs marked for removal by the spray-paint mark of a circle and slash at the base of the trees.[49] Stagwatching surveys were then undertaken for a small subset of HBTs marked for removal along the Loch Valley-Forty Mile SFB. Stagwatching surveys identified, recorded and documented Greater Gliders emerging from 7 HBTs marked for removal. FFMV failed to identify and had planned to remove these 7 denning/nesting trees for the endangered Greater Glider, and likely many more throughout the program of works.

Community groups notified FFMV of these denning/nesting trees marked for removal in April and May of 2024. Despite this, FFMV proceeded with the works in the following weeks and knowingly removed 4 of the 7 denning/nesting trees for Greater Gliders during the breeding season (see Figures 7 and 8 as examples). The 3 marked denning/nesting trees that remain standing were left due to a legal injunction placed on the trees, not because of any environmental good-faith or mitigations from FFMV. Not surprisingly, a deceased Greater Glider was tragically found at the bottom of one felled denning/nesting tree (Figure 7e).[50]

Citizen scientists also documented damage to unmarked (non-hazardous) HBTs confirmed through stagwatching surveys to be occupied by denning/nesting Greater Gliders (Figure 10). Increased fuel loads from the canopies of adjacent felled trees now sit at the base of this damaged tree, significantly increasing the risk of fire damage in the event of planned or wildfire.

Citizen scientists surveyed 53% of the SFBs planned for 'renewal' works in 2023-24. These surveys documented the removal of 888 HBTs (See Figure 9 as examples). 417 of these HBTs (47%) were not marked for removal yet were still removed by tree-felling contractors. 330 of the HBTs removed (37%) were dead stag HBTs. A further 126 HBTs were documented as marked for removal but are yet to be removed due to legal injunctions awarded by the Federal Court.[51]

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[49] Tree Hazard - Fire.
[50] Greater glider found dead next to Victorian Department of Environment tree-felling site.
[51] Federal Court | Warburton Environment.

In total, citizen scientists documented 1014 HBTs removed (or planned for removal) through this program of works and understand that further surveying of treated areas would see this number largely increase.

Citizen scientists measured the Diameters at Breast Height (DBH) for 185 HBTs prior to their removal. 59% of removed HBTs had a DBH greater than 1m, and 6% had a DBH greater than 2m. The largest HBT removed was 2.85m DBH (Figure 11). It exceeded the state's threshold required for big tree protection, and despite community groups alerting FFMV to the presence of this giant tree, FFMV proceeded to remove the large HBT.[52]

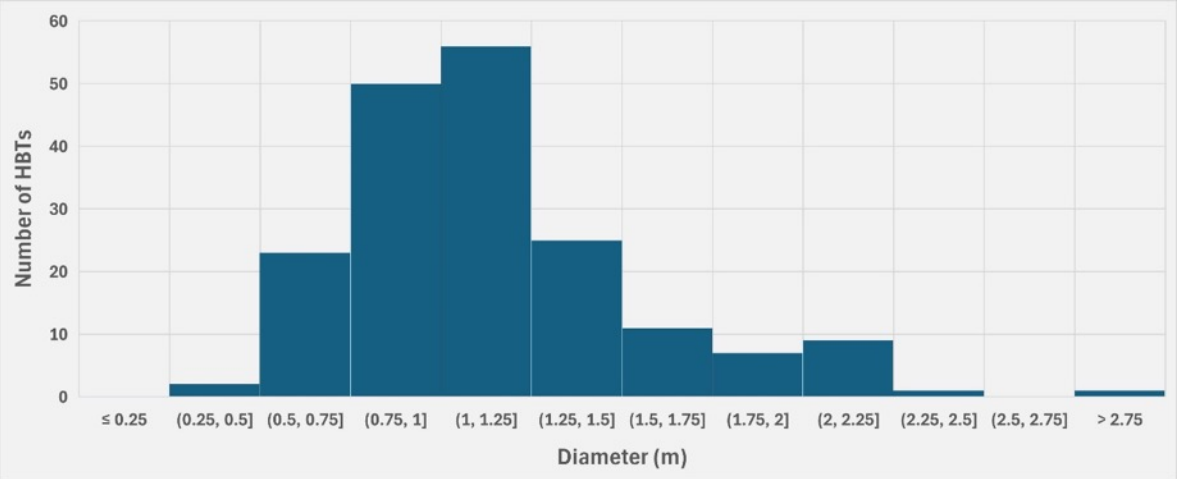

Figure 6. DBH ranges for HBTs removed or planned for removal along two SFBs in the Yarra Ranges (WOTCH & WE, 2025)

[52] Leadbeater's possums: Inside the rescue mission for Victorian Highlands' forest dwellers.

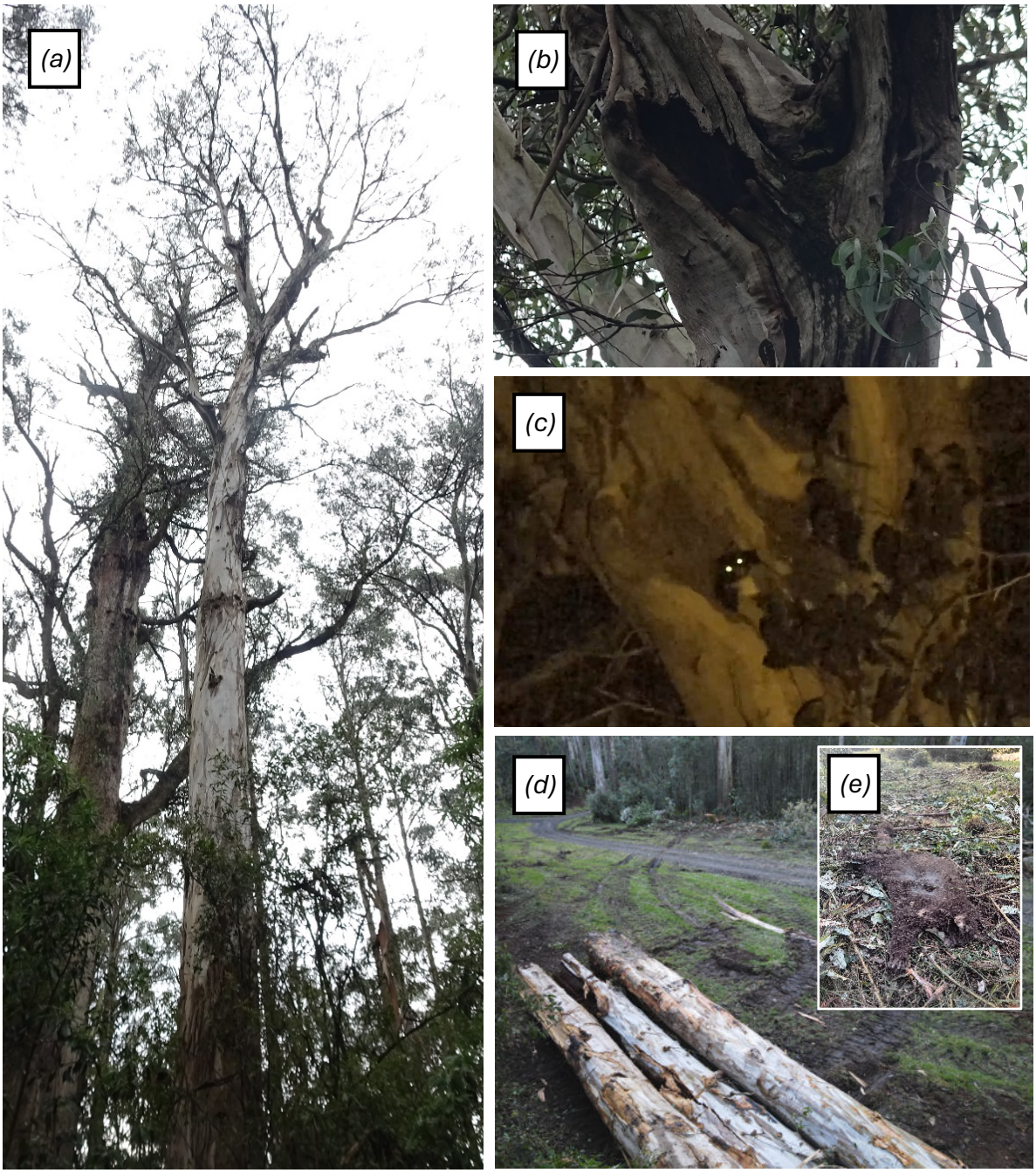

Figure 7 (a-e). Denning/Nesting tree occupied by two endangered Greater Gliders before and after SFB renewal works. (a) Large Mountain Grey-Gum marked for removal on the edge of the Loch Valley-Forty Mile SFB. (b) large trunk hollow. (c) one of two Greater Gliders recorded emerging from hollows in the tree during a stagwatching survey. (d) Denning/Nesting tree subsequently felled during SFB renewal works. Trunk logs in the foreground and cut stump in the background. (e) deceased Greater Glider found at the base of the cut stump during SFB renewal works.

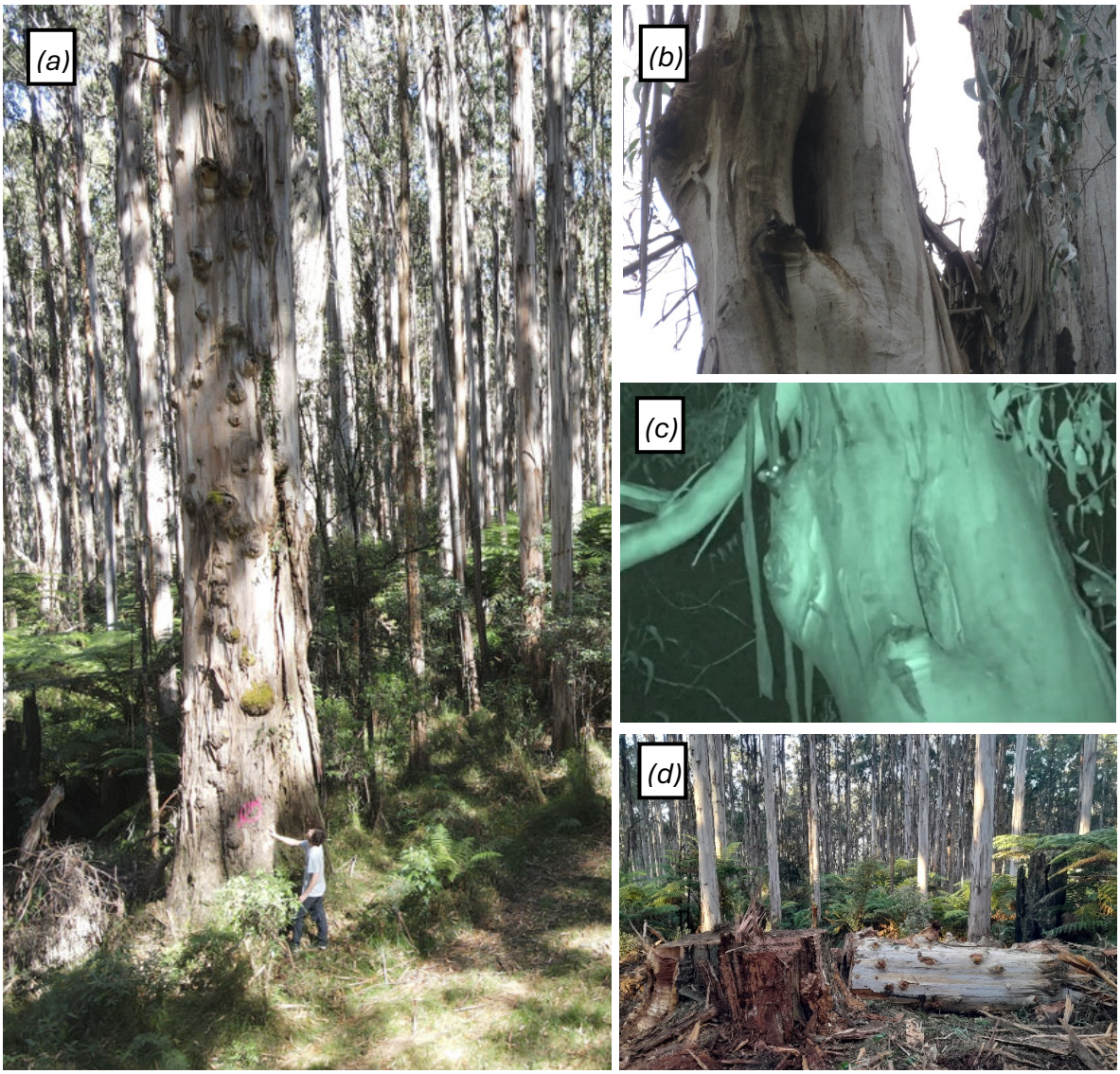

Figure 8 (a-e). Denning/Nesting tree occupied by three endangered Greater Gliders before and after SFB renewal works. (a) Large Mountain Grey-Gum marked for removal on the edge of the Loch Valley-Forty Mile SFB. (b) large trunk hollow. (c) one of three Greater Gliders recorded regularly emerging from hollows in the tree during repeat stagwatching surveys. (d) cut stump of Denning/Nesting tree subsequently felled during SFB renewal works.

Figure 9 (a-e). Examples of HBTs marked for removal which have subsequently been removed during SFB renewals in the Yarra Ranges National Park.

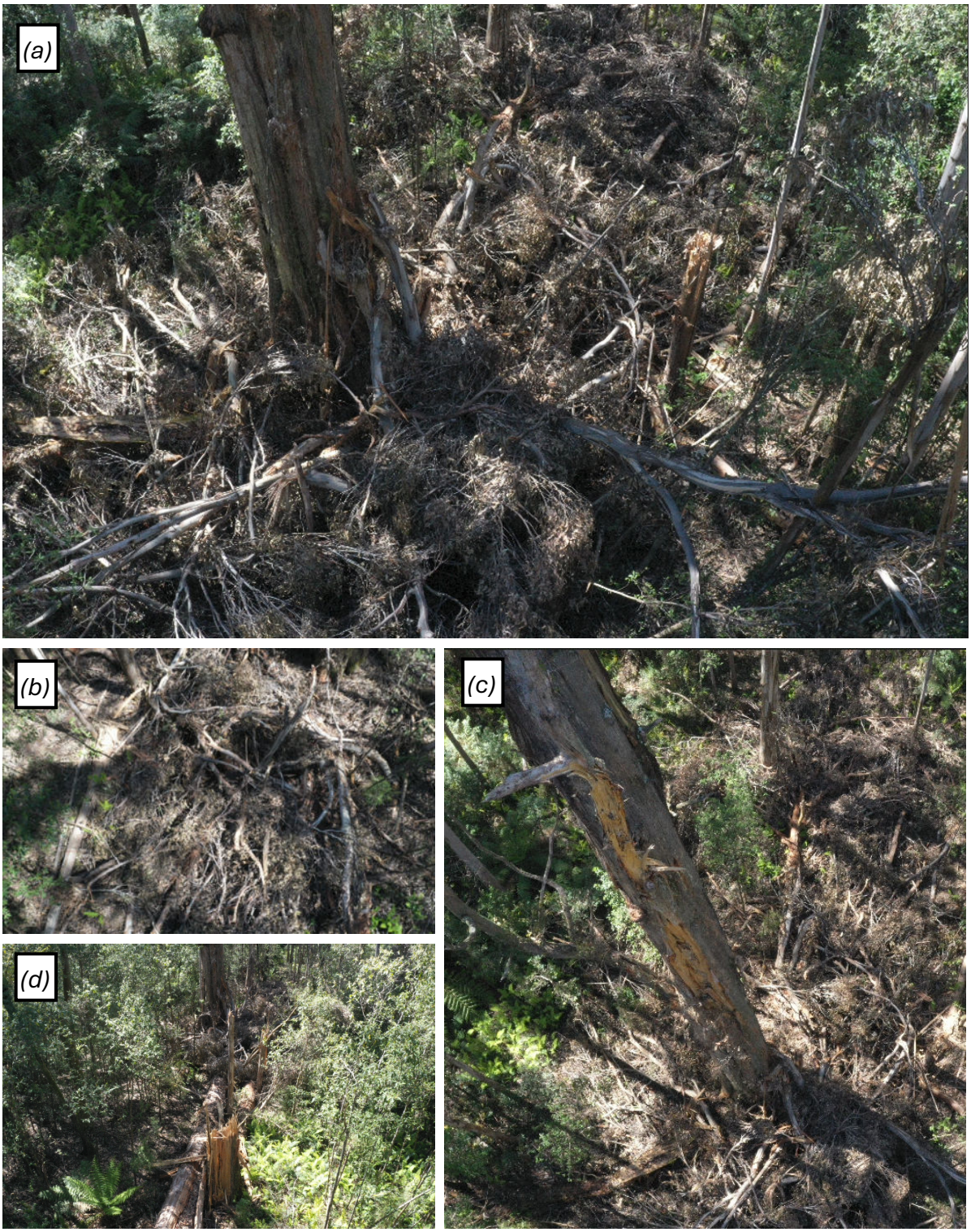

Figure 10 (a-e). Inadvertent damage to unmarked (non-hazardous) Greater Glider denning/nesting tree during SFB renewal works in the Yarra Ranges National Park. (a-b) increased fuel levels at the base of an unmarked and retained Stringybark. Stagwatching surveys from WOTCH and WE recorded one Greater Glider denning in this tree prior to tree felling operations commencing. (c) off-target damage to the unmarked Greater Glider denning/nesting tree as a result of nearby tree felling. (d) felled and removed trees in the foreground. The canopies of these trees are responsible for the increased fuel levels seen in the background and images a-c.

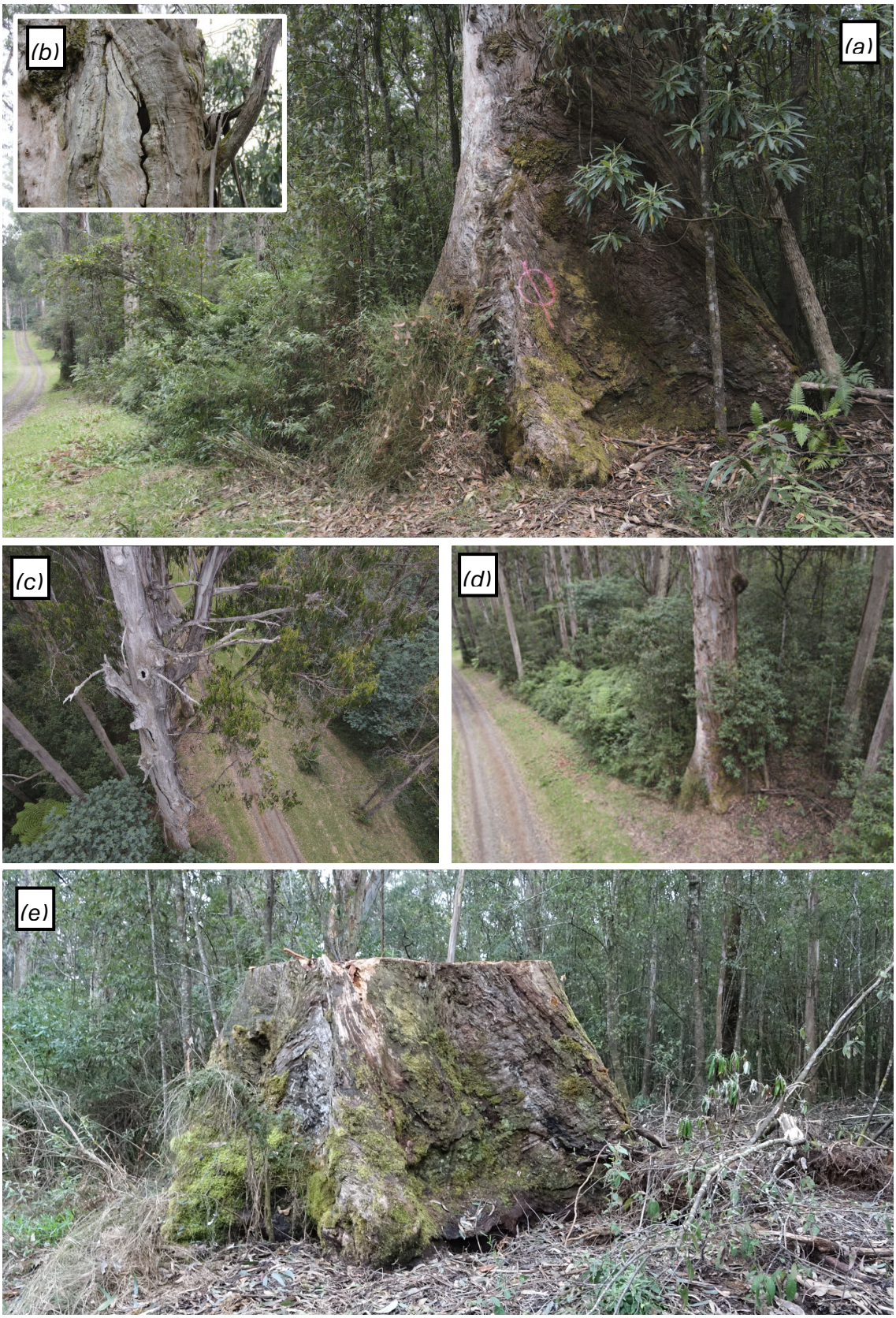

Figure 11 (a-e). Large Mountain Grey-Gum >2.5m DBH before and after SFB renewal works. (a/d) Large HBT measured at 2.85m DBH prior to SFB renewal works, with pink mark for removal visible. (b/c) visible trunk hollows on the large tree marked for removal. (e) cut stump following SFB renewal works, with pink mark for removal rubbed off.

VNPA and Friends of Leadbeater's Possum (FLbP) received various documents through FOI requests that highlight a blatant disregard from FFMV to protect Greater Gliders and MNES during these SFB operations. The findings are summarised below:

- VNPA requested DEECA's review of the situation and processes in light of the discovery of a dead endangered Greater Glider during SFB works.[53] No such documents were revealed. It appears unlikely that DEECA has gone through with any formal review.

- Documents show that the removal of at least four known nesting trees for endangered Greater Gliders in the Yarra Ranges National Park breaches many of DEECA's own policy documents for the program of works, including their own Guidelines, Site Plans and Environmental work/animal welfare standards.

- Internal emails reveal that DEECA requested assurance over the protection of at least one giant living tree, which met the threshold for the state's big tree protection policy (>2.5m DBH), yet this tree was subsequently felled by contractors.

- Documents reveal that DEECA is largely ignoring the recommendations of their own Natural Environment Programs Team, including to protect known nesting trees for Greater Gliders, to prevent the removal of living trees greater than 2.5 meters in diameter, to engage fauna spotters during tree felling and to document the number of hollow-bearing trees removed to understand the impacts of the works.

- A briefing from DEECA to the environment minister claims that Parks Victoria endorsed the works, which is contradictory to other documents received through FOI. Other documents show that Parks Victoria are only supportive of the works provided that DEECA obtains approvals under the Commonwealth's Environment Protection & Biodiversity Conservation (EPBC) Act 1999, and subject to a list of mitigation measures being implemented, including the protection of nest trees. DEECA has not met these requirements.

- Letters from Zoos Victoria to the state's environment Department highlight concerns about the impacts of SFB works on LbP and Greater Glider. They state that "*VicForests are currently being held to higher environmental standards than this project*".

- Recommendations from Zoos Victoria, including for 200m exclusion zones around Leadbeater's Possum records, have been ignored by DEECA.

- Zoos Victoria express disappointment with works along Road 11 where more than 600 hollow-bearing trees were removed in high quality Greater Glider habitat, and state that exclusion zones should have been examined.

[53] This was referenced by Jaclyn Symes during Parliamentary debate of the Sustainable Forests (Timber) Repeal Bill 2024 on 20 June 2024, page 76, <hansard-Forest-Repeal-Bill-974425065-27187.pdf>.

Post-storm Salvage Logging & Hazardous Tree Removals

In April 2024, FFMV commenced fallen tree removal operations in the Dandenong Ranges National Park, three years on from the impacts of the 2021 storm event. This forms a subset of a broader program of works occurring throughout Victoria, including in the Upper Thomson Catchment, Mirboo North and future protected areas (Wombat-Lerderderg National Park and Cobaws Conservation Park).[54] The program of works has a large overlap with modelled Greater Glider habitat, including the case study below which focuses on the operations in the Dandenong Ranges National Park.

Approximately 47% of the 72 hectares planned for treatment in the Dandenong Ranges have been completed to date. The VNPA and Southern Dandenongs Landcare Group (SDLG) undertook pre and post-treatment assessments to determine the on-ground impacts to environmental values and whether the environmental mitigations developed by FFMV to protect key values were implemented. Environmental commitments were received in writing by the Chief Fire Officer on 10 May 2023, which included:

- *"Protections for all hollow bearing, den, sap feed trees and tree ferns, as well as exclusion zones around nesting trees during breeding season*
- *The identification, marking and protection of nest and roost sites."*

Comprehensive pre-treatment surveys from community groups in 2022-23 documented 599 HBTs in the areas threatened by log removal operations. A rapid assessment of the areas partially treated in 2024 revealed that five of these HBTs have been removed (See Figure 12 as examples). The assessment also identified HBTs that were retained but which had inadvertent damage from logging machinery, jeopardising their structural integrity and tree health. Another HBT had been identified and marked for removal under FFMVs hazardous tree removal program despite having clear signs of arboreal mammal occupancy (Figure 13).

Documents received through FOI show that FFMV placed heavy reliance on a desktop assessment to identify the presence of significant values and threatened species during the planning phase. The documents show that FFMV only identified and marked 25 HBTs for protection across the planned treatment areas, which is only 4 per cent of HBTs documented under threat by citizen scientists from the VNPA and SDLG. No targeted Greater Glider surveys were undertaken by FFMV.

The disparities between citizen science and government surveys are significant. FFMVs ecological survey efforts have not met the expectations of the community nor what is required to identify the locations of HBTs and Greater Glider habitat requiring protection during storm recovery (salvage logging) operations.

[54] Managing fire risk after storms.

Figure 12 (a-f). HBTs before and after storm recovery (salvage logging) operations and tree removals. The VNPA & SDLG informed FFMV of their presence prior to their removals (VNPA, 2024).

Figure 13 (a-b). HBT marked for removal (hazardous). This tree exhibits signs of arboreal mammal occupancy for denning/nesting indicated by the claw scratch marks around the hollow (VNPA, 2024).

Figure 14. HBT which has been felled to the ground during log removal operations in the Dandenong Ranges National Park. This tree appears to have had an active nest site for wildlife – most likely the Mountain Brushtail Possum (VNPA, 2024).

Figure 15 (a-b). Off-track machinery disturbance and vegetation destruction following log removal operations in the Dandenong Ranges National Park (VNPA, 2024).

Appendix 3. Recommendations for enhanced regulation, transparency and oversight of fire preparation activities in Victoria

1. Independent and on-ground ecological values assessments should be undertaken prior to fire preparation works to identify significant values that are present or likely to be present on site which require mitigations in the planning and operational phases.

2. Refer all large FFMV projects with nationally listed threatened species and communities for assessment under national environmental laws in a transparent and timely manner.

3. Assess all relevant state listed threatened species and communities and mitigate threats at both program, project and site level, in an open and transparent manner. This must include opportunities for engagement, incorporating new data and pathways for modification and/or mitigation of proposed works.

4. Establish clear and enforceable regulations including concrete mitigations and prescriptions for relevant species and habitats, at least to the level of detail undertaken in NSW's Bush Fire Environmental Assessment Code. VNPA's *Protecting our living legacies* report makes recommendations on mitigations and prescriptions for HBTs which should be implemented in the context of hazardous tree removals. At the very minimum, the Victorian Government's policy for big tree protection should be incorporated into the Code of Practice as a clear and enforceable prescription. That is, trees greater than 2.5m DBH will be protected during fire preparation works.

5. If hazardous trees are to be impacted and/or removed, an independent fauna spotter must be engaged and present on-site to ensure wildlife welfare concerns are appropriately mitigated.

6. Arborists should be engaged for the treatment of hazardous trees so that trees can be 'stumped' in a way that both reduces the risk of harm, whilst also retaining habitat values and hollows through pruning.

7. Appoint an independent regulator or strengthen the Office of Conservation Regulator by moving it outside of DEECA (for example, into either the Environment Protection Authority (EPA) or Department of Justice) and giving it effective power to oversee fire preparation works. This would allow for enforcement and regulation of environmental prescriptions and mitigations, a framework for receiving and considering new information and data, and the coordination of consultation with the community.

8. Strengthen and enforce the Crown Land procedure for the clearing of native vegetation on public land. This should include clear provisions to transparently and meaningfully avoid, minimise and offset the clearing of native vegetation (minimum like for like).