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The Hon Ingrid Stitt MLC
Minister for Environment

By email

Dear Ms Stitt

Unrestrained tree fern destruction breaches the RFA, the Code and the FFG Act

The Rubicon Forest Protection Group was formed in 2015 by a group of local Murrindindi residents unhappy about the palpably unsustainable logging in the Rubicon State Forest. Our aim is to protect and promote the values of the Rubicon forest and to contribute to protecting the values of Victoria's native forests more widely. Our action priorities include:

- stopping unsustainable logging in the Rubicon Forest and promoting forest conservation in the Central Highlands more generally;
- holding VicForests accountable for breaches of its own policies and guidelines and good forest practice generally; and
- encouraging visitors to spend time in the Rubicon Forest, enjoy the beauty and join the campaign to halt unsustainable logging.

In 2016 we published [Unustainable!](#), a damning critique of the reckless disregard by VicForests of the forest values set out in the Code of Practice for Timber Production (the Code) and which your Department's *Timber Harvesting Compliance Unit* manifestly fails to uphold, as recent Supreme Court judgements have confirmed.

In 2017 we met with your predecessor, the Hon Lily D'Ambrosio, setting out the parlous state of the forests of the Central Highlands due to fire and logging and urging her to halt further logging. Some of our pleas seem to have been heeded, with some coupes we had fought to protect included in the Immediate Protection Areas announced in 2019. Disappointingly, many more have since logged. The scale of the destruction, [such as occurred on the Royston Range](#), is almost beyond belief.

In addition to the many further claims of breaches of laws and policies that we set before Minister D'Ambrosio in correspondence, we have lodged over sixty reports of breaches of the Code to the Timber Harvesting Compliance Unit, but to no avail. We have been fobbed off on indefensible grounds and have lost any expectation that it will properly enforce the rules that it was established to enforce. [Our website](#) chronicles our strong forest advocacy over the past six years,

Just prior to last year's State election [we wrote to Minister D'Ambrosio](#) about the rampant destruction of treeferns – species that help give our mountain ash forests their iconic status. Treeferns are core to creating moist, cooler, shaded habitat within forests and are critical in attenuating fire. Properly protecting them becomes all the more important as we face a hotter, more fire prone climate for centuries to come.

Since you have been only recently appointed to the portfolio we set out below the facts as we conveyed them to Minister D'Ambrosio in October.

The case for proper protection of treeferns

VicForests' logging practices are inflicting deep and abiding harm on treeferns and the ecosystems and ecological niches they support and are part of. This has long been known, for example through the work of the Victorian Silvicultural Systems Project (VSSP) and the published work of ARI scientists Keely Ough and Anna Murphy in the 1990s¹. Their research focused on ways of better protecting long-lived understorey species, and it did so through the successful trials of understorey islands.

Such islands, which were also later successfully trialed in the Warra silvicultural trials in Tasmania², provide for improved treefern survival by excluding snigging and felling machines from patches throughout the coupe. But despite the Code explicitly requiring the protection of long-lived understorey species, VicForests, like the Government departments that preceded it, continued to destroy treeferns with ever larger logging machines trampling and dragging logs across the entire coupe. Understorey islands were never implemented and across the Central Highlands, treeferns are now almost entirely confined to unlogged areas.

Tree ferns are arguably a capstone species on which much of the wider forest ecosystem depends³. The 1997 Central Highlands Biodiversity Assessment Technical Report, which was supposed to underpin the original Central Highlands Regional Forest Agreement, sounded the alarm about treefern loss but it went largely unheeded. Key extracts from the Technical Report are set out below:

The potentially threatening processes directly associated with the clearfelling operation include damage or loss of individuals, particularly as a result of machinery use and falling trees, disturbance to the superficial soil structure, disturbance of soil-stored seedbanks, compaction of the soil surface on snig tracks and log landings. These potentially threatening processes are strongly associated and of moderate overall significance. The species at greatest risk are those which rely wholly or partially on vegetative reproduction from organs/structures above, at or immediately below the soil surface (eg. *Dicksonia antarctica*, *Cyathea australis*, *Olearia argophylla*, *Nothofagus cunninghamii*, *Persoonia arborea*).

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The potentially threatening processes indirectly associated with harvesting operation include habitat modification, specifically the removal of one or more forest strata and the loss of opportunity to develop habitat elements characteristic of mature and senescent forests (eg tall

¹ E.g. Ough, K. and Murphy, A. (2004). Decline in tree fern abundance after clearfell harvesting. *For. Ecol. Manage.* 199: 153-163.

² Neyland, M, Hickey, J, & Read, S.M. (2012) A synthesis of outcomes from the Warra Silvicultural Systems Trial, Tasmania: safety, timber production, economics, biodiversity, silviculture and social acceptability, *Australian Forestry*, 75: 147-162

³ For example see *The Great Forest* by David Lindenmayer, Allen and Unwin 2015

treefern trunks, decaying logs) on the coupe. This threatening process is considered to be strongly associated with timber harvesting and of moderate overall significance.

[.]

On the coupe itself, the microclimatic changes following harvesting are radical. While these changes may be similar to the impacts of wildfire in some circumstances, the impact of wildfire may be less extreme in some cases where some vegetation remains after the fire, including burnt or scorched leaves and branches in the canopy or understorey (Keely Ough, pers. comm., Ough and Murphy in prep). Furthermore, it is postulated (Ough and Murphy 1997) that the dense treefern layer (which is present in most ash forests) responds rapidly (ie. within a few weeks) following wildfire to produce a new frond canopy, which has the effect of reducing wind and light, increasing humidity and attenuating temperature extremes at the soil surface and beneath the layer of fronds. These authors have demonstrated a significant increase in treefern mortality following harvesting, when compared to areas burnt by wildfire. Other groundferns and shrubs also resprout more quickly and completely following wildfire than following timber harvesting, hastening the re-establishment of more moderate microclimates (Ough pers. comm).

In addition to the microclimatic amelioration, treeferns may also play a role in the germination and establishment of other forest species, including *Pittosporum bicolor*, *Coprosma quadrifida*, *Tasmannia lanceolata* and *Olearia argophylla*. Treefern trunks are also the substrate for a suite of epiphytic ferns (eg. *Hymenophyllum* spp., *Tmesipteris* spp.) and other epiphytes (eg. *Fieldia australis*). Other understorey shrubs and trees also provide substrate for epiphytes such as *Microsorium pustulatum*, plus a variety of non-vascular plants such as mosses and liverworts.

Not only do treeferns allow the recovery of floristic diversity following fire, they help slow or arrest the spread of fire by keeping the ground shaded and moist, so accelerating the decomposition of forest litter and reducing fuel loads. And this beneficial effect is intensified by the habitat they create for lyrebirds with their soil scratching also aiding litter decomposition and further reducing fuel loads.

So with widespread clearfell logging in the Central Highlands since the mid 1960s the resilience of the ecosystems of which treeferns are a key part has been put at grave risk. Since 1964-65 of a total area of alpine ash, mountain ash and shining gum (these being the forest types in which treeferns are most prevalent) within State Forest in the Central Forest Management Area of around 64,000 ha⁴, over 48,000 ha – 75 per cent - has been clearfelled. Apart from a few lucky survivors, treeferns have largely disappeared from these logged areas. One only need drive, observantly, for a short while through the Toolangi State Forest to see this with gob-smacking clarity.

But the real loss is far greater since wetter mixed species forests may also include a treefern understorey. The mixed species coupes Troop and Rookery – the focus of case 2021-0169 – contain some of the last treefern-rich forest in the upper Acheron River valley, being surrounded forest denuded of treeferns as we have lately fully documented⁵. In this area it is the Rough Tree Fern

⁴ VicForests 2014 Area Statement, Table 3

⁵ https://rubiconforest.org/sites/default/files/TreefernsCriticalEconodeBeingSmashedVicForests_20221005.pdf

(*Cyathea australis*) that is present which cannot resprout if pushed over, unlike the Soft Tree Fern (*Dicksonia antarctica*) which can do so if not buried or killed in any post-logging burn.

It is simply not ecologically sustainable to permit the continued loss of treeferns in the face of this logging history. The inexorable impacts of climate change, including hotter and drier summers, means that although treeferns may persist in unlogged streamside buffers this is no guarantee of their eventual recolonization of areas from which they have been lost.

Minister, we implore you take decisive action now to stop the further loss of treeferns or an already perilous situation will become even more dire. We cannot wait any longer for logging to stop.

Laws breached

Indeed, we consider you have little choice but to take such action if logging laws are to be upheld. The laws (plus regulations and RFA provisions) which are being contravened by VicForests include:

- i. Code Clause 2.2.2.2 - the Precautionary Principle
- ii. Code Clause 2.2.2.10 - Protection of long-lived understorey species
- iii. Central Highlands RFA Clause 62C(b)⁶ - Victoria will use its best endeavours to conserve and protect all EVCs [. . .] by protection of hollow bearing trees and tree ferns in relevant EVCs to maintain ecological processes
- iv. Flora and Fauna Guarantee Act, s 48A – authorisation to take protected species.

Code Cl 2.2.2.2 - The Precautionary Principle

The [precautionary principle](#) is a core tenet of environmental law: *'if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation'*. The breach of the Precautionary Principle arises because both its elements are in play. Firstly, there is considerable scientific uncertainty about whether either species will ever properly recover in areas from where they are lost, especially with increasing fire frequency. Even were if they were to recover, being so slow growing their wider ecosystem role will only be restored over many decades, assuming that the other species that depend on them have not also disappeared with hotter summers and more bushfires.

Secondly, given the scale of loss that has already occurred, the wider ecosystem role treeferns serve, given accelerating climate change, their loss is certainly serious and possibly irreversible.

Code Cl 2.2.2.10 – Protection of long-lived understorey species

RFPG does not believe that VicForests' current silvicultural practices, whereby coupes are not generally entirely clearfelled, is sufficient to meet its obligation to 'protect long-lived understorey species'. The time for this approach to be adequate has long gone.

The seriousness of the threat treeferns now face combined with the scale of past loss means that significant steps, targeted specifically at protecting the vast majority of treeferns on a coupe, must now be taken. To do otherwise would not entail 'protection' by any stretch of the imagination.

⁶ Note that equivalent clauses occur in all Victoria's modernised RFAs.

Central Highlands RFA CI 62C(b)

To allow VicForests to conduct 'business as usual' is totally at odds with Victoria's promise, and the Commonwealth's expectations, that there will be increased protection for tree ferns. Since 2020 when the modernised agreements were signed neither DELWP nor VicForests have taken any steps to increase protection for tree ferns.

While other protections appear to be in train, such as a few new forest management zones to slightly increase protection for Greater Gliders and these may have the side effect of fewer tree ferns being killed, this falls far short of what is needed.

FFG Act s48A - authorisation to take protected species

All Victoria's tree ferns are designated as 'protected' under the Flora and Fauna Guarantee Act. We note that the 2004 Order-in-Council made almost two decades ago that allows protected species to be 'taken' (e.g. for research and some commercial purposes) was rolled over as part of the 2019 amendments otherwise aimed at strengthening the Act. Rolling it over without change ignored the otherwise obligatory considerations set out in s4B which was one of the Act's key changes.

Even the outdated requirements of the Order are being routinely breached as tree ferns are killed. Specifically, the provisions of the 2004 Order require that tree ferns (and all protected flora) may only be killed through logging if that logging is '*planned, executed and followed by regeneration work that is carried out in such a way that it is reasonable to expect that the conservation objectives of this Order will be achieved*' (para 7(1)(e)). Para 6 sets out the Conservation Objectives as follows:

- (a) the objectives set out in section 4(1)(a) to (e) of the Flora and Fauna Guarantee Act 1988; and*
- (b) to ensure that, across each forest management area, each taxon of protected flora that is taken is maintained in a state that is no less viable than it was before the taking occurred.*

The Conservation Objectives now sit in s4(a) to (f) and the current disregard by VicForests of its obligation to protect tree ferns, for the reasons enumerated above, is totally at odds with Sections 4(b) to (e). For the record, these sections are as follows:

- (b) to prevent taxa and communities of flora and fauna from becoming threatened and to recover threatened taxa and communities so their conservation status improves; and*
- (c) to protect, conserve, restore and enhance biodiversity, including—*
 - (i) flora and fauna and their habitats; and*
 - (ii) genetic diversity; and*
 - (iii) ecological communities; and*
 - (iv) ecological processes; and*
- (d) to identify and mitigate the impacts of potentially threatening processes to address the important underlying causes of biodiversity decline; and*
- (e) to ensure the use of biodiversity as a natural resource is ecologically sustainable; . . .*

In addition, part (b) of the Conservation Objectives is also being contravened since the ongoing destruction of tree ferns is leaving them in a state that is far from being '*no less viable than it was before the taking occurred*'.

Proposed Actions

1. Commission a study, for example by ARI or the School of Forestry and Ecosystem Science at the University of Melbourne or the Fenner School of Environment and Society at the ANU, into the distribution of tree ferns in State Forest using LiDAR⁷.
2. Once the data from such a study is available, commence a public consultation process, as set out under s48A of the FFG Act, on a new Order-in-Council that sets out clear and unambiguous rules, such as in para.1 above, that provide for proper protection of the Rough Tree Fern and Soft Tree Fern, based on the latest scientific research and understanding.
3. In the meantime, instruct VicForests to cease logging all coupes where tree ferns are a significant understorey element and elsewhere take steps to ensure that at least 50 per cent of tree ferns in any coupe are protected in sufficiently sized understorey islands or in climate-protected retained mature habitat patches to allow protection from disturbance by wind, storm, shade loss, soil desiccation, erosion, and opportunity for animal and fungi survival including lyrebird return.

Conclusion

Minister, we implore you to take swift action given the dire circumstances faced by tree ferns and the rich ecology they sustain, and the prolonged period over which VicForests has broken the rules and laws with apparent impunity.

The need for urgent action is also underlined by the findings of the Major Event Review established by the Victorian and Commonwealth Governments:

The frequent exposure to intense bushfires is presenting a major and increasing threat to the effective operation of Victoria's RFAs, to the stability of the forests and the achievement of ecologically sustainable forest management.

We look forward to a response to our entreaties at your earliest convenience.

Yours sincerely,



Bev Dick,
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⁷ See email of 4 October from Associate Professor Craig Nitschke to Nick Legge, where A/Prof Nitschke states: *It is possible to detect tree ferns with LiDAR. We have just summited a paper that showed one approach for IDing areas of tree fern dominance. We did not demarcate individual tree ferns however. For a tree fern understorey ID it is potentially possible if you have high enough point-density in your LiDAR data and there is clear separation between vertical canopy layers. Given the overlap in some tree fern canopies it may make it hard to delineate individual tree ferns but this would have to be tested. The main problem in my opinion is that the # of LiDAR returns for tree ferns in the understorey are diminished by all the trees above them which will break their canopies up. A better approach would be to build a model using LiDAR metrics with tree fern abundance and occurrence. This would be more likely to be more accurate and is easier to do!*