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The Hon Lily D'Ambrosio MP
Minister for Energy, Environment and Climate Change

By email

Dear Ms D'Ambrosio

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

Thank you for your detailed reply of 17 June to my letter of 18 April regarding the Traditional Owners Cultural Landscapes Strategy and how it was being completely ignored by VicForests. Sadly, VicForests' intransigence has not changed with numerous coupes now planned for logging on the Black Range near Taggerty that will scar the landscape seen from lands the Andrews Government restored to the Taungurung, namely the Cathedral Range State Park, for decades to come.

If properly regenerated, these landscapes may recover, but not in our lifetime, not without spiritual loss and not before detracting from the visitor experience to Murrindindi Shire.

However, the situation concerning the rampant destruction of tree ferns – species that help give our mountain ash forests their iconic status – is likely to be irrecoverable.

We considered taking up this matter to the Office of the Conservation Regulator but following its dismissal of our breach report last year (Case 2021-0169) on wholly indefensible grounds, and now with the damning criticism of it by the Auditor-General, we expect it will do nothing, as usual.

We therefore wish to set the facts before you in the hope that you will order your Department to require VicForests to obey the law, and comply with the Central Highlands RFA.

Background

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 timber harvesting methods which preserved '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

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

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.

We are now left with a situation where, throughout the Central FMA, and elsewhere, treeferns and their critical ecological role are found only in unlogged areas.

Tree ferns are arguably a critical node in the forest ecosystem, sustaining the complexity on which ecological resilience depends on which much of the wider forest ecosystem depends³. The Central Highlands Biodiversity Assessment Technical Report, which was supposed to underpin the Central Highlands Regional Forest Agreement, sounded the alarm about treefern loss, but little heed was taken of it. Relevant extracts from part of the 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*).

[. . . .]

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 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.

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

Not only do treeferns allow the recovery of floristic diversity following fire, they also 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. This beneficial effect is amplified by the excellent habitat they create for lyrebirds whose soil scratching also aids litter decomposition further reducing fuel loads.

We now face a situation where intensive clearfell logging in the Central Highlands over the past five decades has put the resilience of the ecosystems of which treeferns are a key part at grave risk. For example, 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 22,000 ha – more than a third - has been clearfelled since 1970⁵. 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 very clearly.

But the real loss is even greater since wetter mixed species forests may also include a treefern understorey. The mixed species coupes Troop and Rookery – the focus of THCU case 2021-0169 – contain some of the last treefern-rich forest in the upper Acheron River valley, being surrounded by forest denuded of treeferns as we have lately fully documented⁶. In this area it is the Rough Tree Fern (*Cyathea australis*) that is present which cannot resprout if pushed over, unlike the Soft Tree Fern (*Dicksonia antarctica*) which may do so if not buried or too badly damaged.

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 their eventual recolonization of areas from which they have been lost.

Minister, you must take decisive action now to stop the further loss of treeferns or an already perilous situation will become even more dire. We cannot wait for 2030 for logging to stop.

Laws breached

In fact 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) - 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 breach of the Precautionary Principle arises because both its limbs are in play. Firstly, there is considerable scientific doubt about whether either species will ever properly recover in areas from where they are lost, especially with increasing fire frequency, and 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 range of other species that depend on it have not also disappeared with hotter and drier

⁴ VicForests 2014 Area Statement, Table 3

⁵ LogSeason data from Data Vic for ash stands (AAS, MAS, SHG) in Central FMA, excluding thinning and reforestation

⁶ https://rubiconforest.org/sites/default/files/TreefernsCriticalEconodeBeingSmashedVicForests_20221005.pdf

summers and increased fire frequency. Secondly, given the scale of loss that has already occurred, the wider ecosystem role they serve, and the certainty of accelerating climate change, their loss is certainly serious and possibly irreversible.

Code CI 2.2.2.10

If we were starting with a clean slate, perhaps VicForests' current silvicultural practices, whereby coupes are not generally entirely clearfelled, might be considered sufficient to meet its obligation to 'protect long-lived understorey species', however that time has long passed. The seriousness of the threat they now face combined with the scale of past loss means that significant steps, targeted specifically at protecting the vast majority of tree ferns on a coupe, must now be taken. To do otherwise would not entail 'protection' by any stretch of the imagination.

*Central Highlands RFA CI 62C(b)*⁷

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 March 2020 when the modernised agreements were signed neither DELWP nor VicForests have taken any steps to increase protection for tree ferns.

While other protections may 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

All Victoria's tree ferns are designated as 'protected' under the Flora and Fauna Guarantee Act. While the 2004 Order-in-Council made almost two decades ago that allows protected species to be 'taken' was rolled over in the 2019 amendments to the Act, and so pays no heed to the otherwise obligatory considerations set out in s4B, even its outdated requirements are being breached each and every day 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.*

In none of the coupe plans that we have inspected, and we have seen many, have we seen any evidence that coupe planning has taken explicit account of tree ferns.

The objectives of the Act now sit in s4(a) to (f) and the apparent disregard by VicForests of its obligation to protect tree ferns 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—*

⁷ Note that equivalent clauses occur in all Victoria's modernised RFAs.

- (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; . . .*

But the second part of the Conservation Objectives is also being contravened since decades of widespread 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 Action

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 the tree ferns present in a coupe are protected in understorey islands or in retained habitat patches.

Conclusion

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

Yours sincerely,



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