



29th March, 2016

**Warm Temperate Rainforest &
rare fern presence in and adjacent to coupe
832-502-0017, Puggaree rd,
East Gippsland**



Report prepared by

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This report provides additional information to use by the Department when assessing VicForests’ “Football” coupe (832-502-0017) for rainforest logging breaches.

We understand a site visit and investigation will take place on Wednesday March 30th. We expect this site visit will examine the rainforest breach in the eastern sections of the coupe that we reported earlier. We also expect the area in the south and western parts of the coupe discussed in previous correspondence will also be assessed for rainforest coinciding with the existing linear reserve in order that a 100m buffer can be applied, as required by the Planning Standards for timber harvesting operations in Victoria’s state forests (section 4.6.4.1).

The information provided below will need to be assessed in the field during the site visit and will assist the efficiency of the DELWP investigation covering multiple areas of the coupe where code of practice issues are present.

1. Slender and Skirted Tree-ferns found within and adjacent to the coupe

Additional surveying by our organisations has discovered a large population of Slender and Skirted Tree-ferns inside the coupe and within close proximity to its boundary. Slender or Skirted Tree-ferns were recorded in 39 locations. The current known extent of these combined populations are displayed on the map in Figure 2 as the purple and grey line surrounding the marked records. The true extent of the population of Slender Tree-ferns could extend outside of this area. A thorough search should be conducted by the department, to determine the full extent of the population.

Figure 1: Locations of Slender and Skirted Tree-ferns within and adjacent to the coupe

55 H 655052 5837502	55 H 655066 5837531	55 H 655113 5837514	55 H 655305 5837686
55 H 655069 5837528	55 H 655070 5837506	55 H 655135 5837521	55 H 655234 5837531
55 H 655051 5837504	55 H 655081 5837524	55 H 655173 5837520	55 H 655223 5837529
55 H 655054 5837523	55 H 655048 5837491	55 H 655191 5837519	55 H 655264 5837601
55 H 655067 5837527	55 H 655057 5837525	55 H 654935 5837695	55 H 655248 5837591
55 H 655074 5837499	55 H 655063 5837529	55 H 654965 5837687	55 H 655258 5837540
55 H 655063 5837515	55 H 655076 5837500	55 H 654972 5837563	55 H 655338 5837625
55 H 655050 5837529	55 H 655034 5837560	55 H 655204 5837527	55 H 655268 5837615
55 H 655065 5837507	55 H 655054 5837583	55 H 655216 5837523	55 H 655302 5837690
55 H 655075 5837517	55 H 655075 5837513	55 H 655306 5837675	



Photo: Logged rainforest canopy on southern boundary of coupe.

We are concerned VicForests and DELWP are unaware of the presence of this significant population of rare and protected species. There is no record of any pre logging ecological survey of the coupe. Current logging operations have impacted and will continue to impact upon these species, as the required protections (buffers and zoning) have not been implemented.

The Planning Standards for Timber Harvesting Operations in Victoria's state forests requires DELWP and VicForests to:

“Establish a SMZ of 250 m radius over verified populations”

“conduct a site inspection and detailed planning in consultation with DEPI to ensure the species is adequately protected during timber harvesting operations.”

Logging has occurred within approximately 50m of the populations of rare Tree-ferns. Coupe demarcation tapes have been found within 20m of the population. Logging must not continue or commence within these areas that need to be included within a legally required 250m Special Management Zone. Further disturbance in close proximity to slender tree ferns will prevent the required but not yet implemented SMZ from achieving its purpose; to ensure the species is 'adequately protected'.



Photo: Slender and Skirted Tree-ferns, adjacent to the coupe.

2. Rainforest within and adjacent to coupe coinciding with linear reserve

Our previous correspondence directed DELWP to investigate the rainforest areas in the south and western areas of the coupe that were highly likely to contain rainforest coinciding with a linear reserve. Further field assessment by our organisations has confirmed a large stand of rainforest is present in this area and the stand coincides with the linear reserve. Part of the extent of this rainforest that we have assessed is shown as the dark green line on the map in figure 2. This area of rainforest coincides with the linear reserve and requires a 100m buffer.

Rainforest vegetation in and around the coupe is extensive. Our preliminary surveys have assessed and identified an approximate extent of rainforest in the area within the green dotted line on the map in Figure 2. The full extent of rainforest within the green dotted line, as well as the yellow dotted line, should also be investigated by DELWP and buffered in line with the management prescriptions outlined above. The dashed green line represents an approximate minimum extent of rainforest vegetation, the true extent is larger and should be investigated.

To accurately assess the full extent of the rainforest within the dotted green line the differential species method should be used on account of the presence of a gradual transition from rainforest species to non rainforest species along sections of the rainforest ecotone. Large areas of the coupe contain ecotonal rainforest vegetation that give a strong rainforest floristic signal and transition gradually to non rainforest vegetation.

Rainforest and Slender Tree-fern presence adjacent to the coupe in the north and western areas is yet to be further investigated. Therefore no logging should occur within 250m of the rainforest along Cabbage tree creek and its tributaries until the area has been thoroughly searched for Slender Tree-ferns and rainforest.

In the north western area of the coupe, boundary demarcation tapes have been placed within 50m of a likely rainforest stand that coincides with the linear reserve. No logging should take place in this part of the coupe until the rainforest has been assessed.

An area of rainforest vegetation in close proximity to the log loading is also shown on the attached map as the orange dashed polygon. Bulldozing and the felling of Eucalypts into this area have significantly damaged the rainforest vegetation and removed rainforest structural elements. This area of the coupe should be investigated as an additional breach of the rainforest protections within the regulatory framework.



Photo: Slender Tree-fern adjacent to coupe (L)



Rainforest coinciding with linear reserve (R)

The rainforest stand present within the investigated location, shown on the attached map as the “dotted green outlined” polygon has been recognised and delineated on the basis of a combination of the following characteristics:

- a)** The stand is characterised by a more or less continuous rainforest canopy including as composed of the following “Warm Temperate Rainforest canopy species” as listed in the “Management Standards and Procedures” at section 4.4.7.2:
1. Lilly Pilly (*Acmena smithii*)
 2. Kanooka (*Tristania laurina*)
 3. Sweet Pittosporum (*Pittosporum undulatum*)
 4. Blackwood (*Acacia melanoxylon*)
 5. Blue Olive-berry (*Elaeocarpus reticulatus*)
 6. Jungle Grape (*Cissus hypoglauca*)
- b)** The persistent presence of Warm Temperate Rainforest “differential species” as listed on page 27 of A Field Guide to Rainforest Identification in Victoria: Differential species keys for the delineation of rainforest boundaries (2011):
1. Shade Nettle (*Australina pusilla*)
 2. Hard Water-fern (*Blechnum wattsii*)
 3. Jungle Grape (*Cissus hypoglauca*)
 4. Veined Bristle-fern (*Crepidomanes venosum*)
 5. Soft Tree-fern (*Dicksonia antarctica*)
 6. Fieldia (*Fieldia australis*)
 7. Black-Fruit Saw-sedge (*Gahnia melanocarpa*)
 8. Shiny Shield-fern (*Lastreopsis acuminata*)
 9. Milk-vine (*Marsdenia rostrata*)
 10. Kangaroo Fern (*Microsorium pustulatum*)
 11. Jasmine Morinda (*Morinda jasminoides*)
 12. Large Mock-olive (*Notelaea venosum*)
 13. Twining Silkpod (*Parsonsia brownii*)
 14. Sweet Pittosporum (*Pittosporum undulatum*)
 15. Queensland Bramble (*Rubus moluccanus*)
 16. Rose-leaf Bramble (*Rubus rosifolius*)
 17. Lilly Pilly (*Syzygium smithii*)
 18. Kanooka (*Tristania laurina*)
 19. Scrub Nettle (*Urtica incisa*)
- c)** The strong presence of the following vine species including participating in the rainforest canopy:
1. Jungle Grape (*Cissus hypoglauca*)
 2. Milk Vine (*Marsdenia rostrata*)
 3. Wait-a-while (*Smilax australis*)
 4. Mountain Clematis (*Clematis aristata*)
- d)** The persistent presence of other rainforest (non-“differential”) character species as listed in Peel, B., Rainforest and Cool Temperate Mixed Forest of Victoria, Department of Natural Resources and Environment, Melbourne, 1999, including the following:
1. Mother Spleenwort (*Asplenium bulbiferum*)
 2. Blanket-leaf (*Bedfordia arborescens*)
 3. Gristle Fern (*Blechnum cartilagineum*)
 4. Fishbone Water-fern (*Blechnum nudum*)
 5. Strap Water-fern (*Blechnum patersonii*)
 6. Forest Bind-weed (*Calystegia marginata*)

8. Three-nerved Cassinia (*Cassinia trinerva*)
9. Mountain Clematis (*Clematis aristata*)
10. Prickly Currant-bush (*Coprosma quadrifida*)
11. Rough Tree-fern (*Cyathea australis*)
12. Tasman Flax-lily (*Dianella tasmanica*)
13. Austral Lady-fern (*Diplazium australe*)
14. Black Oliveberry (*Elaeocarpus holopetalus*)
15. Blue Olive-berry (*Elaeocarpus reticulatus*)
16. Mountain Grey Gum (*Eucalyptus cypellocarpa*)
17. Wombat Berry (*Eustrephus latifolius*)
18. Austral Mulberry (*Hedycarya angustifolia*)
19. Common Filmy Fern (*Hymenophyllum cupressiforme*)
20. Fragrant fern (*Microsorium scandens*)
21. Musk Daisy-bush (*Olearia argophylla*)
22. Wonga Vine (*Pandorea pandorana*)
23. Bootlace Bush (*Pimelea axiflora*)
24. Mother Shield-fern (*Polystichum proliferum*)
25. Hazel Pomaderris (*Pomaderris aspera*)
26. Leathery Shield-fern (*Rumohra adiantiformis*)
27. White Elderberry (*Sambucus gaudichaudiana*)
28. Austral Sarsaparilla (*Smilax australis*)
29. Gippsland Waratah (*Telopea oreades*)
30. Forest Wire-grass (*Tetrarrhena juncea*)
31. Bearded Tylophora (*Tylophora barbata*)
32. Scrub Nettle (*Urtica incisa*)
33. Ivy-leaf Violet (*Viola hederacea*)
34. Rock Felt-fern (*Pyrrosia rupestris*)
35. Pearl Vine (*Sarcopetalum harveyanum*)

e) The presence of other rainforest (non-"differential"/non-"character") species including the following:

1. Austral Filmy Fern (*Hymenophyllum australe*)
2. Austral Lady-fern (*Allantodia australis*)
3. Austral Mulberry (*Hedycarya angustifolia*)
4. Bat's Wing Fern (*Histiopteris incisa*)
5. Common Finger-fern (*Grammitis billardierei*)
6. Fan-fern (*Sticherus urceolatus*)
7. Forest Hounds-tounge (*Austrocynoglossum latifolium*)
8. Gypsy Fern (*Ctenopteris heterophylla*)
9. Jungle Brake (*Pteris umbrosa*)
10. Jungle Bristle-fern (*Cepholomanes caudatum*)
11. Lance Water-fern (*Blechnum chambersii*)
12. Long Fork-fern (*Tmesipteris obliqua*)
13. Narrow Filmy-fern (*Hymenophyllum rarum*)
14. River Hook-sedge (*Uncinia nemoralis*)
15. Shiny Filmy-fern (*Hymenophyllum flabellatum*)
16. Sickie Fern' (*Pellaea falcata*)
17. Skirted Tree-fern (*Cyathea X marcescens*)
18. Slender Tree-fern (*Cyathea cunninghamii*)
19. Small Fork-fern (*Tmesipteris parva*)
20. Soft Water-fern (*Blechnum minus*)
21. Weeping Spleenwort (*Asplenium flaccidum*)

- f) The presence of rainforest regeneration and recruitment of juvenile rainforest species, within canopy gaps and areas in transitional and seral stages.
- g) The absence of or limited presence of Eucalypt species presence within the areas found to be rainforest.
- h) The presence of Sclerophyll Forest “differential species” (as listed on page 27 of “A Field Guide to Rainforest Identification in Victoria: Differential species keys for the delineation of rainforest boundaries” (2011)) at high densities at the edge of or exterior to the areas identified as rainforest on the attached maps.



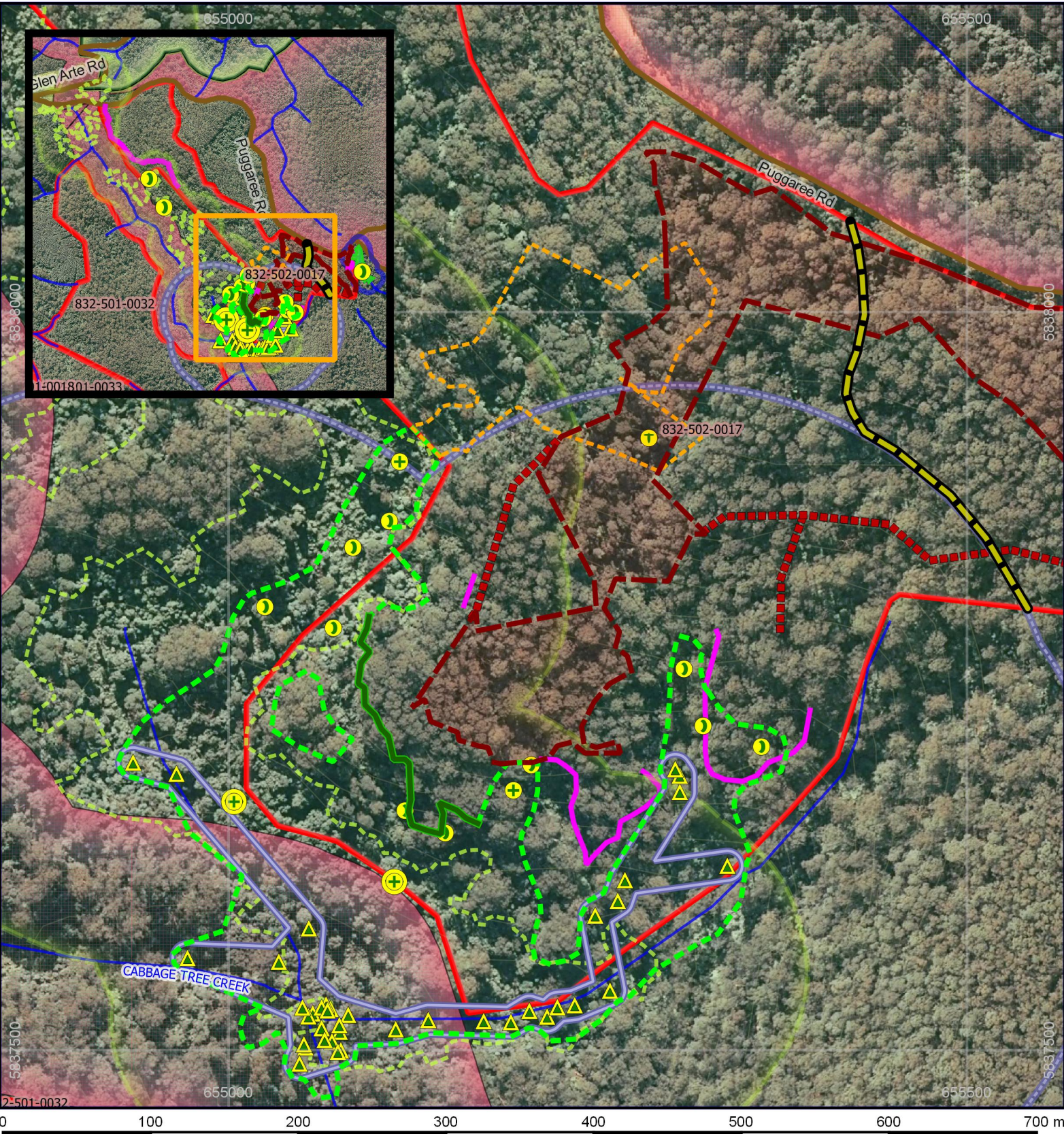
Please inform our organisations of the outcome of the DELWP site visit and investigation and whether VicForests will or will not cease logging operations within areas required to be included within the Slender tree fern SMZ and within the 100m buffer areas on rainforest coinciding with the linear reserve.

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Figure 2. - Puggaree Road_Cabbage Tree Creek (832-502-0017) - Rainforest and Rare Plants Context Map



Legend

Part extent of Rainforest assessed

Approximate minimum extent of Rainforest distribution (part)

Slender & Skirted Tree-ferns

Jungle Bristle-fern

River Hook-sedge

Kanooka

Small Fork-fern

Rainforest vegetation near log landing

Slender and Skirted Tree-fern population

250m Buffer on Slender & Skirted Tree-fern population

Precautionary buffer on Slender/ Skirted Tree fern pop. and rainforest

Minimum area to assess for rainforest presence

Potential 100m buffer on rainforest extent coinciding with Linear Reserve

Forest Management Zones
[DEPI; June: 2014; FMZ100]

Special Protection Zone

General Management Zone

Coupe demarcation tapes

Approximate areas logged (part)

Snig track/logging disturbance

Scheduled Logging Coupes (VicForests, TRP) [Approved_TRP_August_2015]

Roads

Watercourses

Contours

Projection: EPSG: 28355
GDA94/MGA Zone 55

Map Scale:
1:3,500

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Appendix 1:

Slender and Skirted Tree-fern photos from within and adjacent to coupe.

