

INVESTIGATION REPORT

LOGGING OF PROTECTED FLORA & FLORA FOREST MANAGEMENT ZONES

Colquhoun Grevillea (*Grevillea celata*); **Woolly-head Pomaderris** (*Pomaderris eriocephala*); **Long-flower Beard-heath** (*Leucopogon juniperinus*), and; **Wallaby-bush** (*Beyeria lasiocarpa*)

WATERSHED ROAD (Gurrun-gurrun-yarn State Forest)

VicForests logging coupes 742-507-0004 and 742-507-0005

Abstract

VicForests logging coupes 742-507-0004 and 742-507-0005 were investigated to assess the presence of flora species requiring identification and adaptive management actions, including implementation of mandatory flora forest management zones prior to the commencement of logging operations.

Four rare, threatened and/or protected plant species were identified within and adjacent to coupes 742-507-0004 and 742-507-0005 including plants that were disturbed, damaged and/or destroyed during the logging of these coupes. These plants were Colquhoun Grevillea (*Grevillea celata*), Woolly-head Pomaderris (*Pomaderris eriocephala*), Long-flower Beard-heath (*Leucopogon juniperinus*) and Wallaby-bush (*Beyeria lasiocarpa*).

Recommendations are made to the Department of Environment, Land, Water and Planning (the Department) to prosecute VicForests and the logging contractors who operated in coupes 742-507-0004 and 742-507-0005 for logging areas of forest without identifying protected biodiversity conservation values, without implementing mandatory forest management zones, for logging within these areas, and for disturbing, damaging and/or destroying some of these plants.

While logging now seems to have completed in these coupes, each coupe remains listed as "In Progress" (as at 170302), according to VicForests' "Timber Harvesting Safety Zone" list as published on their website, indicating that further logging operations or "regeneration" burning activities may be imminent.

This report further urges the Department to immediately restrain VicForests, their contractors, and the Department from conducting any further logging operations within or adjacent to coupes 742-507-0004 and 742-507-0005 including any further vegetation or soil disturbance and "regeneration" burning activities.

The methodology, results, discussion and recommendations arising from this investigation are further detailed within this report.

Relevant Legislation

- Code of Practice for Timber Production 2014, Department of Environment and Primary Industries, The State of Victoria, 2014
- "Management Standards and Procedures for timber harvesting operations in Victoria's State forests 2014", Department of Environment and Primary Industries, The State of Victoria, 2014
- "Planning Standards for timber harvesting operations in Victoria's State forests 2014, Appendix 5 to the Management Standards and Procedures for timber harvesting operations in Victoria's State forests 2014", Department of Environment and Primary Industries, The State of Victoria, 2014

Organisations participant in breach

- VicForests
- Logging contractors operating within coupes 742-507-0004 and 742-507-0005

Status of Site

Logging in coupes 742-507-0004 and 742-507-0005 has apparently completed but "regeneration" burning may be imminent.

Date of Investigation

07-08/10/2016, 21,22,24/12/2016

Surveyors

Andrew Lincoln
Owen Hanson

Authors

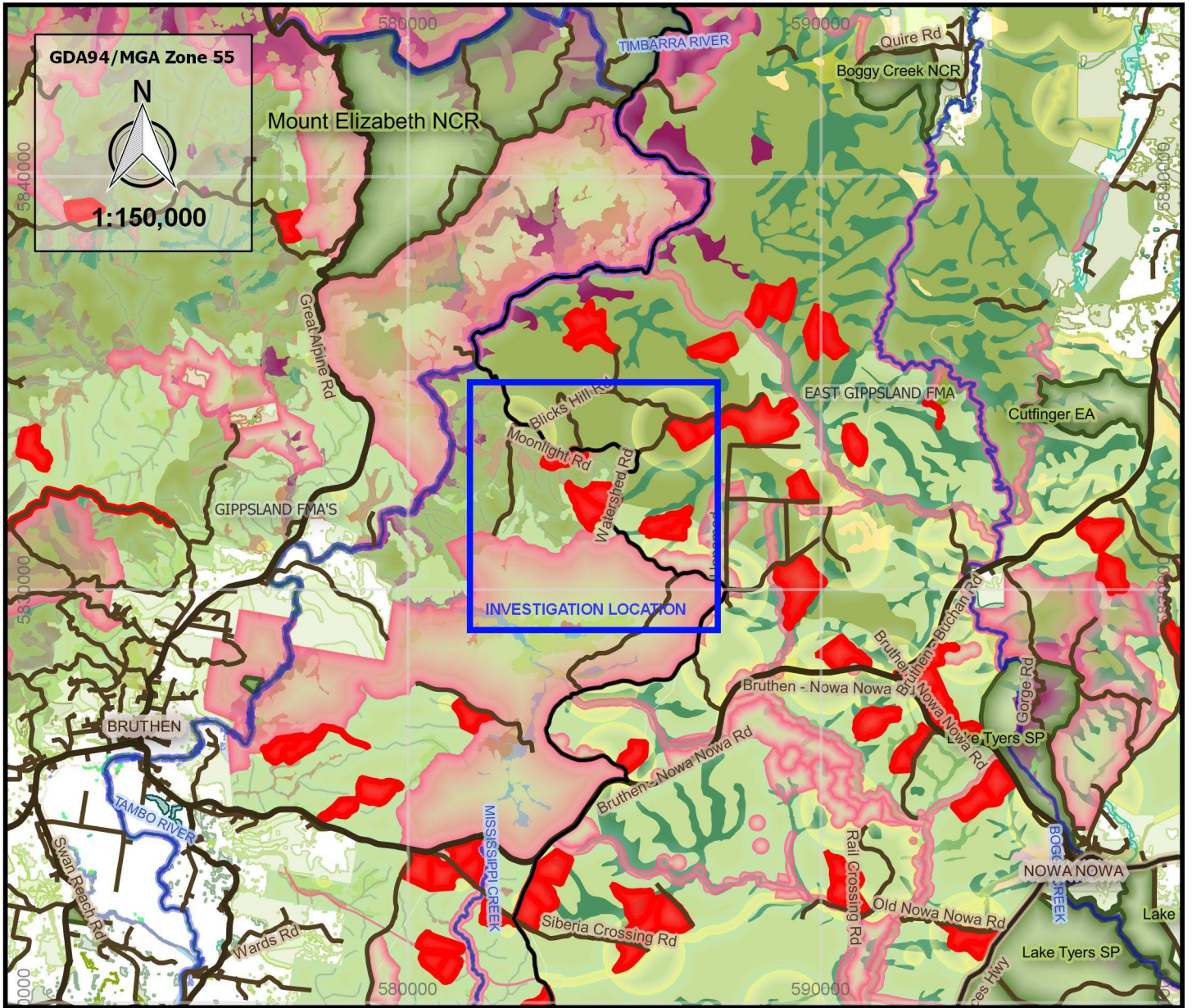
Andrew Lincoln
Fauna and Flora Research Collective Inc.
asl80@hotmail.com

Date of report

15/03/2017

Investigation Location Overview

Figure A. Investigation location: VicForests logging coupes 742-507-0004 & 742-507-0005 off Watershed Road in the Gurrun-gurrun-yarn State Forest of East Gippsland ("Gippsland FMA's") ~15km NE of Bruthen & NW of Nowa Nowa.



Method (Method Used)

1. The Victorian Biodiversity Atlas, including the spatial data-set "VBA_FAUNA25" as well as the spatial data-set comprising the Forest Management Zone scheme (FMZ100), as maintained by the Department of Environment, Land, Water and Planning (the **Department**), was interrogated to ascertain the presence and proximity of rare, threatened and/or protected flora species to VicForests logging coupes 742-507-0004 & 742-507-0005 (the **Watershed Road coupes**). Location coordinates of relevant species and forest management zones were noted and converted to portable formats, in order to locate these records in the field.
2. In addition to locating existing records from the VBA_FAUNA25 dataset, forest areas within and adjacent to the Watershed Road coupes were traversed while searching for additional records of flora species requiring protection under the Code of Practice for Timber Production 2014 (the **Code**) as listed in the "Planning Standards for timber harvesting operations in Victoria's State forests 2014, Appendix 5 to the Management Standards and Procedures for timber harvesting operations in Victoria's State forests 2014" (the **MSP's**).
3. These flora species included Colquhoun Grevillea (*Grevillea celata*), Woolly-head Pomaderris (*Pomaderris eriocephala*), Long-flower Beard-heath (*Leucopogon juniperinus*) and Wallaby-bush (*Beyeria lasiocarpa*).
4. For each of the flora species records detailed within this investigation report, when each plant was encountered a location coordinate was marked using a handheld GPS unit (Garmin GPS_MAP64S) at an accuracy of $\leq 10\text{m}^{+/-}$, a unique waypoint ID was saved containing information as to the species and sequential record number, and where possible a photograph or series of photographs was taken of each plant.
5. Location data was also recorded on the hand-held GPS unit at accuracies of $\leq 10\text{m}^{+/-}$ by marking waypoints at the edge of logging disturbance within the Watershed Road coupes.
6. Following the completion of field investigations, existing and additionally detected flora species records as well as logging disturbance data were analysed using GIS software to apply relevant FMZ buffer areas to flora species records, calculate the areas of these areas disturbed, damaged and/or destroyed by logging activities and to produce the maps presented within this report.
7. The results of this investigation are provided below including: relevant details of the additional flora species encountered presented in "Results 1 - Table 1."; photographs of some of these species in "Results 2 - Figure 1(a-l)."; location details of these plants, associated forest management areas and coupe and logging disturbance extents are presented in the map of "Results 3 - Figure 2."; the relevant legislation raised by the findings of this information in the "Legislation Considered" section, and a summary of this information including recommendations for further action in the final "Conclusions/Discussion/Recommendations" section.

Results 1 (Tables) Table of encountered flora species records

Table 1. Watershed Road - Rare, Threatened and/or Protected Flora Species Records

ref_Table	id_Label	Common Name	Botanical Name	Proximity to Logging Coupes/ Logging Disturbance	Plant Location (GDA94/MGA Zone 55H)	Photo in Results section of report
1	Gc201	Colquhoun Grevillea	<i>Grevillea celata</i>	Within 100m of Coupe	55H 584686 5831678	
2	Gc202	Colquhoun Grevillea	<i>Grevillea celata</i>	Within 100m of Coupe	55H 584690 5831695	
3	Gc203	Colquhoun Grevillea	<i>Grevillea celata</i>	Within 100m of Coupe	55H 584692 5831709	YES
4	Gc204	Colquhoun Grevillea	<i>Grevillea celata</i>	Within Coupe	55H 584643 5831754	YES
5	Gc205	Colquhoun Grevillea	<i>Grevillea celata</i>	Within Coupe	55H 584518 5831845	YES
6	Pe101	Woolly-head Pomaderris	<i>Pomaderris eriocephala</i>	Within 300m of Coupe	55H 584943 5831539	
7	Pe201	Woolly-head Pomaderris	<i>Pomaderris eriocephala</i>	Within Coupe	55H 584384 5831971	YES
8	Pe301	Woolly-head Pomaderris	<i>Pomaderris eriocephala</i>	Within Coupe	55H 584668 5832112	YES
9	Pe413	Woolly-head Pomaderris	<i>Pomaderris eriocephala</i>	Within Logged area	55H 584329 5832030	YES
10	Pe503	Woolly-head Pomaderris	<i>Pomaderris eriocephala</i>	Within Coupe	55H 584367 5832368	
11	Pe526	Woolly-head Pomaderris	<i>Pomaderris eriocephala</i>	Within Coupe	55H 584735 5831906	
12	Lj201	Long-flower Beard Heath	<i>Leucopogon juniperinus</i>	Within Coupe	55H 584604 5831894	YES
13	Lj301	Long-flower Beard Heath	<i>Leucopogon juniperinus</i>	Within Coupe	55H 583891 5832395	YES
14	Lj508	Long-flower Beard Heath	<i>Leucopogon juniperinus</i>	Within Coupe	55H 584896 5832381	YES
15	Lj509	Long-flower Beard Heath	<i>Leucopogon juniperinus</i>	Within Coupe	55H 584882 5832367	
16	Lj601	Long-flower Beard Heath	<i>Leucopogon juniperinus</i>	Within Coupe	55H 584378 5831936	
17	Bl301	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within 100m of Coupe	55H 583956 5832227	
18	Bl302	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within 100m of Coupe	55H 583962 5832214	
19	Bl303	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within 100m of Coupe	55H 583958 5832126	
20	Bl401	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584144 5832198	
21	Bl402	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584146 5832205	
22	Bl403	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584132 5832203	
23	Bl404	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584124 5832202	
24	Bl405	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584053 5832243	
25	Bl406	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584050 5832230	
26	Bl407	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584063 5832230	
27	Bl408	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584072 5832228	
28	Bl408b	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584074 5832244	
29	Bl409	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584062 5832254	
30	Bl410	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584119 5832179	
31	Bl411	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584139 5832186	
32	Bl412	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584172 5832161	
33	Bl414	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584334 5832180	
34	Bl415	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584043 5832436	
35	Bl416	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584045 5832431	
36	Bl502	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Coupe	55H 584336 5832379	
37	Bl504	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584677 5832466	YES
38	Bl505	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584671 5832464	
39	Bl506	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584673 5832476	
40	Bl507	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584680 5832470	
41	Bl510	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within 100m of Coupe	55H 585015 5832424	
42	Bl511	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within 100m of Coupe	55H 584999 5832433	
43	Bl512	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within 100m of Coupe	55H 585014 5832412	
44	Bl513	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 585062 5832139	YES
45	Bl514	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 585077 5832146	
46	Bl515	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 585076 5832169	
47	Bl516	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 585060 5832172	
48	Bl517	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 585052 5832155	
49	Bl518	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 585014 5832133	
50	Bl519	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584986 5832163	
51	Bl520	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584973 5832129	
52	Bl521	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584995 5832125	
53	Bl522	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584931 5831985	
54	Bl523	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584923 5831983	
55	Bl524	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584919 5831972	
56	Bl525	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584928 5831974	YES
57	Bl527	Wallaby Bush	<i>Beyeria lasiocarpa</i>	Within Logged area	55H 584890 5831910	

Results 2 (Photos) Figures 1(a-l).

Figure 1(a). Colquhoun Grevillea (*Grevillea celata*) at "Gc201" 55H 584686 5831678 (GDA94/MGA Zone 55H)



Figure 1(b). Colquhoun Grevillea (*Grevillea celata*) at "Gc204" 55H 584643 5831754 (GDA94/MGA Zone 55H)



Figure 1(c). Colquhoun Grevillea (*Grevillea celata*) at "Gc205" 55H 584518 5831845 (GDA94/MGA Zone 55H)



Figure 1(d). Long-flower Beard-heath (*Leucopogon juniperinus*) at "Lj201" 55H 584604 5831894 (GDA94/MGA Zone 55H)



Figure 1(e). Long-flower Beard-heath (*Leucopogon juniperinus*) at "Lj301" 55H 583891 5832395 (GDA94/MGA Zone 55H)



Figure 1(f). Long-flower Beard-heath (*Leucopogon juniperinus*) at "Lj508" 55H 584896 5832381 (GDA94/MGA Zone 55H)



Figure 1(g). Woolly-head Pomaderris (*Pomaderris eriocephala*) at "Pe201" 55H 584384 5831971 (GDA94/MGA Zone 55H)



Figure 1(h). Woolly-head Pomaderris (*Pomaderris eriocephala*) at "Pe301" 55H 584668 5832112 (GDA94/MGA Zone 55H)



Figure 1(i). Woolly-head Pomaderris (*Pomaderris eriocephala*) at "Pe413" 55H 584329 5832030 (GDA94/MGA Zone 55H)



Figure 1(j). Wallaby-bush (*Beyeria lasiocarpa*) at "B1504" 55H 584677 5832466 (GDA94/MGA Zone 55H)



Figure 1(k). Wallaby-bush (*Beyeria lasiocarpa*) at "B1513" 55H 585062 5832139 (GDA94/MGA Zone 55H)

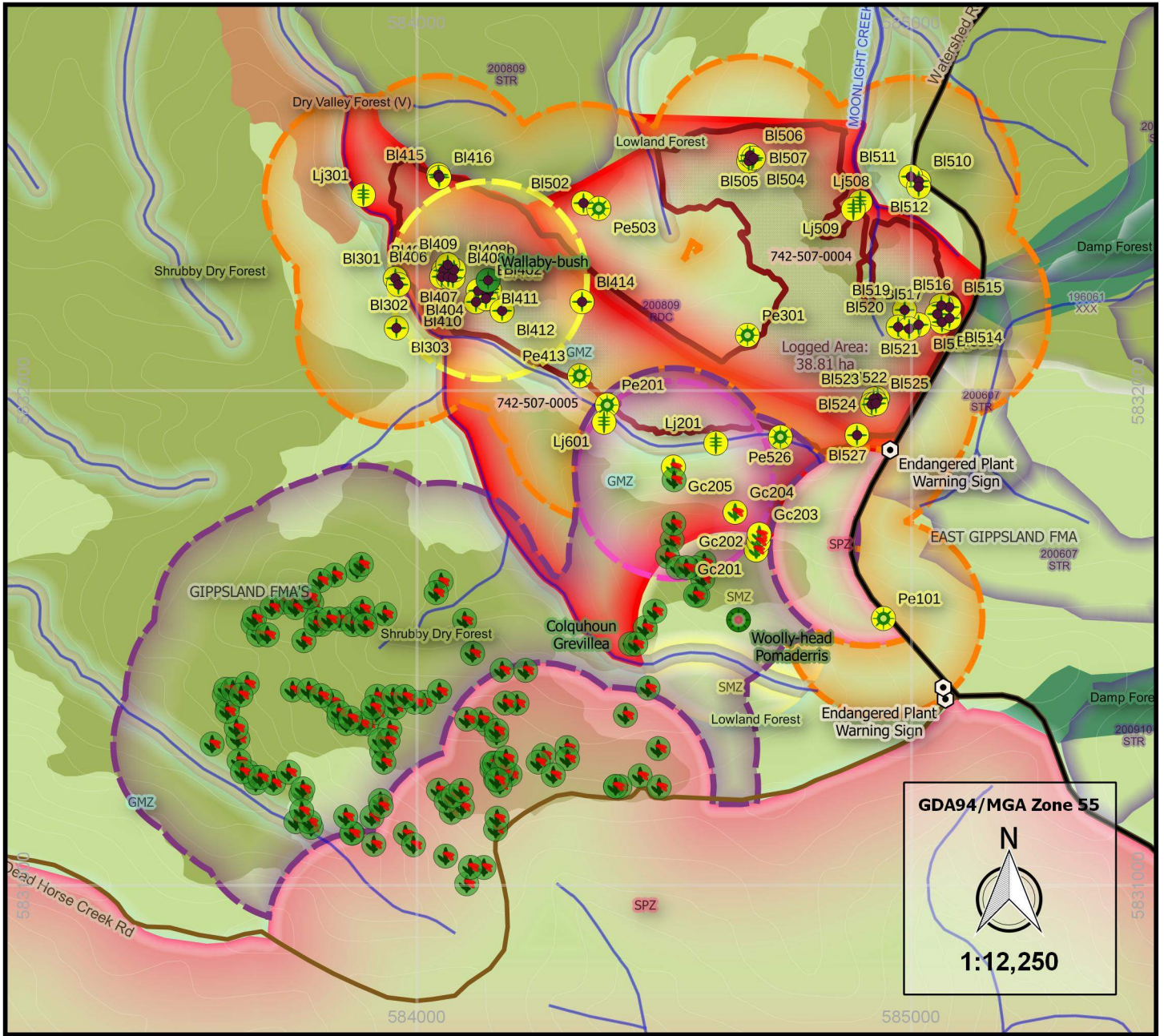


Figure 1(l). Wallaby-bush (*Beyeria lasiocarpa*) at "B1525" 55H 584928 5831974 (GDA94/MGA Zone 55H)



Results 3 (Maps)

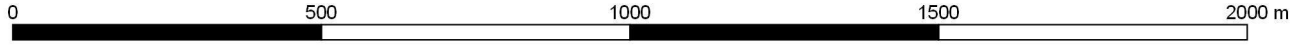
Figure 2. Rare, Threatened and/or Protected Flora and buffers at coupes 742-507-0004 and 742-507-0005



GDA94/MGA Zone 55

N

1:12,250



Legend		Logging Disturbance and Scheduled Logging	Forest Management Zones [FMZ100; DELWP Oct 2016]	Other Layers
Flora Species Records		Logging Disturbance	Special Protection Zone	Outlines
Existing Records [VBA_FLORA25]		VicForests Timber Release Plan [Approved TRP_Boundaries_October_2016]	Special Management Zone	FMA25
Colquhoun Grevillea	Flora sp. Buffers	Prior Logging History [LOG_SEASON]	General Management Zone	Roads
Woolly-head Pomaderris	200m Buffer on closest existing Colquhoun Grevillea record not shown in FMZ	196061	Code of Forest Practice	Watercourses
Wallaby Bush	200m Buffer on existing Wallaby Bush record not shown in FMZ	200607	0 - 100000	Contours
New Records [AL_FFRC]		200708	Ecological Vegetation Classes [NV2005_EVCBCS (modelled)]	
Colquhoun Grevillea	200m Special Protection Zone buffer on Colquhoun Grevillea records not buffered in Forest Management Zone scheme	200809	Damp Forest	
Woolly-head Pomaderris	Additional 200m Special Management Zone buffer on Woolly-head Pomaderris, Long-flower Beard Heath and Wallaby Bush records	200910	Dry Valley Forest	
Long-flower Beard Heath			Lowland Forest	
Wallaby Bush			Shrubby Dry Forest	
Endangered Plant Warning Sign				

Legislation Considered

Considering the following regulatory provisions:

Excerpts from: “Code of Practice for Timber Production 2014, Department of Environment and Primary Industries, The State of Victoria, 2014” (Code)

1 General

1.2 The Code of Practice for Timber Production

...

1.2.6 Compliance on State forest

Under the *Sustainable Forests (Timber) Act 2004*, compliance with this Code is mandatory for any person planning for or conducting a timber harvesting operation on **State forest**. Penalties for noncompliance may apply if timber harvesting operations on State forest are not in accordance with the Code.

...

Incorporated Documents

The *Management Standards and Procedures for timber harvesting operations in Victoria’s State forests* (Management Standards and Procedures) are incorporated into this Code to provide detailed mandatory operational instructions, including region specific instructions for timber harvesting operations in Victoria’s State forests.

The **Management Standards and Procedures** are consistent with the Operational Goals and Mandatory Actions of this Code and must be complied with for **timber harvesting operations** in Victoria’s **State forests**.¹

...

2 Code Application – State Forests

2.2 Environmental Values in State forests

Timber harvesting operations in native forests may have local impacts on environmental values such as water quality and **biodiversity**. Appropriate planning and management through the lifecycle of the timber harvesting operation can minimise these impacts. This section includes requirements that must be observed during planning, roading, harvesting, tending and regeneration of native forests.²

...

2.2.2 Conservation of Biodiversity

Operational Goal

Timber harvesting operations in **State forests** specifically address **biodiversity** conservation risks and consider relevant scientific knowledge at all stages of planning and management. Harvested State forest is managed to ensure that the **forest** is regenerated and the biodiversity of the **native forest** is perpetuated.

The natural floristic composition and representative gene **pools** are maintained when regenerating native forests by protecting long-lived **understorey** species and using appropriate seed sources and mixes of dominant species.

Forest health is monitored and maintained by employing appropriate preventative, protective and remedial measures.

...

Mandatory Actions

Addressing biodiversity conservation risks considering scientific knowledge

2.2.2.1 Planning and management of timber harvesting operations must comply with relevant biodiversity conservation measures specified within the **Management Standards and Procedures**.

2.2.2.2 The **precautionary principle** must be applied to the conservation of biodiversity values. The application of the precautionary principle will be consistent with relevant monitoring and research that has improved the understanding of the effects of forest management on forest ecology and conservation values.

2.2.2.3 The advice of relevant experts and relevant research in conservation biology and flora and fauna management must be considered when planning and conducting timber harvesting operations.

2.2.2.4 During planning identify biodiversity values listed in the Management Standards and Procedures prior to roading, harvesting, **tending** and **regeneration**. Address risks to these values through management actions consistent with the Management Standards and Procedures such as appropriate location of **coupe infrastructure, buffers, exclusion areas**, modified harvest timing, modified silvicultural techniques or retention of specific structural attributes.³

1 Code of Practice for Timber Production 2014 (Code), p. 21-24

2 Code, p. 32

3 Code, p. 34

1. Introduction

1.1 Scope

1.1.1.1 The Management Standards and Procedures apply to all commercial timber harvesting operations conducted in Victoria’s State forests where the Code applies.

2. Planning and Record Keeping

2.1 FMZ and planning information

2.1.1.1 When planning timber harvesting operations, the managing authority will refer to the FMZ100 geospatial layer published on the DEPI website and Corporate Geospatial Data Library for locations and information associated with FMZs.

...
2.1.1.3 Where evidence of a value that requires protection via the establishment or amendment of an SPZ or SMZ is found in the field application must be made to the Secretary or delegate prior to commencement of the timber harvesting operation to create or amend an SPZ or SMZ in accordance with Appendix 5 the Planning Standards. SMZ applications must be accompanied by an SMZ plan and must be complied with during timber harvesting operations.

4. Biodiversity

4.3 Flora

4.3.1.1 Apply management actions for rare and threatened flora identified within areas affected by timber harvesting operations as outlined in Appendix 3 Table 14 (Rare or threatened flora prescriptions).

... [Where evidence of this value is found in the field follow clause 2.1.1.3 of this document using table 5 in Appendix 5 the Planning Standards for information.]⁴

Excerpts from: “Planning Standards for timber harvesting operations in Victoria’s State forests 2014, Appendix 5 to the [MSP's]” (**Planning Standards**)

4. Biodiversity

4.5 Flora – detection based zoning

4.5.1 Statewide

4.5.1.1 Apply the management actions outlined in Table 5 (Detection based FMZ rules for flora) below for zoned rare or threatened flora values.⁵

Table 5 Detection based FMZ rules for flora.⁶

FMA	Common name	Scientific name	Zoning management actions	Management actions	Review
Gippsland FMAs	Colquhoun Grevillea	<i>Grevillea celata</i>	Establish a SPZ of 200 m radius over each verified population.		
Gippsland FMAs	Woolly-head Pomaderris	<i>Pomaderris eriocephala</i>	Establish a SMZ of 200 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.	
Gippsland FMAs	Long-flower Beard-heath	<i>Leucopogon juniperinus</i>	Establish a SMZ of 200 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.	
Gippsland FMAs	Wallaby-bush	<i>Beyeria lasiocarpa</i>	Establish a SMZ of 200 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.	

4 *MSP's*, p. 21, 23, 32, 36, 98, 101, 105

5 *Planning Standards*, p. 16, 69

6 *Planning Standards*, “Table 5 Detection based FMZ rules for flora”, p. 71, 81, 85, 92, 93

Conclusions/Discussion/Recommendations

Existing Colquhoun Grevillea records

1. Colquhoun Grevillea (*Grevillea celata*) is “Listed” in Victoria as a Threatened Species on the Flora and Fauna Guarantee Act (1998) "Threatened List",⁷ is listed on the Department of Environment, Land, Water and Planning (the **Department**) “Advisory list of rare or threatened plants in Victoria - 2014” as "vulnerable" to extinction,⁸ and is listed federally under the Environmental Protection and Biodiversity Conservation Act (1999) as "Vulnerable" to extinction.⁹
2. Numerous well documented records of Colquhoun Grevillea are recorded in close proximity to coupes 742-507-0004 and 742-507-0005 (the **Watershed Road coupes**). An “Endangered Plant Site” (warning against undertaking any "vegetation or soil disturbance" in the area) has been demarcated by the Department, including for this species, at or adjacent to the Watershed Road coupes. At least three signs marking this plant site have been placed in the area with two at the intersection of Watershed Road and Dead Horse Creek Road and one approximately 40m from the entry to each of the Watershed Road coupes.
3. Within the scheduled coupe extents of the Watershed Road coupes 4 Colquhoun Grevillea (*Grevillea celata*) plant records are present on the Victorian Biodiversity Atlas in the Department’s spatial data-set “VBA_FAUNA25”. These records are shown on the map of “Results 3 (Maps): Figure 2.” above.
4. The Code of Practice, through it’s Management Standards and Procedures and the Planning Standards (together: the **Code**) require that Colquhoun Grevillea plants and population extents are identified “prior to roading, harvesting, tending and regeneration” and for each population of this species a 200m Special Protection Zone (**SPZ**) be established. No such SPZ has been established for the population extent encompassing the 4 records within the Watershed Road coupes, nor for other nearby records.
5. **As a result of failing to identify at least 24 Colquhoun Grevillea plants and the full extent of the population of this species within 200m of the Watershed Road coupes, approximately 2.11 ha of the mandatory SPZ to be established responsive to the population extent of the four records described above has now been logged within coupe 742-507-0004. This logging has occurred in breach of the Code and was thus illegal. This area is shown on the map of Figure 2. above as the bright pink area labelled "200m Buffer on closest existing Colquhoun Grevillea record not shown in FMZ".**

7 "Flora and Fauna Guarantee Act 1988 Threatened List, May 2015", Department of Environment, Land, Water & Planning, 2015, and; "Flora and Fauna Guarantee Act 1988 Threatened List, December 2016", Department of Environment, Land, Water & Planning, <http://delwp.vic.gov.au/environment-and-wildlife/conserving-threatened-species-and-communities/flora-and-fauna-guarantee-act-1988/ffg-listed-taxa-communities-and-potentially-threatening-processes>, accessed March 2016

8 "Advisory list of rare or threatened plants in Victoria – 2014", Department of Environment, Land, Water & Planning, <http://delwp.vic.gov.au/environment-and-wildlife/conserving-threatened-species-and-communities/threatened-species-protection-initiative/threatened-species-advisory-lists>, accessed March 2016

9 "EPBC Act List of Threatened Flora", Australian Government Department of the Environment and Energy, <http://www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl>, accessed March 2016

Additional Colquhoun Grevillea records

6. In addition to the 4 records on the VBA_FAUNA25 data-set, at least an additional 5 Colquhoun Grevillea records have been documented within this investigation extending the population extent of the species at this location. Details of these record locations are provided in the "Results" sections of this report.
7. The information in Table 1., the photos within Figures 1(a-c), and the map of Figure 2. show that the location of these 5 additional Colquhoun Grevillea records are located within 100m of coupe 742-507-0005 and that 2 of these records (locations "Gc204" and "Gc205") are located within this coupes scheduled extent and that "Gc205" is located within 100m of the area now logged.
8. **Similarly to the VBA_FAUNA25 Colquhoun Grevillea records described above, these 5 additional records have failed to be identified prior to logging, and logging has now occurred illegally, in breach of the Code, within a total of approximately 2.98 ha of forest (cumulatively with the VBA_FAUNA25 records) within the mandatory SPZ that should have been established for these records. This area is shown on the map of Figure 2. above as the dark purple area labelled "200m Special Protection Zone buffer on Colquhoun Grevillea records not buffered in Forest Management Zone scheme". The 2.98 ha of logging that occurred within the requisite SPZ for Colquhoun Grevillea at this location equates to approximately 17% of the area logged within coupe 742-507-0005 (approximately 17.42 ha).**

Existing Wallaby-bush (*Beyeria lasiocarpa*) record

9. Wallaby-bush (*Beyeria lasiocarpa*) is listed on the Department's "Advisory list of rare or threatened plants in Victoria - 2014" as "rare".¹⁰
10. A Wallaby-bush record within the scheduled extent and now logged area of coupe 742-507-0004 is present on the Victorian Biodiversity Atlas in the Department's spatial data-set "VBA_FAUNA25" meaning that part of the extent of the VBA_FAUNA25 Wallaby-bush population has been disturbed, damaged and/or destroyed by the logging operations in the coupe 742-507-0005. This record is shown on the map of "Results 3 (Maps): Figure 2." above.
11. The Code of Practice, through its Management Standards and Procedures and the Planning Standards (together: the **Code**) require that Wallaby-bush plants and population extents are identified "prior to roading, harvesting, tending and regeneration" and for each record and population extent of this species a 200m Special Management Zone (**SMZ**) be established. No such SMZ has been established for the record within coupe 742-507-0004.
12. **As a result of failing to identify this Wallaby-bush plant and the full extent of the Wallaby-bush population within 200m of the Watershed Road coupes, approximately 9.12 ha (> 70%) of the mandatory SMZ to be established responsive to the population extent of this Wallaby-bush record described above has now been logged within coupe 742-507-0004. This logging has occurred in breach of the Code and was thus illegal. This area is shown on the map of Figure 2. above as the bright yellow area labelled "200m Buffer on existing Wallaby-bush record not shown in FMZ".**

¹⁰ "Advisory list of rare or threatened plants in Victoria – 2014", Department of Environment, Land, Water & Planning, <http://delwp.vic.gov.au/environment-and-wildlife/conserving-threatened-species-and-communities/threatened-species-protection-initiative/threatened-species-advisory-lists>, accessed March 2016

Additional Wallaby-bush, Woolly-head Pomaderris (*Pomaderris eriocephala*) and Long-flower Beard-heath (*Leucopogon juniperinus*) records

13. Woolly-head Pomaderris (*Pomaderris eriocephala*) is listed as "rare" and Long-flower Beard-heath (*Leucopogon juniperinus*) is listed as "poorly known" on the Department's "Advisory list of rare or threatened plants in Victoria - 2014".¹¹
14. A Woolly-head Pomaderris record within 200m of the scheduled extent of coupe 742-507-0004 is present on the Victorian Biodiversity Atlas in the Department's spatial data-set "VBA_FAUNA25". This record is shown on the map of "Results 3 (Maps): Figure 2." above. A Long-flower Beard-heath record within 5km of the scheduled extent of the Watershed Road coupes is present on the Victorian Biodiversity Atlas in the Department's spatial data-set "VBA_FAUNA25".
15. The Code requires that Woolly-head Pomaderris and Long-flower Beard-heath plants and population extents are identified "prior to roading, harvesting, tending and regeneration" and for each record and population extent of this species a 200m SMZ be established. No such SMZ's have been established within the Watershed Road coupes however an SMZ for Woolly-head Pomaderris exists adjacent to the southern extent of these coupes.
16. In addition to the Wallaby-bush, Woolly-head Pomaderris and Long-flower Beard-heath records on the VBA_FAUNA25 data-set described above, at least an additional 41 Wallaby-bush, 6 Woolly-head Pomaderris and 5 Long-flower Beard-heath records have been documented within this investigation demonstrating (and extending) the population extents of these species within and/or adjacent to the Watershed Road coupes. Details of these record locations are provided in the "Results" sections of this report.
17. The information in Table 1., the photos within Figures 1(d-l), and the map of Figure 2. show that the location of the Wallaby-bush, Woolly-head Pomaderris and Long-flower Beard-heath records are located adjacent to or within the Watershed Road coupe extents with most very close to the edge of the logged area (Note: logging trash within the logged area was not searched for additional destroyed plants of these species) and that 34 of the Wallaby-bush and 1 of the Woolly-head Pomaderris records is located within the logged area of these coupes, meaning that at least part of the documented extent of these populations have been disturbed, damaged and/or destroyed by the logging operations in the Watershed Road coupes.
18. **As a result of failing to identify these Wallaby-bush, Woolly-head Pomaderris and Long-flower Beard-heath plants and the full extent of the population of these species within 200m of the Watershed Road coupes, no SMZ's for these species have been established within the Watershed Road coupe extents and logging has now occurred illegally, in breach of the Code within 38.81 ha of the mandatory SMZ that should have been established for these species. This SMZ area is shown on the map of Figure 2. above as the area of the orange area labelled "Additional 200m Special Management Zone buffer on Woolly-head Pomaderris, Long-flower Beard-heath and Wallaby-bush records" intersecting the logged area, shown as the maroon outlined and cross-hatched area. The logged area within the requisite SMZ for these species equates to 100% of the areas now logged in the Watershed Road coupes.**

11 "Advisory list of rare or threatened plants in Victoria – 2014", Department of Environment, Land, Water & Planning, <http://delwp.vic.gov.au/environment-and-wildlife/conserving-threatened-species-and-communities/threatened-species-protection-initiative/threatened-species-advisory-lists>, accessed March 2016

Summary of Rare, Threatened and/or Protected Flora records in the Watershed Road Coupes

19. Table 2. below summarises the extent and proportions of VicForests logging coupes that required FMZ amendment, which were not established, but which have now been logged.

Table 2. Summary of Flora Records, FMZ and Coupe Areas Now Logged

Source	Common Name	Botanical Name	No. of records considered within/ adjacent to coupes	FMZ amendment required	Area of required FMZ amendment now logged (ha)	% of logged coupe area within required FMZ amendment
Coupe 742-507-0005 only						
VBA_FAUNA25 Records only	Colquhoun Grevillea	<i>Grevillea celata</i>	4	SPZ	2.11	12%
INVESTIGATION	Colquhoun Grevillea	<i>Grevillea celata</i>	5	SPZ	2.98	17%
VBA_FAUNA25 Records only	Wallaby-bush	<i>Beyeria lasiocarpa</i>	1	SMZ	8.88	51%
Coupes 742-507-0004 and 742-507-0005						
INVESTIGATION	Wallaby-bush	<i>Beyeria lasiocarpa</i>	41			
INVESTIGATION	Woolly-head Pomaderris	<i>Pomaderris eriocephala</i>	6	SMZ	38.81	100%
INVESTIGATION	Long-flower Beard-heath	<i>Leucopogon juniperinus</i>	5			

Recommendations

20. The information presented within this investigation report demonstrates that during the planning and conduct of logging operations within coupes 742-507-0004 and 742-507-0005, VicForests and the logging contractors have logged illegally including by:

- Failing to identify more than 50 rare, threatened and/or protected flora species, been biodiversity values listed in the MSP's, prior to logging (Code, 2.2.2.4).
- Failing to address the risks to these values through implementation of management actions such as by appropriately applying buffers and exclusion areas consistent with the MSP's and the Planning Standards (Code, 2.2.2.4).
- Failing to refer to the the "FMZ100" (Forest Management Zones) geospatial layer in conjunction with the "VBA_FAUNA25" dataset containing information regarding the proximity of protected values (MSP's, 2.1.1.1 and 2.1.1.3).
- Failing to make an application to the Secretary or delegate prior to the commencement of logging in circumstances where values requiring protection via the establishment of SMZ or SPZ have been found (MSP's 2.1.1.3).
- Failing to apply management actions for rare and threatened flora identified within areas to be affected by logging (MSP's, 4.3.1.1 and Planning Standards, 4.5.1.1).

21. The Department of Environment, Land, Water and Planning must prosecute VicForests and the logging contractors operating within coupes 742-507-0004 and 742-507-0005 for logging illegally in breach of the Code of Practice for Timber Production 2014.

22. The Department must also immediately ensure that no further logging operations or associated activities are conducted within these coupes, including operations relating to the preparation or conduct of "regeneration" burns, that may further breach the Code and prevent further regulatory investigations at this site.

