

Leadbeater's Possum Zone 1A Habitat Detection Report

VicForests Logging Coupe: 300-530-0003

Monda Road, Hardy Creek, Toolangi State Forest

This report details the detection of high-quality Leadbeater's Possum (*Gymnobelideus leadbeateri*) Zone 1A Habitat within and adjacent VicForests logging coupe 300-530-0003.



Leadbeater's Possum Zone 1a habitat within and adjacent coupe 300-530-0003.

Abstract

Field surveys were undertaken within and adjacent VicForests logging coupe 300-530-0003 off Monda Road on the 10th of July, 19th of September and 26th of September 2021, to determine if Leadbeater's Possum (*Gymnobelideus leadbeateri*) Zone 1A habitat was present. For each hollow-bearing tree encountered, a waypoint was marked by GPS, the circumference of the tree was measured at breast height, species and growth stage was noted, obvious hollows were noted including the aspect and height of significant hollows where necessary. Photographs were taken of each tree and any obvious hollows. Each hollow-bearing tree recorded in this investigation was understood to be Mountain Ash (*Eucalyptus regnans*). GIS mapping and spatial analysis was undertaken to determine if the density of hollow-bearing ash trees at coupe 300-530-0003 met the Zone 1a prescription outlined in the '*Planning Standards for timber harvesting operations in Victoria's State forests 2014*'. We conclude that this investigation found the presence of Leadbeater's Possum Zone 1A habitat within and adjacent VicForests logging coupe 300-530-0003 and therefore a Special Protection Zone must immediately be established to protect this critical Leadbeater's Possum habitat from logging operations.

Surveyors: Blake Nisbet, Katherine Best, Phillip Marshall, Hayley Forster and others

Authors: Blake Nisbet
wotch.reports@gmail.com

Wildlife of The Central Highlands Inc.

Dates of investigations: 10 July, 19 Sep & 26 Sep 2021

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Introduction

The Leadbeater's Possum (*Gymnobelideus leadbeateri*) (LBP) is a critically endangered possum found mostly within the montane ash forests of Victoria's Central Highlands and they are dependent on hollows in mature and dead trees (Lindenmayer et al. 1990).

The 'Planning standards for timber harvesting in Victoria's state forests 2014 (**the Planning Standards**)' outlines the following legislative protection for Leadbeater's Possum habitat:

"Establish a SPZ over areas of Zone 1A habitat where there are more than 10 hollow bearing trees per 3 ha in patches greater than 3 ha." (pp39)

The Management Standards and Procedures for timber harvesting operations in Victoria's state forests 2014 (**the MSPs**) provide the following definition for Zone 1A hollow-bearing trees (HBTs):

"'hollow bearing tree' in the context of Zone 1A habitat means living mature or senescent trees of Ash eucalypt species containing hollows" (pp12) The **MSPs** also states that *"'Ash' means Mountain Ash (Eucalyptus regnans), Alpine Ash (Eucalyptus delegatensis) and Shining Gum (Eucalyptus nitens)."* (pp9)

Investigation location

VicForests coupe 300-530-0003 is one of many areas of high conservation value which VicForests have just approved as a new coupe on the Timber Release Plan (TRP) in September 2021. The forest within and adjacent VicForests coupe 300-530-0003 contains many large, old hollow-bearing Mountain Ash (*Eucalyptus regnans*) trees, both alive and dead, which coupled with a rainforest gully along the eastern boundary of the coupe provides exceptional current and future habitat for the LBP. This patch of forest is just off Monda Road in the Toolangi State Forest.

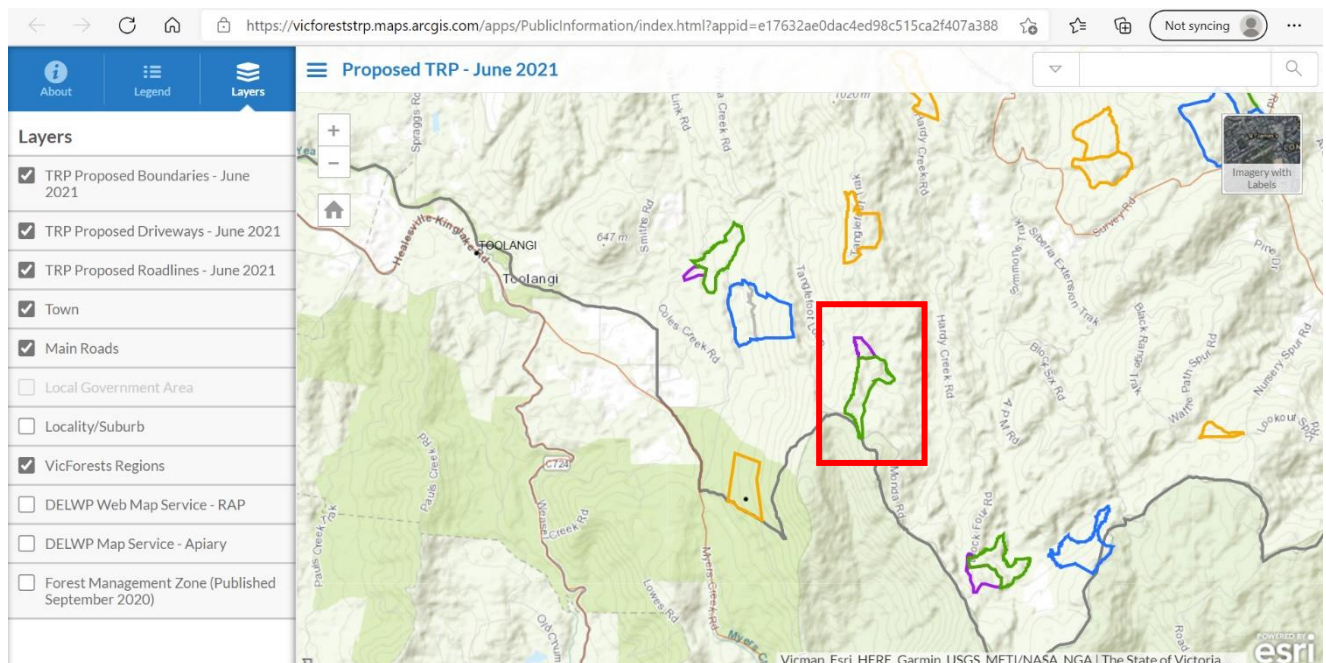


Figure i. VicForests proposed changes to the TRP in June 2021 with green outlines representing proposed new coupes. Accessed from VicForests website on 16 July 2021:

<https://vicforeststrp.maps.arcgis.com/apps/PublicInformation/index.html?appid=e17632ae0dac4ed98c515ca2f407a388>

Note: red box indicates investigation location (coupe 300-530-0003)

Methodology

VicForests logging coupe 300-530-0003 was assessed to determine if LBP Zone 1A habitat was present. Field surveys were undertaken on 10 July, 19 Sep & 26 Sep 2021. The following outline the steps that were taken during this investigation:

- Logging coupe 300-530-0003 was first viewed online via VicForests proposed changes to the TRP interactive map in June 2021.
- Forest within and adjacent the logging coupe was traversed by field surveyors in an effort to identify the presence of live hollow-bearing ash trees that were within the area. This investigation did not record dead hollow-bearing ash trees, of which there were many within the area.
- Large live ash trees were inspected using binoculars and cameras with zooming capabilities to identify and confirm any suspected hollows.
- At the base of each live hollow-bearing ash tree, a unique GPS waypoint was recorded on a hand-held Garmin GPS device. The code for each tree recorded obtained the following sequence;
 - Three letters representing an area code which were changed across each survey date eg '**MON**' for Monda Road,
 - '**01**' for the first tree recorded on each survey date, this would then ascend as surveyors continued to record the trees throughout the area; 02, 03, and so on,
 - Two letters for the tree species, eg '**MA**' for Mountain Ash (*Eucalyptus regnans*).
- The circumference of the tree was measured at breast height (approx 1.3m off the ground) and was noted in a spreadsheet for each marked tree. The circumference of each tree was later divided by pi (3.142) to provide a figure on the diameter at breast height.
- A series of photographs were taken for each marked tree, starting with a photograph of the circumference measurement at breast height with GPS coordinates also in the frame, followed by a series of photos showing the base, structure, crown, and any obvious hollows for each tree.
- All of the data was scribed during the field surveys and later transcribed into an excel spreadsheet, as seen in the results section of this report. Relevant data which was recorded included waypoint name, tree species, growth stage, circumference at breast height, and a description of obvious hollows including aspect and height where necessary. Height was not provided for basal hollows and aspect was not provided for dead-leading spout (DLS) hollows.
- The hollows described in this investigation included only those which could be clearly identified from the ground, and it's likely that for each HBT, particularly those in the late-mature or senescing growth stage, that the crown contained more hollows which went unseen from the ground due to intruding foliage and branches blocking the line of sight. For HBTs with many obvious hollows, only a small handful of hollows were described.
- See figure ii. below for Geographic Information Systems (GIS) mapping and spatial analysis methodology.

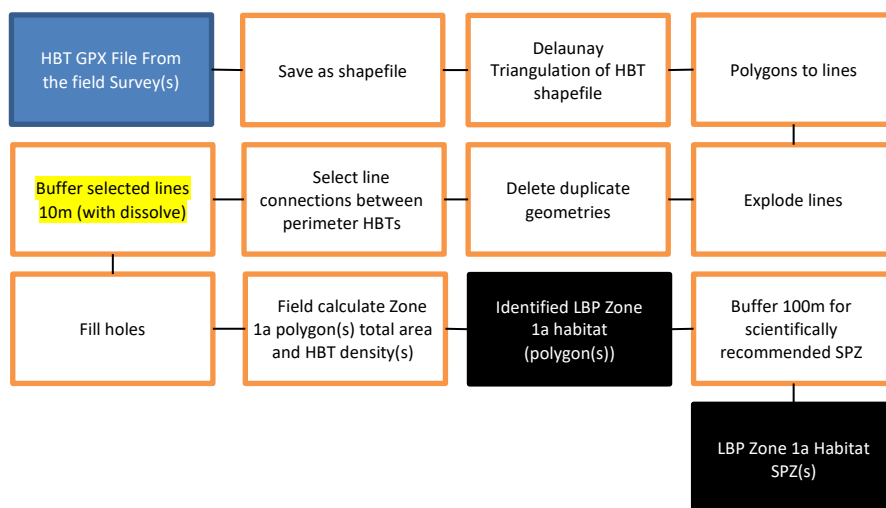


Figure ii. Flowchart describing processing of data in QGIS; whereby the blue represents input data, the black represents output data and the orange represent geoprocessing tools used to identify Leadbeater’s Possum Zone 1A habitat in QGIS. Note that the perimeter HBTs were buffered by 10m to account for GPS error.

Results

Table of survey results:

Table 1. Descriptions of obvious hollows and characteristics of hollow-bearing ash trees recorded during this investigation on 10 July (MON), 19 Sep (NDA) and 26 Sep (TAN) 2021. CBH and DBH refer to the circumference and diameter respectively, of each tree measured at breast height. 43 hollow-bearing ash trees were recorded during this investigation, all of which were identified as Mountain Ash (*Eucalyptus regnans*).

Waypoint ID	Tree species	Growth stage	CBH (m)	DBH (m)	Trunk hollows (Dead-leading spout)	Trunk hollows (other)	Trunk hollows (basal)	Branch hollows
MON01MA	<i>Eucalyptus regnans</i>	Senescing	13.72	4.37	Present (60m)	40m (eastern aspect), 55m (south-east aspect)	Present (southern aspect)	NA
MON02MA	<i>Eucalyptus regnans</i>	Late-Mature	9.4	2.99	Present (65m)	60m (southern aspect), 50m (western aspect), 45m (north aspect)	N/A	Present
MON03MA	<i>Eucalyptus regnans</i>	Senescing	10.35	3.29	Present (60m)	N/A	Present (north-east aspect)	NA
MON04MA	<i>Eucalyptus regnans</i>	Senescing	7.31	2.33	Present (30m)	6m (south-east aspect), numerous at approx 25m (south-east aspect)	Present (north aspect)	NA
MON05MA	<i>Eucalyptus regnans</i>	Late-Mature	8.23	2.62	Present (30m)	N/A	Present (north-east aspect)	NA
MON06MA	<i>Eucalyptus regnans</i>	Senescing	11	3.50	Present (40m)	Numerous fissures at various heights (western aspect)	x2 (north and western aspects)	NA
MON07MA	<i>Eucalyptus regnans</i>	Mature	4.8	1.53	N/A	Large fissure hollow stemming from base to approx 15m (north-west aspect)	Present (north-west aspect)	NA
MON08MA	<i>Eucalyptus regnans</i>	Mature	6.19	1.97	N/A	N/A	x2 (north and western aspects)	NA

Waypoint ID	Tree species	Growth stage	CBH (m)	DBH (m)	Trunk hollows (Dead-leading spout)	Trunk hollows (other)	Trunk hollows (basal)	Branch hollows
MON09MA	<i>Eucalyptus regnans</i>	Senescing	8.22	2.62	Present (35m)	Numerous trunk hollows from 10-30m (various aspects)	N/A	Present (large limb with spout hollows)
MON10MA	<i>Eucalyptus regnans</i>	Senescing	7.44	2.37	Present (35m)	Large fissure hollow 20-30m (west aspect), x2 large at 25m (south-east aspect)	N/A	NA
MON11MA	<i>Eucalyptus regnans</i>	Late-Mature	8.09	2.57	Present (50m)	N/A	Present (north-west aspect)	NA
NDA01MA	<i>Eucalyptus regnans</i>	Mature	4.97	1.58	N/A	Trunk hollows developing in the crown	N/A	x2 limb hollows on the western aspect (10m and 25m)
NDA02MA	<i>Eucalyptus regnans</i>	Senescing	8.2	2.61	Present (45m)	25m (south-west aspect), hollow forming at 20m (western aspect)	Present (south-east aspect), base of trunk decaying	N/A
NDA03MA	<i>Eucalyptus regnans</i>	Mature	6.16	1.96	N/A	Trunk hollowed out at 10-15m (eastern aspect)	Present (southern aspect)	N/A
NDA04MA	<i>Eucalyptus regnans</i>	Late-Mature	7.42	2.36	Present (45m)	40m (eastern aspect)	x2 (western and eastern aspects)	N/A
NDA05MA	<i>Eucalyptus regnans</i>	Late-Mature	7.93	2.52	X2 (60m)	8m (north-western aspect), fissure hollow at 45m (north-western aspect)	Base of trunk decaying/hollowing out	N/A
NDA06MA	<i>Eucalyptus regnans</i>	Senescing	9.7	3.09	Present (55m)	20m (north-western aspect)	x2 (western and eastern aspects)	N/A
NDA07MA	<i>Eucalyptus regnans</i>	Mature	7.15	2.28	N/A	Trunk appears completely hollowed out	Present (eastern aspect), trunk hollowed out to 10m	N/A
NDA08MA	<i>Eucalyptus regnans</i>	Mature	4.14	1.32	N/A	Multiple fissure hollows from 15-35m (south-western aspect)	N/A	N/A
NDA09MA	<i>Eucalyptus regnans</i>	Mature	6.16	1.96	Present (50m)	Fissure hollow at 20m (north-western aspect), fissure hollow at 10-15m (south-eastern aspect)	Present (south-western aspect)	25m (south-eastern aspect)
NDA10MA	<i>Eucalyptus regnans</i>	Senescing	7.53	2.40	Present (40m)	x2 (5m and 35m (western aspect))	N/A	N/A
NDA11MA	<i>Eucalyptus regnans</i>	Late-Mature	5	1.59	N/A	15m (south-eastern aspect)	N/A	N/A
NDA12MA	<i>Eucalyptus regnans</i>	Mature	4	1.27	N/A	18m (north-eastern aspect)	N/A	N/A
NDA13MA	<i>Eucalyptus regnans</i>	Late-Mature	9.72	3.09	Present (50m)	x3 (10m, 20m, 35m (north/north-western aspects), 20m (eastern aspect))	N/A	N/A
NDA14MA	<i>Eucalyptus regnans</i>	Late-Mature	14.79	4.71	x3 (60m)	50m (south-eastern aspect)	Present (south-eastern aspect)	N/A
NDA15MA	<i>Eucalyptus regnans</i>	Late-Mature	8.09	2.57	Present (55m)	x2 (15m, 30m (eastern aspect))	N/A	N/A

Waypoint ID	Tree species	Growth stage	CBH (m)	DBH (m)	Trunk hollows (Dead-leading spout)	Trunk hollows (other)	Trunk hollows (basal)	Branch hollows
NDA16MA	<i>Eucalyptus regnans</i>	Senescing	13.08	4.16	Recent broken crown (35m)	x2 (20m, 25m (north-eastern aspect)), 22m (eastern aspect)	Present (northern aspect)	N/A
TAN01MA	<i>Eucalyptus regnans</i>	Senescing	9.91	3.15	Present (40m)	x2 on northern aspect (20m, 25m), x5 on eastern aspect (10m, 12m, 15m, 30m, 35m)	Present (north-east aspect)	N/A
TAN02MA	<i>Eucalyptus regnans</i>	Late-Mature	11.41	3.63	Present (45m)	x2 on south-eastern aspect (15m, 40m), x1 on south-western aspect (38m)	Present (south-eastern aspect)	N/A
TAN03MA	<i>Eucalyptus regnans</i>	Senescing	8.74	2.78	Present (50m)	N/A	x2 (northern and eastern aspects)	N/A
TAN04MA	<i>Eucalyptus regnans</i>	Senescing	8.94	2.85	Present (25m)	5m (eastern aspect), 15m (southern aspect), many fissures all up the trunk	N/A	N/A
TAN05MA	<i>Eucalyptus regnans</i>	Late-Mature	6.98	2.22	Present (40m)	N/A	Present (south-eastern aspect)	N/A
TAN06MA	<i>Eucalyptus regnans</i>	Late-Mature	7.25	2.31	Present (50m)	x2 on north-eastern aspect (30m, 32m)	Present (north-western aspect)	N/A
TAN07MA	<i>Eucalyptus regnans</i>	Late-Mature	7.2	2.29	Present (45m)	35m (north-eastern aspect)	Present (northern aspect)	N/A
TAN08MA	<i>Eucalyptus regnans</i>	Late-Mature	10.45	3.33	Present (35m)	N/A	Present (northern aspect)	20m (north-western aspect)
TAN09MA	<i>Eucalyptus regnans</i>	Late-Mature	6.44	2.05	Present (30m)	N/A	N/A	x1 spout hollow on western aspect (15m), x1 on eastern aspect (32m)
TAN10MA	<i>Eucalyptus regnans</i>	Late-Mature	10.73	3.42	x2 (60m)	40m (northern aspect), 30m (western aspect)	N/A	12m (northern aspect)
TAN11MA	<i>Eucalyptus regnans</i>	Late-Mature	9.85	3.13	Present (45m)	40m (south-eastern aspect), 40m (eastern aspect)	Present (south-eastern aspect)	N/A
TAN12MA	<i>Eucalyptus regnans</i>	Late-Mature	9.9	3.15	Present (60m)	N/A	Present (south-eastern aspect)	50m (eastern aspect)
TAN13MA	<i>Eucalyptus regnans</i>	Senescing	11.25	3.58	x2 (55m)	20m (northern aspect)	Present (south-western aspect)	x3 on north-western aspect (45m, 50m, 55m)
TAN14MA	<i>Eucalyptus regnans</i>	Mature	5.31	1.69	N/A	x2 on northern aspect (20m, 30m)	Present (north-eastern aspect)	35m (northern aspect)
TAN15MA	<i>Eucalyptus regnans</i>	Senescing	8.26	2.63	Present (35m)	N/A	Present (eastern aspect)	30m (eastern aspect)
TAN16MA	<i>Eucalyptus regnans</i>	Late-Mature	10.56	3.36	x2 (65m)	Fissure hollow at 40m (western aspect)	Present (eastern aspect)	N/A

Sample photographs of obvious hollows



Figure 1a. Example of a hollow-bearing dead-leading spout on 'MON04MA'. Note that all trees which contained dead-leading spouts such as 'MON04MA' were also confirmed to be alive with cambium present and live foliage on the tree.

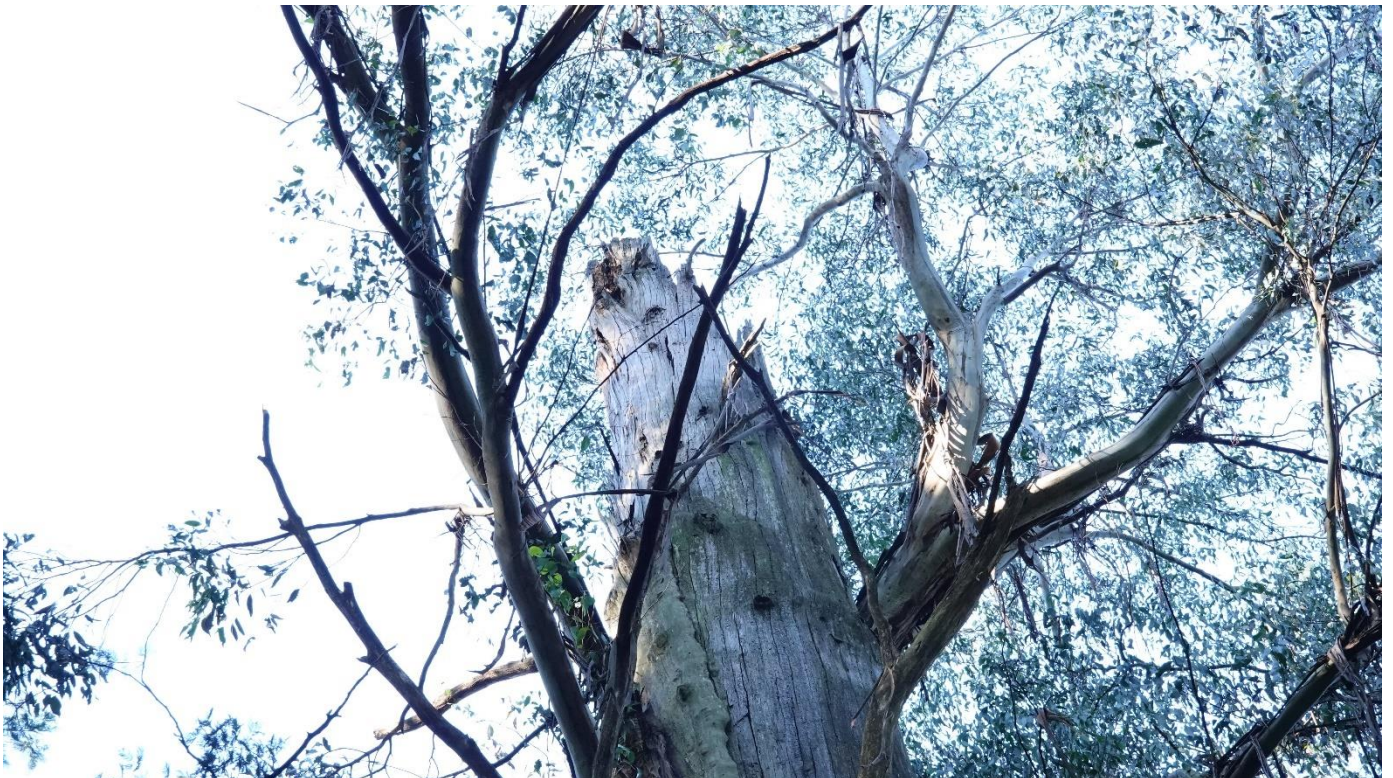


Figure 1b. Example of another hollow-bearing dead-leading spout on 'MON06MA' with many fissure hollows present.



Figure 1c. Example of a trunk hollow on 'MON04MA'.



Figure 1d. Example of another trunk hollow on 'MON02MA'.



Figures 1e (left) and 1f (right). Examples of basal hollows on 'MON11MA' & 'MON04MA' from left to right respectively.



Figure 1g. Example of branch hollows on 'TAN13MA'.

Full photographic evidence of Zone 1a HBTs

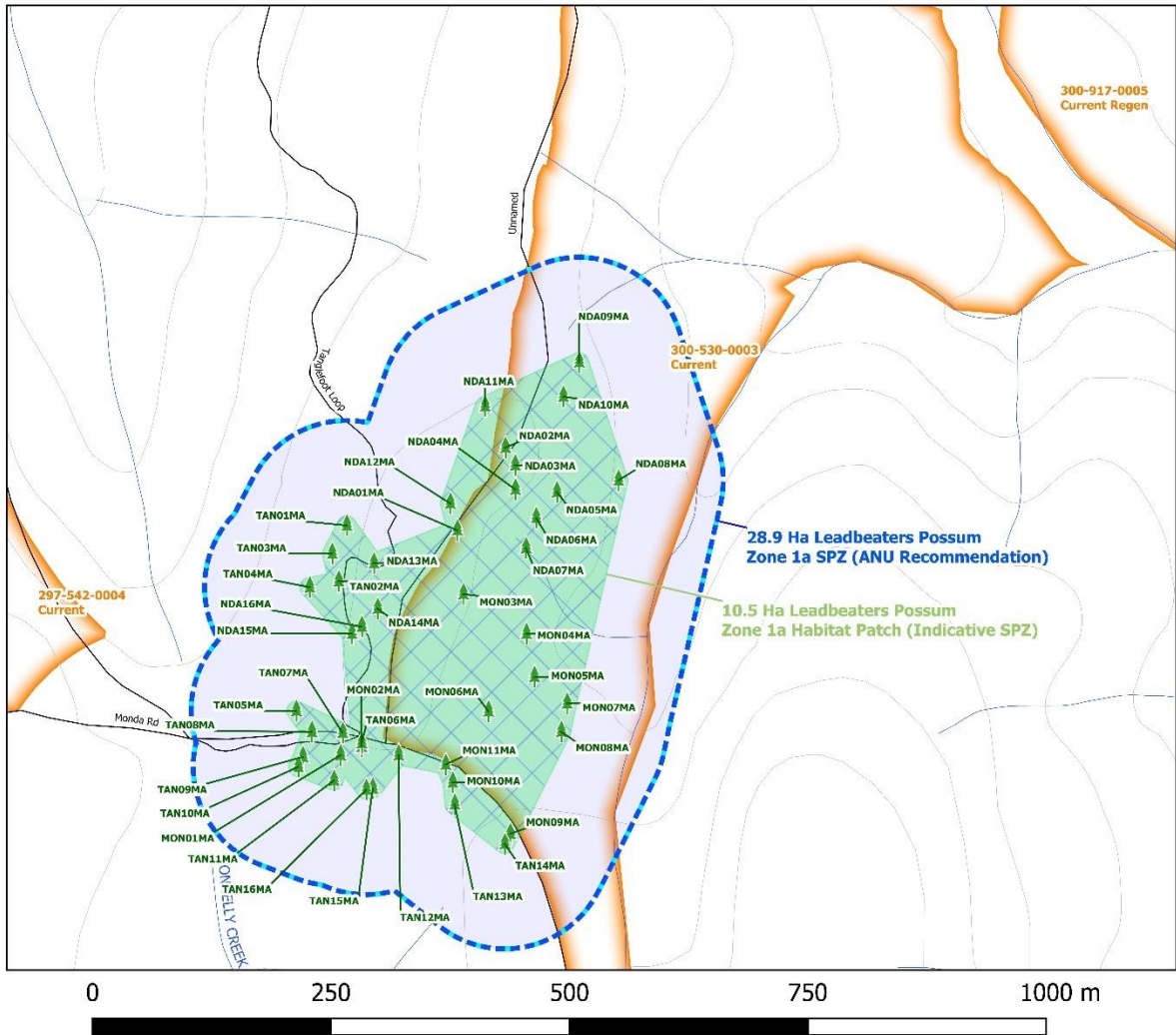
Figure 2 (attached) is a zip folder containing all the photographic evidence taken during this investigation, detailing the obvious hollows and characteristics of each hollow-bearing ash tree described in Table 1 above. The photographs are contained within subfolders named after the waypoint ID (Table 1) for each individual tree.

Relevant spatial data

Figure 3 (attached) is a zip folder containing the relevant spatial data from this investigation. This includes a GPX file containing the waypoints marked at the base of each Zone 1a tree during field surveys (Figure 3a), as well as the Zone 1a patch polygon (Figure 3b) and buffered polygon (Figure 3c) as seen in Figure 4 below.

Mapping of hollow-bearing ash trees and Zone 1a habitat

Monda Road Leadbeater's Possum Zone 1a Habitat Patch; Indicative 10.5 ha and Scientifically Recommended 28.9 ha Special Protection Zone (SPZ); VicForests Approved Timber Release Plan (TRP) Sep 2021; Watercourses, Contours & Roads.



Leadbeater's Possum	VicForests TRP
Zone 1a Trees	Approved TRP Coupes Sep 2021
Zone 1a Patch (Indicative SPZ)	Other
100m buffer around Zone 1a patch (Scientifically Recommended SPZ)	— Contours
	— Roads
	— Watercourses

Created by Blake Nisbet
 WOTCH
 28/09/2021
 QGIS
 GDA / MGA Zone 55 H

Figure 4. Map of all hollow-bearing Mountain Ash (*Eucalyptus regnans*) trees recorded within and adjacent logging coupe 300-530-0003 during this investigation. The green polygon represents the Zone 1a habitat patch around perimeter trees (Indicative SPZ) and the blue polygon represents a 100m buffer around the patch (scientifically recommended SPZ from Australian National University (ANU)).

Discussion

On 10 July, 19 Sep and 26 Sep 2021, field assessments were undertaken to assess the presence (or absence) of LBP Zone 1A habitat within and adjacent VicForests logging coupe 300-530-0003. In total, 43 hollow-bearing ash trees were identified and recorded through these assessments, all of which were Mountain Ash (*Eucalyptus regnans*). These 43 trees occurred within a patch size of 10.5ha at a density of 4.09 HBTs p/ha, or 12.27 HBTs p/3ha (Figure 4). Thus, this 10.5ha patch meets the tree density of ‘more than 10 hollow bearing trees per 3 ha in patches greater than 3 ha’ as outlined within the **Planning Standards**, see Excerpt 1 below.

The following subsection, mandatory prescriptions, outlines the prescription for the identification of LBP Zone 1A habitat as well as some relevant Glossary terms.

Mandatory Prescriptions for LBP Zone 1A Habitat

It is mandatory for VicForests and any other organizations operating within state forests of Victoria to comply with all prescriptions outlined within the *Code of Practice for Timber Production 2014 (the Code)*. Further to organizations operating in state forest having to comply with the Code, it is also mandatory for them to comply with Appendix 5 of the ‘*Management Standards and Procedures for timber harvesting operations in Victoria’s State forests 2014*’ (**MSPs**) which is the ‘*Planning Standards for timber harvesting operations in Victoria’s State forests 2014*’ (**Planning Standards**).

The following excerpt is from Table 4 of the **Planning Standards**:

Excerpt 1 – showing the zoning management actions for the protection of Leadbeater’s Possum habitat. (pp39)

FMA	Common name	Scientific name	Zoning management actions	Management actions	Review
Central Highlands MAs	Leadbeater’s Possum habitat	<i>Gymnobelideus leadbeateri</i>	Establish a SPZ over areas of Zone 1A habitat where there are more than 10 hollow bearing trees per 3 ha in patches greater than 3 ha.	Ensure Zone 1A habitat is not salvage logged.	Review retained habitat as ash forest areas change in relation to Zone 1A habitat criteria.

The following excerpts are from the Glossary section of the **MSPs**:

Excerpt 2 – the definition of a ‘hollow bearing tree’ as referred to in the establishment of Zone 1A habitat. (pp12)

‘**hollow bearing tree**’ in the context of Zone 1A habitat means living **mature** or **senescent** trees of **Ash** eucalypt species containing hollows. Hollow bearing tree in the context of Zone 1B habitat means **dead** mature or senescent living trees of Ash eucalypt species containing hollows.

Excerpt 3 – the definition of ‘Ash’ as referred to in the definition of Zone 1a HBTs. (pp9)

‘**Ash**’ means Mountain Ash (*Eucalyptus regnans*), Alpine Ash (*Eucalyptus delegatensis*) and Shining Gum (*Eucalyptus nitens*).

Excerpt 4 – the definition of a ‘hollow’ as referred to in the ‘hollow bearing tree’ definition. (pp12)

‘hollow’ as per Code definition. However in the context of Leadbeater’s Possum habitat hollows are cavities formed in the trunk or branches of a live or dead tree. They are formed in Ash eucalypt trees through a variety of processes but are generally related to ageing and decay, although physical injury and insect damage may also contribute. They vary in size, both in cavity opening diameter and cavity depth and volume, from small openings of 4 – 8 cm to very large with entrance diameters of 18 – 30 cm or more. Hollows must have an entrance diameter in excess of 4 cm and not have a height in excess of 30 m.

All 43 of the HBTs recorded during this investigation (Table 1) were live Mountain Ash trees containing obvious hollows which were identified from the ground. Binoculars and zoom-capable cameras were used in the field to confirm that hollows did contain depth, and all hollows described in Table 1 appeared to contain an entrance diameter in excess of 4cm. None of the hollows described in Table 1 had a height in excess of 30m.

Excerpt 1 from the **Planning Standards** above states that the mandatory zoning management action for LBP Zone 1a Habitat is to “Establish a SPZ over areas of Zone 1A habitat where there are more than 10 hollow bearing trees per 3 ha in patches greater than 3 ha.” To protect this patch of LBP Zone 1a habitat, both for current and future use by the critically endangered LBP, these HBTs (Table 1, Figure 4) must be protected from logging operations and post-harvest burns. This SPZ must protect these HBTs from edge effects such as windthrow and/or escaped and intensive post-harvest burns from surrounding logging operations. The SPZ mapped in Figure 4 (blue) of this report is based on the scientific recommendations for LBP Zone 1a SPZs and comes from the Australian National University (ANU).

Scientifically Recommended Special Protection Zones for LBP Zone 1a Habitat

ANU researchers have worked in the Mountain Ash forests of Victoria’s Central Highlands for over 30 years. Their extensive work has included studies of the “habitat requirements and population viability of arboreal marsupials (including Leadbeater’s Possum), populations of large old trees, forest dynamics, fire dynamics, logging impacts and numerous other investigations documented in more than 165 peer-reviewed scientific articles and seven books” (Lindenmayer et al. 2013).

In their paper ‘New Restoration Forest Management Prescriptions to conserve Leadbeater’s Possum and Rebuild the cover of Ecologically Mature Forest in the Central Highlands of Victoria’, Lindenmayer et al. 2013 suggest several new forest management prescriptions required to better conserve Leadbeater’s Possum and rebuild the ecologically mature forests of the Central Highlands. Some of these guidelines relevant to the protection of LBP Zone 1a Habitat as identified in this investigation are as follows:

Prescription 1 – Zone 1 Habitat for Leadbeater’s Possum

- 1.1.1 Zone 1 habitat for Leadbeater’s Possum is any area of forest of 3 hectares or more that supports eight or more living or dead hollow-bearing trees per 3 hectares.
- 1.1.2 Zone 1 habitat will be protected by a 100 m wide buffer of unlogged forest.
- 1.1.3 Logging is not permitted in Zone 1 habitat or in associated buffers.
- 1.2 Careful aerial and on-ground assessments of all areas proposed for logging must be completed prior to commencement of harvesting.
- 1.3 The location of areas of Zone 1 forest and the adjacent buffers will be mapped and the subsequent spatial data lodged on the Government Geographic Information System

Prescription 3 – Protection of Hollow-bearing Trees

- 3.1 Each hollow-bearing tree (whether living or dead) will be surrounded by a buffer of unlogged forest measuring 100m in radius.
- 3.2 The locations of buffers to protect living and dead hollow-bearing trees will be mapped and the subsequent spatial data lodged to the Government Geographic Information System.
- 3.3 All trees 100 or more years old should be protected and surrounded by a buffer of unlogged forest measuring 100m in radius.

VicForests requirement to consider scientific knowledge when addressing biodiversity conservation risks

Under **the Code**, VicForests must observe the following actions regarding ‘Environmental Values in State Forests’ during planning, roading, harvesting, tending, and regeneration of native forests. The following are excerpts from **the Code**:

Excerpt 5– Mandatory actions - Addressing biodiversity conservation risks considering scientific knowledge. (pp34)

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.

Excerpt 6 – Definition of the precautionary principle as referred to in mandatory action 2.2.2.2. (pp15)

‘precautionary principle’ means when contemplating decisions that will affect the environment, careful evaluation of management options be undertaken to wherever practical avoid serious or irreversible damage to the environment; and to properly assess the risk-weighted consequences of various options. When dealing with 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.

VicForests is required to comply with clause 2.2.2.2 the ‘precautionary principle’ of **the Code**, which when dealing with the conservation of biodiversity values such as the LBP Zone 1a identified in this report, requires VicForests to apply the precautionary principle “consistent with relevant monitoring and research that has improved the understanding of the effects of forest management on forest ecology and conservation values”. The long-term research and monitoring by ANU in Victoria’s ash forests suggests that to effectively protect HBTs, a 100m buffer of unlogged forest is required around each HBT. The Zone 1a habitat identified in this report therefore requires a 100m SPZ buffer around the perimeter of the patch, to comply with clause 2.2.2.2 ‘the precautionary principle’ of **the code**, this 100m SPZ buffer is mapped in Figure 4 of this report and the spatial data depicting this area is attached as Figure 3c.

Conclusion and Recommendations

This investigation was successful in identifying a patch of LBP Zone 1a habitat totaling 10.5ha within the Toolangi State Forest. This patch of LBP Zone 1a Habitat is largely scheduled for logging within VicForests coupe 300-530-0003, and the following actions must be undertaken by DELWP to protect this critical habitat for the Leadbeater's Possum.

- DELWP must refrain VicForests from commencing logging operations within this patch of LBP Zone 1a habitat as mapped in Figure 4 (Green) of this report (attached spatial data Figure 3b).
- DELWP must establish a SPZ over this area of LBP Zone 1a habitat and ensure that VicForests is complying with the precautionary principle, which would involve establishing a SPZ buffer of at least 100m around the LBP Zone 1a patch (Figure 4: blue) as recommended by the ANU (attached spatial data Figure 3c).
- WOTCH also recommends that the required density of Zone 1a HBTs stated in the **Planning Standards** be amended to account for the scientific recommendations of the ANU, which recommends that “any area of forest of 3 hectares or more that supports eight or more living or dead hollow-bearing trees per 3 hectares” be protected as Zone 1 LBP habitat. The current prescription for LBP Zone 1a Habitat in the **Planning Standards** only incorporates live ash HBTs and is supposed to represent the best future habitat for the LBP, as the possum prefers dead stag trees for nesting (Lindenmayer et al. 1991c). It is overly concerning that LBP Zone 1a habitat is currently an extreme rarity within the Central Highlands, as this is supposed to represent suitable future habitat for the critically endangered LBP.
- Coupe 300-530-0003 should be removed from VicForests TRP as it contains current and future suitable habitat for the critically endangered Leadbeater's Possum.

References

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