

Greater Glider (*Petauroides volans*) Detection Report

Messmate Ridge Road, Marysville

Rubicon State Forest

VicForests logging coupe: 312-510-0010 & 312-510-0011

Abstract:

Within VicForests logging coupe 312-510-0010 and 312-510-0011, an investigation was undertaken to identify the presence/absence of threatened nocturnal wildlife inhabiting the forested area. This report details the presence of nine greater gliders (*Petauroides volans*) recorded within coupes 312-510-0010 'Rumba' & 312-510-0011 'Pumba', containing 6 and 3 gliders respectively.

The following report concludes that VicForests are planning logging operations within a critical area of forest inhabited by the threatened greater glider, listed under the 'Flora and Fauna Guarantee Act 1988' as of 2017. Recommendations are made to the Department of Environment, Land, Water and Planning (DELWP) to ensure the protection of this significant population of greater gliders. The methodology, results, discussion and recommendations from the evidence obtained during the nocturnal surveys are detailed below.

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Date of report: 13/02/2020

Overview of investigation location:

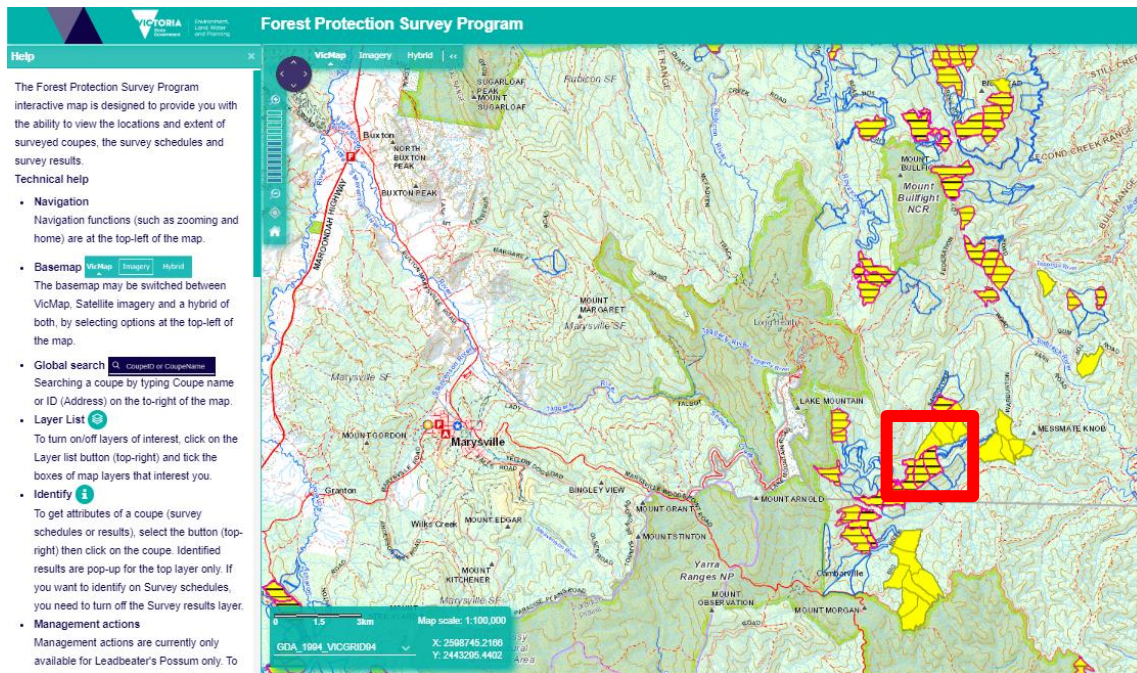


Figure b. Excerpt from DELWP’s ‘Forest Protection Survey Program Interactive Map’ showing the location of the logging coupes subject to the investigation (red square), in relation to Marysville and the Yarra Ranges National Park. Map viewed on the 13th of February 2020; <https://maps.ffm.vic.gov.au/ForestProtectionSurveys/>

Methodology:

- During the evening of the 10th February 2020, spotlighting transect surveys were conducted within VicForests logging coupes 312-510-0010 and 312-510-0011.
- Parts of the forest within the above area were searched to detect the presence/absence of greater gliders and other nocturnal arboreal fauna by engaging a hand-held spotlight to detect ‘eye shine’ within the canopy.
- Upon detection, a Sony video recorder was mostly used for species identification.
- Once species were confirmed to be the target species, where possible, video footage and still images were taken where the individuals were first observed.
- A unique GPS waypoint was then created for each Greater Glider directly beneath where the animal was located.
- The waypoints given followed the sequence of:
 - firstly, the three letters at the beginning represented a unique sequence for the nocturnal survey e.g. ‘MMR’.
 - then, the following two numbers represented the individual count of threatened species encountered throughout the survey e.g. ‘01’ for the first Greater Glider encountered
 - then, two letters representing a unique species code e.g. ‘GG’ for greater glider.
 - and finally, for most of the data recorded a ‘V’ was given to individuals that were identified visually instead of ‘A’ for aurally.

Results 1, Photographic evidence: Below are photographs taken of all the Greater Gliders recorded throughout the nocturnal survey investigation.



Figure 1a. Photographic evidence of Greater Glider (MMR01GGV & MMR02GGV) recorded at '55 H 0405436 5846933 (UTM/Zone 55 H)'.



Figure 1b. Photographic evidence of Greater Glider (MMR03GGV) recorded at '55 H 0405328 5846847 (UTM/Zone 55 H)'.



Figure 1c. Photographic evidence of Greater Glider (MMR04GGV & MMR05GGV) recorded at '55 H 0405302 5846720 (UTM/Zone 55 H)'.



Figure 1d. Photographic evidence of Greater Glider (MMR06GGV) recorded at '55 H 0405189 5846564 (UTM/Zone 55 H)'.



Figure 1e. Photographic evidence of Greater Glider (MMR07GGV & MMG08GGV) recorded at '55 H 0404872 5846118 (UTM/Zone 55 H)'.



Figure 1f. Photographic evidence of Greater Glider (MMR09GGV) recorded at '55 H 0405070 5846186 (UTM/Zone 55 H)'.

Results 2, Table of evidence obtained:

Throughout the nocturnal survey within the logging coupes 312-510-0010 & 312-510-0011, nine Greater Gliders were recorded. Some details regarding these detections are shown below within Table 1.

Table 1. Relevant data recorded from the survey investigation. This table shows the; time, waypoint name, species common name, location coordinates and photograph number associated for each greater glider recorded.

Time	Waypoint name	Species common name	Location coordinates	Photograph #
9.22pm	MMR01GGV	Greater Glider	55 H 0405436 5846933	3253
9.22pm	MMR02GGV	Greater Glider	55 H 0405436 5846933	3253
9.36pm	MMR03GGV	Greater Glider	55 H 0405328 5846847	3262
9.49pm	MMR04GGV	Greater Glider	55 H 0405302 5846720	3269
9.49pm	MMR05GGV	Greater Glider	55 H 0405302 5846720	3269
9.58pm	MMR06GGV	Greater Glider	55 H 0405189 5846564	3273
10.27pm	MMR07GGV	Greater Glider	55 H 0404872 5846118	3277
10.27pm	MMR08GGV	Greater Glider	55 H 0404872 5846118	3277
10.41pm	MMR09GGV	Greater Glider	55 H 0405070 5846186	3282

Results 3, Greater Glider detection Maps:

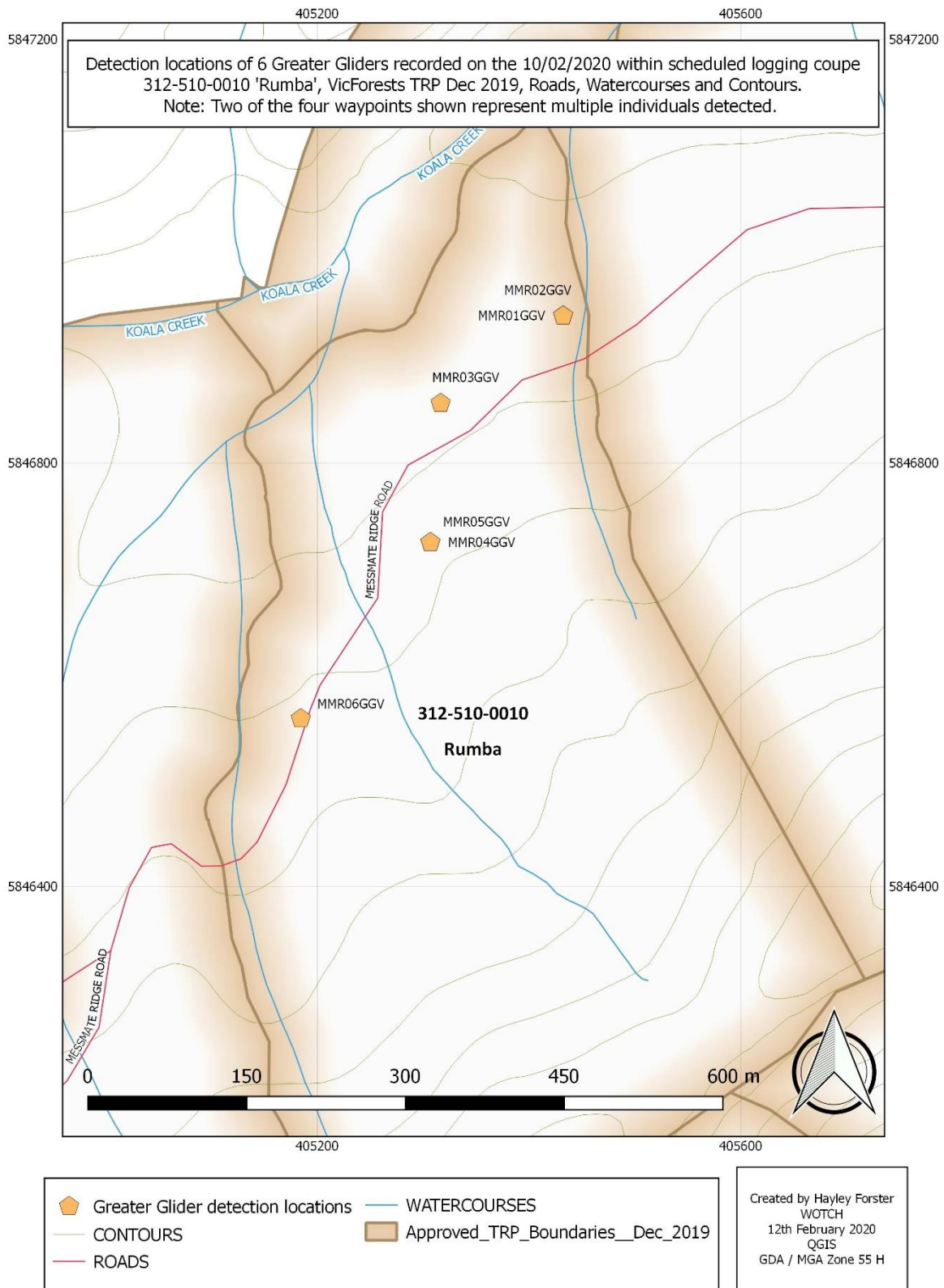


Figure 2a. Greater Glider detection locations within VicForests logging coupe 312-510-0010 along Messmate Ridge Road, Rubicon State Forest. This map was produced using the *QGIS* mapping software.

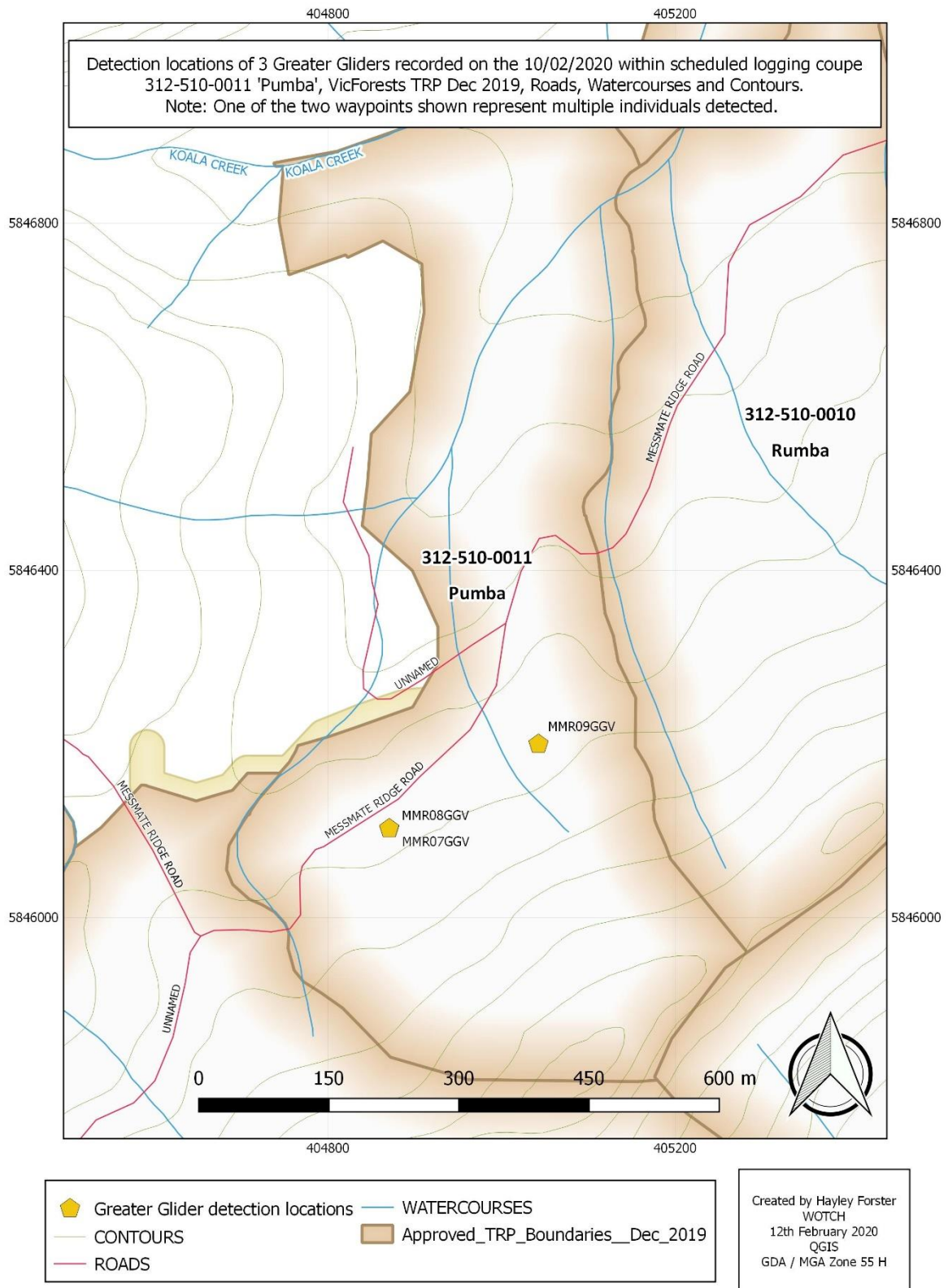


Figure 2b. Greater Glider detection locations within VicForests logging coupe 312-510-0011 along Messmate Ridge Road, Rubicon State Forest. This map was produced using the *QGIS* mapping software.

Results 4, Attached Video Evidence and GPX File:

Figure 4a – (attached) zip folder of photographic and video recording evidence of the Greater Gliders detected throughout the survey investigation.

*Note that video footage of GPS displays Greater Glider Detection ‘MMR02GGV’ as ‘PUM02GGV’, this was changed to ‘MMR02GGV’ later.

Figure 4b – (attached) is a GPX file of the Greater Glider locations recorded throughout the survey investigation.

Figure 4c – (attached) is a GPX file of the transect travelled throughout the survey investigation of Rumba

Discussion:

Greater Glider (*Petauroides Volans*)

Within VicForests scheduled logging coupe 312-510-0010 & 312-510-0011, a total of nine Greater Gliders (*Petauroides volans*) were observed and recorded during a spotlighting survey. To comprehensively understand the exact number of individual threatened Greater Gliders that occupy the forest within this coupe, extensive field surveys are still required to be undertaken. It is understood that individual Greater Gliders are often missed or not observed during spotlighting surveys, for this reason, a combination of survey methods are necessary to identify all areas of these coupes that currently house Greater Gliders and their habitat, e.g. stag watching, thermal imaging cameras.

The following is an excerpt from the Greater Glider Action Statement under the heading ‘Intended Management Actions’. *The Greater Glider (Petauroides Volans subsp. Volans) Action Statement – released November 2019:*

Objective 2: To secure populations or habitat from potentially incompatible land use or catastrophic loss

- | | |
|--|------------|
| 4. Immediately protect key areas of habitat across eastern Victoria. An indicative map of these areas is included at Attachment 1. When boundaries are finalised, an update to this action statement will be released that includes the final map. | DELWP |
| 5. Retain at least 40% of the basal area of eucalypts across each timber harvesting coupe, prioritising live, hollow bearing trees, wherever a density of Greater Gliders equal to or greater than five individuals per spotlight kilometre (or equivalent measure) is identified. | VicForests |

As shown in point 4 of the above excerpt from the Action Statement, immediate protection has been put in place in ‘key areas of habitat’ across Victoria. There is concern that some of the habitat included within the protected 90,000 ha is not suitable due to being heavily impacted by fire in the last 12 months. This population of Greater Gliders in the Marysville region is of high significance to the overall population of the species and should be included in the ‘key areas of habitat’ to be protected for the conservation of the species.

The newly prescribed management action for the Greater Glider as described in point 5 above, allows for clearfell logging to occur in highly significant Greater Glider habitat where as little as 40% of the basal area will remain. Greater Gliders are largely solitary with small home ranges and little overlap between their territories, therefore the loss of up to 60% of the total habitat within 312-510-0010 and up to 100% from 312-510-0011 will inevitably result in the loss of many individuals. This prescription is not adequate for the protection of these Greater Gliders or the highly significant and valuable habitat.

In 2017 the Victorian Flora and Fauna Guarantee - Scientific Advisory Committee (SAC) recommended the Greater Glider (*Petauroides volans* subsp. *volans*) be listed under the Flora and Fauna Guarantee Act 1988. Evidence under Sub-criterion 1.2.2 ‘The threat is currently operating and is expected to operate at a level in the near future which is likely to result in the extinction of the taxa’ states:

“Timber harvesting in greater glider habitat has been proven to cause declines and/or local extinctions of greater glider populations (Lindenmayer et al. 2011, Kavanagh and Webb 1998, Lunney 1987, Dunning and Smith 1986, Tyndale-Biscoe and Smith 1969). Timber harvesting practices reduces the number of hollow bearing trees available for denning by tree removal or as a result of regeneration burns after the logging (Lindenmayer et al. 2011, 2002; Lunney 1987). In addition, the species does not cope well with habitat change (Kavanagh and Wheeler 2004, Tyndale -Biscoe and Smith 1969). Although all animals may not die from the initial impact they will die shortly afterwards. This is due to life history traits: affinity with home range, small home ranges, attachment to hollow bearing trees they use for denning and their specialist diet (Tyndale-Biscoe 2005).

In Victoria timber harvesting is widespread in the eastern and central parts of state. This is also the main distribution and habitat of the greater glider. Considering the known impacts of timber harvesting on gliders (Kavanagh and Webb 1998, Lunney 1987, Tyndale-Biscoe and Smith 1969, Dunning and Smith 1986), it is likely that other local extinctions of this species have already occurred and will continue to occur in the future.”

Based on the above scientific evidence, the presence of the threatened Greater Gliders within coupes 312-510-0010 & 312-510-0011 must trigger the DELWP to immediately enforce the Precautionary Principle and ensure no logging operations are conducted within the coupes.

Recommendations

1. VicForests must retain at least 40% of the basal area of Eucalypts in coupe 312-510-0010, prioritising areas with live hollow-bearing trees where Gliders were detected during this survey
2. DELWP must revisit the mapping for key protection areas for the Greater Glider and add in additional areas for Greater Glider Protection to compensate for protection areas which have been heavily impacted by bushfires in the past twelve months. Coupe 312-510-0010 & 312-510-0011 should be included as a key protection area for the Greater Glider.
3. DELWP and VicForests must thoroughly survey coupes 312-510-0010 & 312-510-0011 for Greater Gliders to ensure the upmost protection for these threatened species in these coupes.
4. DELWP should refrain VicForests from conducting forestry operations in coupes 312-510-0010 & 312-510-0011 which has been documented as high quality habitat for the threatened Greater Glider.
5. Within the ‘Code of Practice for Timber Production 2014’, under sub-heading 2.2.2 ‘Conservation 200213 – Greater Glider Detection Report – Marysville –Messmate Ridge Road – 312-510-0010 & 312-510-0011 – WOTCH 10/11

of Biodiversity' logging operations conducted have an obligation to adhere to the following criteria:

- 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.*
6. To proceed with the clearfelling of logging coupe 312-510-0010 & 312-510-0011 ignores the SAC's recommendations would be a breach of the Precautionary Principle and furthermore a breach of the 'Code of Practice for Timber Production 2014'.
7. **Based on the scientific evidence outlined by the SAC's recommendations suggesting that clearfell logging has a negative impact on the conservation of the Greater Glider, the above legislative mandatory actions must be adhered to by VicForests and coupe 312-510-0010 & 312-510-0011 subject to this report must be removed from the current VicForests Timber Release Plan.**

