

To: Minister for Energy,  
Environment and Climate  
Change

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**GREATER GLIDER AND HABITAT HOTSPOTS**

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**Core message**

**Ministerial Request - Meeting**

The Greater Glider has been nominated for listing as threatened under the *Flora and Fauna Guarantee Act 1988* (FFG Act). The Scientific Advisory Committee will make its final recommendation in respect of this nomination in the coming months. The FFG Act places responsibility on the Minister, the Secretary and public authorities to consider the conservation of flora and fauna when making decisions and taking actions. The vast majority of Greater Glider habitat in Victoria occurs on public land managed by DELWP and its portfolio partners such as Parks Victoria. Activities such as fire management and timber harvesting potentially impact on forest-dependent species such as the Greater Glider, and the planning and management of such activities should seek to avoid or minimise any impacts. Work has begun to consider options for further protection of the Greater Glider from timber harvesting. Development and assessment of options will be based on advice of DEWLP biodiversity experts, best available scientific information and consideration of the potential impacts on timber availability. Members of the Scientific Advisory Committee will be invited to participate in relevant discussions.

**Recommendations**

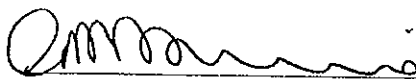
1. Note the information provided on the Greater Glider and initial work to consider additional protections for the species from the timber harvesting

Recommendation 1     Approved     Not approved     Noted     Returned for review

**Comments**

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Signed



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

Date

30/1/17

Approved by

Date

Nina Cullen, Executive Director Biodiversity 30: internal workings

Endorsed by: Paul Smith, Deputy Secretary Energy, Environment and Climate Change 30: internal workings    Signature:

Date:



MBR032305

To: Minister for Energy,  
Environment and Climate  
Change

From	BIODIVERSITY	Ref	MBR032305
Title	GREATER GLIDER AND HABITAT HOTSPOTS	File	

### Key Information

1. In November 2016, Emeritus Professor Barbara Evans, convenor of the Scientific Advisory Committee (SAC) established under the *Flora and Fauna Guarantee Act 1988* (FFG Act), wrote to you requesting the suspension of timber harvesting of a coupe in the Strathbogie Ranges due to concerns about impacts on the Greater Glider and review of timber harvesting prescriptions across the Greater Glider's range. Your letter of reply noted that you had asked the Department to provide further advice on the matter.

#### *Knowledge about the Greater Glider and its decline*

2. The Greater Glider is an arboreal (tree-dwelling) marsupial native to eastern Australia from south-eastern Queensland to Victoria. An Australia-wide conservation status assessment undertaken by threatened species experts in 2014 for the International Union for the Conservation of Nature Red List concluded that, on the available evidence, the Greater Glider had declined in abundance across its range by more than 80% over a 20 year period, including the complete loss of some sub-populations. The assessment attributed this decline to habitat loss, fragmentation, extensive fire, and some forestry practices, and noted that this decline is likely to be exacerbated by climate change.
3. In Victoria, recent evidence from core areas of habitat such as the Central Highlands and East Gippsland along with other smaller areas of habitat, indicates that populations of the Greater Glider have declined significantly over the past 15 to 20 years. The SAC preliminary recommendation (Attachment 1) provides additional detail on this decline.
4. The key ecological and management questions to be answered in further developing advice on priority management actions for the Greater Glider are:
  - What are the main factors causing the recent decline in the Greater Glider in Victoria?
  - What is the current distribution and habitat requirements of the Greater Glider, including hotspots (areas of habitat with healthy populations)
  - How reliable is our knowledge?
  - How significant is timber harvesting as a threat to the Greater Glider?
  - Are there other threats affecting the Greater Glider that should be managed?
5. It should be noted that, while the evidence of decline might be sufficient to warrant listing using a precautionary approach, it might not be adequate to base a comprehensive system of protection.

#### *Process to list the Greater Glider*

6. The Greater Glider has been nominated for listing as threatened under the FFG Act. The nomination was considered by the SAC at its meeting on 21 November 2016. The SAC preliminary recommendation was advertised in the press and on the DELWP website in January 2017. Public comments will be accepted until 24 February 2017. Following consideration of any comments, the SAC will make its final recommendation in respect of this nomination.
7. You have accepted an invitation to meet with the SAC at its forthcoming meeting in March 2017.

#### *Obligations on the Victorian Government, Minister and Secretary*

8. In general terms, the FFG Act places responsibility on the Minister, the Secretary and public authorities to consider the conservation of flora and fauna when making decisions and taking actions. This is especially true for species and communities on the Threatened List. The vast majority of Greater Glider habitat in

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- the longer-term proposal to transition the protection provided by forest management zoning away from a species by species approach to a landscape approach, in line with the general direction of the Biodiversity Plan.
17. The following process is recommended to provide interim protection for the Greater Glider while broader reform options are considered:
- a. Assemble current information, including plotting recent observations against habitat distribution models and land tenure/zoning, evaluate adequacy of current protection and identify critical data gaps, if any s30: internal workings
  - b. If appropriate, implement feasible, low-impact zoning changes, in consultation with VicForests s30: internal
  - c. Prepare an Action Statement s30: internal workings and
  - d. Incorporate protection of the Greater Glider and its habitat into the longer-term proposal to transition the protection provided by forest management zoning away from a species by species approach to a landscape approach s30: internal workings

#### Consultation

- Knowledge and Decision Systems, Biodiversity Division
- Policy and Planning, Forest, Fire and Regions
- Environment and Community Programs, Biodiversity Division
- Arthur Rylah Institute, Biodiversity Division

#### Attachments

**No. Attachment name**

1	SAC Preliminary Recommendation Report for the Greater Glider
2	Options for further protection of the Greater Glider from timber harvesting
3	Next steps – indicative timeframes

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Victoria occurs on public land managed by DELWP and Parks Victoria, where Victoria's forest regulatory framework (diagram below) is in place to avoid or minimise impacts to species such as the Greater Glider.

9. In the short term, existing processes, such as amendment to the forest management zoning scheme (FMZs), are a means to achieve better protection for the Greater Glider. These options are discussed further in attachment one and point 17 below.
10. Longer-term opportunities for improvements to the forest management and regulatory framework will also be explored. This includes up-coming review of the Regional Forest Agreements (RFAs), opportunity to review Forest Management Plans, and acting on the outcomes of the Forest Industry Taskforce. This provides an opportunity to achieve long term protection for multiple threatened species, including the Greater Glider, through adoption of a landscape approach rather than single species detection and management.

*Existing protections for the Greater Glider in the timber harvesting regime*

11. There are areas of habitat for arboreal mammals (including the Greater Glider) set aside within FMZs. These were established at the time forest management plans were developed, therefore only cover significant populations that were mapped at that time.
12. This does not include habitat within the Strathbogrie Ranges, the area identified by the Scientific Advisory Committee as currently having a significant populations of the Greater Glider, where the decline appears to have been less severe, and is therefore considered a 'habitat hotspot'.
13. East Gippsland Forest Management Area has a detection based zoning rule for the Greater Glider for the establishment of a Special Protection Zone of approximately 100 ha of suitable habitat where verified records of Greater Gliders in sufficient high densities. The criteria for density are: more than two individuals per hectare, more than ten individuals per kilometre of spotlighting or more than 15 individuals per hour of spotlighting, or where substantial populations are located in isolated or unusual habitat.

*Preparation of an Action Statement*

14. Under the FFG Act, an Action Statement must be prepared as soon as possible after the listing of a species. As DELWP has struggled to keep pace with the requirement for Action Statements, the FFG Reform Discussion Paper is proposing that a more succinct "conservation advice" would be prepared for all listed items (species, communities and potentially threatening processes) and that a more detailed "management advice" would be prepared for items that require specific action.
15. Given a) that the Greater Glider is likely to be listed in the coming months, prior to any legislative changes, and b) the high profile of this species among conservation stakeholders, DELWP would prioritise the preparation of an Action Statement for the Greater Glider. This process would take approximately six months to complete, including stakeholder consultation.

*Consideration of additional protections for the Greater Glider from timber harvesting*

16. Options to increase protection of the Greater Glider are set out in Attachment 2. There are significant constraints associated with many of the options due to wider issues including:
  - the outcomes of the Forest Industry Taskforce process;
  - the implications for timber supply and/or protection of other species of adding or substituting protection zones;
  - the cost and uncertainty of extending detection-based prescriptions across the range of the Greater Glider;
  - the lengthy process to amend the Code and underlying procedures and standards;
  - the time and resources required to undertake further studies of the Greater Glider; and



FLORA & FAUNA  
GUARANTEE

Nomination no. 879

Item no.: 11133

FLORA AND FAUNA GUARANTEE - SCIENTIFIC ADVISORY COMMITTEE  
PRELIMINARY RECOMMENDATION ON A NOMINATION FOR LISTING

*Petauroides volans volans* Kerr 1792 - Greater Glider

**Date of consideration:** 21 November 2016

**File No.:** FF/54/3751

**Validity:** The nomination is for a valid item.

**Prescribed Information:** The prescribed information was provided.

Name of the Nominator is adequately provided.

Name of the item is adequately provided.

The nominated taxon is accepted by the Scientific Advisory Committee (SAC) as a valid taxon because it has been formally described and it is accepted as a valid taxon by Museum Victoria.

Largest of all the gliding possums the Greater Glider is endemic to eastern Australia. In the 1990s the species was considered '... common residents of eucalypt forest in eastern Victoria and higher rainfall areas in the Midlands'. The species has also been recorded from south east of Ballarat and to a lesser extent the Gippsland Plain (Menkhorst 1995). The preferred habitats include forest dominated by *Eucalyptus regnans* in the Eastern Highlands, *E. fastigata*, *E. viminalis* and *E. radiata* forest in east Gippsland, *E. radiata* forest in north-east Victoria and moist peppermint-stringybark-gum forest in the southern foothills of the Eastern Highlands (Menkhorst op. cit.). The species feeds almost exclusively on the leaves, buds and flowers of eucalypts. Apparently suitable forest in the Otway Ranges, the Grampians, Mt Cole, Wilsons Promontory and far south-western Victoria is not occupied by the species.

Greater Gliders are much more abundant in high altitude forest than in coastal forests and prefer forest on highly fertile soils. Menkhorst (1995) notes that local distribution of Greater Gliders is heavily influenced by the presence of eucalypts with foliage rich in nutrients (especially nitrogen and phosphorous). They also require trees with large hollows for denning during the day and raising young.

While the Greater Glider is '...well represented in a number of conservation reserves...' (Menkhorst 1995), the bulk of its distribution remains in forest available for timber harvesting. Wood production practices are known to substantially deplete Greater Glider populations and gliders usually die if all or most of their home range is intensively logged or cleared (Menkhorst op. cit.). Unless they are linked as part of an interconnecting network of reserves, local populations risk extinction through catastrophe or by loss of genetic vigour through inbreeding. Again Menkhorst (1995) notes that agricultural development has already isolated populations in the Wombat Forest, Gippsland Highlands and Gelliondale Forest and in smaller areas on the fringes of the Eastern Highlands. McKay (1988) notes that conservation of the species '...is utterly dependent on sympathetic forest management which retains buffer strips of old forest between coupes and preserves old 'habitat trees' and their potential successors in small unlogged areas.'

A description of the Greater Glider can be found in Menkhorst and Knight (2004).

**Eligibility for listing as a taxon under the Flora and Fauna Guarantee**

The nominated item satisfies at least one criterion of the set of criteria prepared and maintained under Section 11 of the *Flora and Fauna Guarantee Act 1988*, and stated in Schedule 1 of the *Flora and Fauna Guarantee Regulations 2011*.

Based on the evidence that the Greater Glider has declined in range and abundance, and that the processes thought to be responsible still exist and are likely to continue, the SAC believes the nomination meets the following Flora and Fauna Guarantee listing criteria:

**Evidence that criteria are satisfied:**

**Criterion 1.1** *The taxon is in a demonstrable state of decline which is likely to result in extinction*

*Evidence:*

Recent survey data and other information suggest that the Greater Glider has undergone significant declines in distribution and abundance in Victoria. Studies in the central Highlands of Victoria (Lindenmayer et al. 2011) show that from 160, one hectare sites across 180 000 ha in 1987 there were greater gliders in 42 sites. This fell by 8.8 % a

year until 2010. Old growth areas in National Parks tended to have much higher glider counts than areas designated for wood production. Of the 42 sites, those burnt in 2009 have had no detections of greater gliders since that fire event.

More recently Lumsden et al. (2013) showed extensive declines of Greater Glider compared to surveys of the species in the 1990's in a large area of the Central Highlands. Results showed glider occupancy in only 16% (32 sites) of sites where they had been previously recorded, with most of the records being concentrated in 1 to 2 areas. Lumsden et al. (op. cit.) noted that: '...a striking result of these surveys was the scarcity of the greater glider, which was, until recently, common across the central highlands.'

The occupancy models Lumsden (op cit.) generated for the greater glider post surveys are now predicting it to occur quite patchily and only to the northeast of the area surveyed.

In East Gippsland a large portion of areas surveyed in 2015 showed declines in Greater Glider populations. At least 50% of the 1 km transects surveyed in the 1990's showed occupancy of greater glider. In 2015 after the transects were surveyed four times each the results showed;

- 4 of 18 transects in the Genoa area contained only one animal
- Of 20 transects in Yalmy/Martin's Creek, one transect contained a single animal and another transect contained 2
- 1 of 18 transects contained 1 greater glider in the foothill forest between Orbost and Lakes Entrance
- 4 of 18 transects contained 1 greater glider in the coastal forest between Lakes Entrance and Bairnsdale

Demonstrable declines of the species have been recorded in Mount Alfred State Park (Department of Environment and Energy 2016) and in the Cathedral Ranges. Around the Cathedral Ranges State Park there has been a significant decline in observations at both Little River valley and the adjacent Blue Range. In the mid 1990's both areas were reported to have reliable high numbers of greater gliders (S. Smith pers. comm.). In the Blue Range the animal has not been located since 2009. Both these areas were burnt in the 2009 Victorian fires. Smith believes that although the 2009 fire severely impacted the greater glider on Blue Range the decline had probably started occurring before the 2009 fires, possibly because of drought.

A population of Greater Gliders near Lake Tyers State Park (Burnt Bridge) was known for its high density of gliders. This population has declined and it is now difficult to detect greater gliders in the area, despite their eye shine being easy to detect. Recent spotlight tours in this area by local naturalist Jim Reside (2015-2016) have failed to locate any Greater Gliders (J. Reside pers. comm.)

A recent Commonwealth assessment of Greater Gliders made the following comment:

'Major bushfires in 2003, 2006–2007 and 2009 burnt much of the greater glider's range in the state, and further fragmented its distribution as evidenced by surveys and species records (Lumsden et al. 2013, Vic SAC 2015). Reoccupation of burnt sites in subsequent years is likely to be a slow process due to the small home ranges (1–2 ha) of the species and its limited dispersal capabilities (L. Lumsden pers. comm., cited in Vic SAC 2015). It also depends on there not being further significant fires in the interim (Vic SAC 2015). Since the 2009 fires, which burnt the Kinglake East Bushland Reserve and nearby areas, spotlighting records of greater gliders in these areas have significantly declined (Cobern pers. comm. 2015). The occupancy model in Lumsden et al. (2013) predicts that areas most likely to be occupied following the 2009 fires are now patchily distributed.'

**Criterion 1.2** *The taxon is significantly prone to future threats which are likely to result in extinction*

*Evidence:*

Some of the processes that affect Greater Glider survival appear to be increasing (e.g. drought, extreme heat events, possible increased fire frequency). The difficulty in providing mitigation strategies for these processes may make continued population declines likely.

**Sub-criterion 1.2.2** *The threat is currently operating and is expected to operate at a level in the future which is likely to result in the extinction of the taxon.*

*Evidence:*

The SAC understands that the currently known threats to Greater Glider are occurring in all areas of its range. Direct evidence of declines in Victoria can be seen in two broad areas: Central Highlands and East Gippsland. The following specific threats to the greater glider are current and are expected to operate at a level in the future which could lead to the extinction of the species in the long term.

**Wildfire**

Wildfire destroys the preferred habitat (particularly hollow-bearing trees used for denning) and directly kills greater gliders. A number of researchers have indicated that wildfire is a major threat and/or cause of the decline of the greater glider in SE Australia (Berry et al. 2015, Lindenmayer et al. 2011, 2013, Lumsden et al. 2013, McNabb et al. 2012, L. Bluff pers. comm.). The species' sensitivity to wildfire in Victoria has also been reported in van der Ree and Loyn (2002) and Possingham et al. (1994).

With Global Climate Change, wildfires in south-eastern Australia have been modelled to increase in frequency and intensity. Fire seasons are also predicted to become much longer (CSIRO 2015, Lui et al. 2010, Williams et al.

2001). Wildfire as a threat to the greater glider is ongoing and its entire habitat is susceptible. The threat is extremely difficult to control and could eventually result in extinction of this species.

#### *Timber harvesting*

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.

#### *Drought*

Many researchers believe declines in greater gliders may be linked to increased dry periods or drought (Lumsden et al. 2013, Lindenmayer et al. 2011, S. Smith pers. Comm.). Droughts have also been associated with increases in wildfire and both these impacts are predicted to increase in intensity in the future (CSIRO 2015).

#### *Hyper-predation*

Changes in predator-prey interactions in SE Australia may also be a contributing factor causing declines in the greater glider (Lindenmayer 2011, Kavanagh and Webb 1998). This may possibly be due to changes in the natural diet of the Sooty Owl (a key glider predator) from terrestrial prey to more arboreal prey (Bilney et al. 2010). The decline in terrestrial prey can be attributed to the introduction of the red fox causing local extinctions of a number of terrestrial prey species (Woinarski et al. 2016).

#### *Habitat fragmentation*

Local extinctions from fire, timber harvesting, drought or predation across the range of the greater glider will lead to a loss of habitat connectivity. McCarthy and Lindenmayer (1999) and Possingham et al (1994) found small patch sizes (McCarthy and Lindenmayer: less than 500 ha; Possingham et al. less than 1000 ha) of habitat are unviable for the greater gliders long-term viability. Lindenmayer and Taylor (2003) found evidence of genetic erosion in the species after 5-6 generations in small forest patches (approximately 20ha) near Tumut in southern New South Wales.

The data presented on distribution and abundance are the result of reasonable surveys and provide clear evidence that the taxon is rare in terms of abundance and distribution.

#### **Additional Information**

Greater Gliders have recently been classified as 'Vulnerable' under the *Environment Protection and Biodiversity Conservation Act 1999* (Department of Environment and Energy 2016).

#### **Documentation**

The published information provided to the SAC has been assessed. Based on the available evidence, the SAC believes that the data presented are not the subject of scientific dispute and the inferences drawn are reasonable and well supported.

#### **SAC's Preliminary Recommendation**

The SAC concludes that on the evidence available the nominated item is eligible for listing in accordance with Section 11(1) of the Act because criteria 1.1 and 1.2 and subcriterion 1.2.2 of the Flora and Fauna Guarantee Regulations 2011 have been satisfied.

The Scientific Advisory Committee therefore makes a preliminary recommendation that the nominated item be supported for listing under the *Flora and Fauna Guarantee Act 1988*.

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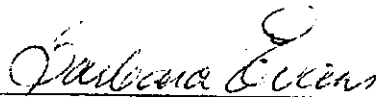
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Endorsement by the Convenor of the Scientific Advisory Committee

Date



29-11-2016

Prof Emeritus Barbara Evans  
Convenor

To: Minister for Energy,  
Environment and Climate  
Change



**GREATER GLIDER (PETAUROIDES VOLANS VOLANS)**

Core message

Ministerial Correspondence

On 4 November 2016, Professor Emeritus Barbara Evans, Convenor of the *Flora and Fauna Guarantee Act 1988* Scientific Advisory Committee, wrote to you regarding the status of the Greater Glider. The Committee is concerned about the decline of the Greater Glider across its range and requests that you:

- support an interim suspension to timber harvesting in the Strathbogie ranges; and
- review timber harvesting prescriptions throughout the Greater Glider's range.

**Recommendations**

1. That you note that the department will carry out further work to establish what the priority management actions are for the Greater Glider and how protections should be implemented in the timber harvesting regime.

- Noted  Returned for review

2. That you sign the attached letter of reply.

- Approved  Not approved  Returned for review

Comments

Please provide arrange a meeting where  
with a detailed briefing and  
discussion can occur  
regarding G.G., SAC and  
hot spots

Signed

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

Date

3-1-17

Approved by

Date

Vivienne Clare, Executive Director Strategy, Capability and Innovation

Endorsed by: Lee Miezis, Deputy Secretary Forest, Fire and Regions

Signature:

Date:



MIN023780

To: Minister for Energy,  
Environment and Climate  
Change

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From	BIODIVERSITY	Ref	MIN023780
Title	GREATER GLIDER (PETAUROIDES VOLANS VOLANS)	File	

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### Key Information

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#### *Current protection measures and issues*

1. There is good evidence that Greater Gliders are experiencing significant declines across Victoria, New South Wales and Queensland. There is also evidence to suggest that the decline in Greater Glider populations across its range is not being experienced by other forest-dependent arboreal mammals to the same extent.
2. In May 2016, on the basis of recent declines across its entire Australian range, the Greater Glider was listed as nationally vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act does not apply to timber harvesting operations covered by a Regional Forest Agreement (RFA) under the *RFA Act 2002*. Therefore, EPBC Act listing does not constrain timber harvesting operations within an RFA area, such as the Strathbogie ranges.
3. The *Flora and Fauna Guarantee Act 1988* (FFG Act) Scientific Advisory Committee (SAC) recommended this species for listing under the FFG Act at a meeting on 21 November 2016. The recommendation report was advertised for public comment on Wednesday 14 December and will close on 24 February 2017. Following public consultation, it is likely the SAC will recommend to you that the Greater Glider be listed under the FFG Act, at their first meeting in March 2017.
4. Listing a species under the FFG Act does not create any direct legal requirements on timber harvesting operators. However, operators are required to comply with the precautionary principle when managing the impacts of their operations on biodiversity values and listing does highlight that a species is vulnerable. It also provides for an Action Statement to be prepared by the department. Action Statements that were in place at the time that *the Code of Practice for Timber Production 2014* (the Code) was written are reflected in the Code's management and planning prescriptions.
5. The Code does not currently contain any detection based planning protections for Greater Gliders except in the East Gippsland region. The Strathbogie Ranges, the area of interest in the SAC letter, are in the North East region. There are areas of habitat for arboreal mammals (including Greater Gliders) set aside within the zoning scheme. This was established at the time forest management plans were developed, therefore they only cover significant populations that were mapped at that time. This does not include habitat within the Strathbogie ranges.
6. The following groups have also suggested or requested additional protection of the Greater Glider:
  - The Strathbogie Sustainable Forest Group wrote to you on 10 and 21 November 2016 (MIN023525) requesting detection based protection of Greater Gliders (Forest Reports case number 2016 – 0076).
  - In agreement with the SAC, Arthur Rylah Institute experts have advised that the Greater Glider population in the Strathbogie ranges is relatively large and given declines elsewhere around the state the area is an important refuge for Greater Gliders and the owls that rely on them as prey.
7. Neither you nor the Secretary have the power to suspend or halt timber harvesting that is in compliance with the Code and other elements of the regulatory framework, as is the case in the Strathbogie ranges.

8. The department will carry out further work to establish priority management actions for the Greater Glider and then consider how protections can best be implemented in the timber harvesting regime. Potential options include:
  - a) Updating the Code to incorporate specific planning and management prescriptions across the Greater Glider's range. This would require proposed amendments to be tabled in Parliament. Consideration will need to be given to the timing of this in relation to any potential amendments emerging from the Forest Industry Taskforce and the review of regulatory arrangements across the department.
  - b) Extending the existing detection based planning standard for Greater Gliders in East Gippsland across all regions (or specific areas) as a basis for planning decisions. This could support the creation of new zoning protections, should the required density of Greater Gliders be detected. Further analysis would be required, including to consider effectiveness as a management action; the implications of not incorporating changes into the Code; alignment with commitments under Regional Forest Agreements including the impact on commitments for provision of timber resources; and requirements for community consultation.
  - c) Working with VicForests to gain agreement for voluntary action to protect the Greater Glider, based on applying the precautionary principle.
9. It is uncertain what factors are contributing to the decline of Greater Gliders in Victoria and elsewhere across its range. Urgent work is required to better understand the drivers and to identify priority actions to mitigate threats. It is likely that a future Greater Glider Action Statement would recommend research into the species' decline as an intended management action. Given this, it is not considered necessary to wait until the Action Statement is published to commence work to consider further protections.
10. The SAC suggested the use of an Interim Conservation Order under the FFG Act to protect Greater Gliders. However, this can only be applied to the critical habitat of a species. Critical habitat has not been determined for the Greater Gliders. Critical habitat determination is a function of the Secretary of DELWP under section 20 of the FFG Act and would require a thorough assessment of all Greater Glider habitat in Victoria to determine what is critical for the survival of this species. Therefore an Interim Conservation Order is not considered a practical solution for protecting Greater Gliders, particularly in the short term.

## **Context**

11. The single tree selection harvesting technique being used currently by VicForests in Parlours coupe in the Strathbogie Ranges has potentially reduced the risk to Greater Gliders from timber harvesting (compared to clear fall harvesting). Single tree selection should see a greater number of habitat trees left in the area for arboreal mammals. Once harvesting in Parlours coupe is complete toward the end of the year, VicForests has advised they have no plans to harvest further coupes in the Strathbogie ranges within the next 2 years. However, there are ten more coupes available for harvest in the Strathbogie ranges on VicForests 2016 Timber Release Plan.
12. The detection based zoning rule for Greater Gliders in East Gippsland suggests that a Special Protection Zone of approximately 100 ha of suitable habitat be established where verified records report more than 2 individuals per hectare, more than 10 individuals per km or more than 15 individuals per hour of spotlighting, or where substantial populations are located in isolated or unusual habitat.

To: Minister for Energy,  
Environment and Climate  
Change

**Consultation**

§33: personal [redacted] Species Information, Knowledge and Decision Systems, Biodiversity, DELWP;  
§33: personal [redacted] Environment and Community Programs, Biodiversity, DELWP; James Todd,  
Director Knowledge and Information Systems, DELWP; and §33: personal [redacted] Research Scientist  
Wildlife Ecology, Arthur Rylah Institute have been consulted.

**Attachments**

N/A

# Flora and Fauna Guarantee Act 1988 Scientific Advisory Committee

The Hon Liliana D'Ambrosio MP  
Minister for Energy, Environment and Climate Change  
Level 17, 8 Nicholson Street  
MELBOURNE VIC 3000

24 November 2016



Dear Minister,

As Chair of the Flora and Fauna Guarantee Act Scientific Advisory Committee, I write on behalf of the committee in relation to the Greater Glider (*Petauroides volans volans*). This native species is Australia's largest gliding possum and the world's second largest gliding mammal. It is a specialist nocturnal feeder on eucalypt leaves and resides in the upper canopy of eucalypt forests, using hollows in live old growth trees (of at least ~120 years old).



Greater Glider (*Petauroides volans volans*), pale morph. (Image: Bruce Thomson, AusWildlife)

In 2016, on the basis of recent declines recorded across its range, this species was listed as nationally Vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999*.

This listing was supported by evidence of significant declines in Queensland (89% decline over 30 years in reference sites), New South Wales (including regional extinctions) and Victoria (up to 87% regional declines from reference sites).

In its recent (21<sup>st</sup> November) meeting, the Scientific Advisory Committee received and considered a nomination for the Greater Glider to be formally listed and offered protection under Victoria's *Flora and Fauna Guarantee Act 1988*. Through the supporting evidence provided with this nomination, the conservation advice associated with the recent national listing, and additional expert input, there is significant evidence that this once-common species is experiencing significant declines across the state.

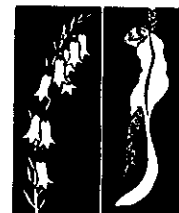
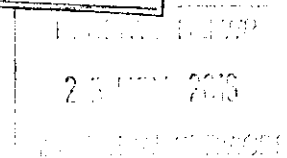
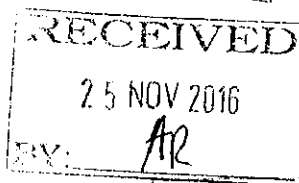
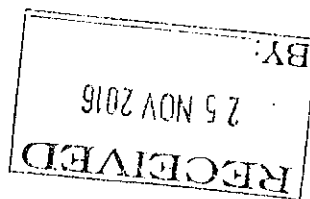
Fire and direct loss of habitat (timber harvesting and clearing) are major causes of declines but other factors may be involved as declines are also recorded in unburnt national parks. Potential factors may variously include direct loss of habitat, wild and planned fires, extreme heat events, foliage nutrient changes, climate shifts, hyper-predation by owls and/or declines in the numbers of live old growth trees (and their hollows).

While further information is gathered and potential causative factors are investigated, the Scientific Advisory Committee wishes to raise an issue of potential immediate impact on known significant populations of this species in the Strathbogie Ranges in central Victoria.

***The Strathbogie Ranges are considered an important area for Greater Glider conservation as the area has not experienced the population declines witnessed elsewhere in the state, potentially due to the absence of timber harvesting or fires in recent decades. Timber harvesting is planned for some of the key Greater Glider habitat within this region, which would have a significant impact on these local populations.***

Timber harvesting activities by VicForests commenced last week in state forest in the Strathbogie Ranges in tree stands where high Greater Glider numbers have recently been recorded (up to 17 individuals per kilometre).

In Gippsland forests, timber harvesting occurs under regulations where harvesting is suspended and 100-hectare protection zones established when Greater Gliders are detected at densities higher than 10 individuals per kilometre of census. This regulatory protection does not exist in central Victoria including the Strathbogie Ranges and timber harvesting is currently under way within areas containing high densities of Greater Gliders.



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GUARANTEE

The Scientific Advisory Committee requests that the Minister consider this issue and support an interim suspension to timber harvesting at locations in the Strathbogie Ranges in order to establish a stronger knowledge base and ensure that logging activities are conducive with protection of this significant species.

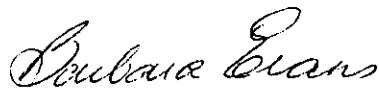
A potential mechanism that could be used to establish an interim suspension is an "Interim Conservation Order" as provided for under the *Flora and Fauna Guarantee Act*. The Scientific Advisory Committee would be strongly supportive of and can formally request the deployment of this conservation management tool, should the Minister support this action.

The committee also requests a review of timber harvesting prescriptions throughout the species range in forested areas of Victoria, to ensure that timber harvesting activities are conducive with the protection of this species. The committee also recognises the need for support to establish a stronger knowledge base. There is currently no dedicated funding to undertake Greater Glider surveys nor detailed research into the causes of these declines.

Committee members and I are happy to provide further details or aid in any way in your deliberations.

I thank you for considering this request.

Yours sincerely,



**Professor Emeritus Barbara Evans**  
Convenor, Scientific Advisory Committee

Date: 24 / 11 / 2016