

**IN THE SUPREME COURT OF VICTORIA
AT MELBOURNE
COMMON LAW DIVISION**

No. 8547 of 2009

BETWEEN

ENVIRONMENT EAST GIPPSLAND INC

Plaintiff

and

VICFORESTS

Defendant

**EXPERT REPORT IN REPLY OF DR ANDREW P SMITH
REGARDING GREATER GLIDER AND YELLOW-BELLIED GLIDER**

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**Statement in Reply to Expert Witness Report of Professor Ian
Ferguson**

Report to the Supreme Court of Victoria

Proceedings No 8547 of 2009.

By Dr. Andrew P. Smith.

12 February 2010



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1. I have read the Expert Witness report of Professor Ian Ferguson dated 28 January 2010.
2. Professor Ferguson notes that the loss of hollow bearing trees and habitat for gliders is potentially a threat to large forest owls under the Flora and Fauna Guarantee Act (section 4.4).
3. Professor Ferguson appears to dismiss the possibility of adverse or inappropriate effects of proposed timber harvesting on Gliders and Owls in the Study Area (sections 2.2, 4.4 and 4.5 of his Expert Report) based two broad arguments:
 - a) that hollow-bearing trees required by gliders are adequately maintained under Action Statements and measures agreed between Vicforests and DSE (sections 2.2, & 4.4), and
 - b) that over 400,000 hectares of forest is located in nature conservation reserves in East Gippsland (section 4.5).
4. Professor Ferguson's arguments rely on the following assumptions:
 1. that hollow bearing trees are the only essential habitat component required by gliders that needs to be ameliorated in timber production forests;
 2. that measures proposed to maintain and protect hollow bearing trees (see Table 1 in my Expert Report) are adequate;
 3. that measures proposed to maintain and protect hollow bearing trees are actually fully and adequately implemented in practice;
 4. that current nature reserves in East Gippsland are adequate in size, structure (oldgrowth), habitat type, disturbance history (not logged or severely burnt), connectivity and other ecological values to sustain viable populations of Yellow-bellied Gliders and Greater Gliders.
5. Professor Ferguson has not provided any data or evidence to support or justify these assumptions. The evidence available to me indicates that none of these assumptions are supported.

6. Tree hollows are not the only essential habitat component required by gliders. Yellow-bellied Gliders require oldgrowth forests and the presence of particular sap food tree species and forest types in addition to tree hollows (see section 3.2.1 and 3.2.3 of my report). Even if the specified minimum density of hollow-bearing hollows (5 per hectare) were maintained it is unlikely that Yellow-bellied Gliders would recover or return to regrowth forests. Similarly the Greater Glider prefers mature and oldgrowth forests and is likely to be scarce in regrowth forests harvested on short rotations (<40-80 years).

7. Evidence from recent logging in the vicinity of the Study Area (Coupe 20 and surrounding logged forest) indicates that amelioration measures and standards designed to protect hollow-bearing trees are not properly or adequately implemented (see section 3.1.8 of my report). Specifically in the case of coupe 20 such a high proportion of retained trees were apparently killed by regeneration burns that the retained density of living habitat trees is less than the minimum requirement. Furthermore no excess buffer of retained trees (above the minimum) appears to have been added to allow for tree mortality and fall from fire and windthrow. This is evident from data of Bilney reproduced in Figure 4 of my Expert Report which shows that only about 50 living trees > 50 cm diameter were present in the 18 hectare Coupe about a year after logging (2.8 trees per hectare). Many of these trees would be too small to have hollows. Data in Fox et al. (2009) suggest that only about one in three trees of 75cm diameter contain hollows. Many of the larger trees with hollows retained on the Coupe are likely to fall over within the near future due to exposure, windthrow, and excessive fire damage. For this reason actual numbers of retained trees should exceed the minimum specification (5 per hectare) by a buffer sufficient to offset fire and storm damage. Also there is no evidence that habitat trees were retained in small clusters including younger regrowth and understorey. A key purpose of this requirement is to provide "recruitment trees" which are younger trees without hollows that can grow up to replace older trees when they fall, thus ensuring long term continuity of hollow supply. I saw no retained clusters with regrowth living trees and understorey after timber harvesting in Coupe 20.

8. Habitat tree protection measures prescribed by VicForests are minimum standards designed to allow timber harvesting and some level of biodiversity

conservation in average forests. These measures are not suitable or adequate for protection of hollow-dependent fauna in forests of above average quality such as those in the Study Area. These high quality forests may require at least double the current minimum standard (10 living habitat trees per hectare). Current habitat tree prescriptions are also inadequate for protection of oldgrowth dependent species such as Greater Gliders and Yellow-bellied Gliders unless combined with alternative ecologically sustainable timber harvesting practices, such as those which limit harvesting intensity to low intensity selective logging, or small gap harvesting on long rotations (> 80 years) and specific protection measures to protect key resources such as sap food trees.

9. As outlined in my Expert report (sections 3.1.6, 3.2.3) protection of Yellow-bellied Gliders and to a lesser extent Greater Gliders in the Study Area will rely on either:

- a) addition of these oldgrowth forests to protected nature reserve network, or
- b) adoption of ecologically sustainable low intensity (single tree) selection harvesting practices (such as those practiced in parts of NSW and Queensland in the recent past or some private forests, eg Smith 2001) more appropriate to these forests, in addition to implementation of more effective hollow-bearing tree protection measures.

10. Professor Ferguson concludes (section 4.5) that the extent of existing nature conservation reserves in East Gippsland including recent additions (445,000 hectares) addresses concerns regarding owl and Spotted-tailed Quoll conservation "in a manner proportionate in my view to the threats involved". No data or evidence is provided to justify or support this conclusion. No data is provided on the proportion of this reserve network which is adequate in size, structure (oldgrowth), habitat type, disturbance history (not logged or severely burnt) and connectivity to sustain viable populations of Yellow-bellied Gliders and Greater Gliders. Neither is there any estimate of the proportion of this area that is likely to remain in the event of climate change over the next 50-100 years.

The extent of current glider habitat in reserves is likely to be less than the total extent of oldgrowth wet forest and oldgrowth damp forest included in reserves in East Gippsland. In 1995 there were 16,096 ha of wet forest and 18,808 ha. of damp forest

in East Gippsland (see Appendix I of the 1995 Forest Management Plan). Not all of these areas are likely to be suitable for gliders for reasons of fire history, vegetation type, connectivity soil nutrient status and other factors. Despite some subsequent increases in the extent of reserved oldgrowth forest in East Gippsland, and the possible location of glider habitat in some areas outside mapped oldgrowth areas, it remains my opinion that there is a high likelihood that the current extent of protected glider habitat in East Gippsland is below that necessary to sustain minimum viable populations over the foreseeable future, particularly in the event of climate change.

11. In my opinion Professor Ferguson's conclusion that current levels of conservation are proportionate to the threats involved does not adequately take account of the ecological uniqueness and importance of the Study Area as a refuge area (from fire and climate change), ecological corridor and high density habitat area for Greater Gliders, Yellow-bellied Gliders and threatened species that depend on them for prey including the Sooty Owl, Powerful Owl and Spotted-tailed Quoll.

References

Fox J. C. Hamilton F. And Occhipinti S. (2009) Tree hollow incidence in Victorian state forests. *Australian Forestry* 72, 39-48.

Smith A. 2001 Guidelines for sustainable forestry on private lands in NSW. Setscan Pty. Ltd, Currumbin Qld.