

# Pikes Hill Forest– 830-506-0013

## MASKED OWL DETECTION

### MASKED OWL DETECTION REPORT

Report on Masked Owl (**Tyto novaehollandiae novaehollandiae**) detection within VicForests scheduled logging coupe 830-506-0013

This investigated to determine the presence/absence of Large Forest Owls including Masked Owls this investigation detected the Masked Owl from within coupe 830-506-0013.

As such, planning and operational compliance with the regulatory framework governing logging operations within Victorian State Forest concerning the application of the “Intended Management Actions” detailed within each of the relevant Flora and Fauna Guarantee Act (1998) Action Statements for each of the Owl species, the “Management Guideline” for Owls detailed in the relevant Forest Management Plan for the East Gippsland Forest Management Area, and the “precautionary principle” as expressed within the relevant “Code of Practice for Timber Production”, was assessed.

The methodology employed, the results of the investigation and the reports conclusions and recommendations are detailed below.

### Relevant Legislation

- Flora and Fauna Guarantee Act (1998) Action Statement Masked Owl (*Tyto novaehollandiae novaehollandiae*), Department of Sustainability and Environment, The State of Victoria, East Melbourne, 2003
- Forest Management Plan for the East Gippsland Forest Management Area (Chapter 3, Biodiversity Conservation), Department of Conservation and Natural Resources, East Melbourne, 1995
- Code of Practice for Timber Production (Section 2.2.2), Victorian Government Department of Sustainability and Environment, 2007

**Status of Site: Logging is scheduled on VicForests current Timber Release Plan within coupe 830-506-0013.**

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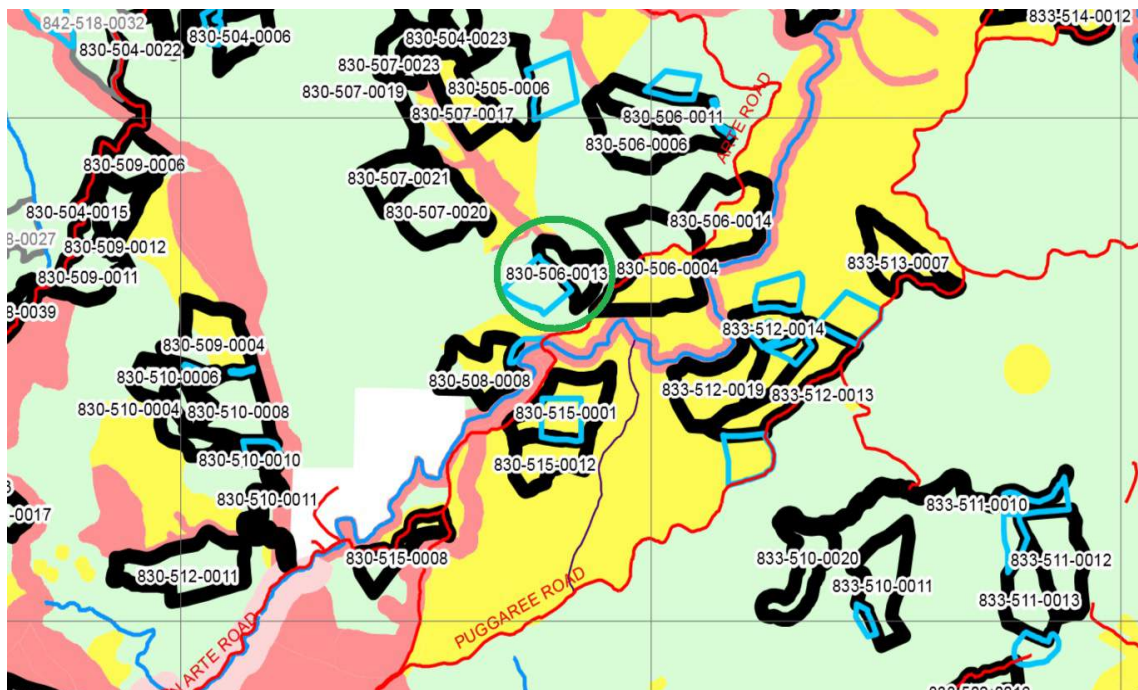
Date of Investigation 01/02/2015 Date of report 04/02/2015.

## Location details

- \* Within VicForests scheduled logging coupe 830-506-0013 on access track off of Pikes Hill Rd, lower southern slopes of (Bald Mount, Mt Quark, Pikes Hill complex). East Gippsland.
- \* CPB8305060013 [waypoint]: “Active Search/Recording Location” 55 H 0659095 5843496(GDA//UTM)
- \* MASKEDOWLPIKESHILL8305060013 [waypoint]: “Incidental aural/visual encounter” 55 H 0659089 5843487(GDA//UTM)
- \* Forest type Wet/Damp Forest EVC
- \* High/VeryHigh abundance of hollow bearing trees

Figure A. Detail from: Vic Forest "Approved Timber Release Plan Map – 2013-2016 Orbost East. Surveyd coupe(830-506-0013) circled in green.

Figure A.



## **Method 1 (Active Search/Call Playback – method used) [ 1st February 2015]**

Active Search/Call Playback [01/02/2015]

*Survey technique:*

- Hand-held megaphone and MP3 audio player with prerecorded Forest Owl calls.
- Audio recording using hand-held audio recorder [Model: Olympus Linear PCM Recorder LS-12]
- Photograph/Video recording using digital camera. [Model: Nikon Coolpix L110]
- Global Positioning System (GPS) for recording location of species detection records.

*Location:*

- CPB8305060013: “Active Search/Recording Location” 55 H 0659095 5843496(GDA//UTM) • MASKEDOWLPIKESHILL8305060013: “Incidental aural/visual encounter” ; 55 H 0659089 5843487(GDA//UTM)
- Note: times detailed in this section are approximate.

*Method used:*

1. Surveyors were present on the 1st Feb 2015, at 22:44, at “CPB8305060013” within the Orbost East district and within VicForests scheduled logging coupe 830-506-0013.
2. Audio recording using hand-held audio recorder commenced at this time during which Common Brush Tail Possum and Yellow-bellied Gliders, Sugar Glider, Southern Boobook Owls and Small Forest Bats were aural detected/visual observed. This audio recording continued until approximately 00:15.
3. Forest Owl call play back recordings were played from 22:56.
4. Powerful Owl prerecorded calls were played for 2 minutes followed by a period of 10 minutes silence, listening and active searching for the presence of owls with a hand-held spotlight. This process was repeated for the Powerful Owl species twice.
5. Masked Owl prerecorded calls were played intermittently for ~3 minutes interspersed by periods of silence ~5 minutes. . This process was repeated for the Masked Owl species three times
6. Masked Owl Chatter call was heard in response to the Masked Owl call-play back from approximately 10° and 10m from “CPB8305060013” at 23:46.

*Method used:continued*

8. At approximately 23:56 observed and heard Masked Owl calling from 10° and 15m from survey location in upper branches of a Eucalyptus trees nearby, visual observation was obtained using the hand-held spotlight.
9. Shortly after video/stills photographs were captured of the Masked Owl individual at this location.
10. Shortly after the Masked Owl individual flew to a different location at approximately 50° and ~15m from the survey location.
11. Additional photographs were obtained of the Masked Owl from this location.
12. The Active Search/Call Playback survey was concluded shortly after.



Hollow Bearing Stages. Pikes Hill Forest

## **Results:(1-2-3) – Figures 1(a-b), 2(a-b), 3(a-b)., Table 1.**

### \* **Results 1.**

#### **Detection location.**

This investigation detected the Masked Owl within VicForests scheduled logging coupe 830-506-0013 at 23:46 on the 1<sup>st</sup>February 20015.

- CPB8305060013 [waypoint]: “Active Search/Recording Location”  
55 H 0659095 5843496(GDA//UTM)
- MASKEDOWLPIKESHILL8305060013 [waypoint]: “Incidental aural/visual encounter” ;  
55 H 0659089 5843487(GDA//UTM)

### \* **Results 2.**

- Figures. 1(a) & 1(b) and 2(a)&2(b) shows a detail of photographs captured of the Masked Owl and site tree of the individual observed within this investigation.
- Figures. 3(a[Masked Owl screech])and 3(b)[Masked Owl chatter] created in “AVS Audio Editor7.3”1 is a screen capture of one of the active searchhand held recording audio detections of the Masked Owl. This image shows the “spectrographic visualisation”of the call. That is, the recorded frequency of the Masked Owl vocalisation presented over time.

### \* **Results 3.**

Table 1. Pikes Hill Call Play Back - Summary of Large Forest Owl detections” (below) summarises the active search survey and Masked Owl detection obtained within this investigation and shows details of the detection date, location, time, species, type, direction, distance and additional notes.

**Figure. 1(a) Masked Owl perched 1st tree.**



**Figure. 1(b) Masked Owl 1st site tree.**



**Figure. 2(a) Masked Owl perched 2nd tree.**

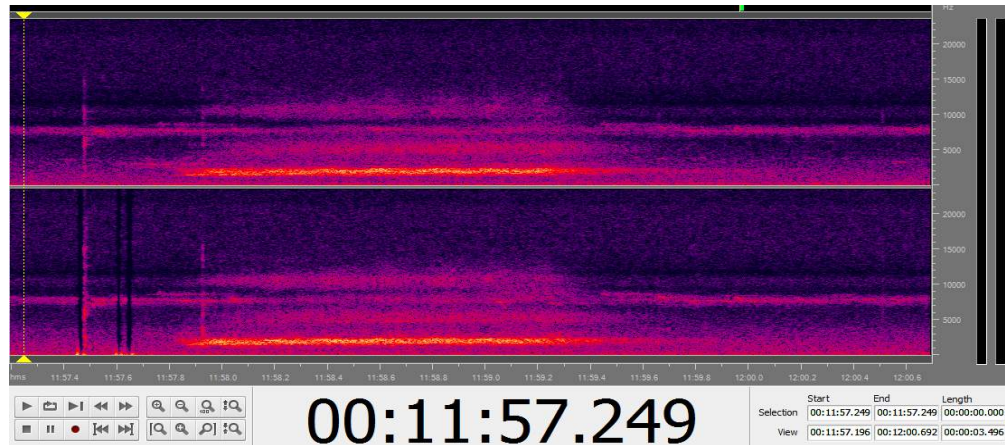


**Figure 2(b) Study site / site tree**

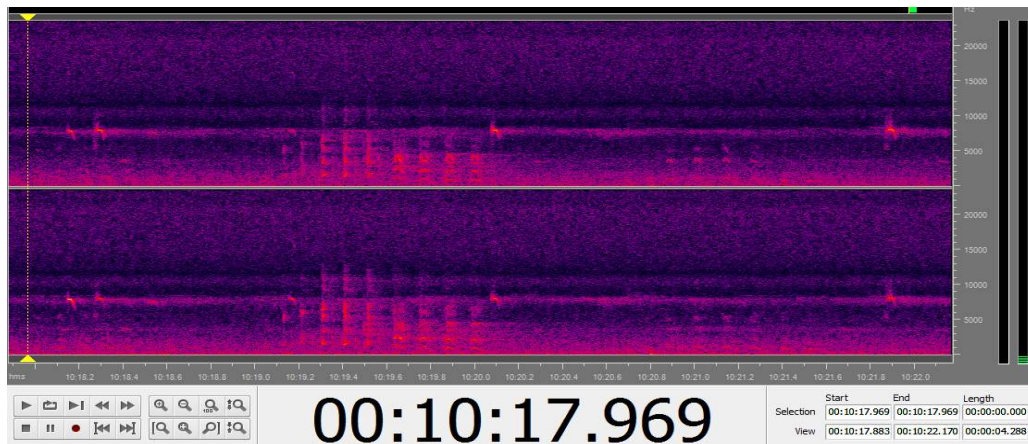


**Study Site. Pikes Hill Forest**

**Figure.3(a) Masked Owl screech. From hand held recorder. File no.150202\_0009.wav**



**Figure.3(b) Masked Owl chatter. From hand held recorder. File no.150201\_0007.wav**



Hollow bearing Stag. Pikes Hill Forest



**Table 1. Sellers Road – Summary of Large Forest Owl detection**

**Legend**

Powerful Owl <i>Ninox strenua</i> (P.O)	Yellow-bellied Glider <i>Petaurus australis</i> (Y.B.G)
Masked Owl <i>Tyto novaehollandiae</i> (M.O)	Common Brush Tail Possum <i>Trichosurus vulpecula</i> (C.B.T.P)
Southern Boobook Owl <i>Ninox novaeseelandiae</i> (S.B.B)	Sugar Glider <i>Petaurus breviceps</i> (S.G.G)

**Location:** Coupe 830-506-0013 EVC Wet/Damp Mixed Forest, High Abundance Hollow Bearing Trees

ID GDA 94 / UTM Accuracy 4-13m Elevation 286m Partly Cloudy, Still, ~16°C, Moon Present

• CPB8305060013 [waypoint]: “Active Search/Recording Location” 55 H 0659095 5843496(GDA//UTM) marked at 01/02/15 22:54

• MASKEDOWLPIKESHILL8305060013 [waypoint]: “Incidental aural/visual encounter” ; 55 H 0659089 584387(GDA//UTM) marked at 01/02/15 23:48

Time	Species	Detection Type	Direction	Distance
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**22:44 Arrive/listen.....**

22:52-->22:56	P.O	Call Play Back		
22:56-->23:05		Listen		
23:05-->23:06	P.O	Call Play Back		
23:07	Y.B.G	Aural	@0°	100m
23:15-->23:16	M.O	Call Play Back		
23:16-->23:21		Listen		
23:21-->23:26	M.O	Call Play Back		
23:26-->23:45		Listen		
23:45-->23:46	M.O	Call Play Back		
23:46	M.O	Aural	@10°	10-15m
23:56	M.O	Visual	@10°	Above 15m
00:18	M.O	Left		

00:20 Concluded survey. NOTE: “Digital camera ”Only” clock was one hour behind.” Recorded time from GPS.

## **Conclusion/Recommendations (legislation considered)**

This section considers the management activities listed in the the following documents including the excerpts reproduced below:

MASKED OWL Compiled from: Flora and Fauna Guarantee Act (1998) Action Statement Masked Owl *Tyto novaehollandiae novaehollandiae*, Department of Sustainability and Environment, The State of Victoria, East Melbourne, 2003.

Garnett (1992) Rare (Aust., Southern subspecies)

NRE (2000) Endangered (Vic.)

The Masked Owl has been listed as a threatened species under the Flora and Fauna Guarantee Act 1988. It is not known whether there has been a decline in numbers of Masked Owl in Victoria; however the low numbers of breeding records for the species are reason for serious concern.

**In its final recommendation the Scientific Advisory Committee (SAC 1991) has determined that the Masked Owl is:**

- Significantly prone to future threats which are likely to result in extinction, and
- Very rare in terms of abundance or distribution.

**The following threatening processes are of concern for the Masked Owl in Victoria:**

- Land clearance and fragmentation
- Loss of trees with large hollows
- Loss of prey species

### **Ecological issues specific to the taxon: Masked Owl (*Tyto novaehollandiae novaehollandiae*)**

Intensive timber harvesting activities leading to a reduction in the abundance of hollows suitable for nest sites or prey species may pose a threat to the Masked Owl over much of its range (SAC 1991).

The existing parks and reserve system may not provide sufficient suitable habitat to meet the management objectives of this Action Statement. Complementary management actions are required to conserve owl populations within state forest and on private land.

The frequency and timing of burning to manage understorey vegetation may impact on the abundance of prey species, and may be particularly detrimental if burning is conducted during Masked Owl breeding activity. Firewood collection is also likely to reduce the abundance of prey, as these materials provide habitat for some prey species.

Because they make use of forest/farmland edges and farmland with scattered old trees (among other habitats), Masked Owls are potentially vulnerable to a range of management practices in the rural landscape. Poisoning of introduced mammals such as European Rabbits in farmland on forest edges may lead to secondary poisoning of owls or reduced abundance of prey species. Various sprays may have toxic effects. Changes in land use have occurred in several regions, with unknown effects on Masked Owls. For example, extensive tree plantations have been established in some areas, with associated loss of scattered old trees and open space. Long-term effects on wildlife are likely to have positive and negative components, and need to be investigated.

## **Habitat Protection**

In State forests, the requirements of this Action Statement will be implemented through the development of FMPs to ensure effective integration of owl conservation measures with other forest values and uses. Conservation strategies for Masked Owl in existing plans are generally consistent with this Action Statement and will be maintained until the plans are reviewed. Protection in state forest will follow two protocols. Where clear-fell harvesting (NRE 1996a) or seed-tree systems are used, a Special Protection Zone will be established to exclude timber harvesting from specified areas. Where selective harvesting is used (NRE 1996a), a Special Management Zone will be established with specific

### **Prescriptions to protect habitat elements such as old hollow-bearing trees that may be used by Masked Owls and their prey.**

Masked Owl Management Areas (MOMAs): Where clear-fell or seed-tree systems are used, delineate and protect a core area of at least 500ha of suitable habitat (dependent on habitat type) as SPZ. For MOMAs based on specific records (rather than habitat modelling), the SPZ will fall within a 3.5km radius (approximately 3 800 ha) of the record (e.g. nest or roost tree).

Responsibility: NRE (Forests Service; Regions)

Masked Owl Management Areas (MOMAs): Where selective harvesting (NRE 1996a) is used, manage areas of 1 000ha to maintain habitat capable of supporting adequate populations of terrestrial and arboreal prey mammals to support breeding owls. MOMAs based on specific records will comprise 3ha SPZs around the records plus SMZs of about 1 000ha which will allow for modified timber harvesting practices that retain sufficient levels of habitat trees. MOMAs based on habitat modelling will comprise solely the approximately 1 000ha SMZs. Special Management Zone Plans will be prepared specifying the prescriptions to be applied within SMZs for Masked Owl and will become part of the relevant Regional prescriptions. Responsibility: NRE (Forests Service; Regions)

All confirmed nesting and roosting sites utilised recently and frequently (based on reliable observation or physical evidence such as pellets or wash) located outside MOMAs will be protected by a 3ha SPZ around the site and a 250-300m radius (or equivalent linear area) SMZ buffers around identified localities, unless they are already protected. In these cases, habitat for foraging is provided in areas excluded from timber harvesting by general prescription including wildlife corridors, steep areas and non-merchantable areas and areas protected for other management purposes.

Responsibility: NRE (Forests Service; Regions)

Locate, monitor and protect all known Masked Owl habitat sites within the parks and reserves system as a contribution to target numbers of regional MOMAs. In larger parks and reserves delineate MOMAs of at least 500 ha of continuous suitable habitat which can be managed so as to be free of significant disturbance factors. In smaller conservation reserves, protect as much suitable habitat as possible and endeavour to obtain co-operative management from adjoining landowners.

Responsibility: Parks Victoria

**MASKED OWLS From: Code of Practice for Timber Production, Victorian Government  
Department of Sustainability and Environment.**

“2.2.2 Conservation of Biodiversity ... Mandatory Actions “To facilitate the protection of biodiversity values, the following matters must be addressed when developing and reviewing plans and must be adhered to during operations:

- application of the precautionary principle to the conservation of biodiversity values, consistent with monitoring and research to improve understanding of the effects of forest management on forest ecology and conservation values ...
- providing appropriate undisturbed buffer areas around significant habitats; ...
- modifying coupe size and dispersal in the landscape, and rotation periods, as appropriate.”

[See also the “Code of Practice for Timber Production's” definition of the “*precautionary principle*” contained within its “*Glossary*”.

MASKED OWL Compiled from: Forest Management Plan for the East Gippsland Forest Management Area (Chapter 3, Biodiversity Conservation), Department of Conservation and Natural Resources, East Melbourne, 1995, p.30



Hollow Bearing Trees. Pikes Hill Forest

## **Discussion/Conclusion/Recommendations (summary/analysis)**

- \* Masked Owl: Detection, the Precautionary Principle must be implemented and further study is required to identify Roost/Nest Sites and breeding pairs.
- \* A Masked Owl individual was detected within this survey as present within VicForests scheduled logging coupe 830-506-0013 at approximately 23:46 on the 01 February 2015.
- \* This Masked Owl detection raises the possibility that this species may be using the forest within or adjacent to the area scheduled to be logged by VicForests for their roosting or nesting purposes.
- \* VicForests must not log coupe 830-506-0013 without enacting (as a minimum) the measures required by the relevant sections of the “Flora and Fauna Guarantee Act (1998) Action Statement” for the Masked Owl, and the Forest Management Plan for the East Gippsland Forest Management Area (Chapter 3, Biodiversity Conservation) as summarised within this report's “Method (Analysis/Recommendations)” sections.
- \* In addition, VicForests must not log coupe 830-506-0013 without causing appropriate presence/absence surveys undertaken by appropriately qualified surveyors for Masked Owl, Powerful Owl and Sooty Owl roost and/or nest sites within the area of these coupes, and all forest areas within 300m from the coupe's boundaries, to be completed.
- \* If any additional threatened Owl sighting, roost and/or nest sites are discovered, logging must not proceed within coupe 830-506-0013 without enacting the management actions detailed above.

**If the following has not occurred: “the completion of the current review of management area reserves created under the East Gippsland FMP in respect of the habitat of ... the Masked Owl in circumstances where the current management areas comprise in part modelled habitat in which [the Masked Owl has not] been detected” (or alternatively, where the current reserves for the Owls established under the FMP have been significantly damaged through disturbances such as the major wildfire of 2014), then the precautionary principle requires that VicForests must not log coupe 830-506-0013 until such review has been completed.**