

# Murrindindi River, Toolangi State Forest

## 298-519-0002 'Mr Ed'

### Sooty Owl Nest Detection Report

Report detailing Sooty Owl (*Tyto tenebricosa*) breeding activity and nesting site within VicForests active logging coupe 298-519-0002



Figure i. *Tyto* owl pellet in coupe 298-519-0002

#### Abstract

VicForests' active logging coupe 298-519-0002 was investigated to assess the presence/absence of threatened species in an area of ash forest threatened by clearfell logging. Wildlife of The Central Highlands (WOTCH) surveys identified a large (suspected Mountain Ash (*Eucalyptus regnans*)) stag in coupe 298-519-0002, abundant with obvious hollows of varying sizes. At the base of the stag, owl pellets were first detected on the 16<sup>th</sup> of August, and upon revisiting the site on the 28<sup>th</sup> of August, additional fresh owl pellets were detected, and some were taken as a sample for species identification purposes. Photos of the pellets & specifically the bone material within were sent off to an expert for identification. We received confirmation from the expert that the pellets belonged to a *Tyto tenebricosa* (Sooty Owl), and the consensus was that the stag appeared to be a suitable nesting/roosting site for Sooty Owls. An active search survey by WOTCH also detected a Sooty Owl approximately 450m from the stag on the 20<sup>th</sup> August. A follow up survey on the 30<sup>th</sup> of August detected a Sooty Owl nest with a juvenile owl inside the hollow. This report informs the Department (DELWP) that an active Sooty Owl nest and high quality breeding/foraging habitat is under imminent threat from VicForests clearfell logging, and the Department must enforce the relevant protective prescriptions as detailed in the results section of this report.

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Wildlife of the Central Highlands Inc

#### Dates of Investigation:

Initial pellet detections: 16/08/2019

Sooty Owl detection: 20/08/2019

Additional fresh pellet detections: 28/08/2019

Sooty Owl nest detection: 30/08/2019

Date of report: 01/09/2019

## Introduction

### Investigation Location:

VicForests coupe 298-519-0002 ‘Mr Ed’ is located approximately 21 km north of Healesville township in the Toolangi State Forest. This patch of forest is abundant with mature and senescing hollow bearing Mountain Ash (*Eucalyptus regnans*) trees, and contains habitat for threatened species such as the Greater Glider (*Petauroides volans*) and Leadbeater’s Possum (*Gymnobelideus leadbeateri*) (see previous WOTCH reports case no. 2019-0057 & 2019-0061). The coupe borders along the Murrindindi River and associated tributaries, which includes Cool Temperate Rainforest and riparian thicket EVC’s.

The coupe is scheduled to be clearfelled by VicForests, and has been listed on the Timber Harvesting Safety Zone (THSZ) list since the 29<sup>th</sup> of July 2019 (VicForests, 2019). WOTCH surveyors first detected forestry machinery in the coupe on the 17<sup>th</sup> of August, thus highlighting the urgency of this report and the issues raised in the discussions/conclusions below.

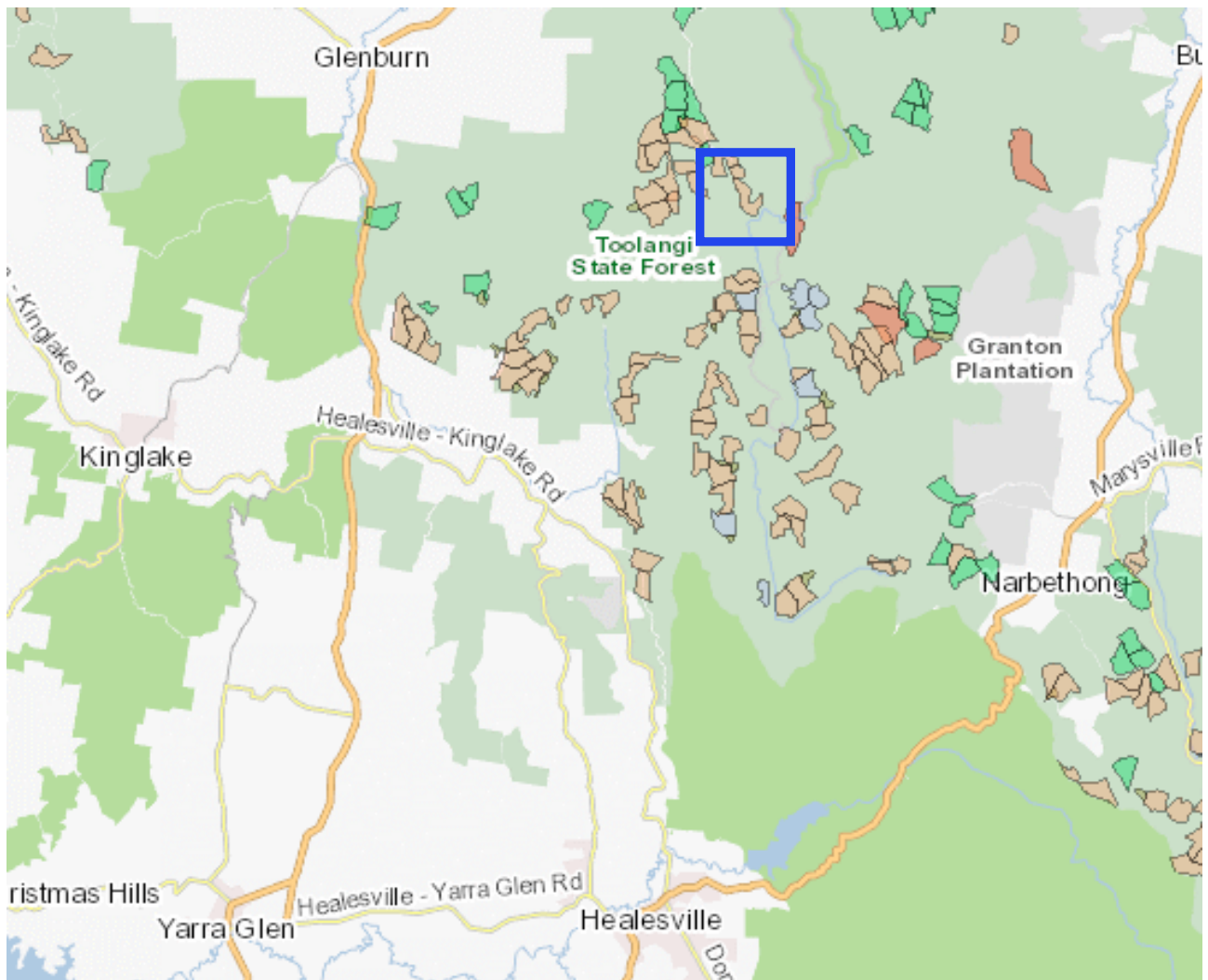


Figure ii. Blue box outlining the location of coupe 298-519-0002 ‘Mr Ed’ in respect to surrounding townships; screenshot taken from MapShare Vic (DELWP, 2019)

## Sooty Owl (*Tyto tenebricosa*):

The Sooty Owl is a highly territorial, long-lived (Hyem, 1979; Debus, 1994), nocturnal and cryptic (Bilney et al., 2011c) large forest owl that can be found throughout wet eucalypt forests and rainforest ecosystems of the Central Highlands region (Bilney et al., 2006). They are reported to have extensive areas of old forest throughout their home ranges (Milledge et al., 1991). A study in East Gippsland found that male Sooty Owls had an average home range size of 3,025 hectares and female Sooty Owls had an average home range size of 994 hectares (Bilney et al., 2011c). For nesting and roosting sites, they require large tree hollows (Schodde and Mason, 1980; Hollands, 1999; Higgins, 1999) which do not form until trees are very old (hundreds of years) (Mawson and Long, 1994).

Earlier this week, WOTCH volunteers submitted a report detailing the many large hollow-bearing and senescing trees that were recorded within VicForests logging coupe 298-519-0002, most of which were within 1km of the two Sooty Owl nesting sites detailed within this report. Sooty Owls mate for life and may breed every year. They have a variable breeding season with autumn-winter and early spring peaks (Hyem 1979; Debus 1994). Fledglings have also been reported to peak in the spring months (Bilney et al., 2011a) with adults rarely raising more than one fledgling at a time (Peake et al., 1993). It has been found that arboreal mammals form a high percentage of the Sooty Owls prey (Higgins, 1999; Bilney et al., 2011a; Bilney et al., 2011b), and it has been documented that Sooty Owls are relying more so on arboreal prey than has historically been recorded (Bilney et al., 2006). During the October to December months, high consumption rates of greater gliders have been recorded (Bilney et al., 2011b) and with the area immediately surrounding these Sooty Owl nesting sites containing many Greater Gliders, as reported by WOTCH over the past 2 years, it becomes vital to preserve the habitat of these key prey species. Other arboreal prey species that have been recorded to be of significant within the Sooty Owls diet include the Sugar Glider and Ringtail Possum (Bilney et al., 2006).

The Greater Sooty Owl (*Tyto tenebricosa*) is listed as a threatened species under the Flora and Fauna Guarantee Act 1988 (FFG Act) and an action statement was produced for the species under the FFG Act in 2003 (DSE, 2003). The action statement lists wildfire, fragmentation, reduced dispersal opportunity and genetic isolation as some of the threats which have shaped the status of the Sooty Owl as; significantly prone to future threats which are likely to result in extinction, and very rare in terms of abundance or distribution (DSE, 2003). Clearfell logging is heavily linked to these threats, for example its widely accepted that logging can increase wildfire risk/severity in moist forests (Lindenmayer et al., 2009). Thus, clearfell logging remains a threat to the persistence of the Sooty Owl into the future. The Sooty Owl is also listed as threatened within the Department of Sustainability and Environment's 2013 document the Advisory List of Threatened Vertebrate Fauna in Victoria (DSE, 2013).

## **Methods**

### **Methods 1. Fieldwork**

#### Initial Pellet detections: 16/08/2019

On the 16<sup>th</sup> of August 2019, WOTCH surveyors found a collection of owl pellets at the base of a large stag (Figure 1a) in coupe 298-519-0002 'Mr Ed'. Photos and videos (Figures 2 & 3) were taken of the pellets, along with the GPS coordinates for evidence of location. Photos were also taken of the large stag and hollows which looked suitable for nesting/roosting owl species (Figure 1).

### Sooty Owl detection: 20/08/2019

On the 20<sup>th</sup> of August 2019, WOTCH surveyors had an opportunistic detection of Sooty Owl (*Tyto tenebricosa*) whilst on a Greater Glider survey in coupe 298-519-0002 'Mr Ed'. Surveyors were spotlighting high up in Mountain Ash trees looking for Greater Glider eyeshine, a Sooty Owl was detected high up in a Mountain Ash tree, where it was found calling with a characteristic *Tyto* screech. The detection occurred approximately 450m from the stag. Footage of the Sooty owl was taken as seen in Figure 5.

### Additional fresh pellet detections: 28/08/2019

On the 28<sup>th</sup> August 2019, WOTCH surveyors revisited the stag site to determine whether there were any additional pellets not seen at the site on the 16<sup>th</sup> of August. Fresh pellets were found, indicating the recent/frequent use of the stag site by the owl. This time fresh samples were collected in a plastic bag, targeting bony material to aid prey identification and thus assist with the identification of the owl species occupying the site.

### Sooty Owl nest detection: 30/08/2019

A follow up site survey on the 30<sup>th</sup> August 2019 detected a Sooty Owl nest adjacent coupe 298-519-0002 in a live Mountain Ash hollow. During the site survey, an owl was heard calling frequently, and upon tracking the source of the call WOTCH surveyors found a juvenile owl calling from inside a nesting hollow. Video was captured of a suspected juvenile Sooty Owl in the nest (Figure 7a/b), and photographs were taken of the nest tree (Figures 6c/d).

## **Methods 2. Consultation with relevant experts**

Photos of owl pellets were initially sent to the Arthur Rylah Institute (ARI) for identification on the 19<sup>th</sup> of August, and ARI suggested we send the pellet photos to a relevant expert, Dr Rohan Bilney. Dr Bilney is a senior field ecologist, who completed Honours and PhD at Deakin University investigating the ecology of large forest owls (Sooty, Masked and Powerful Owls) and small mammal decline since European settlement in eastern Victoria.

The first set of data sent off to Dr Bilney included photos of the stag tree and associated hollows (Figures 1), photos and videos of the owl pellets as seen in Figures 2 & 3, as well as the video footage of the Sooty Owl detected approximately 450m from the stag (Figure 5). This original dataset was sent on the 26<sup>th</sup> of August.

Dr Bilney suggested that photos of prey remains with scale would assist him with identification of the owl species, and so we sifted/washed prey bones from the pellet samples collected on the 28<sup>th</sup> and sent photos of the bones along with scale, these photos can be seen below (Figures iii-v).



Figure iii. Image of prey bones sifted and washed from pellet samples, sent to Dr Bilney on the 29<sup>th</sup> August.



Figure iv. Image of prey bones sifted and washed from pellet samples, sent to Dr Bilney on the 29<sup>th</sup> August.



Figure v. Image of prey bones sifted and washed from pellet samples, sent to Dr Bilney on the 29<sup>th</sup> August.

### **Methods 3. GIS mapping of protective prescriptions**

#### **Fixed FMZ Rules for Fauna (Figures 8a/b):**

A 3.5km buffer was first established around the Sooty Owl nest tree to establish a Sooty Owl Management Area (SOMA), as per the code (DEPI, 2014). Within this area (approximately 3800 Ha), Ecological Vegetation classes (EVC's) were overlaid along with existing Forest Management Zones (FMZ's), VicForests current Timber Release Plan (TRP), Roads, Watercourses, Contours and logging history. This area was assessed to find the most suitable foraging/breeding habitat for Sooty Owl to be reserved in 500 hectares of Special Protection Zone (SPZ). Areas logged since 1990 (the last 30 years) were considered unsuitable foraging/breeding habitat for the Sooty Owl and were therefore avoided during the establishment of Sooty Owl SPZ, as suggested in the code of practice (DEPI, 2014). The 500 hectare area of SPZ mapped in Figures 8a/b consists of a variety of habitats used by the Sooty Owl. Preferred EVC's within the SPZ include Wet Forest, Cool Temperate Rainforest, Riparian thicket and Damp Forest. Areas of preferred growth stages, such as the mature/senescent Mountain Ash Forest in coupe 298-519-0002 'Mr Ed' were incorporated into the Sooty Owl SPZ (See WOTCH report: case no. 2019-0061). The boundaries of the SOMA Sooty Owl SPZ were aligned with natural features, including watercourses, ridgelines, spurs and to a smaller degree was aligned with unnatural features such as roads and logged coupe edges.

# Results

## Summary

### Results 1:

- Figures 1a/b are photographs of the suitable nesting/roosting stag in coupe 298-519-0002
- Figures 2a/b are screenshots taken from Figures 3a/b (attached), showing Sooty Owl pellets located at the base of the stag
- Figures 3a/b are videos (attached) showing the pellets located at the base of the stag
- Figure 4 is a screenshot from Figure 5 (attached), showing a juvenile Sooty Owl detected adjacent coupe 298-519-0002
- Figure 5 (attached) is a video recording of the juvenile Sooty Owl detection taken on the 20/08/2019
- Figures 6a/b are screenshots taken from Figures 7a/b (attached), showing a Sooty Owl in the active nest and the GPS coordinates of the detection location
- Figures 6c/d are images of the nest tree
- Figures 7a/b (attached) are video recordings of the active Sooty Owl nest

### Results 2:

- Table 1 represents expert opinions from Dr Rohan Bilney on the identification of owl pellets, the suitability of the stag for Sooty Owl nesting/roosting and breeding activity in the area

### Results 3:

- Table 2 represents the Fixed Forest Management Zone (FMZ) Rules for Sooty Owl in the Central Highlands FMA's as per the code of practice (DEPI, 2014)

### Results 4:

- Figure 8i is an attached GPX file containing the waypoints for the active Sooty Owl nest tree, the juvenile Sooty Owl detection and the suitable nesting/roosting stag in coupe 298-519-0002

### Results 5:

- Figures 8a/b are geographic maps showing the protective requirements for the active Sooty Owl nest as per the code of practice (DEPI, 2014)

**Results 1. Photographs and videos of the nesting/roosting stag in coupe 298-519-0002, associated hollows, owl pellets, juvenile Sooty Owl detection, active Sooty Owl nest detection and active Sooty Owl nesting tree.**



Figure 1a. Image of a suitable *Tyto tenebricosa* nesting/roosting stag taken at approximately 55 H 371617 / 5852799 (UTM)





Figure 1b. Image of suitable nesting/roosting hollow for *Tyto tenebricosa* taken at approximately 55 H 371617 / 5852799 (UTM)



Figure 2a. Screenshot from Figure 3a (attached video) of a *Tyto tenebricosa* owl pellet taken at the base of the stag (Figure 1a) at approximately 55 H 371618 / 5852802 (UTM)



Figure 2b. Screenshot from Figure 3b (attached video) of a *Tyto tenebricosa* owl pellet taken at the base of the stag (Figure 1a) at approximately 55 H 371628 / 5852769 (UTM)



Figure 4. Screenshot from Figure 5 (attached video) of a juvenile *Tyto tenebricosa* (Sooty Owl) detected adjacent coupe 298-519-0002 at approximately 55 H 371815 / 5852396 (UTM)



Figure 6a. Screenshot taken from Figure 7a (attached) showing a juvenile Sooty Owl in the nest, taken at approximately 55 H 371785 / 5852383 (UTM)



Figure 6b. Screenshot taken from Figure 7b (attached) showing the GPS coordinates of the Sooty Owl nest detection



Figure 6c. Image taken on the 30<sup>th</sup> of August showing the active Sooty Owl nest tree (*Eucalyptus regnans*) adjacent coupe 298-519-0002 taken at approximately 55 H 371791 / 5852369 (UTM)



Figure 6d. Image taken on the 30<sup>th</sup> of August showing the active Sooty Owl nest tree (*Eucalyptus regnans*) adjacent coupe 298-519-0002 taken at approximately 55 H 371791 / 5852369 (UTM)

**Results 2. Expert opinions on owl pellet prey composition, species identification of responsible owl, breeding success of Sooty Owl in the area and the suitability of the stag as a nesting site.**

Table 1. Expert opinion from Dr Rohan Bilney on the species identification of owl pellets, nesting suitability of the stag and breeding activity of Sooty Owl in coupe 298-519-0002 ‘Mr Ed’. Reference below

Rohan Bilney | Senior Field Ecologist  
 Forestry Corporation of NSW | Hardwood Forests  
 13 Bass Street (P.O. Box 702), Eden, 2551 | Ph: (02) 64968807 M: 0439942899  
 E: [Rohan.Bilney@fcnsw.com.au](mailto:Rohan.Bilney@fcnsw.com.au) | [www.forestrycorporation.com.au](http://www.forestrycorporation.com.au)

<b>Relevant Expert</b>	<b>Date</b>	<b>Expert opinion</b>
Dr Rohan Bilney	27/08/2019	<i>“I can confirm the pellets are from a Tyto, which will most probably be Sooty Owl. It is impossible to distinguish pellets between Tyto species, and really need to rely on combination of prey contents (species), prey size and habitat to help with determining the owl species. ... The dead stag looks like a highly suitable roost/nest, but again, similar as used by both Sooty and Masked owls.”</i>
Dr Rohan Bilney	29/08/2019	<i>“With confidence I can say the prey remains are common ringtail possum (the larger humeri) and sugar glider (femora). That further suggests that the predator was a Sooty Owl, as both species are arboreal and typical prey of them (Masked owls usually eat more ground dwelling species). What is also of interest is the lack of cranial material, which could suggest the pellets are from a juvenile or female, and that the adult male ate the heads first (usually what happens) before providing them the rest of the prey. ... Also, it’s rather rare to find pellets under eucalypt roosts, but more often nests. ... Also, upon viewing your video, that owl is a juvenile. Surprisingly looks quite pale in the video though. Therefore, there is a nest nearby.”</i>
Dr Rohan Bilney	29/08/2019	<i>“There is no defined breeding season of the Sooty Owl as they can breed throughout the year. I did find a peak in fledging in spring (sept-oct), but have recorded fledging across all seasons.”</i>

**Results 3. Protective measures to be implemented for the Sooty Owl as per the code of practice (DEPI, 2014).**

From the “*Planning Standards for timber harvesting operations in Victoria’s State forests 2014, Appendix 5 to the Management Standards and Procedures for timber harvesting operations in Victoria’s State forests 2014*” under the following code:

**4. Biodiversity**

**4.2 Fauna – fixed zoning**

4.2.1 Statewide

4.2.1.1 Plan management actions for rare and endangered fauna in accordance with Table 3 (Fixed FMZ rules for fauna) below.

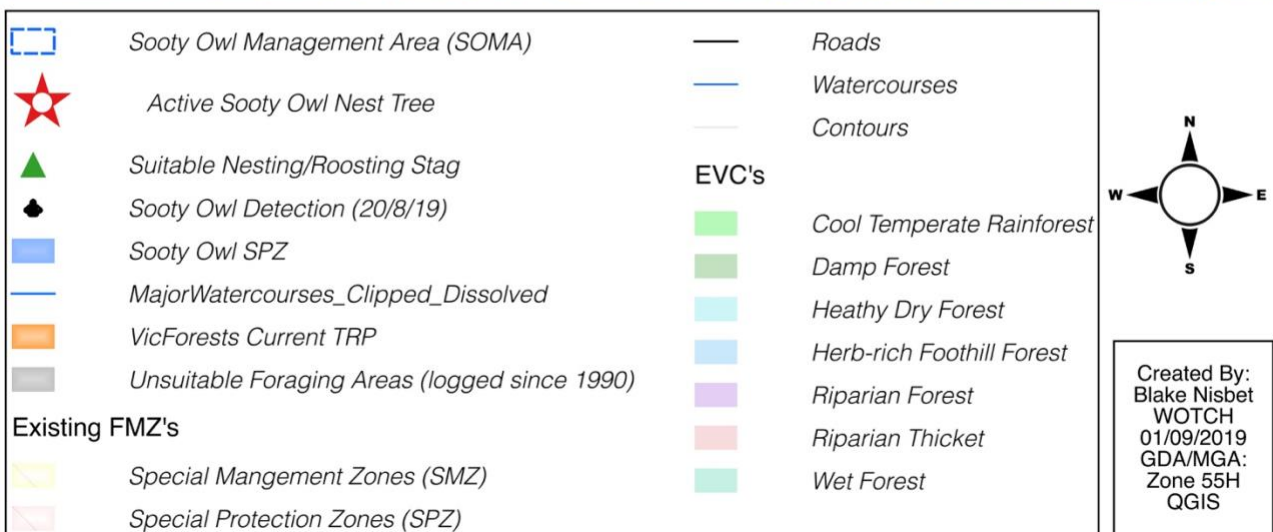
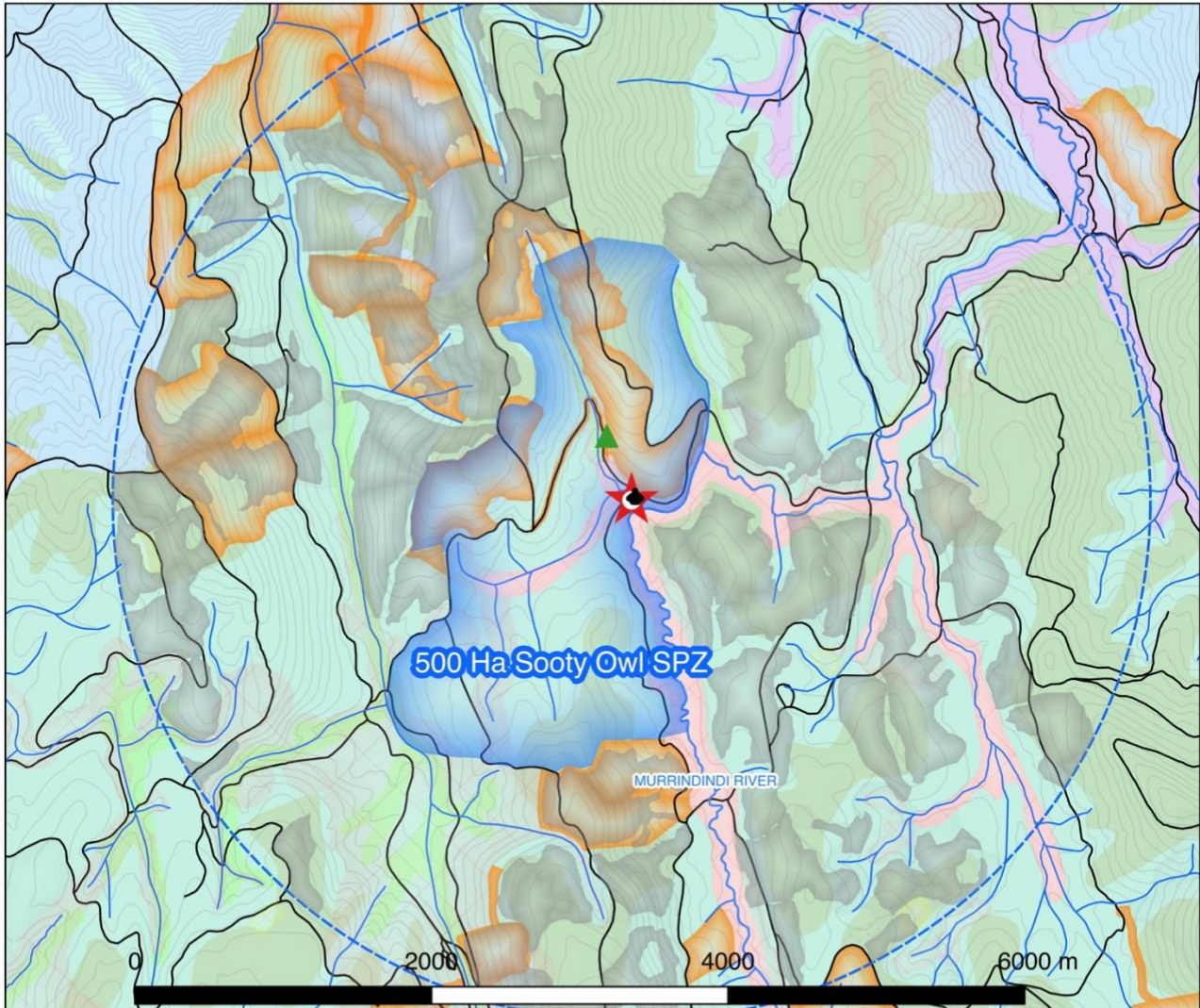
4.2.1.2 Maintain FMZ schemes for rare and endangered fauna in accordance with Table 3 (Fixed FMZ rules for fauna) below

Table 2. Fixed Forest Management Zone (FMZ) rules for Sooty Owl in the Central Highlands FMA’s

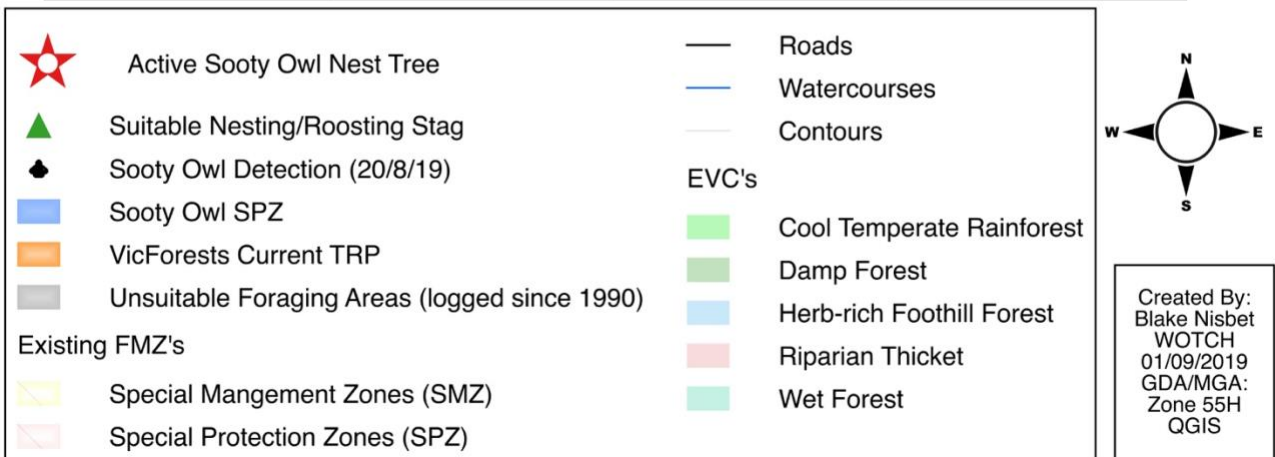
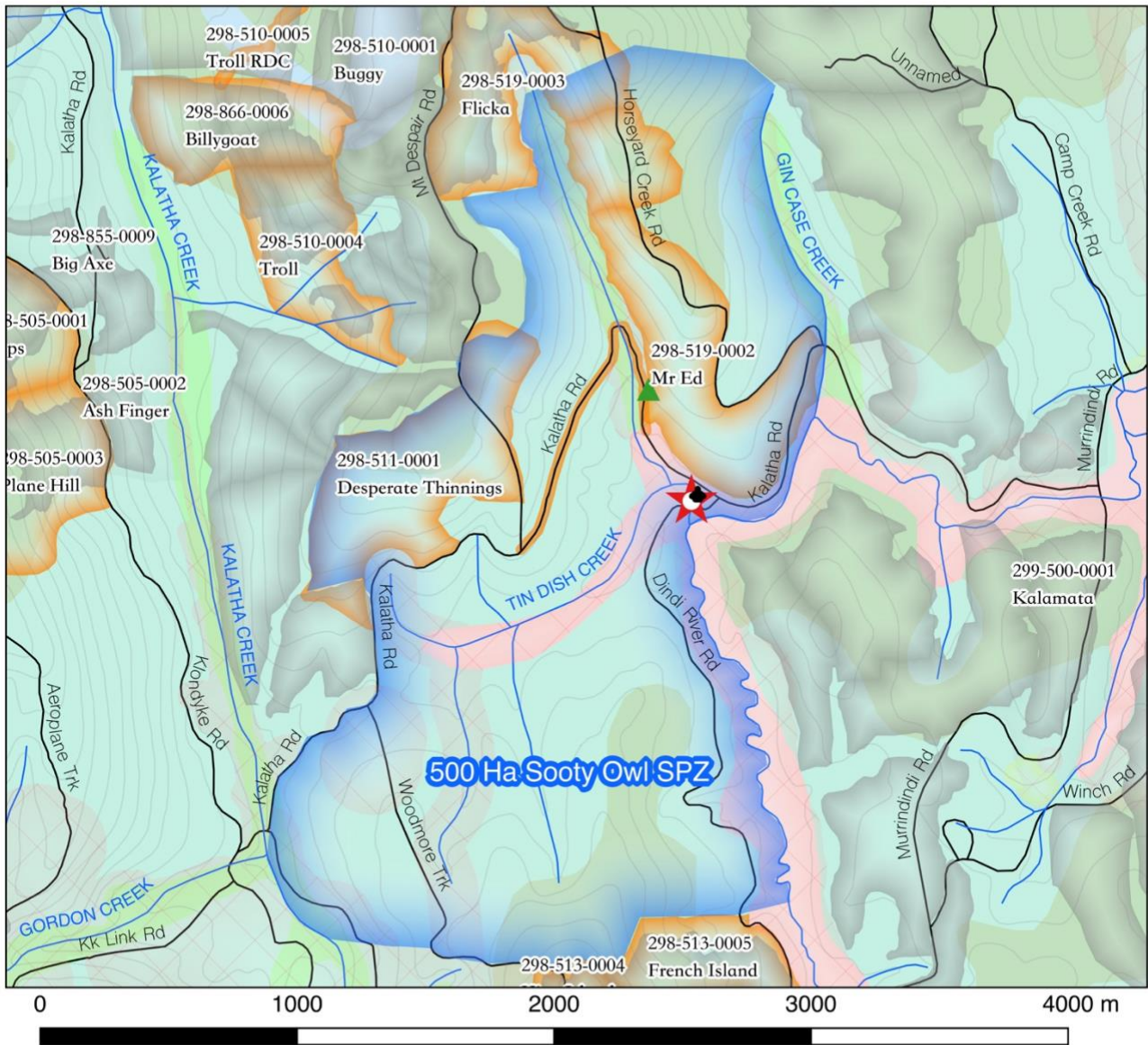
FMA	Common name	Scientific name	Zoning management actions	Management actions	Review
Central Highland FMAs	Sooty Owl	<i>Tyto tenebricosa</i>	Identify and maintain a target of 100 Sooty Owl Management Areas (SOMA) across public land in the Central FMAs. Locate SOMAs based on probable breeding areas based on the occurrence of owlets or adult roosting pairs and on habitat identified by habitat modelling. SOMAs may overlap with management areas established for other species. Allocate SOMAs across State forest and conservation reserves, with preference to protect suitable habitat within conservation reserves, especially in large reserves where the home range can be protected within the reserve. Where clearfell or seed tree harvesting systems are used, select a 500 ha area within a 3.5 km radius of the record (approximate area of 3800 ha) for each SOMA. Align SOMA boundaries with recognisable features, preferably natural, such as ridgelines or sub-catchments. Where possible SOMAs should comprise of patches greater than 100 ha in area and contiguous with other forest. Maximise the inclusion of habitats known to be used by the Sooty Owl, such as forest in headwaters, old-growth forest in gullies, forest with a diversity of preferred EVCs, forest of preferred growth stages such as mixed - senescent - mature, otherwise mature or mixed senescent - mature - regrowth, forest with large and / or dead hollow-bearing trees, forest with abundant Silver Wattle, Tree-ferns and Blanket-leaf, and forest in deep gullies. Avoid locating SOMAs in extensive areas of forest known to be less suitable, forest less than 28 m tall, treeless areas, regrowth forest or any of the dry EVCs. Include State forest areas of the SOMA in SPZ.		

## Results 5. Maps detailing the protective prescriptions for the Sooty Owl Management Area (SOMA)

Results 5. Figure 8a: Sooty Owl Management Area (SOMA) as per the code (Fixed FMZ Rules For Fauna), Active Sooty Owl nesting tree and suitable nesting/roosting stag in coupe 298-519-0002 'Mr Ed', Sooty Owl detection, Unsuitable foraging areas for Sooty Owl within the Sooty Owl Management Area (SOMA) (Logged since 1990), Ecological Vegetation Classes (EVC's), Recommended 500 Ha SPZ within the SOMA (as required per the code), Watercourses, Roads, Contours, Existing Forest Mangement Zones (FMZ's) & Vicforests current Timber Release Plan (TRP)



Results 5. Figure 8b: Active Sooty Owl nesting tree and suitable nesting/roosting stag in coupe 298-519-0002 'Mr Ed', Sooty Owl detection, Unsuitable foraging areas for Sooty Owl within the Sooty Owl Management Area (SOMA) (Logged since 1990), Ecological Vegetation Classes (EVC's) within the SOMA, Recommended 500 Ha SPZ within the SOMA (as required in the code (Fixed FMZ Rules For Fauna)), Watercourses, Roads, Contours, Existing Forest Management Zones (FMZ's) & Vicforests current Timber Release Plan (TRP)





## Discussion

The investigation detailed in the methods section of this report has led to the discovery of high quality and confirmed breeding habitat of the threatened Sooty Owl. Repetitive usage of a large hollow bearing stag (Figures 1a/b), as indicated by ongoing detections of Sooty Owl pellets (Figures 2a/b, iii-v) highlights the importance of coupe 298-519-0002 as nesting/roosting habitat for the Sooty Owl. The discovery of an active Sooty Owl nest in a live Mountain Ash tree (Figures 6a-d) confirmed the presence of a Sooty Owl breeding pair in the area, and the breeding pair has successfully fledged an owl within the last few months (Bilney, 2019 (pers com)), as seen in the nest in Figure 6a. The action statement for the Sooty Owl stated that eastern Victoria had an estimated population of 400-900 breeding pairs (DSE, 2003), and as the species was in decline at that stage the estimation now could be even lower. One of the main intended management actions from the action statement was to identify 500 Sooty Owl Management Areas (SOMA's) across the Victorian range and protect foraging/breeding habitat within these SOMA's (DSE, 2003). In areas of state forest, such as that found in the Central Highlands FMA's, a SOMA should consist of 3800 hectares (3.5km buffer) around a recorded breeding pair of Sooty Owls, in which 500 hectares of forest within the SOMA should be reserved in Forest Management Zoning (FMZ) as Special Protection Zone (SPZ) (Table 2). As seen below in Figure 9, The target number of SOMA's in the Central Highlands FMA's is 65, a mere 13% of the state target.

**TABLE 1: Target Number Of Sooty Owl Management Areas (SOMAs) In Forest Management Areas**

<i>Forest Management Area</i>	<i>Tree cover (km<sup>2</sup>)<sup>i</sup></i>	<i>Number of SOMAs</i>	<i>Proportion of State target (%)</i>
<b>Central Highlands</b>	5 754	65	13
<b>North East</b>	13 740	100	20
<b>Central Gippsland</b>	10 635	125	25
<b>Tambo</b>	5 266	79	16
<b>East Gippsland</b>	10 986	131	26
<b>TOTAL</b>	<b>46 381</b>	<b>500</b>	<b>100</b>

Figure 9. Number of SOMA's to be protected across each FMA, with 65 listed under the Central Highlands (Action Statement).

Inconsistencies are present within the state target for the Central Highlands FMA's between the action statement (65 SOMA's) and the code (100 SOMA's) (DSE, 2003; DEPI, 2014). No public information was found as to whether the state government has reached these targets, nor was there any information found publically available for the locations of established SOMA's across the highlands. The methodology around the establishment of SOMA's has been questioned, specifically raised in an East Gippsland court case (Supreme Court of Victoria, 2010), where Dr Bilney highlighted some of the flaws with habitat modelling in respect to the establishment of SOMA's. "The main weakness of habitat models is that where a SOMA has been devised based on this habitat model, it is unknown whether a Sooty Owl actually occupies the area. This could potentially result in a false pretence that populations are being conserved based purely on speculation that preserving habitat is sufficient. The strength of habitat models is that in areas where surveys are impossible to conduct (remote access), suitable habitat can still be reserved (Bilney, 2009)". Dr Steve Henry, DSE Manager of Biodiversity in East Gippsland agreed that there was work to be done on revising and improving the Sooty Owl Management system (Henry, 2009). He stated that a portion of the target SOMA's are made up of modelled sites, and thus, new records of Sooty Owl that do not fit into a current SOMA should be substituted for modelled sites until the target number of SOMA's are met. He then

continued that once modelled sites are completed phased out, that is all SOMA's are now based on records, priority is to be given to sites based on breeding records (Henry, 2009). He also stated that before Dr Bilney's PHD project, they had very little data on breeding records in East Gippsland, thus highlighting the importance of such data (Henry, 2009).

SOMA's are to be prioritised on breeding records where possible. Figures 8a/b shows the required establishment of a SOMA around the new breeding record detailed in this report. In these maps, you can see the Sooty Owl nest tree buffered 3.5 km, representing an area of approximately 3800 Hectares of SOMA. Within that area, the most suitable foraging habitat has been mapped out to be reserved as SPZ (Figure 8b). This SPZ represents some of the last intact, mature and senescent forest within this SOMA, as much of the surrounding foraging habitat is young regenerating forest which has been logged in the last 30 years (Figure 8a). 1137 hectares ( $\approx 30\%$ ) of the SOMA has been logged in the last 30 years and is therefore unlikely to be suitable foraging habitat for the breeding pair (Figure 8a). Therefore, in this instance it would be suitable to extend the size of the reserved SPZ within this SOMA to 1000-1500 hectares to account for home ranges of Sooty Owls (Bilney et al., 2011c).

Amongst this SOMA, 44 hectares ( $\approx 10\%$ ) of the reserved SPZ is under imminent threat from logging. Coupe 298-519-0002 'Mr Ed' is currently active (VicForests, 2019) and is expected to be clearfelled within the coming weeks. This portion of the SPZ contains at least 30 documented hollow bearing Mountain Ash trees which would provide suitable nesting opportunities for the Sooty Owl breeding pair (WOTCH Report Case no. 2019-0061). The abundance of hollow bearing trees in this area also acts as critical foraging habitat for the Sooty Owls, as it is known to inhabit the Greater Glider (WOTCH Report Case no. 2019-0057), a common food source for the Sooty Owl (Bilney et al., 2011b), and likely hosts an array of other arboreal fauna favoured by the Sooty Owl for feeding. The clearfelling of the Sooty Owl breeding pair habitat is illegal as per the code of practice and could cause serious and/or irreversible consequences for the Sooty Owl breeding pair within this SOMA. The department must step in to implement the protective measures as outlined in this report, with the establishment of a SOMA and indicative 500 hectare (minimum) SPZ around the breeding record.

## **Conclusion/Actions:**

### **Report Summary:**

- The investigation detailed in the methods section of this report led to the discovery of an active Sooty Owl nest adjacent active logging coupe 298-519-0002 'Mr Ed' in the Toolangi State Forest.
- A juvenile Sooty Owl (fledged within the last few months) was detected and filmed (Figures 7a/b) within the nest tree (Figures 6a-d).
- A suitable nesting stag was also detected within coupe 298-519-0002, and pellets were found on multiple occasions at the base of the stag and confirmed by an expert (Dr Bilney) to belong to Sooty Owls.
- Coupe 298-519-0002 is expected to be harvested within the coming weeks, and provides high quality nesting/foraging habitat for the Sooty Owl breeding pair within the area.
- As per the code of practice (DEPI, 2014), a SOMA must be established around the breeding record and 500 hectares (minimum) of foraging habitat must be reserved in SPZ to protect the pair of threatened Sooty Owls.

### **Required actions:**

The Department (DELWP) must act to protect this breeding pair of threatened Sooty Owls from the threats of imminent logging, including the following actions as per the code of practice (DEPI, 2014):

- **Refraining VicForests from undertaking any forestry operations in coupe 298-519-0002 ‘Mr Ed’ with a matter of urgency, as well as any other coupes that fall within the SOMA detailed in Figure 8a**
- **Establish the SOMA and 500 Hectare Sooty Owl SPZ as detailed in Figures 8a/b**

### **Recommended actions:**

- **Increase the Sooty Owl SPZ within this SOMA (and others in similar situations) to 1000-1500 hectares to account for the loss of foraging habitat from recent timber harvesting operations within the SOMA**
- **Undertake surveys for Sooty Owl nest sites outside of existing SOMA’s to substitute modelled SOMA’s with record based SOMA’s such as the one detailed in this report**



### **References:**

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