

## INVESTIGATION REPORT

# HIGH DENSITY RECORDING OF GREATER GLIDERS (*Petauroides volans*)

**COAST RANGE ROAD**  
VicForests Logging coupe 886-509-0012

### Abstract

Forest areas within and/or adjacent to VicForests scheduled logging coupe 886-509-0012 were investigated to assess the presence and density of Greater Glider (*Petauroides volans*) individuals and other nocturnal fauna.

Greater Glider (*Petauroides volans*) individuals were recorded from this location during nocturnal spotlighting surveys.

The Greater Glider (*Petauroides volans*) records obtained within this investigation were assessed using spatial analysis and were found to exist at densities requiring protection under the relevant mandatory biodiversity conservation measures set out in the regulatory framework governing logging operations in Victoria's State Forests.

Recommendations are made to the Department of Environment, Land, Water and Planning (DELWP) and to VicForests to ensure that the area of high Greater Glider (*Petauroides volans*) density is protected from logging through its inclusion in the "Special Protection Zone" of the "Forest Management Zone Scheme".

The methodology, results, discussion and recommendations arising from this investigation are further detailed within this report.

### Relevant Legislation

- Code of Practice for Timber Production 2014, Department of Environment and Primary Industries, The State of Victoria, 2014
- "Management Standards and Procedures for timber harvesting operations in Victoria's State forests 2014", Department of Environment and Primary Industries, The State of Victoria, 2014
- "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", Department of Environment and Primary Industries, The State of Victoria, 2014
- Forest Management Plan For The East Gippsland Forest Management Area, Victoria Department of Conservation and Natural Resources, East Melbourne, December 1995

### Relevant Organisations

- VicForests

### Status of Site

Coupe 886-509-0012 is scheduled for logging

### Date of Investigation

05/05/2015

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21/09/2015

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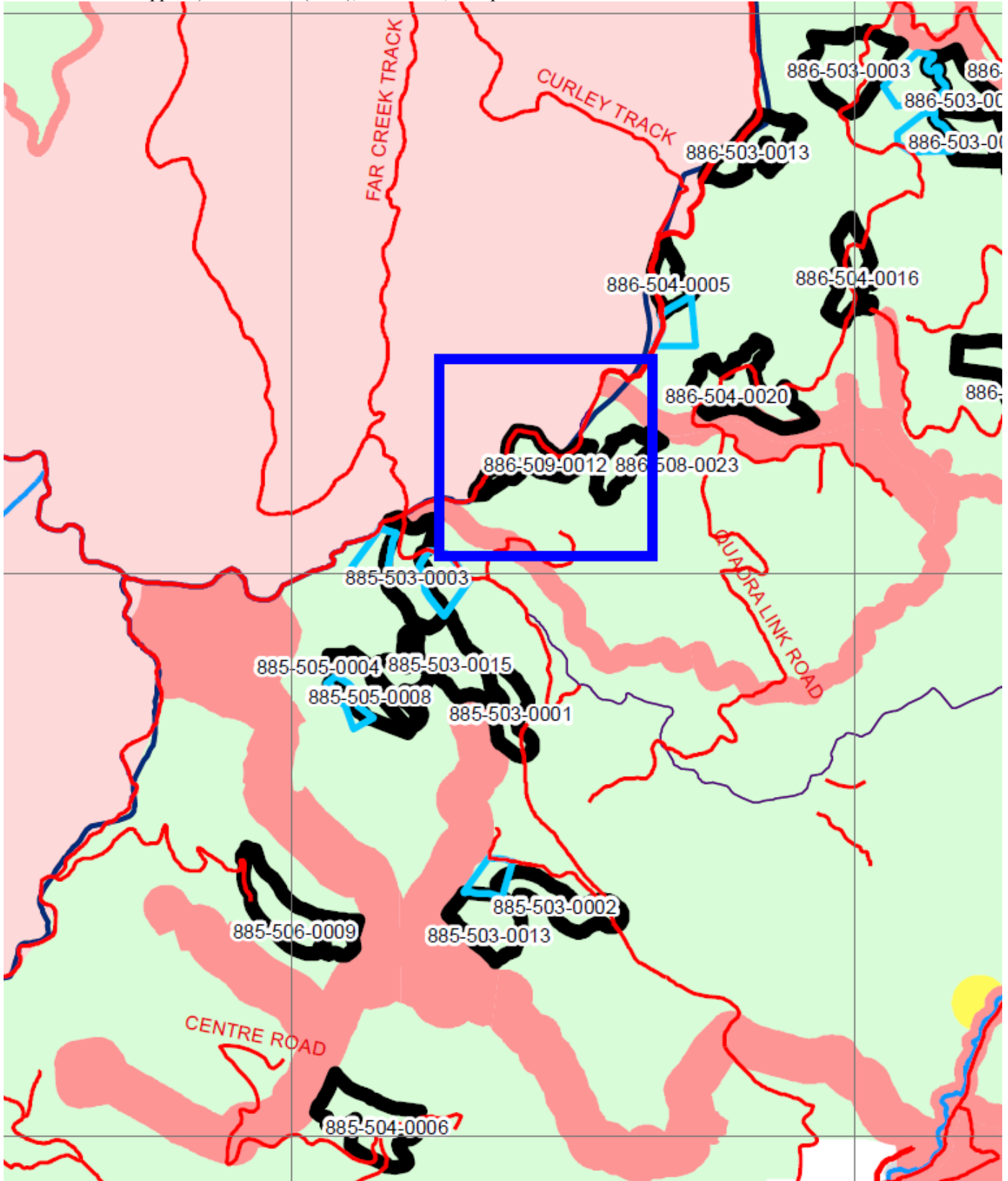
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## Study Location Overview

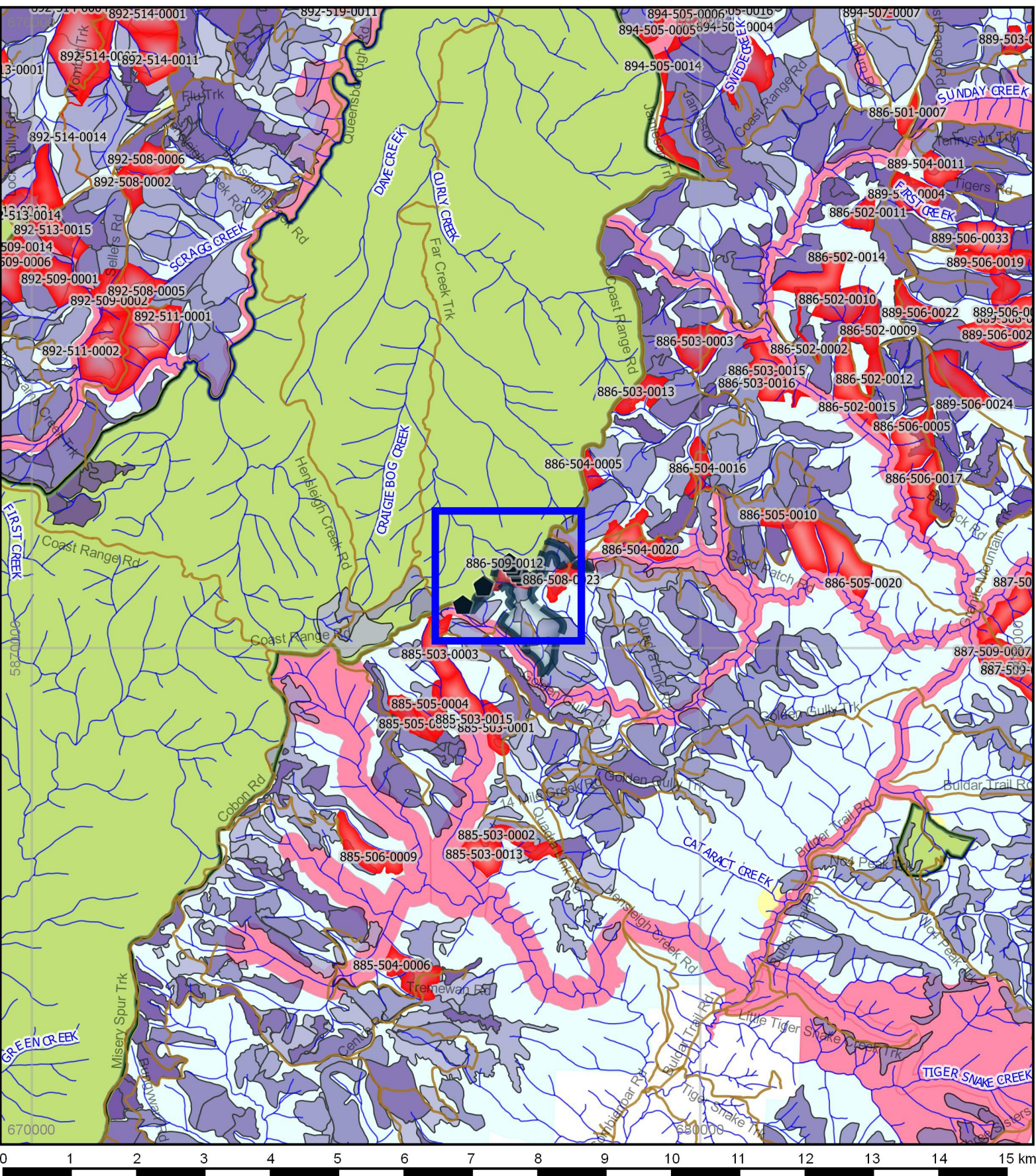
Within VicForests scheduled logging coupe 886-509-0012 off Coast Range Road in the Quadra Forest Block of East Gippsland forming part of the south-eastern flank of the Errinundra Plateau National Park.

Figure A(i). Detail from: "Approved Timber Release Plan 2013 - 2016 Change Map; April 2015 (with all approved amendments applied) Cann River (West), VicForests, 16 April 2015



\*Investigation location within blue box

Figure A(ii). Study Location Overview - Coast Range Road; Nocturnal Fauna Detection records; High Density Greater Glider Area and Protection Zone; Forest Management Zoning [DEPI, June, 2014]; Logging History [LASTLOG25]; Scheduled Logging [TRP]



<b>Legend</b>		<b>Parks and Reserves [PARKRES]</b> 	<b>Prior Logging History [2014: LASTLOG25]</b> 
Greater Glider record High Density of Greater Glider Area [8 GG within 3.99ha @ 2.01 GG per ha] 100ha High Density of Greater Glider proposed Special Protection Zone	<b>Forest Management Zoning [FMZ100; DEPI, June, 2014]</b> Conservation Parks and Reserves Special Protection Zone Special Management Zone General Management Zone		
<b>Projection: EPSG: 28355 GDA94/MGA Zone 55</b>  <b>Map Scale: 1:75,000</b>			

## Method 1 (Nocturnal Fauna Spotlighting Survey), & Results 1 (Nocturnal Fauna Spotlighting Survey Results Summary)

### Nocturnal Fauna Survey [05/05/2015]

#### Equipment Used

- Hand-held Spotlight
- Binoculars
- Digital Camera
- Global Positioning System (GPS)  
[Garmin GPSMAP 62s]
- Compass, pen and paper

#### Method used

1. On the 05 May 2015, at around 09:30pm surveyors commenced a spotlighting survey heading westerly along Coast Range Road in the Quadra Forest Block on the edge of the Errinundra Plateau of East Gippsland.
2. The forest adjacent to (visible from) Coast Range Road was searched for the presence of nocturnal fauna principally by shining a hand-held spotlight to detect fauna movement or “eye shine”.
3. As fauna were observed their locations were marked with the GPS and time, species, bearing from and an estimate of the distance from observation location were noted. See “Results 1. Table 1. Nocturnal Fauna Spotlighting Survey Results Summary; 05/05/2015” below for details of the fauna encountered.
4. Fauna record location data were analysed using Geographic Information Systems (GIS) mapping software to determine compliance requirements with the regulatory framework governing logging operations in Victoria's State Forest with respect to fauna detection based biodiversity conservation measures.
5. Further presentation of these results, as well as conclusions and discussion arising from this investigations results are provided in their respective sections below.

Results 1. Table 1. Nocturnal Fauna Spotlighting Survey Results Summary; 05/05/2015

TIME	Common Name	Specific Name	Location (GDA94 UTM)	Bearing	Distance (est.)
21:30	Greater Glider	<i>Petauroides volans</i>	55 H 677347 5871057	340°	50m
21:38	Greater Glider	<i>Petauroides volans</i>	55 H 677282 5871108	320°	70m
21:42	Greater Glider	<i>Petauroides volans</i>	55 H 677273 5871118	70°	30m
21:53	Greater Glider	<i>Petauroides volans</i>	55 H 677207 5871184	0°	50m
21:55	Greater Glider	<i>Petauroides volans</i>	55 H 677197 5871213	240°	40m
21:55	Greater Glider	<i>Petauroides volans</i>	55 H 677198 5871213	220°	40m
22:06	Greater Glider	<i>Petauroides volans</i>	55 H 677155 5871260	220°	30m
22:08	Greater Glider	<i>Petauroides volans</i>	55 H 677140 5871268	60°	0m
22:09	Tawny Frog-mouth	<i>Podargus strigoides</i>	55 H 677119 5871278	280°	30m
22:28	Mountain Brush-tail Possum	<i>Trichosurus cunninghami</i>	55 H 676776 5870931	340°	40m
22:30	Greater Glider	<i>Petauroides volans</i>	55 H 676765 5870935	170°	20m
22:37	Greater Glider	<i>Petauroides volans</i>	55 H 676751 5870912	280°	30m
22:49	Mountain Brush-tail Possum	<i>Trichosurus cunninghami</i>	55 H 676626 5870747	270°	30m
22:59	Greater Glider	<i>Petauroides volans</i>	55 H 676447 5870636	80°	20m

## Method 2 (analysis/recommendations/legislation considered [as at August 2015])

From: “Management Standards and Procedures for timber harvesting operations in Victoria’s State forests 2014”, Department of Environment and Primary Industries, The State of Victoria, 2014.<sup>1</sup>

### “2. Planning and Record Keeping

#### 2.1 FMZ and planning information

2.1.1.3 Where evidence of a value that requires protection via the establishment or amendment of an SPZ or SMZ is found in the field application must be made to the Secretary or delegate prior to commencement of the timber harvesting operation to create or amend an SPZ or SMZ in accordance with Appendix 5 the Planning Standards. SMZ applications must be accompanied by an SMZ plan and must be complied with during timber harvesting operations.

### 4. Biodiversity

#### 4.2 Fauna

4.2.1.1 Apply management actions for rare and threatened fauna identified within areas affected by timber harvesting operations as outlined in Appendix 3 Table 13 (Rare or threatened fauna prescriptions).

**Table 13 Rare or threatened fauna and invertebrate prescriptions.**

FMA	Common name	Scientific name	Management action
East Gippsland	Greater Glider	<i>Petauroides volans</i>	Where evidence of this value is found in the field follow clause 2.1.1.3 of this document using table 4 in Appendix 5 the Planning Standards for information.

From: “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”<sup>2</sup>

### “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.

#### 4.3 Fauna - detection based zoning

##### 4.3.1 Statewide

4.3.1.1 Apply the management actions outlined in Table 4 (Detection based FMZ rules for fauna) below for zoned rare or threatened fauna.

4.3.1.2 Implement FMZ amendments and reviews in accordance with Table 4 (Detection based FMZ rules for fauna) below for new verified rare or threatened fauna records and FMZ amendment requirements outlined in section 2.

**Table 4 Detection based FMZ rules for fauna.**

FMA	Common name	Scientific name	Zoning management actions	Management actions	Review
East Gippsland	Greater Glider	<i>Petauroides volans</i>	Establish a SPZ of approximately 100 ha of suitable habitat 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.		

<sup>1</sup> “Management Standards and Procedures for timber harvesting operations in Victoria’s State forests 2014”, Department of Environment and Primary Industries, The State of Victoria, 2014, p. 23, 32, 36, 76, 79

<sup>2</sup> “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”, Department of Environment and Primary Industries, The State of Victoria, 2014, pp. 16, 17, 20, 43

From: "Forest Management Plan For The East Gippsland Forest Management Area, Victoria Department of Conservation and Natural Resources, East Melbourne, December 1995".<sup>3</sup>

## **"Chapter 3 BIODIVERSITY CONSERVATION**

### **3.4 - NATIVE FAUNA**

#### **CONSERVATION GUIDELINE Mammals**

Arboreal mammals. For each of the following occurrences, approximately 100 ha of suitable habitat will be included in the SPZ:

- resident Koala populations.
- Greater Glider and Common Brushtail Possum - >2 individuals per ha, >10 per km, or >15 per hour of spotlighting.
- Yellow-bellied Glider - >0.2 per ha, >5 per km, or >7 per hour of spotlighting.
- Eastern Pygmy Possum - >5 per standard pitfall line over 5 days.
- substantial populations of the above species that are isolated or in unusual habitat.



<sup>3</sup> Forest Management Plan For The East Gippsland Forest Management Area, Victoria Department of Conservation and Natural Resources, East Melbourne, December 1995, p. 12, 27, 29, 30

**Results 2 – Greater Glider (*Petauroides volans*); Figures 1(a-d).**

Figure 1(a). Greater Glider (*Petauroides volans*) [Greater Glider photograph taken within investigation location]



Figure 1(b). Greater Glider (*Petauroides volans*) [Greater Glider photograph taken within investigation location]





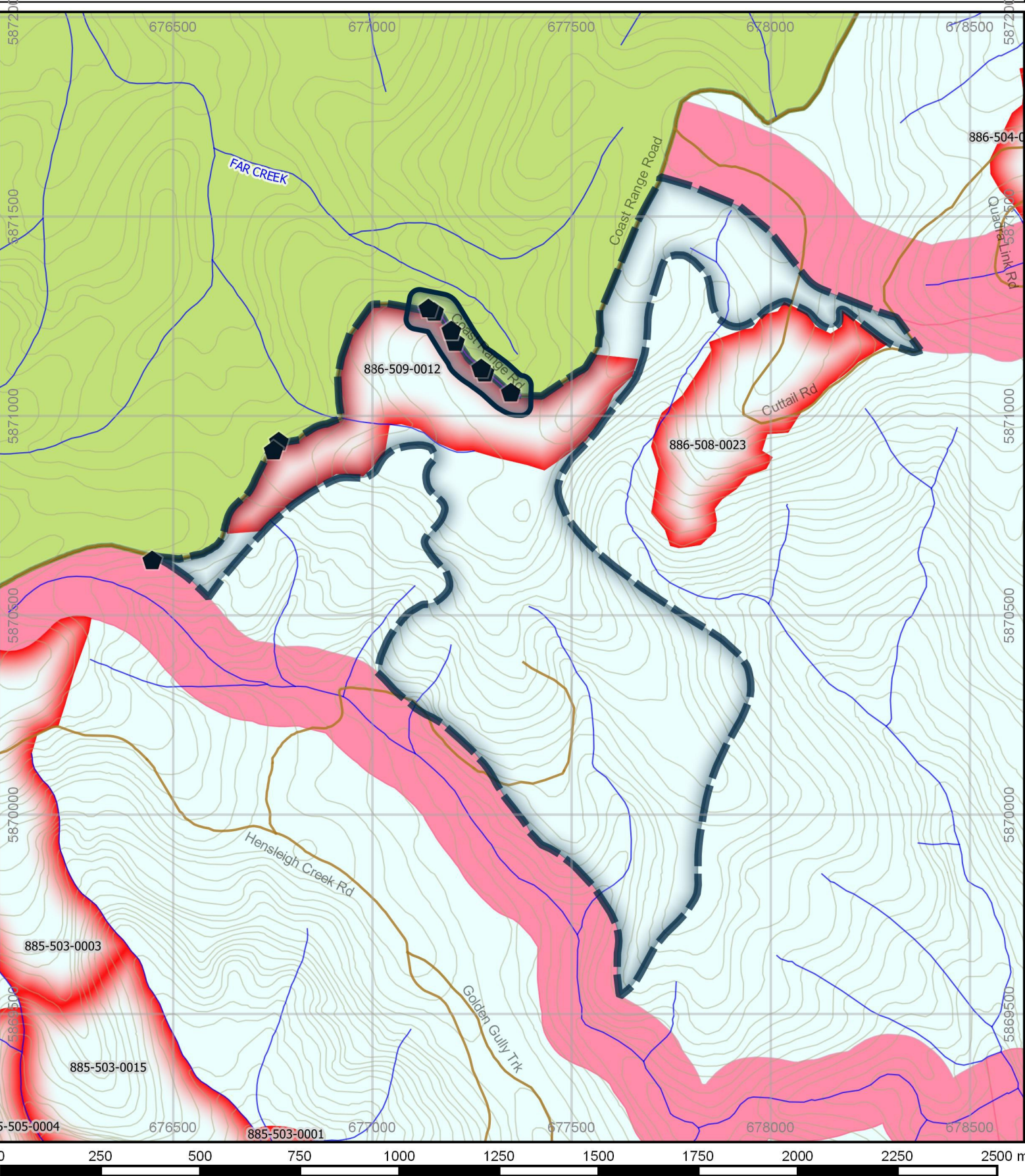
Figure 1(c). Greater Glider (*Petauroides volans*) [Greater Glider photograph taken within investigation location]



Figure 1(d). Greater Glider (*Petauroides volans*) [Greater Glider photograph taken within investigation location]



Results 3. Figure 2. Coast Range Road; Nocturnal Fauna Detection records; High Density Greater Glider Area and Protection Zone; Forest Management Zoning [DEPI, June, 2014]; Logging History [LASTLOG25]; Scheduled Logging [TRP]



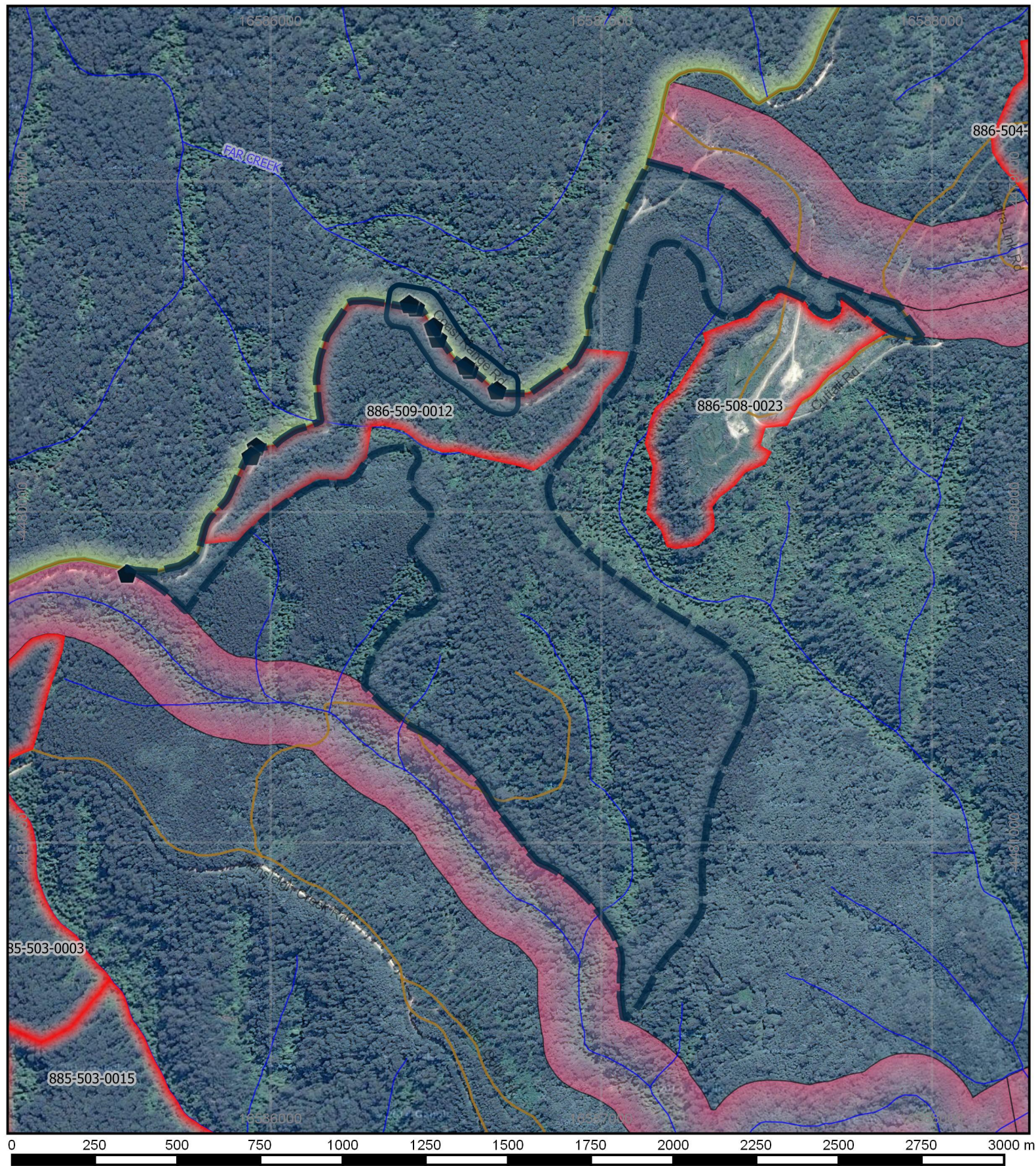
**Legend**

Greater Glider record	Forest Management Zoning [FMZ100; DEPI, June, 2014]	Timber Release Plan (VicForests) [Approved_TRP_April2015]
High Density of Greater Glider Area [8 GG within 3.99ha @ 2.01 GG per ha]	Conservation Parks and Reserves	Roads
100ha High Density of Greater Glider proposed Special Protection Zone	Special Protection Zone	Watercourses
	General Management Zone	Contours
	Parks & Reserves [PARKRES]	




Projection: EPSG: 28355  
GDA94/MGA Zone 55

Map Scale:  
1:12,500

Results 3. Figure 3. Coast Range Road; Nocturnal Fauna Detection records; High Density Greater Glider Area and Protection Zone; Forest Management Zoning [DEPI, June, 2014]; Logging History [LASTLOG25]; Scheduled Logging [TRP]; Satellite



- Legend**
-  Greater Glider Records
  -  High Density of Greater Glider Area [8 GG within 3.99ha @ 2.01 GG per ha]
  -  100ha High Density of Greater Glider proposed Special Protection Zone

- Forest Management Zoning [FMZ100; DEPI, June, 2014]**
-  Conservation Parks and Reserves
  -  Special Protection Zone
  -  General Management Zone

-  Parks & Reserves [PARKRES]
-  Timber Release Plan (VicForests) [Approved\_TRP\_April2015]
-  Roads
-  Watercourses

Projection: EPSG: 3857  
WGS 84 Pseudo Mercator

Map Scale:  
1:15,000



## Summary/Conclusions/Discussion

### High-density of Greater Gliders (*Petauroides volans*)

1. Within and adjacent to VicForests scheduled logging coupe 886-509-0012 eleven Greater Gliders (*Petauroides volans*) were observed and recorded in a single nocturnal fauna spotlighting survey transect on the 05/05/2015. These record locations are displayed in Results 3. Figure 2. as the “dark blue pentagon” points.
2. Both the “Management Standards and Procedures for timber harvesting operations in Victoria’s State forests 2014”, Department of Environment and Primary Industries, The State of Victoria, 2014 through its “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” and the Forest Management Plan For The East Gippsland Forest Management Area, Victoria Department of Conservation and Natural Resources, East Melbourne, December 1995 require that an SPZ (Special Protection Zone) of approximately 100ha of suitable habitat be established for records of > 2 individual Greater Gliders per hectare of spotlighting.
3. 8 of the 11 Greater Glider individual records were made in close proximity to each other and were recorded within less than the 3.99ha area shown in Results 3. Figure 2. as the “dark blue solid outlined” polygon at a density of > 2.01 Greater Gliders per hectare.
4. Results 3. Figure 2. shows the recommended Special Protection Zone (SPZ) of approximately 100ha of suitable habitat that can be transferred into SPZ in closest proximity to the high density of Greater Glider area identified within this report (the “dark blue dashed outlined” polygon). This SPZ design takes into account the closest and most suitable forest types required for the species habitat requirements, the distribution of prior logging operations in the nearby area and the investigation locations topographic configurations and infrastructural features.
5. In order to meet the requirements of the High Density of Greater Glider prescriptions contained within the regulatory framework governing logging operations in Victoria's State Forests this Special Protection Zone must be fully implemented prior to any further logging planning or operations within this area.
6. **VicForests must refrain from and The Department of Environment, Land, Water and Planning must restrain VicForests from logging within the 100ha SPZ displayed in Results 3. Figure 2. and ensure that this area is protected from the effects of logging including “regeneration” burns.**

