

Bruce's Track #2 – Ellery State Forest East Gippsland

842-516-0010 and 842-516-0016

LONG-FOOTED POTOROO REMOTE CAMERA SURVEY DETECTION REPORT

**Report on Long-footed Potoroo (*Potorous longipes*) detections
within VicForests scheduled logging coupes 842-516-0010 and 842-516-0016**

Abstract

The Long-footed Potoroo (*Potorous longipes*) is listed as 'endangered' in Australia under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act); 'endangered internationally under the The International Union for the Conservation of Nature (IUCN) "IUCN Red List of Threatened Species"; and 'threatened' in Victoria under the Flora and Fauna Guarantee Act 1988 (FFG Act).

VicForests' scheduled logging coupes 842-516-0010 and 842-516-0016 were investigated to assess the presence/absence of Long-footed Potoroos (*Potorous longipes*) within State Forest scheduled for logging in accordance with the Department of Sustainability and Environment's [now Department of Environment and Primary Industries] Flora and Fauna Guarantee Act (1988) ("FFGA") Action Statement No. 58 (revised in 2009) for the Long-footed Potoroo *Potorous longipes*'s Appendix I "Prescriptions to be applied in State Forest".

Long-footed Potoroos were identified during this investigation within scheduled logging coupes 842-516-0010 and 842-516-0016. This investigation concludes that VicForests, within coupes 842-516-0010 and 842-516-0016 has scheduled logging in an area of forest currently inhabited by the endangered Long-footed Potoroo.

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

Surveyors

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Date of Investigation 26/08/2014 – 14/09/2014

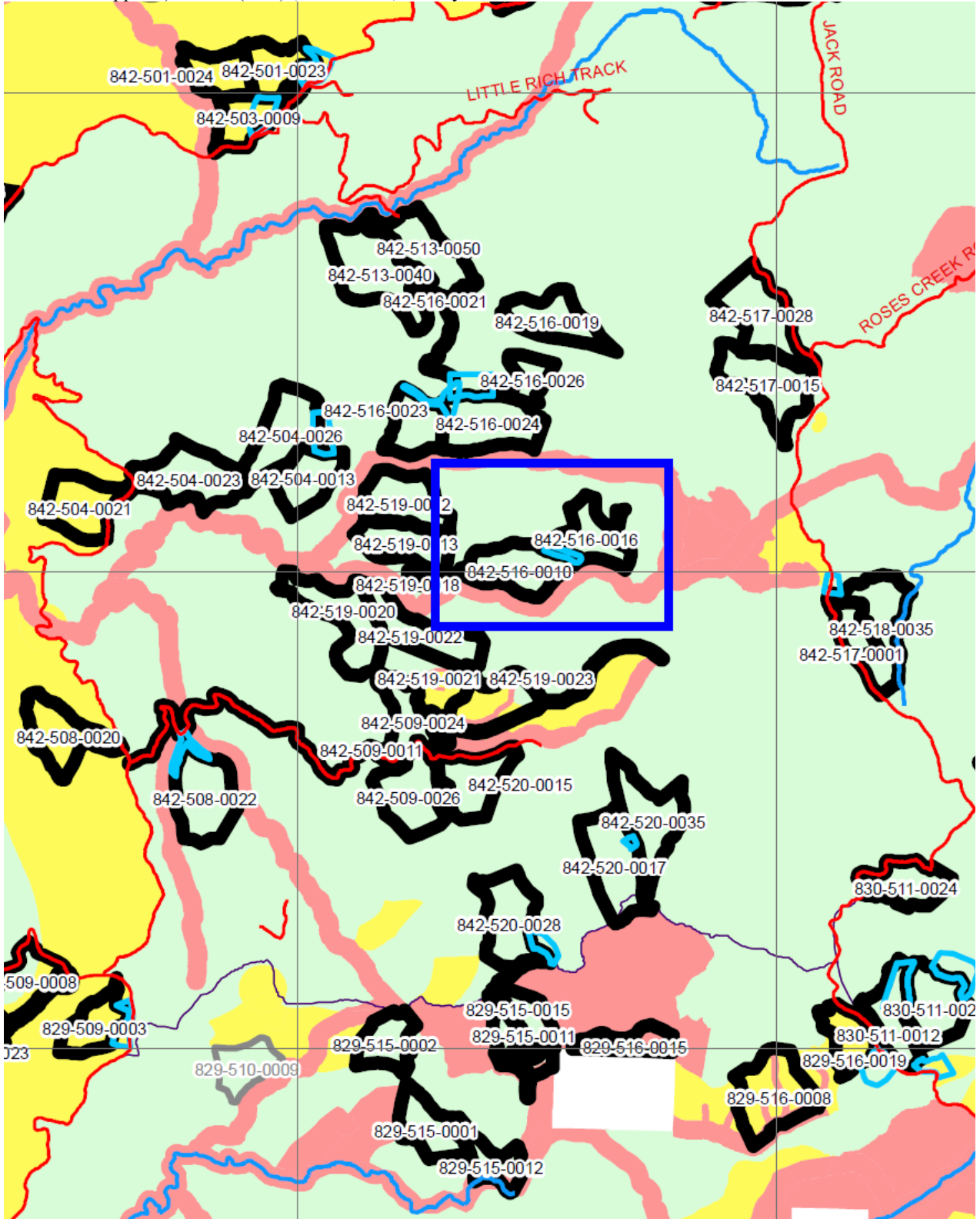
Date of report

01/10/2014

Location details

Within VicForests scheduled logging coupes 842-516-0010 and 842-516-0016 along Bruce's Track in the Ellery State Forest, East Gippsland.

Figure A. Detail from: "Approved Timber Release Plan Map – 2013-2016 Change Map; July 2014 (with all approved amendments applied) Orbost (East)", VicForests, 16 July 2014



* Investigation location within blue box.

Method (Remote Camera Survey – method used)

Remote Camera Survey [26/08/2014 – 14/09/2014]

Survey technique and Method used:

1. On the 26/08/2014 within VicForests scheduled logging coupes 842-516-0010 and 842-516-0016 2 motion triggered infra-red night vision capable cameras were deployed with each directed at a steel container with a bait attractant comprising of oats, honey and truffle oil.
2. Each of the cameras were placed at the following locations and were configured with the following settings:

Camera Details	Waypoint:	BTCAM01	BTCAM02
	Location (GDA94/UTM):	55 H 648048 // 5845426	55 H 647342 // 5845037
	Brand/Type	Reconyx HC500 Hyperfire	Reconyx HC500 Hyperfire
	Mode/Settings	10 Pictures	10 Pictures

3. On the 14/09/2014 the cameras were retrieved from the field.
4. The pictures and video captured on each of the cameras were inspected for the presence, among other fauna species, of the the Long-footed Potoroo.
5. See the “Results” section below for further details of the species discovered including the detection of the Long-footed Potoroo.

Figure B. “BTCAM01” camera placement at: [55 H 648048 // 5845426](#) (GDA94 UTM)



Method (analysis/conclusions/recommendations)

From: “*Flora and Fauna Guarantee Act (1988) Action Statement No. 58 (revised in 2009) for the Long-footed Potoroo [including] Appendix I 'Prescriptions to be applied in State Forest'*”¹

“Conservation Objective

Long term objective

To ensure that the Long-footed Potoroo can survive, flourish and retain its potential for evolutionary development in the wild.

Intended Management Actions

The intended management actions listed below are further elaborated in DSE’s Actions for Biodiversity Conservation (ABC) system. Detailed information about the actions and locations, including priorities, is held in this system and will be provided annually to land managers and other authorities. It is intended that the targets specified below be met within the five year timeframe of this Action Statement.

...

Action 4

Protect Long-footed Potoroo habitat at detection sites on public land outside the Core Protected Area

Establish additional protected areas where Long-footed Potoroos have been detected in State forest or other public land outside the Core Protected Area. In State forest, apply the protection measures specified in Appendix I. The protection measures will be formally reviewed in 2014.

Responsibility: DSE, VicForests

Appendix I: Prescriptions to be applied in State forest:

1. Each Long-footed Potoroo (LFP) detection site outside the Core Protected Area will generate a Special Management Zone (SMZ) of approximately 150 ha.
2. As far as possible, SMZ boundaries will follow recognisable landscape features such as ridges, spurs and watercourses.
3. Within each SMZ, at least one third (~50 ha) will be protected from timber harvesting and new roading.
4. This will be known as Long-footed Potoroo Retained Habitat.
5. The LFP Retained Habitat will include the best LFP habitat in the SMZ, which will generally be in gullies and on lower, sheltered slopes.
6. The LFP Retained Habitat may include areas otherwise unavailable for timber harvesting due to restrictions under the Code of Practice for Timber Harvesting.
7. The SMZ will also have a general restriction of one third of the total area that can be harvested in any three year period. If more than one coupe is to be harvested in an SMZ in the same year, the coupes must be separated by at least the equivalent of another coupe width.
8. The SMZ, with the LFP Retained Habitat clearly delineated, will be shown as part of the Forest Management Area zoning scheme.
9. The SMZ will be designed by DSE, in consultation with VicForests, and approved by DSE.
10. If the ~150 ha area includes any part of an existing conservation reserve or Special Protection Zone (SPZ), these areas will retain their existing reservation or zoning status but will be considered for inclusion as part of the area of retained habitat. In such cases, the final area designated as SMZ may be correspondingly smaller.”

1 “Flora and Fauna Guarantee Act (1988) (“FFGA”) Action Statement No. 58 (revised in 2009) for the Long-footed Potoroo *Potorous longipes*”, [when published] Department of Sustainability and Environment's, Victorian Government Department of Sustainability and Environment [now Department of Environment and Primary Industries], Melbourne, August 2009, pp. 7-8, 13

Results 1 – Summary and Table 1.

Summary

1. Cameras were deployed on the afternoon of Tuesday 26 August and as such the morning of that day is not part of a recording session. Similarly, cameras were retrieved on the afternoon of Sunday 14 September and that evening is also not part of a recording session.
2. In total there were 19 camera survey nights, from dusk till dawn, undertaken at the locations shown below.
3. Long-footed Potoroos were recorded as present within VicForests scheduled logging coupes on 2 of the 2 cameras and on 6 (or 32%) of the 19 survey nights.
4. Images of each of the Long-footed Potoroo detections and further details are provided in the following “Results – Figures 1(a-g)” section below.
5. The following species were also recorded during this survey:

Common Name	Scientific name	BTCAM01	BTCAM02
Eastern Yellow Robin	<i>Eopsaltria australis</i>	YES	
Wonga Pigeon	<i>Leucosarcia melanoleuca</i>	YES	
Superb Lyrebird	<i>Menura novaehollandiae</i>		YES
Long-footed Potoroo	<i>Potorous longipes</i>	YES	YES
Common Brushtail Possum	<i>Trichosurus vulpecula</i>	YES	YES
Mountain Brushtail Possum	<i>Trichosurus cunninghami</i>		YES
Common Wombat	<i>Vombatus ursinus</i>		YES
Swamp Wallaby	<i>Wallabia bicolor</i>	YES	

Table 1. Summary of the recording schedule and Long-footed Potoroo detections

Camera Details	Waypoint:			BTCAM01	BTCAM02	All Cameras	
	Location (GDA94/UTM):			55 H 648048 // 5845426	55 H 647342 // 5845037	-	
	Brand/Type			Reconyx HC500 Hyperfire	Reconyx HC500 Hyperfire	-	
	Mode/Settings			10 Pictures	10 Pictures	-	
Date/Survey Session (nights/dusk-dawn)/Time of recording	Date	Time	#				
	26	Tuesday	AM				
			PM	1			
	27	Wednesday	AM				
			PM	2		PM 08:15:54	PM 08:15:54
	28	Thursday	AM	3			
			PM	4			
	29	Friday	AM	5			
			PM	6			
	30	Saturday	AM	7			
			PM	8			
	31	Sunday	AM	9			
			PM	10			
	1	Monday	AM	11			
			PM	12			
	2	Tuesday	AM	13			
			PM	14			
	3	Wednesday	AM	15	PM 09:09:37; NB: 6x trigger events	AM 12:47:59	AM 12:47:59; PM 09:03:37
	4	Thursday	AM	16			
			PM	17			
	5	Friday	AM	18			
			PM	19			
	6	Saturday	AM	20			
			PM	21			
	7	Sunday	AM	22			
			PM	23			
	8	Monday	AM	24		PM 07:21:32	PM 07:21:32
			PM	25			
9	Tuesday	AM	26		PM 07:59:45	PM 07:59:45	
		PM	27				
10	Wednesday	AM	28				
		PM	29				
11	Thursday	AM	30		PM 07:28:58	PM 07:28:58	
		PM	31				
12	Friday	AM	32		PM 07:11:45	PM 07:11:45	
		PM	33				
13	Saturday	AM	34				
		PM	35				
14	Sunday	AM	36				
		PM	37				
# of 19 survey nights with LFP recorded present:				1	6	6	
% of 19 survey nights with LFP recorded present:				5%	32%	32%	
Legend:				No Camera Survey	Camera survey night	LFP Present	

Results 2 – Figures 1(a-g). and Results 3 – Figures [maps] 2 - 5.

Figure 1(a). “BTCAM01”, Long-footed Potoroo detection 1/1 (NB: there were 6x 10 image sequences triggered by LFP at this time) at: 55 H 648048 // 5845426 (GDA94 UTM) 2014-09-03 09:10:24 PM Image10/10 [50/60]



Figure 1(b). “BTCAM02”, Long-footed Potoroo detection 1/6 at: 55 H 647342 // 5845037 (GDA94 UTM) 2014-08-27_08:15:54 PM Image 1/10



Results 2 – Figures 1(a-g). and Results 3 – Figures [maps] 2 - 5.

Figure 1(c). “BTCAM02”, Long-footed Potoroo detection 2/6 at: [55 H 647342 // 5845037](#) (GDA94 UTM) 2014-09-04_12:48:10 AM Image 6/10



Figure 1(d). “BTCAM02”, Long-footed Potoroo detection 3/6 at: [55 H 647342 // 5845037](#) (GDA94 UTM) 2014-09-08_07:21:35 PM Image 2/10



Results 2 – Figures 1(a-g). and Results 3 – Figures [maps] 2 - 5.

Figure 1(e). “BTCAM02”, Long-footed Potoroo detection 4/6 at: [55 H 647342 // 5845037](#) (GDA94 UTM) 2014-09-09_07:59:45 PM Image 1/10



Figure 1(f). “BTCAM02”, Long-footed Potoroo detection 5/6 at: [55 H 647342 // 5845037](#) (GDA94 UTM) 2014-09-11_07:29:06 PM Image 5/10



Results 2 – Figures 1(a-g). and Results 3 – Figures [maps] 2 - 5.

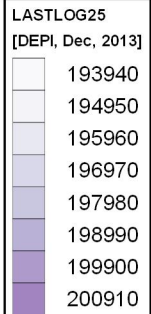
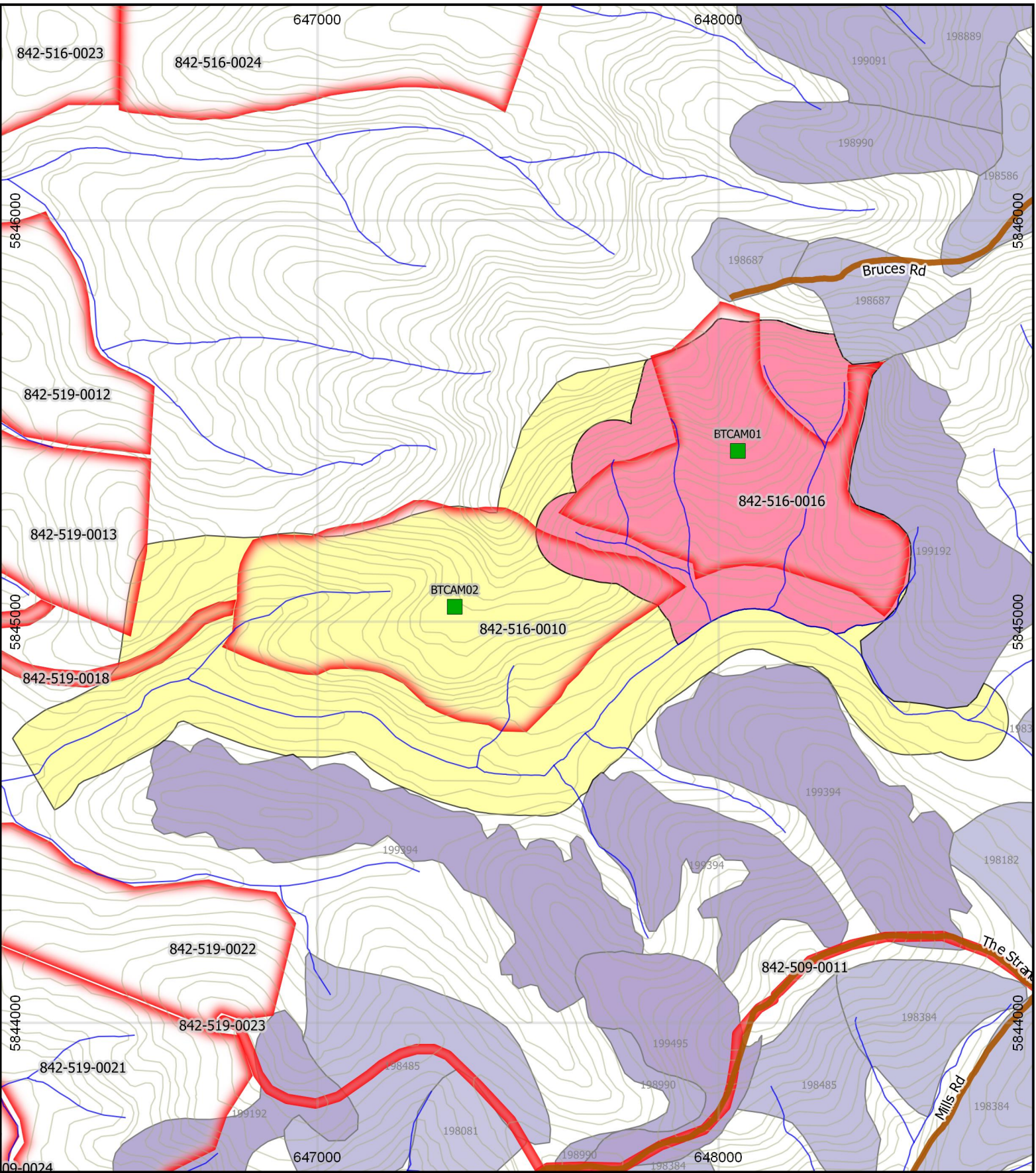
Figure 1(g). “BTCAM02”, Long-footed Potoroo detection 6/6 at: [55 H 647342 // 5845037](#) (GDA94 UTM) 2014-09-12_07:11:53 PM Image 5/10



Figure C. “BTCAM02” camera placement at: [55 H 647342 // 5845037](#) (GDA94 UTM)



Results 3. Figure 2. Bruce's Track #2 - Long-footed Potoroo Detection Locations; "BTCAM01" Proposed "Special Management Zone" with "Retained Habitat"; Prior logging history [DEPI; December, 2013]; Roads, Watercourses, Contours



Projection: EPSG: 28355
GDA94/MGA Zone 55

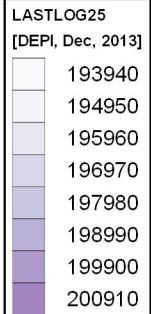
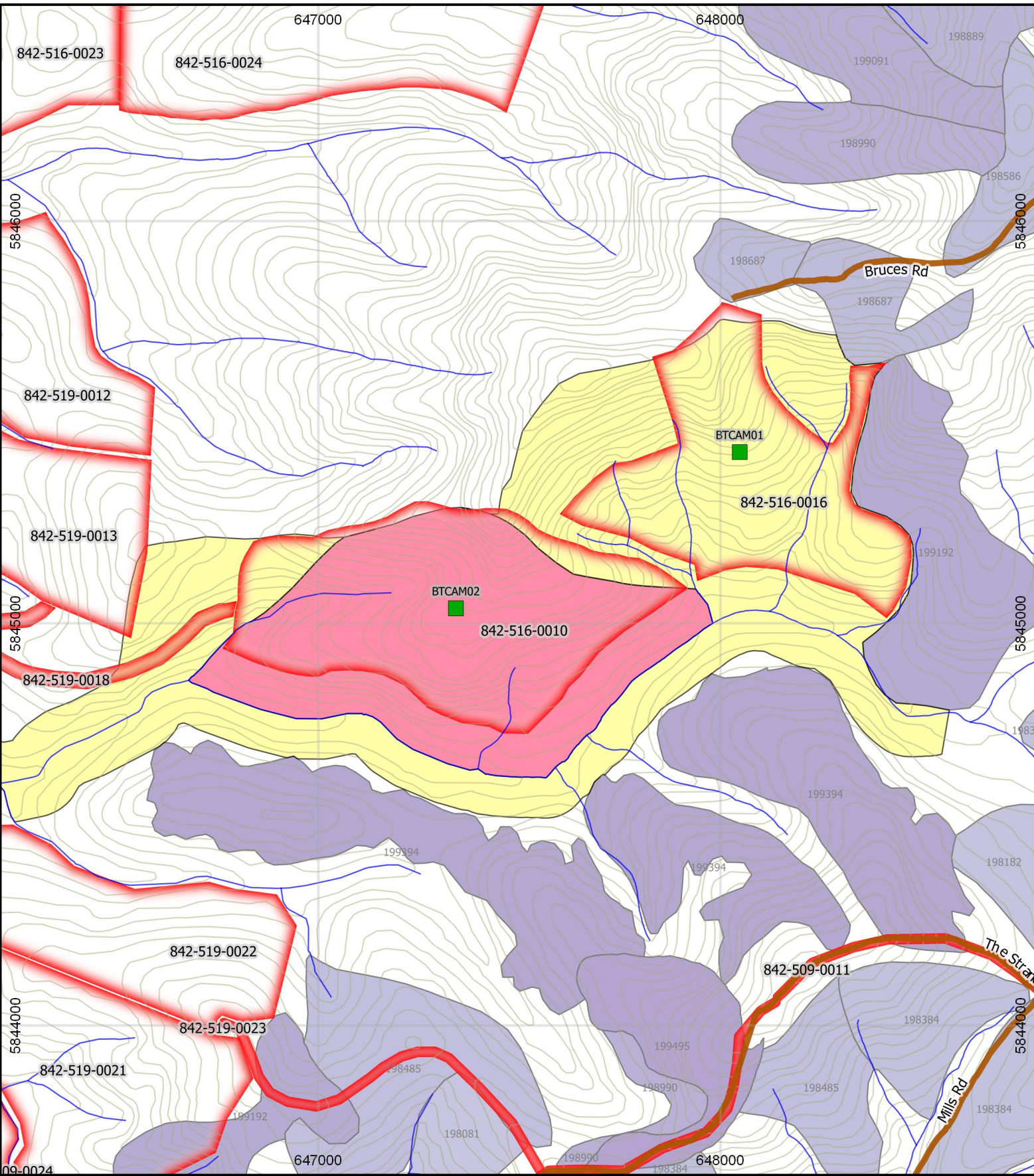
Map Scale:
1:12,500



Legend

- | | | |
|---|--|--------------|
| Long-footed Potoroo Detection Location | Proposed LFP "Retained Habitat" for "BTCAM01" detection (49.97 ha) | Roads |
| Scheduled Logging Coupes (VicForests TRP) | Proposed LFP "Special Management Zone" for "BTCAM01" detection (149.92 ha) | Contours |
| | | Watercourses |

Results 3. Figure 3. Bruce's Track #2 - Long-footed Potoroo Detection Locations; "BTCAM02" Proposed "Special Management Zone" with "Retained Habitat"; Prior logging history [DEPI; December, 2013]; Roads, Watercourses, Contours










Projection: EPSG: 28355
GDA94/MGA Zone 55

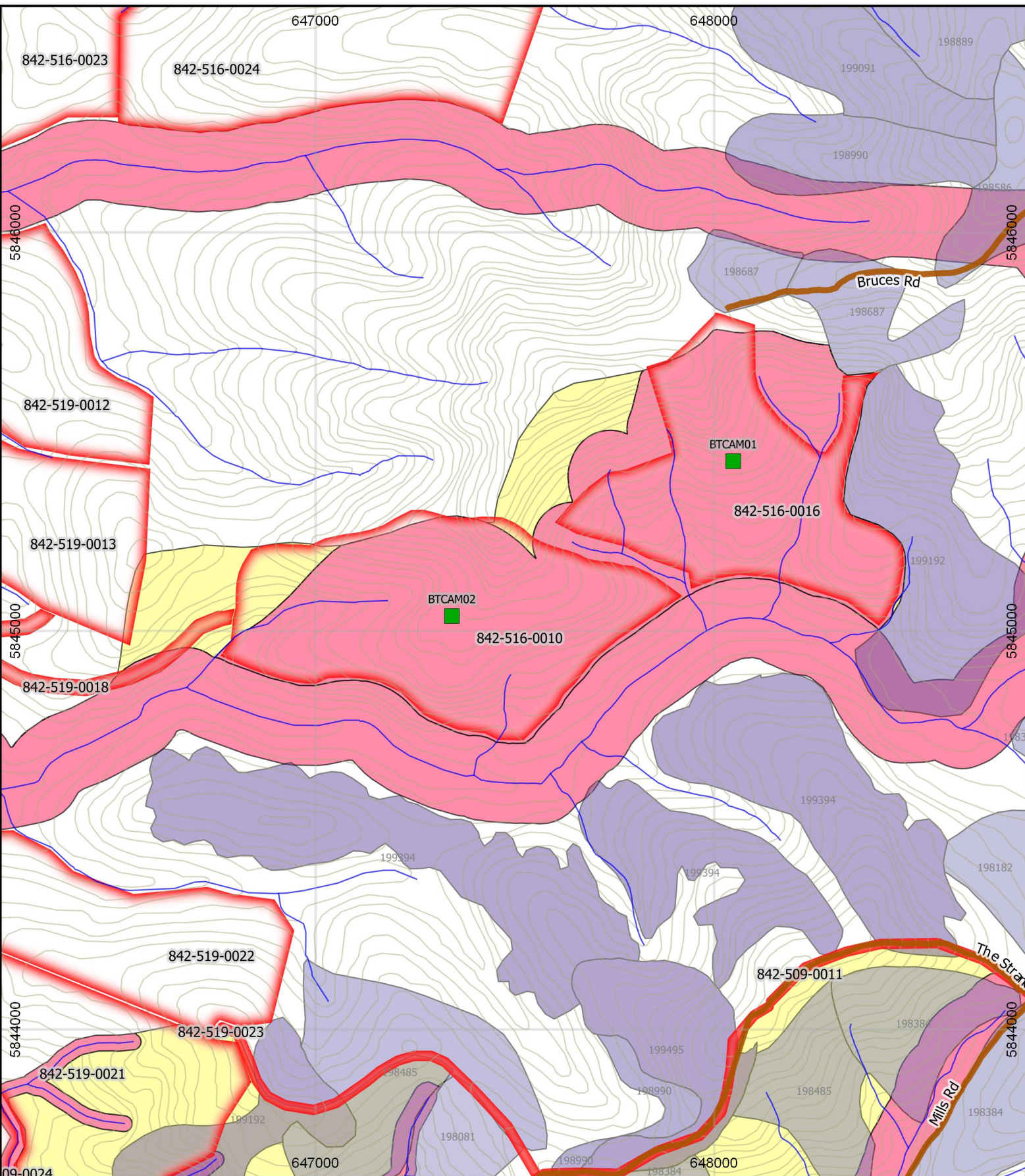
Map Scale:
1:12,500



Legend

 Long-footed Potoroo Detection Location	 Proposed LFP "Retained Habitat" for "BTCAM02" detection (49.89 ha)	 Roads
 Scheduled Logging Coupes (VicForests TRP)	 Proposed LFP "Special Management Zone" for "BTCAM02" detection (149.75 ha)	 Contours
		 Watercourses

Results 3. Figure 4. Bruce's Track #2 - Long-footed Potoroo Detection Locations; Forest Management Zoning [DEPI, June, 2014] (with proposed LFP detection additions); Prior logging history [DEPI; December, 2013]; Roads, Watercourses, Contours



0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 m

LASTLOG25 [DEPI, Dec, 2013]	
[Lightest Blue]	193940
[Light Blue]	194950
[Medium-Light Blue]	195960
[Medium Blue]	196970
[Medium-Dark Blue]	197980
[Dark Blue]	198990
[Darkest Blue]	199900
[Purple]	200910

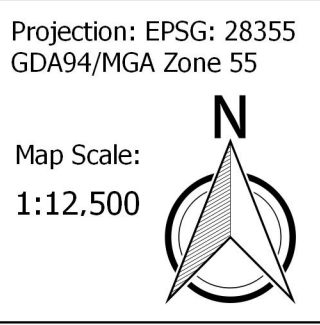
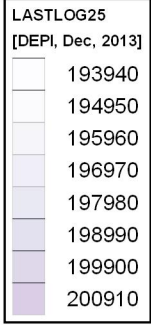
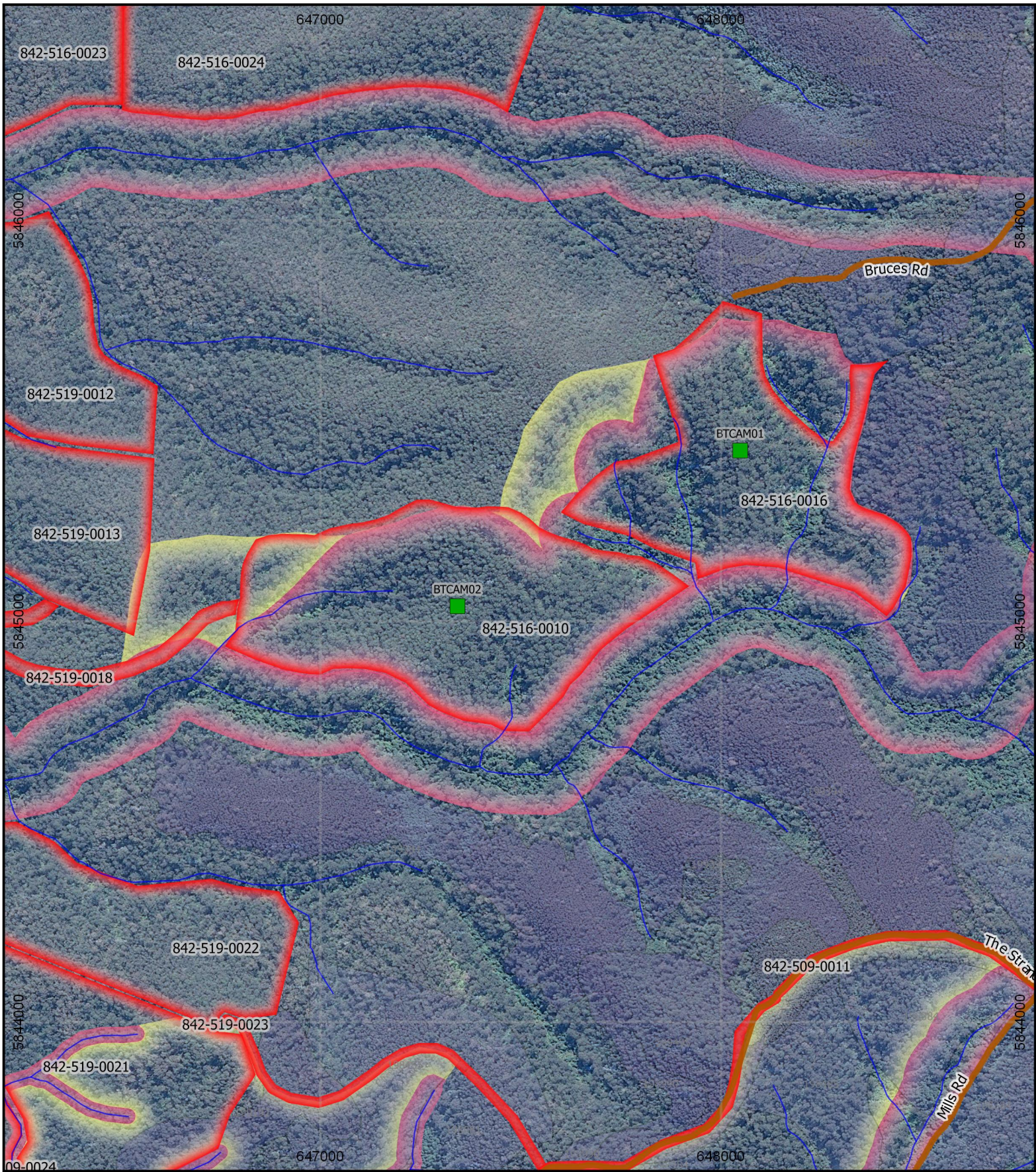
Projection: EPSG: 28355
GDA94/MGA Zone 55

Map Scale:
1:12,500



Legend		
■ Long-footed Potoroo Detection Location	■ Existing FMZ [DEPI, June, 2014] (with proposed LFP detection additions)	■ Special Management Zone
■ Scheduled Logging Coupes (VicForests TRP)	■ Code of Forest Practice	— Roads
	■ Special Protection Zone	— Contours
		— Watercourses

Results 3. Figure 5. Bruce's Track #2 - Long-footed Potoroo Detection Locations; "BTCAM02" Proposed "Special Management Zone" with "Retained Habitat"; Prior logging history [DEPI; December, 2013]; Roads, Watercourses, Contours; Satellite imagery



Legend

Long-footed Potoroo Detection Location	Proposed LFP "Retained Habitat" for "BTCAM02" detection (49.89 ha)	Roads
Scheduled Logging Coupes (VicForests TRP)	Proposed LFP "Special Management Zone" for "BTCAM02" detection (149.75 ha)	Contours
		Watercourses

Discussion/Conclusions/Recommendations

“Flora and Fauna Guarantee Act (1988) Action Statement No. 58 (revised in 2009) for the Long-footed Potoroo [including] Appendix I 'Prescriptions to be applied in State Forest’”²

Appendix I: Prescriptions to be applied in State forest:

1. Each Long-footed Potoroo (LFP) detection site outside the Core Protected Area will generate a Special Management Zone (SMZ) of approximately 150 ha.
2. As far as possible, SMZ boundaries will follow recognisable landscape features such as ridges, spurs and watercourses.
3. Within each SMZ, at least one third (~50 ha) will be protected from timber harvesting and new roading.
4. This will be known as Long-footed Potoroo Retained Habitat.
5. The LFP Retained Habitat will include the best LFP habitat in the SMZ, which will generally be in gullies and on lower, sheltered slopes.
6. The LFP Retained Habitat may include areas otherwise unavailable for timber harvesting due to restrictions under the Code of Practice for Timber Harvesting.
7. The SMZ will also have a general restriction of one third of the total area that can be harvested in any three year period. If more than one coupe is to be harvested in an SMZ in the same year, the coupes must be separated by at least the equivalent of another coupe width.
8. The SMZ, with the LFP Retained Habitat clearly delineated, will be shown as part of the Forest Management Area zoning scheme.
9. The SMZ will be designed by DSE, in consultation with VicForests, and approved by DSE.
10. If the ~150 ha area includes any part of an existing conservation reserve or Special Protection Zone (SPZ), these areas will retain their existing reservation or zoning status but will be considered for inclusion as part of the area of retained habitat. In such cases, the final area designated as SMZ may be correspondingly smaller.

Long-footed Potoroo detection records

1. Long-footed Potoroo detection records were obtained between 26/08/2014 and the 14/09/2014 within scheduled logging coupes 842-516-0010 and 842-516-0016 at the 2 locations detailed in the preceding “Results” section's Table 1. and Figures [maps] 2-5.”.
2. In total 12 10-image sequences of Long-footed Potoroos were obtained on a total of 6 out of 19 survey nights (32%). An image from each of the unique time sequences is shown in the preceding “Results” section's Figure 1(a-g).”.
3. Figures [maps] 2.-5. shows the two separate “Long-footed Potoroo Detection Locations”.
4. The *Long-footed Potoroo FFGA Action Statement* requires that each “*Long-footed Potoroo (LFP) detection site outside the Core Protected Area will generate a Special Management Zone (SMZ) of approximately 150 ha.*” Also, the FFGA Action Statement requires that “*as far as possible, SMZ boundaries will follow recognisable landscape features such as ridges, spurs and watercourses*”, and “*within each SMZ, at least one third (~50 ha) will be protected from timber harvesting and new roading,*” and that “*this will be known as Long-footed Potoroo Retained Habitat.*” and that “*the LFP Retained Habitat will include the best LFP habitat in the SMZ, which will generally be in gullies and on lower, sheltered slopes.*”
5. In *Environment East Gippsland v VicForests* [2010 VSC 335] His Honour Justice Osborne included in his judgment criticism by a DSE biodiversity officer of a proposed LFP Retained Habitat area that failed to cover the detection site itself at [419]:

² “Flora and Fauna Guarantee Act (1988) (“FFGA”) Action Statement No. 58 (revised in 2009) for the Long-footed Potoroo *Potorous longipes*”, p 13

“1. The intent of the SMZ and especially the Retained Habitat (RH) is to provide protection for the habitat of the LfPs [Long-footed Potoroos] around the detection site, partly so we can demonstrate that we are NOT knowingly logging forest likely to be the home range of the individual detected. “2. The home range of LfPs appears to be in the order of 10 to 20 ha, with some animals ranging over larger areas (up to 100 ha). Thus, the RH should be designed to try to capture an area of this order (ie low tens of ha) around the detection site (which is why the Action Statements states the RH is to be about 50 ha). Designing the RH so that it is greater than a few hundred metres from the detection site is not within the purpose and spirit of the prescription. Lee’s recommended SMZ design places about half of the RH further than 500 m from the detection site and thus well outside the expected home range of the detected individual.”

6. His Honour also stated at [420] that:

“The formulation of the retained habitat must [...] take into account each of the first, second and third detections.”

7. Figures [maps] 2. and Figure [map] 3. each show a recommended Long-footed Potoroo “Special Management Zone” (SMZ) of 149.92 ha and 149.75 ha respectively for which the spatial delineation of each follows the ridges, spurs and watercourses of the local terrain.
8. Each “SMZ” contains an area of 49.97 ha and 49.89 ha respectively (the “Long-footed Potoroo Retained Habitat”) of the best available habitat comprising the two areas of known Long-footed Potoroo occupancy and the closest available gullies and lower sheltered slopes.
9. Each of the recommended “Long-footed Potoroo Retained Habitat”, 49.97 ha and 49.89 ha, “takes into account each of the ... detections” and aims to cover, owing to what can be ascertained from the available evidence, the home range of the LFP's detected. The LFP Retained Habitat is almost entirely contained within the closest 500m from each of the detection sites and thus within the expected home range of the individuals detected.
10. The Department of Environment and Primary Industries (DEPI) must restrain VicForests from logging within coupes 842-516-0010 and 842-516-0016 until all necessary management actions triggered responsive to the Long-footed Potoroo detections detailed above are completed and should ensure that the recommended FFGA AS #58 LFP SMZ's with one third protected as LFP RH provided and shown in Figures [maps] 2. - 5. are implemented.
11. The Fauna and Flora Research Collective has detected the Long-footed Potoroo and corresponded on the appropriateness of responsive forest management planning for at least 38 locations in State Forests within scheduled logging coupes from 2009 to the present. The details of each detection is contained in the 28 survey reports and letters submitted to the Department of Sustainability and Environment (“DSE”), now DEPI and VicForests. Serious ongoing disagreement concerning the quality and appropriateness of the design, approval and spatial arrangement of each of the SMZ's required to be enacted following each of the LFP detections demands the need for special attention to the appropriate design and implementation of any further FFGA AS#58 LFP SMZ's with one third protected as LFP RH in accordance with the meaning and intention of the Flora and Fauna Guarantee Act (1988). Further details can be found here: <http://faunaandfloraresearchcollective.wordpress.com/lfp-smz-review/>
12. In addition, VicForests must conduct (and the Department of Environment and Primary Industries must require that VicForests conduct) appropriate presence/absence surveys for the Long-footed Potoroo in all areas scheduled for logging within the distributional range of the Long-footed Potoroo prior to the commencement of any logging operations.