

## INVESTIGATION REPORT

# DETECTION OF ORBOST SPINY CRAYFISH (*Euastacus diversus*)

**Basin Creek (Snowy River) Catchment**  
Tulloch Ard Road/Running Creek Track

**VicForests' Logging Coupes:  
810-501-0006 & 810-501-0009**

### Abstract

This investigation report details the detection of the endangered Orbost Spiny Crayfish (*Euastacus diversus*) encountered during an investigation of threatened species values within VicForests scheduled logging coupes 810-501-0006 and 810-501-0009.

The regulatory framework governing logging operations in Victoria, through the Code of Practice for Timber Production 2014 and its incorporated documents require that for records of *Euastacus diversus* (Orbost Spiny Crayfish), a SPZ extending 100 m from each bank for 1 km upstream and 1 km downstream" must be established within which all logging must be excluded.

### Status of Site:

Coupe 810-501-0006 & 810-501-0009 are scheduled for logging on the current timber release plan and are currently listed as "Harvest Pending" on VicForests' website, although logging may have already commenced within these coupes.

The Department of Environment, Land, Water and Planning (DELWP) must immediately restrain VicForests from commencing logging within 100m of the streams in coupes 810-501-0006 & 810-501-0009 within which *Euastacus diversus* was detected.

### Relevant Legislation

- Code of Practice for Timber Production 2014, Department of Environment and Primary Industries, The State of Victoria, 2014  
*Incorporated documents:*
- "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

### Date of Investigation:

15/12/2016

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### Date of report:

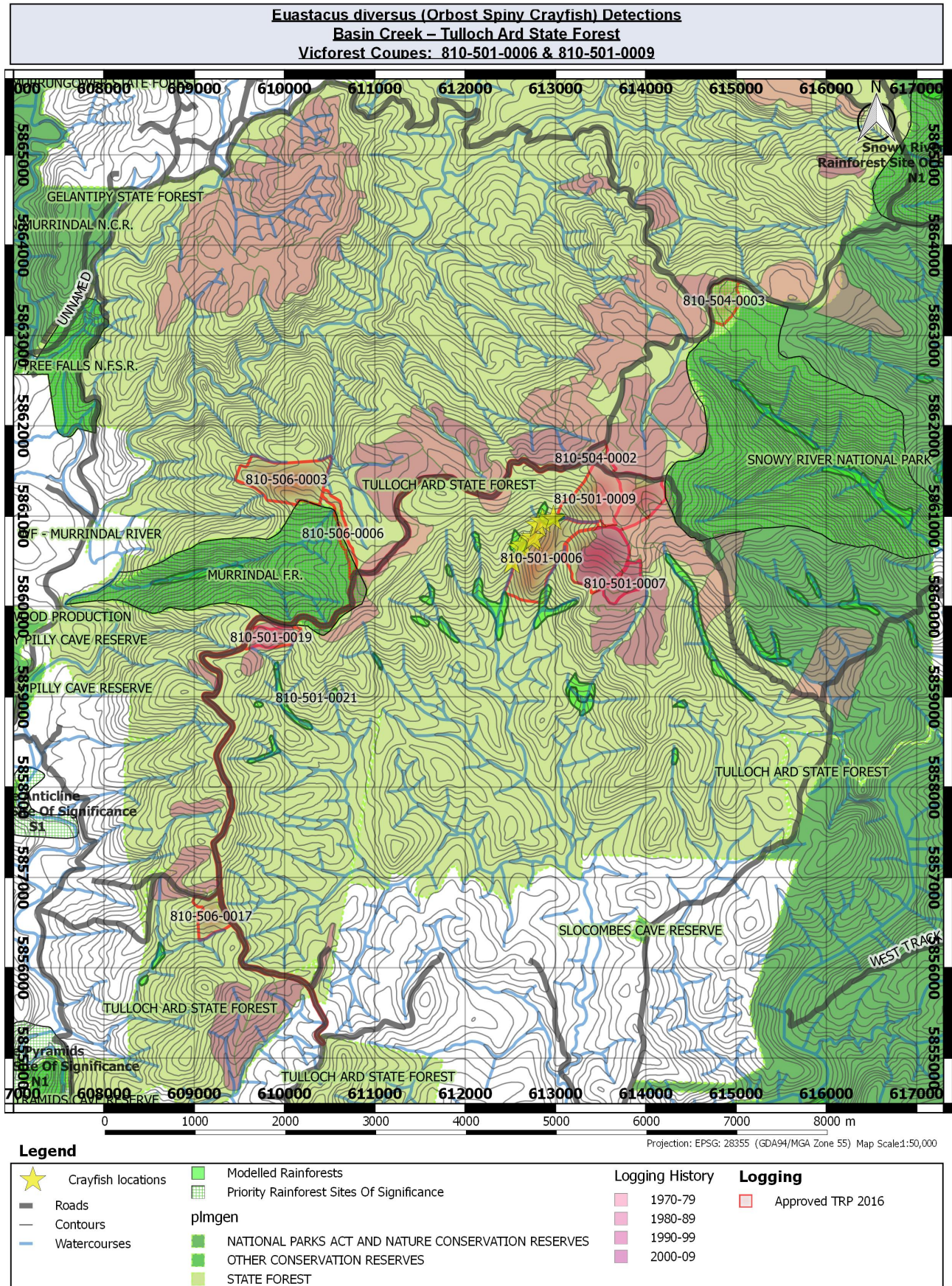
13/01/2017

### Author:

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# Study Location Overview

Figure A. VicForests scheduled logging coupes 810-501-0006 and 810-501-0009 off Tulloch Ard Road in the “Basin Forest Block” of East Gippsland.



## Method Used and Results Summary

### Equipment Used

- Digital Camera
- Head torch
- Global Positioning System (GPS)  
[Garmin GPSMAP 62s]

Method used/Results Summary – Walking search/inspection of creeks for *Euastacus diversus* [15/12/2016]

1. On 15th December 2016 surveyors conducted a nocturnal active riparian search covering a section of the watercourses within and adjacent to VicForests active and scheduled logging coupes 810-501-0006 & 810-501-0009.
2. At approximately 55 H 612520 5860485 (location 01), 55 H 612645 5860677 (location 02), 55 H 612611 5860651 (location 03), 55 H 612740 5860740 (location 04), 55 H 612761 5860763 (location 05), 55 H 612809 5860897 (location 06), 55 H 612858 5860941 (location 07) and 55 H 612979 5860974 (location 08), *Euastacus* individuals were observed in small pools within the Basin Creek (Snowy River) system.
3. Photographs were taken of each *Euastacus* individual at locations 02 to 08 and were identified to the “East Gippsland Spiny Cray Group (EGSCGroup)” as per the Victorian Government Department of Environment, Land, Water and Planning's “survey standard” “10-Spiny-Cray-Euastacus-spp-Survey-Standards-FINALv1.0\_2MAY11” as published on their website.<sup>1</sup> Identification to species was made for the individual at location 03 derived from *Euastacus* spp. distributions spatially delineated within the "Victorian Biodiversity Atlas" spatial datasets and with reference to "A Guide to Australia's Spiny Freshwater Crayfish" (McCormack, R. B., 2012), particularly regarding the presence of the "male cuticle partition", the lack of "telsonic surface spines" and the presence of 4 "mesal carpal spines" on this individual (see "Results 1 (Photos and location details) below).<sup>2</sup>
4. Photographs of Orbost Spiny Crayfish (*Euastacus diversus*) encountered at location 03 are provided in the Results 1. section as Figure 1. and further location details are provided in the maps of Results 2. below.

1 "Survey Standard: Spiny Crayfish, *Euastacus* spp. (including the Orbost Spiny Crayfish)" The Department of Sustainability and Environment Approved Survey Standards: Spiny Crayfish *Euastacus diversus*., v.1.0, 2 May 2011

2 McCormack, R. B., A Guide to Australia's Spiny Freshwater Crayfish, CSIRO Publishing, Melbourne, 2012

## Method 2 (analysis/recommendations)

Excerpts from: “Code of Practice for Timber Production 2014, Department of Environment and Primary Industries, The State of Victoria, 2014”<sup>3</sup>

### 1 General

#### 1.2 The Code of Practice for Timber Production

##### 1.2.6 Compliance on State forest

Under the *Sustainable Forests (Timber) Act 2004*, compliance with this Code is mandatory for any person planning for or conducting a timber harvesting operation on **State forest**. Penalties for noncompliance may apply if timber harvesting operations on State forest are not in accordance with the Code.

The Code is a prescribed legislative instrument made and enforced under relevant law listed in the *Conservation, Forests and Lands Act 1987*. For the purposes of each relevant law the **Secretary** is an **authorised officer** and is therefore responsible for ensuring compliance with the Code on State forest. Compliance is also monitored by other authorised officers appointed by the Secretary pursuant to the *Conservation, Forests and Lands Act 1987*.

### 2 Code Application – State Forests

#### 2.2 Environmental Values in State forests

Timber harvesting operations in native forests may have local impacts on environmental values such as water quality and **biodiversity**. Appropriate planning and management through the lifecycle of the timber harvesting operation can minimise these impacts. This section includes requirements that must be observed during planning, roading, harvesting, tending and regeneration of native forests.

##### 2.2.2 Conservation of Biodiversity

###### Operational Goal

**Timber harvesting operations in State forests** specifically address **biodiversity** conservation risks and consider relevant scientific knowledge at all stages of planning and management.

###### Mandatory Actions

###### **Addressing biodiversity conservation risks considering scientific knowledge**

2.2.2.1 Planning and management of timber harvesting operations must comply with relevant biodiversity conservation measures specified within the **Management Standards and Procedures**.

2.2.2.2 The **precautionary principle** must be applied to the conservation of biodiversity values. The application of the precautionary principle will be consistent with relevant monitoring and research that has improved the understanding of the effects of forest management on forest ecology and conservation values.

2.2.2.3 The advice of relevant experts and relevant research in ~~conservation~~ biology and flora and fauna management must be considered when planning and conducting timber harvesting operations.

2.2.2.4 During planning identify biodiversity values listed in the Management Standards and Procedures prior to roading, harvesting, **tending** and **regeneration**. Address risks to these values through management actions consistent with the Management Standards and Procedures such as appropriate location of **coupe infrastructure, buffers, exclusion areas**, modified harvest timing, modified silvicultural techniques or retention of specific structural attributes.

2.2.2.5 Protect areas excluded from harvesting from the impacts of timber harvesting operations.

###### **2.2.2.6 Perpetuating the biodiversity of harvested native forests**

2.2.2.8 Long-term (strategic) **forest** management planning must incorporate **wildlife corridors**, comprising appropriate widths of retained forest, to facilitate animal movement between patches of forest of varying ages and stages of development, and contribute to a linked system of reserves.

3 *Code of Practice for Timber Production 2014*, pp. 11, 21, 23, 31-32, 34-35

## Glossary

**‘precautionary principle’** means when contemplating decisions that will affect the environment, careful evaluation of management options be undertaken to wherever practical avoid serious or irreversible damage to the environment; and to properly assess the risk-weighted consequences of various options. When dealing with threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

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>4</sup>

## “4. Biodiversity

### 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 5 Detection based FMZ rules for fauna.**<sup>5</sup>

FMA	Common name	Scientific name	Zoning management actions	Management actions	Review
East Gippsland	Orbost Spiny Crayfish	Euastacus diversus	<b>Establish a SPZ extending 100 m from each bank for 1 km upstream and 1 km downstream of verified detection sites.</b>	<b>Avoid constructing new roads and stream crossings within the SPZ. Manage nearby regeneration burns to ensure the SPZ is not burnt.</b>	Review this strategy when 20 sites are established.

<sup>4</sup> *Planning Standards*, p. 36

<sup>5</sup> *Planning Standards*, “Table 4 Detection based FMZ rules for fauna”, p. 45

## Results 1 (Photos and location details)



Figure 1(a). *Euastacus diversus* (location 03)  
at 55 H 612610 5860653 (GDA94 UTM)



Figure 1(b). *Euastacus diversus* (location 03)  
at 55 H 612610 5860653 (GDA94 UTM)



Figure 1(c). *Euastacus diversus* (location 03)  
at 55 H 612610 5860653 (GDA94 UTM)

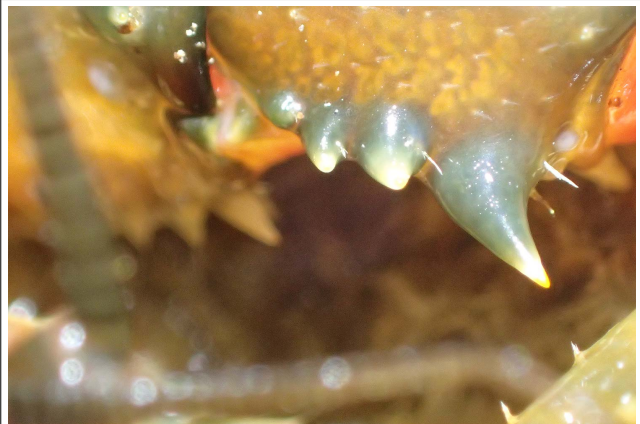


Figure 1(d). *Euastacus diversus* (location 03)  
at 55 H 612610 5860653 (GDA94 UTM)



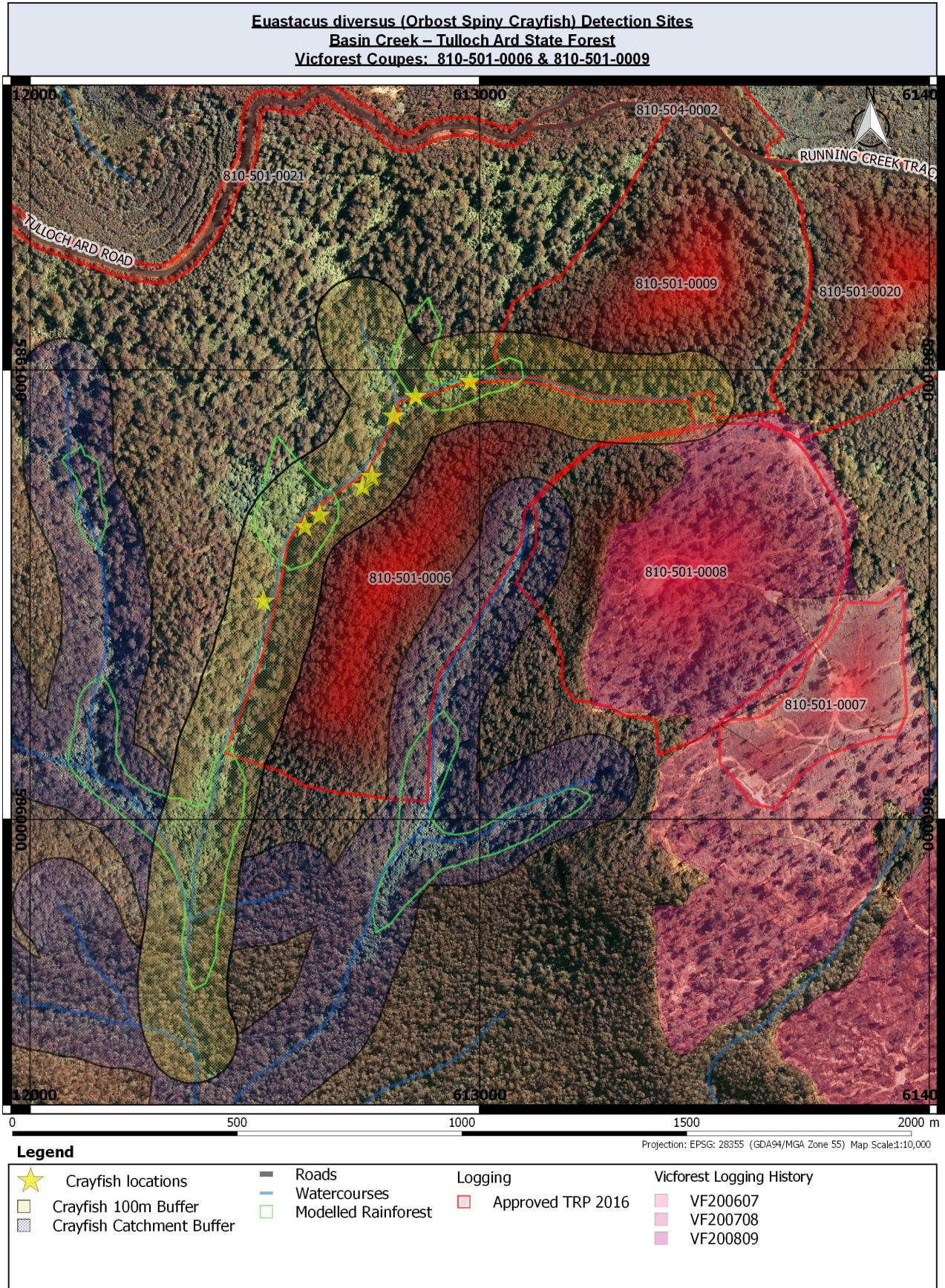
Figure 1(e). *Euastacus diversus* (location 03)  
at 55 H 612610 5860653 (GDA94 UTM)



Figure 1(f). *Euastacus diversus* (location 03)  
at 55 H 612610 5860653 (GDA94 UTM)

## Results 2 (Map)

Figure 2. Tulloch Ard Road - *Euastacus diversus* records and 100m Buffers



Report: Threatened Species Detection & Investigation. G.E.C.O - O.H Investigation Start Date: 15/12/2016.  
 Euastacus diversus Basin Creek - Vicforest Logging Coupe 810-501-0006 & 810-501-0009. Tulloch Ard State Forest, Basin Forest Block, East Gippsland. Map created 12/01/2017.

## Discussion/Conclusions/Recommendations

### *Euastacus diversus* (Orbost Spiny Crayfish)

1. Multiple *Euastacus diversus* (Orbost Spiny Crayfish) were identified and recorded from within or adjacent to VicForests scheduled logging coupes 810-501-0006 & 810-501-0009 at the locations displayed as the “yellow star” symbols in Figure A and Figure 2.. of Results 2 above.
2. The management prescriptions relevant to the Orbost Spiny Crayfish in 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”, section 4.3.1.1-2, requires that for all verified records of *Euastacus diversus* (Orbost Spiny Crayfish) the “FMZ amendments and reviews in accordance with Table 4” must be applied. Table 4. requires that for records of *Euastacus diversus* (Orbost Spiny Crayfish), a SPZ extending 100 m from each bank for 1 km upstream and 1 km downstream" must be established.
3. As a regulator of operations within Victoria's State Forests DELWP must ensure VicForests and their logging contractors abide by these prescriptions including by applying the minimum 100m Special Protection Zone displayed in Results 2. Figure 2. for the *Euastacus diversus* (Orbost Spiny Crayfish) locations displayed and any others found within 1000m of VicForests' scheduled logging coupes.
4. DELWP must immediately restrain VicForests and the logging contractors operating in the listed coupes from logging in the areas of these *Euastacus diversus* (Orbosdt Spiny Crayfish) records including within coupes 810-501-0006 & 810-501-0009 as well as any additional surrounding areas where the species is present.
5. A thorough search for the presence of and evaluation of the extent and population health of *Euastacus diversus* (Orbost Spiny Crayfish) must be undertaken within any further areas where VicForests intends to log and the species presence is possible.
6. The map of Results 2. Figure 2. shows that logging is planned within the 100m buffer of the Basin Creek watercourse within which *Euastacus diversus* (Orbost Spiny Crayfish) was recorded on the western and northern boundaries of coupe 810-501-0006 & south-eastern edge of coupe 810-501-0009. The watercourse on the south-eastern boundary of coupe 810-501-0006 is also likely to support *Euastacus diversus* or form part of the habitat for Orbost Spiny Crayfish in the headwaters of this catchment.