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**Tarrone Gas-fired Power Station  
Growling Grass Frog Targeted Surveys  
(Job# 8187)**

**Introduction**

Biosis Research undertook a flora and terrestrial fauna assessment of the proposed site of a gas-fired power station at Tarrone, north east of Port Fairy, in western Victoria (Biosis Research 2009). This report identified several low lying freshwater marshes within the site that provided potential habitat for the nationally significant Growling Grass Frog *Litoria raniformis*. Biosis Research was requested by URS Australia to undertake targeted surveys for this species in these areas.

**Methods**

Targeted surveys for the Growling Grass Frog were initially scheduled for January 2009. However, the freshwater marshes identified as potential habitat for the Growling Grass Frog were found to be dry after a prolonged period of dry weather.

Further targeted surveys were scheduled for the 2009/10 breeding season (October 2009 to March 2010) subject to suitable weather conditions and rainfall. Hamilton has experienced above average rainfall for the months between July and September 2009, with October 2009 below average (Table 1). Freshwater marshes in south-western Victoria contained high water levels in late October (author *pers. obs.*).

**Table 1. Mean versus observed monthly rainfall at Hamilton**

	Jul	Aug	Sep	Oct
<b>Mean rainfall (mm)</b>	74	76.6	72.5	66.1
<b>Monthly rainfall (mm)</b>	98.8	94.6	73.8	36.2

(Source: [www.bom.gov.au/climate/dwo/200907/html/IDCJDW3032.200907.shtml](http://www.bom.gov.au/climate/dwo/200907/html/IDCJDW3032.200907.shtml))

The study was undertaken on 29 October by two zoologists from Biosis Research who are experienced in undertaking survey for the species. Prior to surveying the Tarrone site, two local reference sites with known populations of Growling Grass Frog, were visited to ensure that the species was active and detectable during the survey period. The reference sites were Bryan's Swamp (12 km northwest of Dunkeld) and Tower Lake (13 km northwest of Warrnambool). Once the species was confirmed as being active at the reference sites, survey commenced at the freshwater marshes at the Tarrone site.

An initial 15 minute period of passive listening was undertaken at each waterbody to detect the advertisement call of male Growling Grass Frogs. This was followed by a five minute period of call playback in an attempt to elicit a call response. The waterbodies were then carefully searched for frogs using hand-held spotlights for a minimum period of 45 minutes per waterbody. Surveys were timed to

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detect calling males during the breeding season. No attempt was made to locate Growling Grass Frog tadpoles. Other species of frogs observed during the survey and their locations were recorded.

## Results

Numerous (100+) male Growling Grass Frogs were heard calling at Bryan's Swamp while two males were heard calling from Tower Lake. As Growling Grass Frogs were heard calling at both reference sites survey conditions were determined to be suitable and surveys proceeded at Tarrone.

Despite recent rainfall all freshwater marshes within the study area had dried up and there was no standing water on the site. The wetland areas contained some aquatic vegetation such as *Myriophyllum* spp., *Ranunculus* spp. and *Eleocharis* spp. Several Common Froglets *Crinia signifera* were heard calling from a nearby table drain. No Growling Grass Frogs were heard calling or observed within wetland areas on the site or in adjacent table drains.

As the wetlands at the Tarrone site were dry, we could not completely rule out the presence Growling Grass Frogs. To compensate, a roadside census for calling Growling Grass Frog was undertaken in an attempt to locate populations of the species elsewhere in the Tarrone area. Growling Grass Frogs can be heard for distances of up to 1 km and roadside surveys, if conducted under appropriate conditions and at the right time of the year, can be a very good way of locating populations without having to actually visit a waterbody.

Our rationale was that if a population or populations were found nearby, then there was a higher likelihood that the species would occupy the freshwater marshes at Tarrone when they contain water.

The roadside calling census was conducted by driving along an area bounded by Tarrone North Rd, Woolsthorpe – Heywood Rd, Hamilton – Port Fairy Rd and Tarrone Lane. Every 2 km the car was stopped, the engine turned off, and observers listened quietly for a period of 5 minutes. No Growling Grass frogs were heard calling during the roadside census, although Southern Brown Tree Frog *Litoria ewingi*, Common Froglet, Southern Bullfrog *Limnodynastes dumerilii* and Striped Marsh Frog *L. peronii* were all heard.

## Conclusion

The freshwater marshes within the study area are connected via a culvert to another freshwater marsh to the west of Landers Lane. This area is in turn drained via a cut drain to the south (landowner *pers. comm.*). Despite recent above average rainfall this year, the lack of water in the freshwater marshes, suggests that these wetlands are likely to drain rapidly and thus are unlikely to sustain water long enough to provide breeding habitat for Growling Grass Frog. The lack of records within the area (AVW), together with our inability to locate any calling males during the roadside census, indicates that the local area is unlikely to support Grass Frog population.

On the basis of our findings I believe that further survey for the species is not warranted. This conclusion has been supported by the Department of Sustainability and Environment (G.Peterson *pers. comm.*)

Please contact me on the numbers below if you have any enquiries.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'N Garvey', with a stylized flourish at the end.

Nathan Garvey  
Zoologist

**References**

Biosis Research (2009). *Flora and terrestrial fauna assessment of the proposed Tarrone Gas-fired Power Station and Associated Road Reserves, Victoria*. Authors: K.Sofa, S.Gilbert, R.Steer & J.Miller.