

Department of Health
C/- Busselton Hospital
Locked Bag 3
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7 November 2013

Attention: Rory Stemp

RE: Western Ringtail Possum Monitoring, Busselton Health Campus, October 2013

INTRODUCTION

This letter report details the results of the October 2013 survey for Western Ringtail Possum (WRP) at the Busselton Health Campus. The survey was conducted as part of a monitoring program undertaken on behalf of the Department of Health in accordance with the Western Ringtail Possum Management Plan¹.

The preparation and implementation of the Western Ringtail Possum Management Plan was a condition for the approval of the Busselton Health Campus redevelopment under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC 2011/6011) and State *Environmental Protection Act 1986* (NVCP 4433/2). The Western Ringtail Possum Management Plan was recently revised and was approved by the Commonwealth Government and the Department of Department of Environmental Regulation (WA)(15/08/2013).

The approved Western Ringtail Possum Management Plan outlines the requirement for a WRP monitoring program to be conducted at the Busselton Health Campus and includes the following management measures:

- M17 : Monitor the WRP population twice a year during construction, twice per year for two years following construction and then annually until year 5 (post-construction) and again at year 10 (post-construction) using ground-based methods. If during the period of twice yearly monitoring there is a greater than 20% reduction in the baseline population, twice yearly monitoring will be extended for a period agreed between DEC, DSEWPaC and Department of Health.*
- *Undertake a WRP survey within two months of the completion of the translocation program to establish a baseline population remaining on the site.*
 - *Following each WRP monitoring survey the results will be compared with the baseline survey described above (with consideration of seasonal variation) and where there is a reduction in the number of individuals recorded, the DSEWPaC and DEC will be notified by the Department of Health. The information will be made available on the Department of Health's website for transparency purposes. Summary of the monitoring data will be reported annually to the DEC and DSEWPaC.*
 - *Monitoring will be consistent with baseline monitoring completed by Coffey Environments (Coffey Environments, 2009). It will involve traversing the site by foot during the day time hours searching for possum dreys, and nocturnal spotlighting over two evenings using head torches. The location of dreys and WRPs will be recorded using a hand-held GPS. Monitoring will be conducted twice per year (nominally in February/March and November/December) and undertaken by personnel with demonstrated experience in conducting WRP surveys.*

¹ Coffey, 2013. Western Ringtail Possum Management Plan, Department of Health: Busselton Hospital Health Campus Redevelopment

Surveys have been conducted biannually at the site since February 2009, with surveys being conducted in late summer (February - March) and in spring (October - December). While the Western Ringtail Possum Management Plan indicates surveys to be conducted in November/December, these surveys are now conducted in October to be consistent with post translocation and post clearance survey that was conducted in October 2012, immediately after translocation and clearing was undertaken.

Construction of the new Busselton Health Campus is currently underway and the first phase of construction is scheduled for completion in October 2014.

OBJECTIVE

The objectives of the October 2013 monitoring survey were:

- To conduct monitoring of WRP using method consistent with baseline monitoring previously conducted at the site (Coffey, 2013).
- Compare the survey results with the baseline survey data (post clearing and post translocation)..

METHODOLOGY

The survey was conducted by Matthew Johnston (Zoologist) and Clinton van den Bergh (Ecologist) on the 21 and 22 October 2013.

Spotlighting searches for WRP were conducted over two consecutive evenings. The campus was traversed after dark and all areas of remnant or planted vegetation were searched using a head torch to detect eye shine or other signs of possums. Locations of WRP were recorded using a GPS. The weather on both nights of the survey was fine and cool and was considered suitable for undertaking possum surveys.

Daytime searches were also conducted to detect possum dreys or WRP that could be observed in the canopy. All dreys were recorded with a GPS and additional information was also collected including the height of the drey, the tree species and the presence or absence of a possum in the drey.

Dreys were also assigned to one of the following four categories:

1. Flat bed of vegetative material.
2. Slightly concave nest of vegetative material.
3. Dome shape nest with an open top.
4. Completely conical nest that is fully-enclosed.

RESULTS

Seventy and 65 WRPs were recorded on the two survey nights respectively. The location of all WRP recorded during the survey are shown in Figure 1.

The density of WRPs within the Busselton Health Campus is 21 individuals per hectare of canopy (WRP/ha), based on an estimated remaining canopy area of 3.35 ha (Coffey, 2013).

WRPs were located as individuals, in pairs and as a group of up to four individuals. Most pairs consisted of an adult and sub-adult that had not yet dispersed.

A total of 22 dreys were recorded during the survey, with the majority (19) dreys classified as category 4. One drey was classified as category 1 and two dreys were classified as category 2. Three WRPs were located during the day that were not in dreys, but nested in a forked tree branch. A number of hollows in mature trees at the site were also expected to be occupied by WRP but could not be investigated due to the height in the tree.

DISCUSSION

The WRP population at the Busselton Health Campus was 70 individuals during the October 2013 survey, slightly higher than the baseline (post clearing and post translocation) population of 68 individuals recorded in October 2012. The population remains above the 20% trigger value set-out in the WRP Management Plan (Chart 1).

The WRP Management Plan requires additional monitoring to be undertaken in the event that there is a 20% reduction in the baseline (post clearing and post translocation) population of WRP at the site. As the WRP population remains above the trigger value, monitoring should continue on a biannual basis in accordance with the WRP Management Plan.

The WRP abundance was the highest observed since clearing was undertaken and construction commencement, with 70 individuals being observed, in comparison to the 68 and 61 individuals observed in October 2012 and March 2013 respectively (Table 1).

The possum density was 21 individuals/ha of canopy during the October 2013 survey and was the highest density observed during the monitoring program. All three monitoring surveys conducted since clearing was undertaken at the Busselton Health Campus have recorded WRP densities greater than prior to disturbance. This is likely to be an indication that possums displaced by clearing have taken up residence elsewhere on the Busselton Health Campus.

The seasonal trend in WRP abundance appears to have continued in October 2013. This trend has been typified by an increase in WRP abundance during spring (October-December monitoring) followed by a decrease in numbers around late summer (February-March monitoring) (Table 1). The trend appears to follow seasonal breeding, with juveniles and sub adults leading to a natural increase in the population in spring, and dispersal and mortality resulting in a decline by the end of summer.

Chart 1: Abundance of Western Ringtail Possum at the Busselton Health Campus

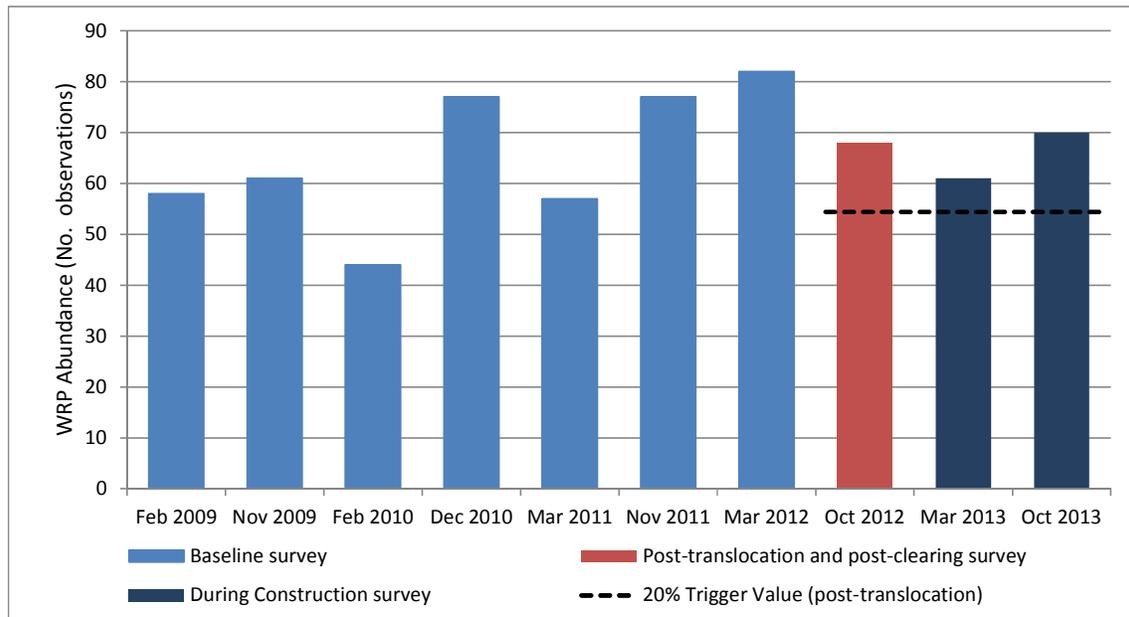


Table 1 Number and Density of Western Ringtail Possums Recorded During Monitoring

Survey	Number	Density (Individuals/ha of canopy)
February 2009	58	13.1
November 2009	61	13.8
February 2010	44	10
December 2010	77	17.4
March 2011	57	12.9
November 2011	77	17.4
March 2012	82	18.6
October 2012*	68	20.3
March 2013*	61	18.1
October 2013*	70	20.9

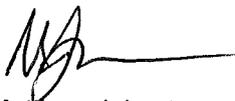
* Conducted subsequent to vegetation clearing and the translocation of 20 individuals to Tone-Perup Nature Reserve.

CONCLUSION

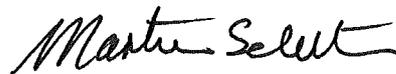
The current monitoring frequency (biannually) should be maintained until 5 years post construction in accordance with the WRP Management Plan. As the WRP population remains above the trigger value, contingency measures involving an increase in monitoring frequency or further population investigations are not required at this stage.

Please do not hesitate to contact the undersigned on 08 9355 7100 if you require any further information regarding this letter.

Yours sincerely,



Matthew Johnston
Environmental Scientist/Zoologist

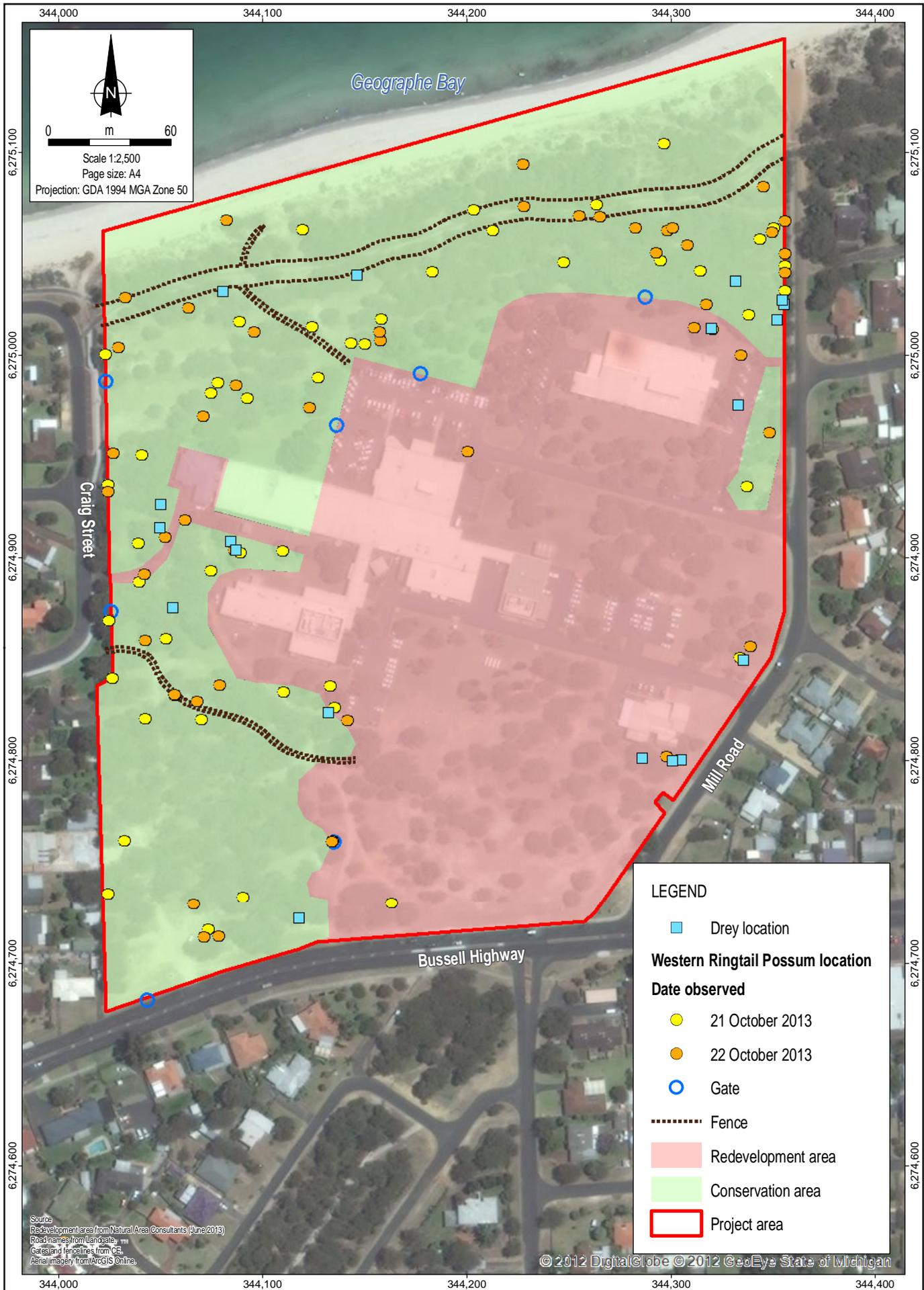


Martine Scheltema
Principal Environmental Consultant

CC: Erica Pilgrim
Caesar D'Adamo

Attachment

Figure 1: Western Ringtail Possum observation and drey locations (October 2013)




 0 m 60
 Scale 1:2,500
 Page size: A4
 Projection: GDA 1994 MGA Zone 50

LEGEND

-  Drey location
- Western Ringtail Possum location**
- Date observed**
-  21 October 2013
-  22 October 2013
-  Gate
-  Fence
-  Redevelopment area
-  Conservation area
-  Project area

Source:
 Redevelopment area from Natural Area Consultants (June 2013)
 Road names from Landgate
 Gates and fences from CSU
 Aerial imagery from ArcGIS Online

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