

10 April 2015

Our ref: ENAUPERT04326AB\_008\_v1

Department of Health  
C/- Busselton Hospital  
Locked Bag 3  
Busselton WA 6280

Attention: Rory Stemp

Dear Rory,

### **Western Ringtail Possum Monitoring – Busselton Health Campus, March 2015**

This letter report details the results of the March 2015 survey for Western Ringtail Possums (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 Plan (Coffey, 2013a).

The preparation and implementation of the Western Ringtail Possum Management Plan was a condition of approval for the Busselton Health Campus redevelopment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC 2011/6011) and *Environmental Protection Act 1986* (NVCP 4433/2). The Western Ringtail Possum Management Plan was revised and approved by the Department of Environment Regulation (formerly Department of Environment and Conservation (DEC)) on 3 September 2013 and the Department of the Environment (formerly Department of Sustainability, Environment, Water Population and Communities - DSEWPAC) on 31 October 2013.

The 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 five (post-construction) and again at year ten (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 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 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.*

Surveys have been conducted biannually at the site since February 2009, with surveys completed in late summer (February – March) and 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 the post-translocation and post-clearance survey that was completed on October 2012, immediately following after translocation and clearing.

Construction of the new Busselton Health Campus has been completed since the October 2014 survey; however, there will still be demolition of some structure required. In accordance with the Western Ringtail Possum Management Plan (M12) a suitably qualified zoologist with an approved Regulation 15 Department of Parks and Wildlife (DPAW) fauna relocation licence should be on site during any demolition.

## **Conservation Status Update**

Since the October 2014 survey the conservation status for the WRP has been reviewed and upgraded at a state level from Vulnerable to Endangered under the *Wildlife Conservation Act 1950*. The reason for this is due to a drying climate (climate change), habitat loss and feral predators. The WRP is still listed as Vulnerable at a federal level under the EPBC Act. The change in conservation status will not impact the frequency or methodology of the WRP monitoring program.

## **Objective**

The objectives of the March 2015 monitoring survey were:

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

## **Methodology**

The survey was conducted by John Trainer (Zoologist) and Clinton van den Bergh (Ecologist) on 10 and 11 March 2015.

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

A daytime search was completed on 11 March to detect any possum dreys or WRPs that could be observed in the canopy. All dreys were recorded with a GPS and additional information was collected including the height of the drey, the tree species and the presence or absence of a WRP in the drey.

Dreys were 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

A total of 68 and 67 WRPs were noted on the two survey nights, respectively. The locations of all the WRPs recorded during the survey are shown in Figure 1.

The density of WRPs within Busselton Health Campus is 20 individuals per hectare of canopy (WRP/ha), based on an estimated remaining canopy area of 3.35 ha (Coffey, 2013b).

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

A total of 19 dreys were recorded during the daytime survey, with three dreys classified as Category 1, eight dreys were classified as Category 2, five dreys were classified as Category 3 and three dreys were classified as Category 4. Five of the dreys were occupied by WRPs during the day. Two WRPs were recorded during the day in the fork of branches in two Peppermint trees.

## Discussion

The WRP population at Busselton Health Campus was 68 individuals during the March 2015 survey, slightly higher than the survey undertaken a year earlier in March 2014 (64 individuals). This number is higher than the baseline (post clearing and post translocation) population of 61 individuals recorded in March 2013. The population remains above the 20% trigger value set-out in the WRP Management Plan (Chart 1).

The WRP Management Plan requires more frequent monitoring to be undertaken in the event that there is a 20% reduction in the baseline 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.

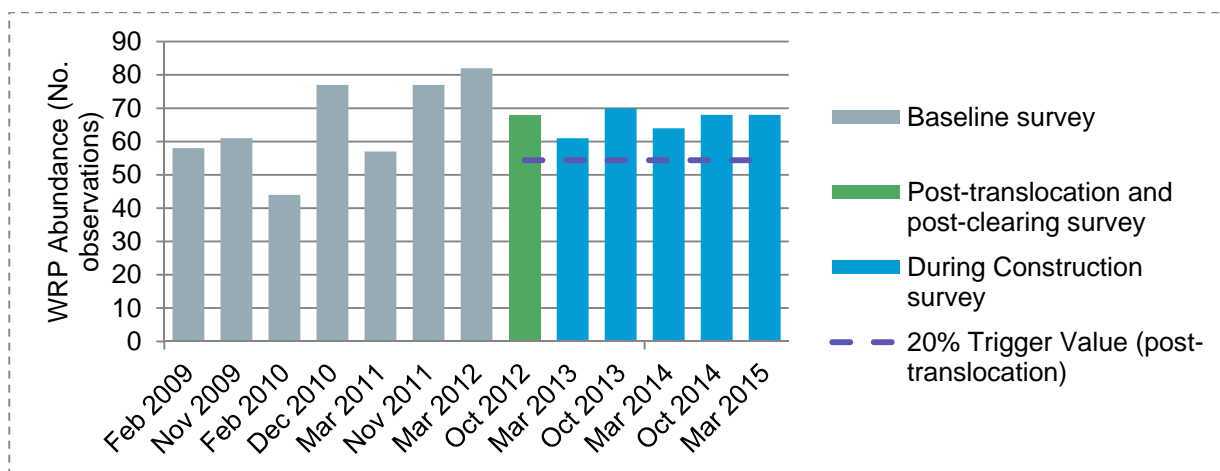
The WRP abundance was slightly higher but still comparable to the previous two Marches surveys (61 and 64 individuals) (Table 1).

The possum density was 20 individuals/ha of canopy during the March 2015 survey and is similar to, but slightly higher than the density observed in the previous two March monitoring surveys (2012 and 2013). All of the monitoring surveys conducted since clearing was undertaken at the Busselton Health Campus, excluding March 2013 have recorded WRP densities greater than pre-disturbance levels (Table 1). This may indicate that possums displaced by the clearing have taken up residence elsewhere on the Busselton Health Campus. It may also suggest that the WRP population is healthy with new WRPs or dispersed sub-adults taking residence in the Health Campus.

WRP abundance has previously been typified by an increase in WRP abundance during spring (October–December monitoring) followed by a decrease in numbers in early autumn (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 early autumn. Since clearing, the seasonal trend in abundance has become less extreme. The abundance of WRP has remained stable between the October 2014 and March 2015 surveys indicating that the population at Busselton Health Campus is growing or has not reached its carrying

capacity due to improved tree health/condition. However, more data is required before this assumption can be proved.

**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
March 2014*	64	19.1
October 2014*	68	20.3
March 2015*	68	20.3

\* 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 2 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, further population investigation or consultation with the DPAW (previously the DEC) and the DOTE is not required at this stage.

For and on behalf of Coffey,



### John Trainer

Senior Environmental Scientist (Zoologist)

## References

Coffey 2013a. Western Ringtail Possum Management Plan, Department of Health Campus Redevelopment.

Coffey 2013b. Western Ringtail Possum Monitoring, October survey 2013, Department of Health: Busselton Health Campus.

## Attachment

Figure 1: Western Ringtail Possum observation and drey locations (March 2015).

**Figure 1 - Western Ringtail Possum observation and  
drey locations (March 2015)**

344,000 344,100 344,200 344,300



0 m 60

Scale 1:2,500

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Projection: GDA 1994 MGA Zone 50

LEGEND

■ Drey location

□ Project area

Date observed

■ Redevelopment area

● 10 March 2015

■ Conservation area

● 11 March 2015

6,275,200

6,275,200

6,275,100

6,275,100

6,275,000

6,275,000

6,274,900

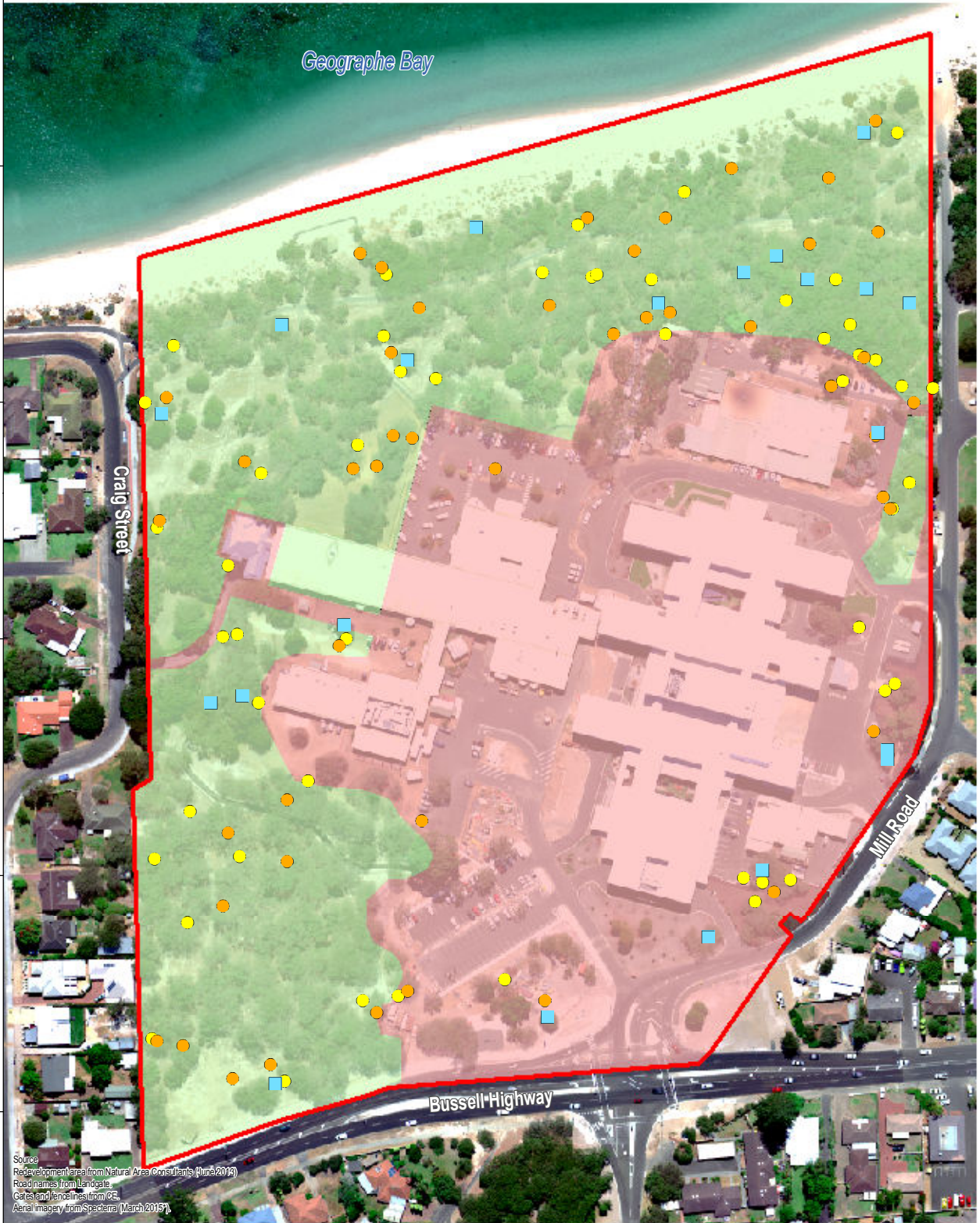
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Source:  
 Redevelopment area from Natural Area Consultants (June 2013)  
 Road names from Landgate  
 Gates and fences from GIS  
 Aerial imagery from Specterra (March 2015)

344,000 344,100 344,200 344,300



Date: 31.03.2015  
 MXD: 4326AB\_L01\_GIS001\_v0\_1  
 File Name: 4326AB\_L01\_F001\_GIS

Department of Health  
 Western Ringtail Possum Monitoring  
 Busselton Health Campus, March 2015

Western Ringtail Possum  
 observations and drey locations  
 (March 2015)

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