

8 March 2012

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

Attention: Rory Stemp

Dear Rory,

RE: Western Ringtail Possum Survey, Busselton Health Campus, March 2012

This letter reports the results of the Western Ringtail Possum Survey conducted within the remnant vegetation of the Busselton Health Campus in March 2012. The survey was conducted as part of baseline monitoring surveys prior to the commencement of vegetation clearing, construction and development of the proposed new Busselton Health Campus.

Survey methodology was consistent with previous surveys conducted on site in February and November 2009, February and December 2010 and March and November 2011. The survey conducted during March 2012 consisted of a two-night nocturnal survey to estimate the number of possums using the site and a daytime survey to determine the presence of dreys. Nocturnal surveys and daytime assessment of dreys were undertaken by Dr Graeme Finlayson and Dr Serena Finlayson on 29 February and 1 March 2012.

The survey builds on the following information collected since February 2009.

- February 2009 WRP survey as part of the 'Significant Fauna and Flora Values – Busselton Hospital Redevelopment Site' report (Coffey Environments, 2009; P2009-121, V1).
- November 2009 WRP survey (Coffey Environments letter report; ENVIPERT00629AA_Environmental Assessment_008_gf).
- February 2010 WRP survey (Coffey Environments letter report; ENVIPERT00629AA_Environmental Assessment_011_gf).
- December 2010 WRP survey (Coffey Environments letter report; ENVIPERT00629AA_Environmental Assessment_018_1nr).
- March 2011 WRP survey (Coffey Environments letter report; ENVIPERT00629AA_Environmental Assessment_020_gf).

- November 2011 WRP survey (Coffey Environments letter report; ENVIPERT00629AA_WRP Survey Nov 2011_001_gf).

METHODOLOGY

Spotlighting was conducted over two evenings. The project area was traversed on foot using head torches. Locations of WRP sightings were recorded using a hand-held GPS. The weather on night one of the survey was fine and mild but windy, which made conditions for spotting possums difficult. On the second night conditions were fine and mild with less wind and were considered suitable for spotlighting possums. Coffey Environments acknowledges that it is unlikely all possums inhabiting the area were sighted on any given night. Whilst spotlighting, possums often turn their heads or close their eyes when light is shone nearby. These actions can make spotlighting counts difficult given that eye-shine is the primary method of locating individuals. There are also areas of habitat on site that contain thick canopy and are likely to reduce possum detection rates.

Daytime searches were conducted by searching the site for dreys or possums that could be observed in the canopy. Dreys were assigned to one of four categories;

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

All dreys were recorded with a hand-held GPS. Additional information collected during the daytime surveys included the height of the drey, the tree species and the presence or absence of a possum. Locations of possums that were either not in a drey or in a hollow were also recorded.

RESULTS

A total of 157 WRPs were recorded during the survey (Figure 1). Seventy-five WRPs were recorded on the first night, with 82 WRPs recorded on the second night. WRPs were located as individuals, in pairs and as a group of three, which is likely to be associated with the breeding season and young animals that are yet to disperse. Most groups made of 2 or more individuals consisted of an adult with large back young or sub-adults that had not yet dispersed. In Figure 1 location points sometimes represent more than one individual.

A total of 37 dreys were located during the daytime survey (Figure 2), of which 13 were definitely occupied by WRPs. There were 11 dreys were classified as category 1 dreys, 9 were classified as category 2, 2 as category 3 and 12 as category 4. There were hollows throughout the site but no WRPs were recorded as using hollows. Fourteen WRPs were located during the day that were not in dreys, but perched in a tree branch.

DISCUSSION

The number of possums recorded during the March 2012 survey was comparable to previous surveys, although was considerably higher than that for the February/March survey periods (Table 1). The trend for WRPs to be present on site tends to follow seasonal breeding with an increase in local abundance during November/December followed by a decrease in numbers around late-February/March. It would appear that dispersal of possums after the breeding season of 2011/12 has occurred later than for previous years. This was also evident with the presence of back young and the presence of possums in groups of three.

The results of the February 2009, November 2009, February 2010, December 2010, March 2011, November 2011 and March 2012 surveys suggest that the Busselton Hospital site contains a healthy population of WRPs with a density of up to seven possums per hectare, which is comparable to previous surveys conducted for this species within the Busselton area (Jones *et al.*, 2007; Coffey Environments, 2009; EP2009-121, V1).

Table 1. Number of Western Ringtail Possums Recorded on Site During Baseline Surveys

Survey	Night 1	Night 2
February 2009	58	47
November 2009	61	52
February 2010	44	44
December 2010	77	68
March 2011	47	57
November 2011	72	77
March 2012	75	82

Coffey Environments have now completed three years of baseline surveys on the Busselton Hospital Site. It is recommended that surveys are conducted throughout the construction and development of the proposed redevelopment to determine whether the construction activities are impacting on the resident WRP population.

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

For and on behalf of Coffey Environments Australia Pty Ltd

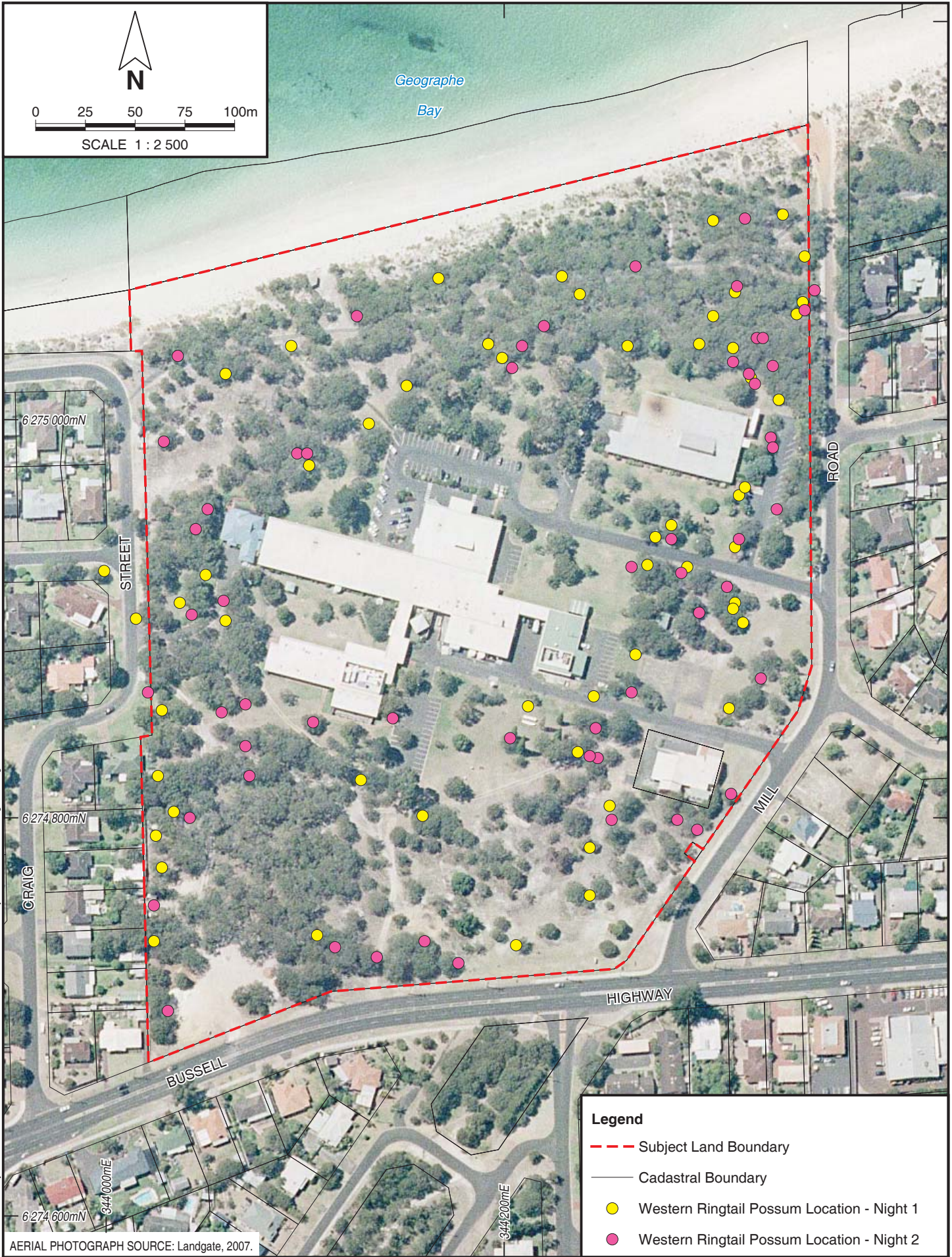


Dr Graeme Finlayson
Senior Consultant Zoologist

Attachments:

1. Figure 1. Spotlighting Survey Results, March 2012
2. Figure 2. Daytime Survey Results, March 2012

cc. Kate Clarke, Caesar D'Adamo



- Legend**
- - - Subject Land Boundary
 - Cadastral Boundary
 - Western Ringtail Possum Location - Night 1
 - Western Ringtail Possum Location - Night 2

AERIAL PHOTOGRAPH SOURCE: Landgate, 2007.

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Drawn:	C. Reeves
Checked:	G. Finlayson
Date:	8 Mar 2012
Projection:	MGA zn50
Scale:	1 : 2 500 at A4

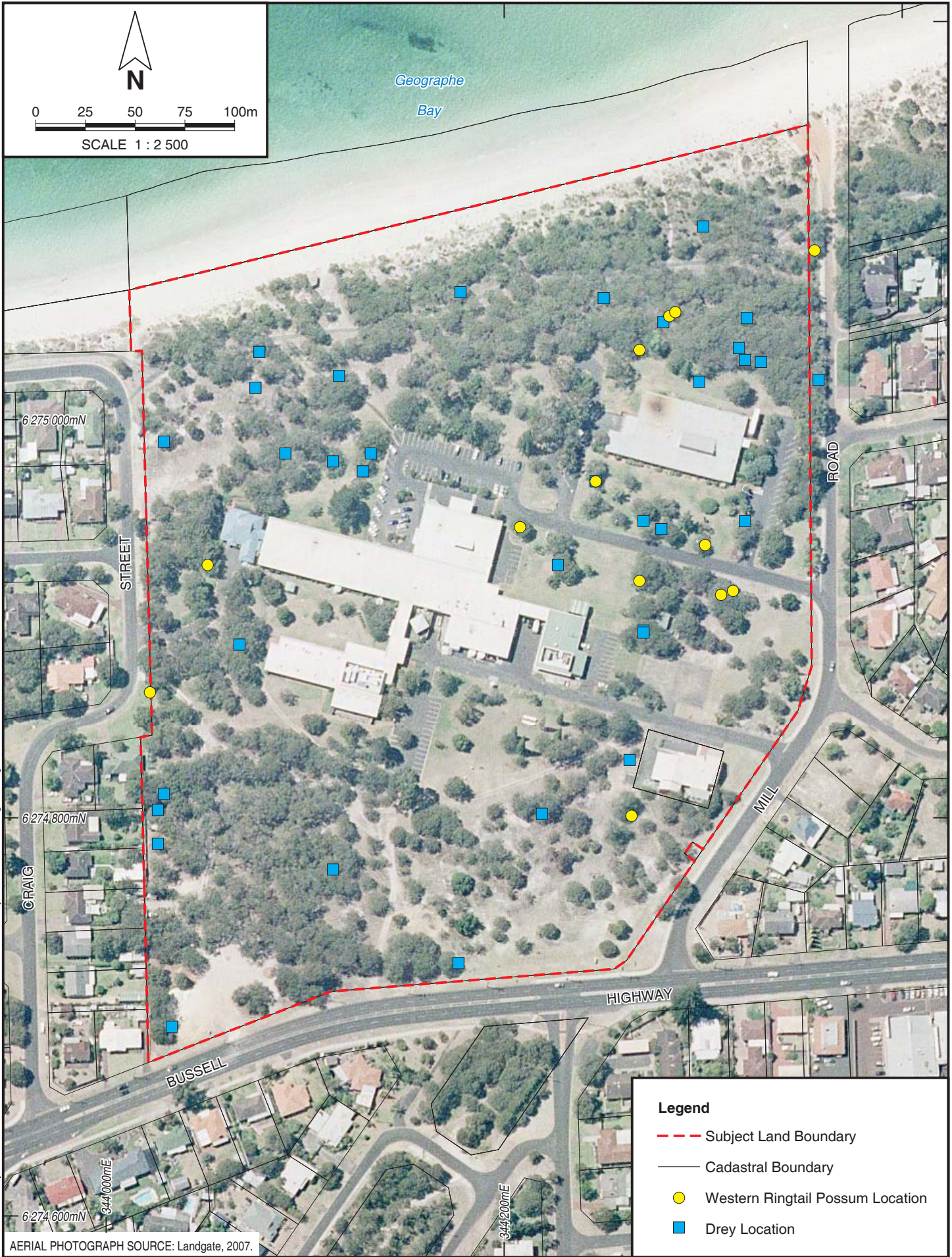
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WESTERN RINGTAIL POSSUM SURVEY - MARCH 2012
BUSSELTON HOSPITAL SITE

WRP LOCATIONS - FEBRUARY-MARCH 2012

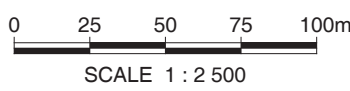
Figure 1



6 275 000mN

STREET

Geographe Bay



ROAD

6 274 800mN

CRAIG

MILL

6 274 600mN

3 441 000mE

BUSSELL

HIGHWAY

3 442 000mE

AERIAL PHOTOGRAPH SOURCE: Landgate, 2007.

Legend

- - - Subject Land Boundary
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DREY LOCATIONS - MARCH 2012

Figure 2

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