

14 March 2011

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

Attention: Kate Clarke

Dear Kate

RE: Western Ringtail Possum Survey - March 2011

This letter reports the results of a survey conducted for the Western Ringtail Possum (WRP) at the Busselton Hospital site (Figure 1) during March 2011.

The purpose of the March 2011 survey was to provide a comparison with surveys conducted in February 2009, November 2009, February 2010 and December 2010 and as a baseline survey for the site.

The survey conducted during March 2011 consisted of a two-night nocturnal survey to estimate the number of possums utilising the site and to identify the areas of highest possum activity. Nocturnal surveys were undertaken by Dr Graeme Finlayson and Natassja Raymond on 7 and 8 March 2011.

The survey builds on information collected during the February 2009 survey and reported in '*Significant Fauna and Flora Values – Busselton Hospital Redevelopment Site*' (Coffey Environments, 2009; EP2009-121, V1), the November 2009 survey (Coffey Environments letter report; ENVIPERT00629AA_Environmental Assessment_008_gf), the February 2010 survey (Coffey Environments letter report; ENVIPERT00629AA_Environmental Assessment_011_gf) and the December 2010 survey (Coffey Environments letter report; ENVIPERT00629AA_Environmental Assessment_018_1nr).

METHODOLOGY

Spotlighting was conducted over two evenings. The project area was traversed on foot using head torches. Locations of WRPs sightings were recorded using a GPS. The weather on both nights of the survey was mild, still and clear and both nights 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.

The above methodology is consistent with previous surveys conducted on site in February 2009, November 2009, February 2010 (Coffey Environments, 2009; EP2009-121, V1, ENVIPERT00629AA_Environmental Assessment_008_gf and ENVIPERT00629AA_Environmental Assessment_011_gf) and December 2010 (Coffey Environments letter report; ENVIPERT00629AA_Environmental Assessment_018_1nr).

RESULTS

A total of 104 WRPs were recorded during the survey (Figure 2). 47 WRPs were recorded on the first night, with 57 WRPs recorded on the second night. Two back young were recorded during the survey and two females were carrying pouch young.

A dead possum was found during the survey (Figure 2).

DISCUSSION

The number of possums recorded during the March 2011 survey was higher than the previous survey conducted on site in February 2010 but the same as February 2009 (Table 1). In general the trend appears to be an increase in local abundance during November/December and then a drop off in numbers around late-February/March. Possum abundance on site appears to fluctuate seasonally, most likely associated with seasonal breeding. Coffey Environments have previously recorded large fluctuations in numbers between months and years throughout the Busselton area.

Previous surveys in the general vicinity have also shown that the timing of births within WRP populations can vary from year to year, but generally occurs between July and October, with back young and juveniles generally visible in November and December. It would appear that in the current season the breeding season has been prolonged with females still carrying both pouch young and back young in March. This may be associated with the dry season that has been experienced in south-west WA.

The results of the February 2009, November 2009, February 2010, December 2010 and March 2011 surveys suggest that the Busselton Hospital site contains a healthy population of WRPs with a density that ranges between four and 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
COMPARISON OF POSSUM COUNTS**

Survey	Night 1	Night 2	Total
February 2009	58	47	105
November 2009	61	52*	113
February 2010	44	44	88
December 2010	77	68	145
March 2011	47	57	104

***Thunderstorm and rainfall interrupted survey**

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**



**Martine Scheltema
Principal Environmental Consultant**

Cc

Rory Stemp

Attachments:

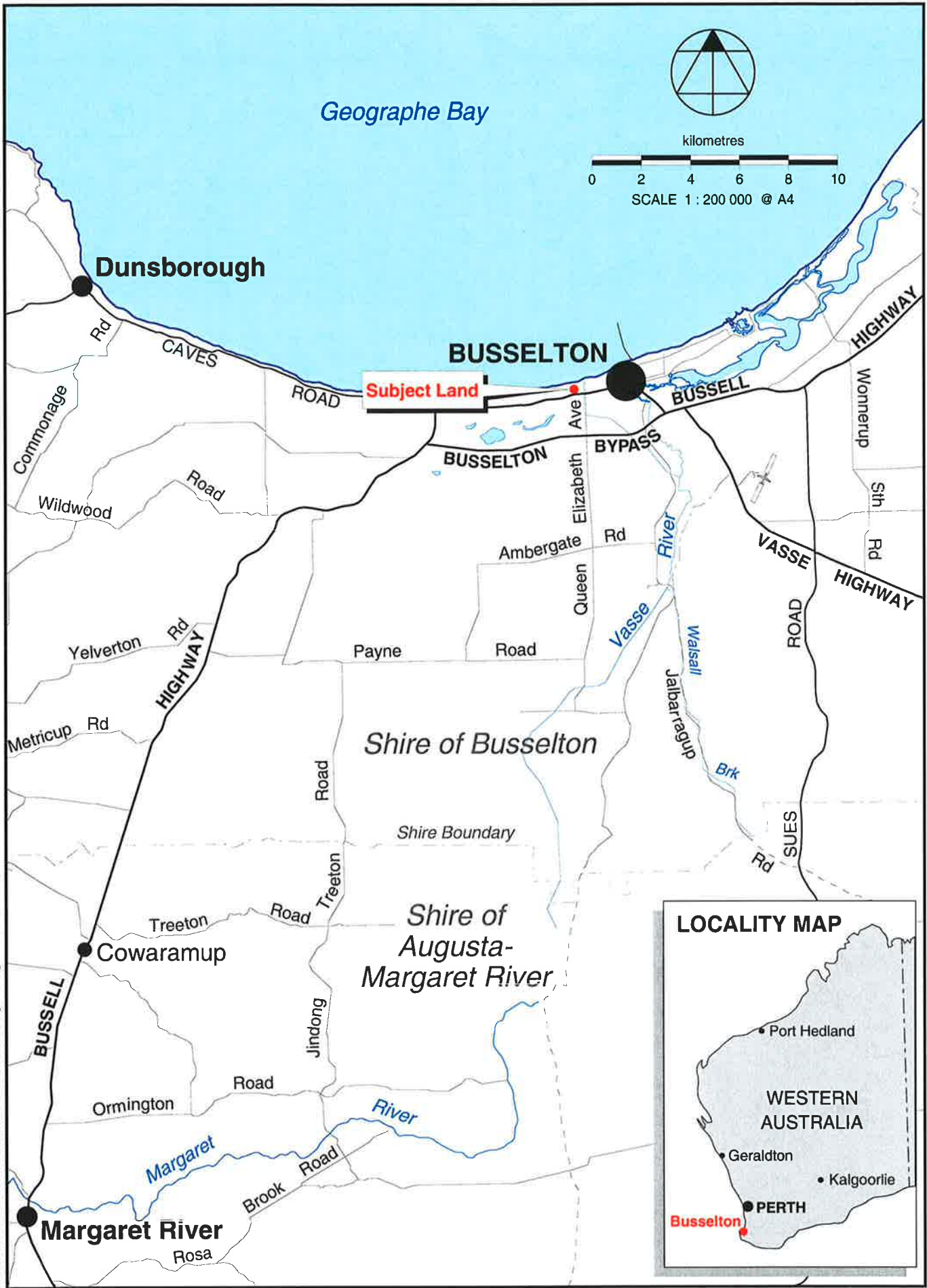
Figure 1

Figure 2

PRINTED: Mon 14 Mar 11

DRAWN: CR 14-03-11 CHECKED: GF 14-03-11

ENVIPERT00629AA-Environmental Assessment_020_gf-F01.dgn DATUM: MGA zns0



WESTERN RINGTAIL POSSUM SURVEY
 MARCH 2011 - BUSSELTON HOSPITAL
REGIONAL LOCATION

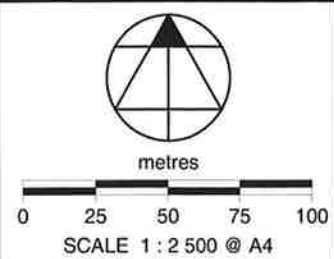
FIGURE 1

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ENVIPERT00629AA-Environmental Assessment_020_gf-F02.dgn DATUM: MGA zrn50 DRAWN: CR 14-03-11 CHECKED: GF 14-03-11

LEGEND

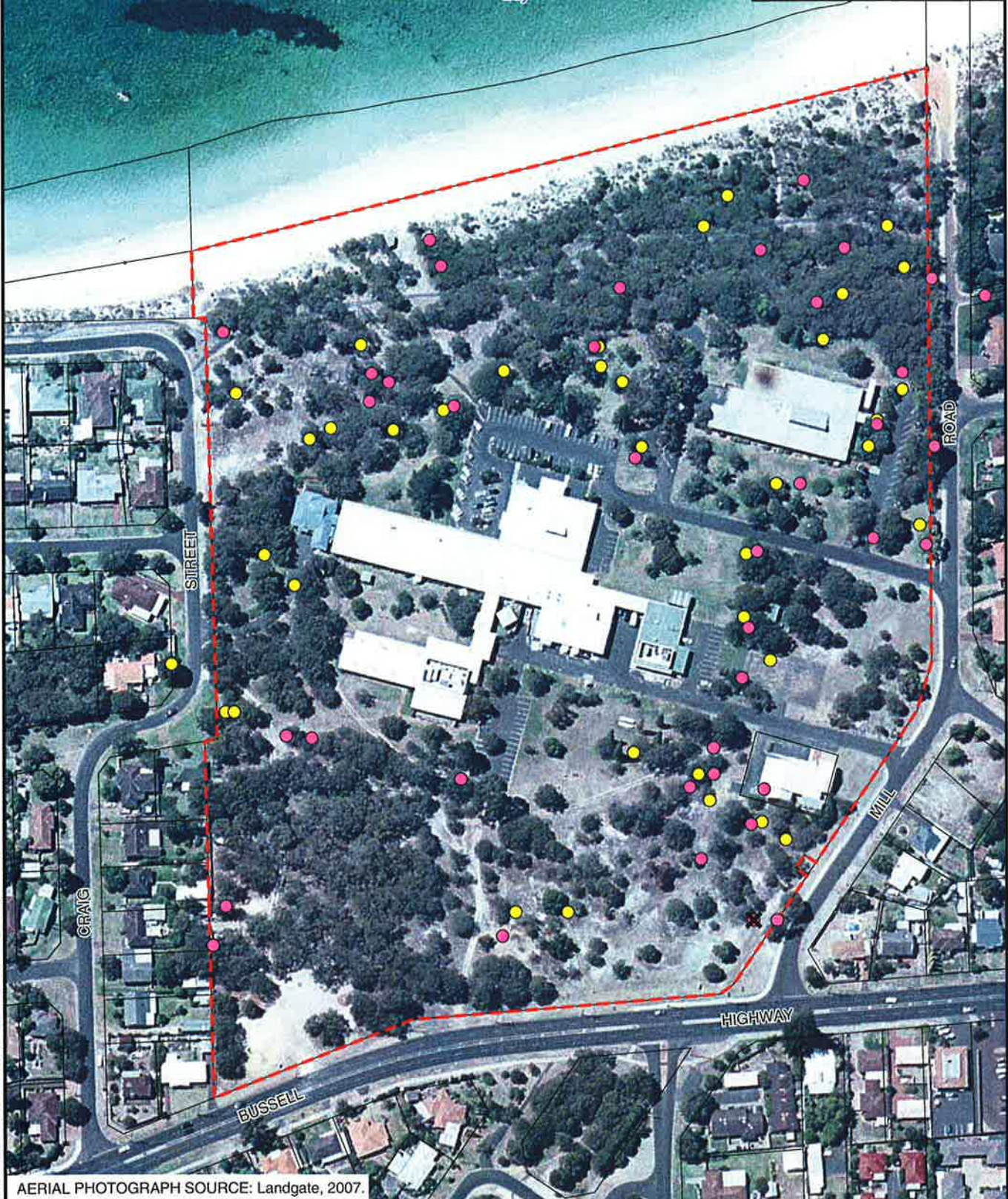
- - - Subject Land Boundary
- Cadastral Boundary
- WRP Location - Night 1 (7/3/10)
- WRP Location - Night 2 (8/3/10)
- ✕ Dead WRP Location



metres

0 25 50 75 100

SCALE 1 : 2 500 @ A4



AERIAL PHOTOGRAPH SOURCE: Landgate, 2007.