

Hollow Survey for Black-Cockatoo Breeding Activity

Conducted for the City of Gosnells

Survey location | Warton Road Reserve (adjacent to Jandakot Regional Park), Canning Vale

Survey date | 6th October 2021, 1015hrs – 1110hrs

Surveyor | ██████████

Background

A flora and vegetation survey was conducted by Emerge Associates on behalf of the City of Gosnells along Warton Road between Ranford Road and Nicholson Road in Canning Vale. This area is the site of proposed clearing and development works for the widening of Warton Road.

As part of the flora and vegetation survey, Tree 63 (stag), E 398574, N 6447106 (see figure 1) was identified as a significant tree within the development area due to the presence of hollows (though none of the hollows were assessed as being suitable for breeding by Black-Cockatoos).

A draft clearing permit has been issued to undertake the clearing and development works associated with the project. This survey was undertaken as a preliminary investigation to assist with fulfilling Management Condition **8. Fauna Management – black cockatoo breeding habitat** of the clearing permit. Under the clearing permit a survey must be conducted within 72 hours prior to undertaking any clearing works.

This survey was conducted to aid in guiding activities under Management Condition 8, namely the installation and monitoring of an artificial black-cockatoo nest hollow to replace any nest hollows lost through clearing activities should evidence of breeding be found.

A preliminary survey of Tree 63 was conducted on the 6th of October 2021 look for evidence of current or past use by any of the three Black-Cockatoo species:

- Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii naso*)
- Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*)
- Baudin's Black-Cockatoo (*Calyptorhynchus baudinii*)

Methodology

The following methods were employed during the targeted survey of Tree 63 to assess for current or historic use by Black-Cockatoos.

- Visual inspection for potential hollows, including assessing for signs of recent use (*e.g.* chipping around hollow entry)
- Internal inspection of potential hollows using a pole camera (NestView PoleCam Model NV4) for evidence of use (*e.g.* presence/absence of eggs or chicks, evidence of prior use such as discarded shells or feathers).
- A tap and flush survey was conducted after completion of hollow assessments using the pole camera to check for hollows that may be not apparent from visual surveys.

Suitability of hollows for breeding by Black-Cockatoos was assessed through review of the footage from the pole camera. Suitability was assessed based on the depth of the hollow, the breadth of the hollow base, and the size of the hollow entrance.

Survey Results

Tree 63 (Image 5) | Four hollows with entrances of suitable diameter for use by Black-Cockatoos were identified from the external inspection of the tree. None of the entrances showed observable signs of use (*i.e.* no chipping observed).

On examination with the pole camera, one of the potential hollows identified from the ground was identified as not being a hollow. The remaining three hollows (1 – 3) were observed to be viable hollows, though no evidence of current use was observed (see images 1 – 3).

None of the three hollows were assessed as being suitable for breeding by the three Black-Cockatoo species.

- Hollow 1: hollow depth too shallow (base of suitable breadth)
- Hollow 2: hollow base too narrow
- Hollow 3: hollow base too narrow

On completion of the examination of all hollows with the pole camera a tap and flush survey was conducted in case hollows were present that did not have observable entrances.

No species of bird, or microbat, were flushed through the tap and flush survey.

Final Assessment

As of the 6th of October 2021 Tree 63 is not in use by any hollow nesting species.

None of the hollows assessed in Tree 63 are suitable for breeding by Black-Cockatoos.

Recommendations

Whilst none of the hollows assessed in tree 63 are currently suitable for any of the three Black-Cockatoos due to their being too shallow and/or narrow, I recommend installing an artificial hollow within close proximity to tree 63 to replace the loss of potential future hollows (particularly Hollow 1 – see image 1).

Two Jarrah (*Eucalyptus marginata*) trees (Tree 61 and Tree 66) were assessed as potential locations for the installation of an artificial hollow. Both trees were identified due to their having a DBH>50, and their proximity to the tree 63 and their position relative to the proposed road development.

An unused hollow was identified in Tree 66 (Image 4) which was assessed to currently be too shallow for use by Black-Cockatoos.

Tree 66 (figure 1 and Images 6 and 7) was assessed as being suitable for the installation of an artificial hollow due to its large size and greater distance from the track and future road development than Tree 61, whilst still easily accessible for future monitoring and maintenance.

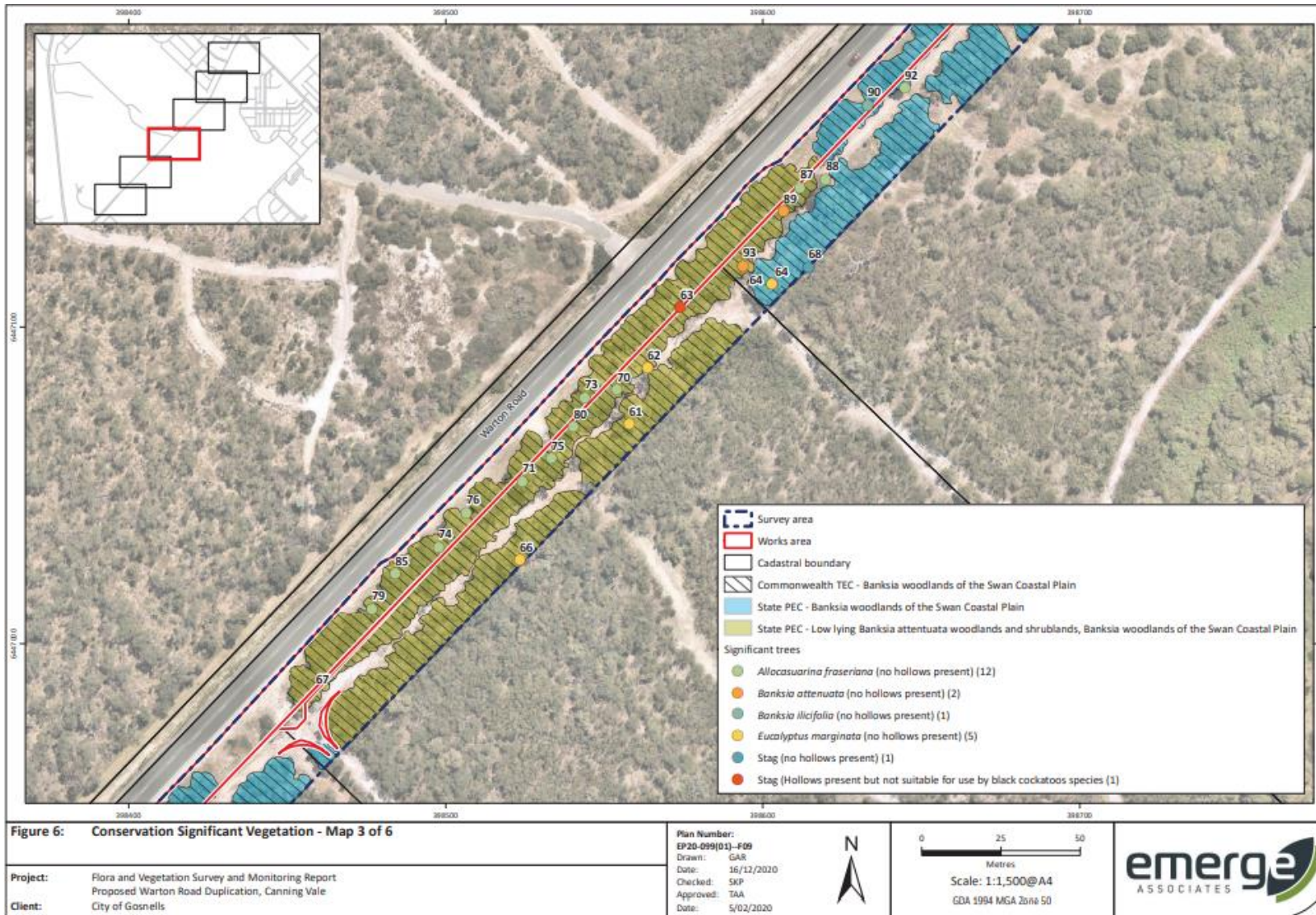


Figure 1. Map of survey area showing locations of the three trees surveyed (Trees 61, 63, and 66).



Image 1. Tree 63 – Hollow 1 (not in use – hollow depth too shallow for any of the three Black-Cockatoo species).

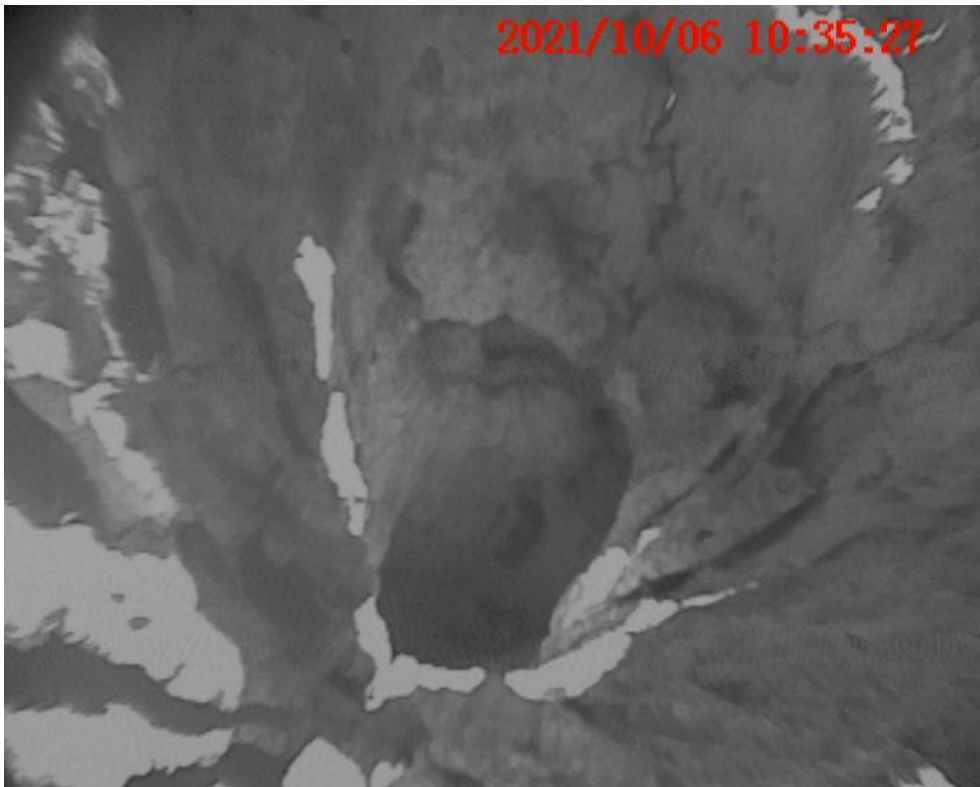


Image 2. Tree 63 – Hollow 2 (not in use – base of hollow too narrow for any of the three Black-Cockatoo species).

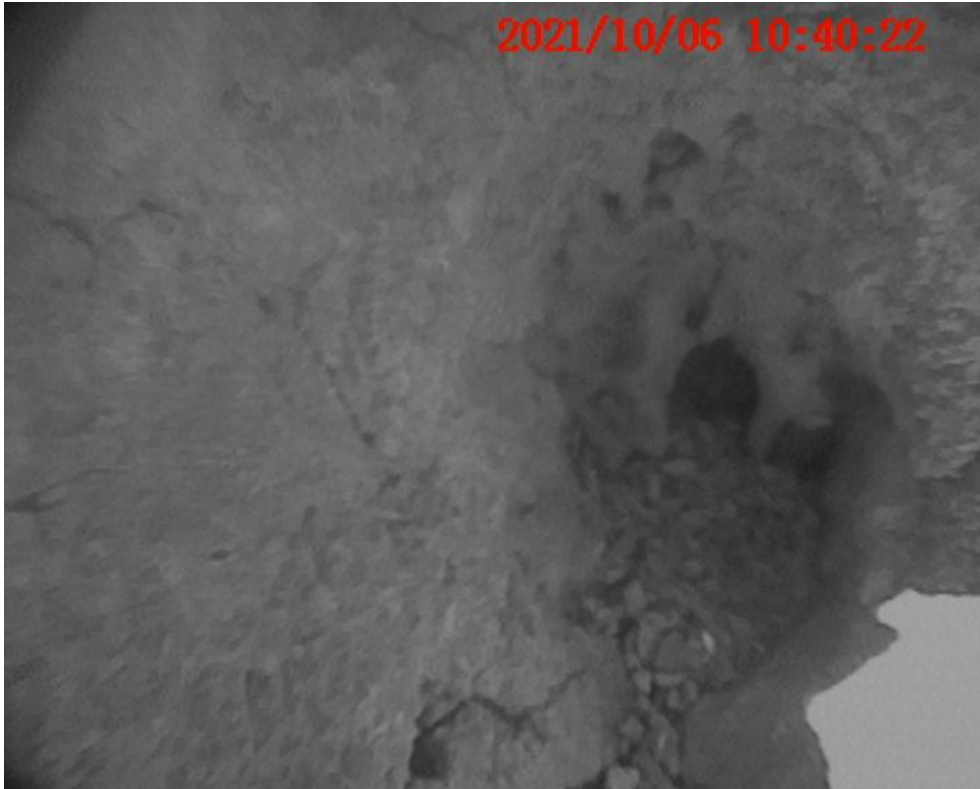


Image 3. Tree 63 – Hollow 3 (not in use – base of hollow too narrow for any of the three Black-Cockatoo species).



Image 4. Tree 66 – Hollow 1 (not in use – too shallow for any of the three Black-Cockatoo species).



Image 5. Tree 63 (stag) to be removed



Image 6. Tree 66 (proposed tree for artificial hollow installation) taken from western side (along track).

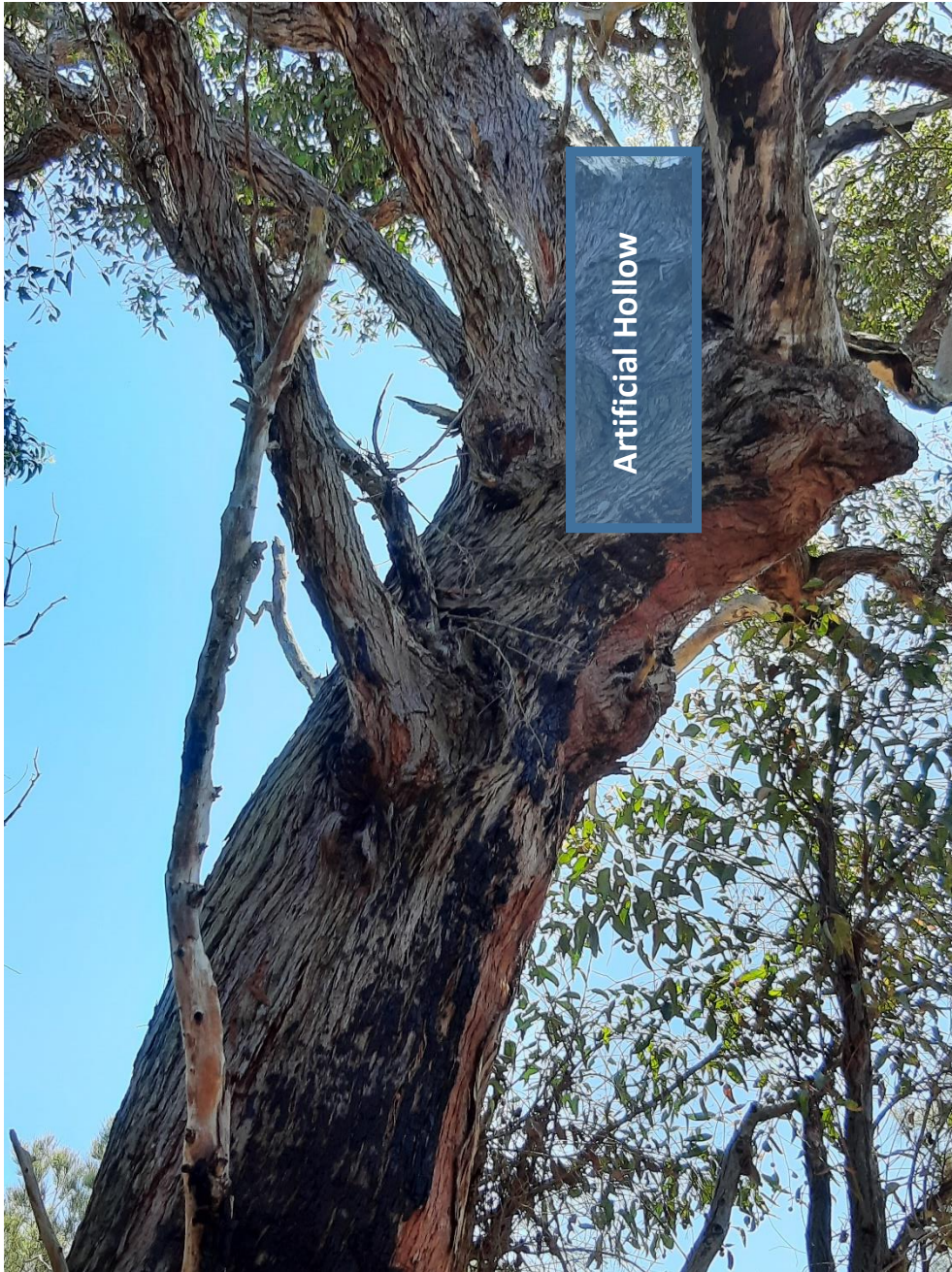


Image 7. Tree 66 (proposed tree for artificial hollow installation) taken from eastern side showing proposed location for an artificial hollow.