Powerful Owl (*Ninox strenua*) & Glossy Black-Cockatoo (*Calyptorhynchus lathami*) Nesting Assessment

Part Lot 28, DP 871790
Seaspray Street, Narrawallee
City of Shoalhaven

David Coombes

October 1998

Undertaken for :
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Summary

An assessment of a land parcel to the west of Seaspray Street, Narrawallee was undertaken in October 1998 to ascertain the nesting status and nesting potential for two threatened bird species, the Powerful Owl and the Glossy Black-Cockatoo.
Neither species were present at the time of the assessment, however numerous Powerful Owl roost sites were found both on and off site, and some She-oak (*Allocasuarina littoralis*) cones chewed by Glossy Black-Cockatoos were found on site.
The location and type of Powerful Owl roosts together with favourable habitat support the likelihood of nesting to have occurred earlier in the year. At the very least, sections of the site and adjacent areas are of significant importance to the owls in terms of roosting and foraging.
No evidence of Glossy Black-Cockatoo nesting was found, although it is possible given the appropriate tree hollow development within the site.

Introduction

Background

This report was commissioned by Shoalhaven City Council in order to further assess the suitability of rezoning part Lot 28, DP 871790 in Seaspray Street Narrawallee, from Environmental Protection 7(d2) (special scenic) to allow for residential development.
A general flora and fauna survey was carried out during February and March 1998 by Kevin Mills & Associates, during which Powerful Owls were heard calling in and near the study area.

Scope of the study

In order to address concerns of NPWS relating to habitat potential for threatened fauna, this study was commissioned to 'identify whether there are any nesting sites for the Powerful Owl or the Glossy Black-Cockatoo on the subject land'.

Nesting habitat requirements

Powerful Owls require large, live trees with substantial hollow development in the trunk or main limbs. Entrance shape of the hollow is an important factor, typically horizontally orientated or sloping with a pronounced bottom 'lip'. Suitable day roosting trees, providing an open perch with a heavy canopy cover, in the area of the nest are also crucial. Quality of surrounding habitat for prey species is particularly important for nesting Powerful Owls as several months are spent within the nesting area. Prey species mainly consist of possums and gliders, but also birds to varying degrees (pers. obs.; Kavanagh 1994). In coastal areas, the Common Ringtail Possum (*Pseudocheirus peregrinus*) is probably the most important prey species (pers. obs.; Debus & Chafer 1994), with Greater Gliders (*Petauroides volans*) and Sugar Gliders (*Petaurus breviceps*) also recorded as major prey species (e.g.. Kavanagh 1988; Chafer 1992).

Less is certain about the specific nesting requirements of Glossy Black-Cockatoos in NSW, however personal observation has shown they may nest in either live or dead trees, not necessarily of the size required by Powerful Owls. Foraging habitat close to the nest site may be preferred, but not necessarily essential as birds have been observed travelling some distance between nesting areas and foraging sites (pers. obs.; *Chewings* 1995).

Methods

The Narrawallee site was assessed between the 16th and 18th October, 1998.

A thorough daylight search of the subject land and immediately adjacent areas was undertaken to assess nesting potential and signs of use. Signs of use included 'whitewash' (excreta), regurgitated pellets of indigestible material and other prey remains of the owls, and chewed She-oak cones for Glossy Black-Cockatoos.

Afternoon to dusk listening for Glossy Black-Cockatoo calls was carried out to ascertain if birds were returning to a nest or roost site. Dusk listening for Powerful Owl calls was also undertaken together with call playback techniques limited to the general study area to ascertain presence and breeding status.

Assessment limitations

A significant limitation to the assessment is the timing in relation to nesting seasons. Both species generally start breeding in late Summer/early Autumn and are usually finished by the end of September (this is assumed to be earlier for Glossy Black-Cockatoos, but is based on a very small number of nest observations on mainland Australia). I have observed Powerful Owls in south-eastern NSW nesting up until early October, and Glossy Black-Cockatoos on Kangaroo Island have been observed nesting up until mid October (*Chewings* 1997), although these may be extreme examples. This means the assessment was undertaken at the very tail-end or outside of the nesting times for both species.

While in favourable habitat Powerful Owls may persist in the general area of the nest for some time after nesting, this behaviour seems much less likely for Glossy Black-Cockatoos. It is also very possible to find evidence of Powerful Owl occupation (excreta, regurgitated pellets and remains of prey) for some time after the birds have left the nest site, but again this is much less likely for Glossy Black-Cockatoos.

Findings

Powerful Owls

No Powerful Owls were seen or heard during the assessment .

Ten diurnal roosting sites were located, both within and close to the study area (see attachment A). The estimated time of last use was two to four weeks prior to the assessment, which is within the generally accepted nesting season for the owls. All roosts were in Turpentine (*Syncarpia glomulifera*) trees and were considered significant as most had been used a

number of times. Most of the roosts also showed signs of the owls perching close to each other in the same tree or in closely adjacent trees. This behaviour is most likely to occur prior to and following nesting with adult birds and/or owlets tending to roost next to each other or close together. This is not usually found with roosts of single or non-breeding birds (pers. obs.).

Prey remains found at these roosts included at least one arboreal mammal, either the Common Ringtail Possum (*P. peregrinus*) or Greater Glider (*P. volans*), and at least three species of diurnal birds. This concurs with species found in the general area of the site by Kevin Mills & Associates (1998) and myself.

The location of the roosts at the northern end of the site corresponds with the most likely nesting habitat in and around the site. Several Blackbutt (*Eucalyptus pilularis*) trees in this area (both within and close to the site) are the most likely nest tree candidates in terms of size, maturity, hollow size and hollow entrance shape. *E. pilularis* have been recorded as nest trees for Powerful Owls. (Debus and Chafer 1994).

The habitat in and near the site has been found to support potential prey species such as Greater Gliders (*P. volans*), Sugar Gliders (*P. breviceps*), Common Ringtail Possums (*P. peregrinus*), Common Brushtail Possums (*Trichosurus vulpecula*) and suitable diurnal birds (Kevin Mills & Associates 1998).

Glossy Black-Cockatoos

No Glossy Black-Cockatoos were seen or heard during the assessment.

A small number of chewed She-oak (*A. littoralis*) cones were located towards the south-western corner of the site, and this was the only indication of Glossy Black-Cockatoo use of the area.

The number of live and dead trees within the study area supporting hollows of suitable size and type suggest nesting for this species is possible.

Conclusions

While no definitive statement of nesting status in the study area could be made for either species due to the timing of the assessment, the evidence of significant Powerful Owl use together with the quality of nesting and foraging habitat strongly supports the likelihood of the owls having nested within or adjacent to the study area. This species has a strong tendency to re-use favourable nesting sites (pers. obs.; R.P. Kavanagh pers. comm) and future nesting activity should be considered more likely than not

Therefore a crucial issue here is minimising the disturbance to the general area and specifically to the northern site boundary area from the gully westward.

The significance of the site in terms of acting as a link to major forested areas to the north and south adds weight to maintaining the integrity of this habitat.

Glossy Black-Cockatoos are possibly less likely to nest in the study area, although a number of suitable tree hollows occur within the site. As mentioned, the low number of potential feed trees within the site may be of

little consequence in terms of nesting with higher quality foraging habitat occurring in the district.

References

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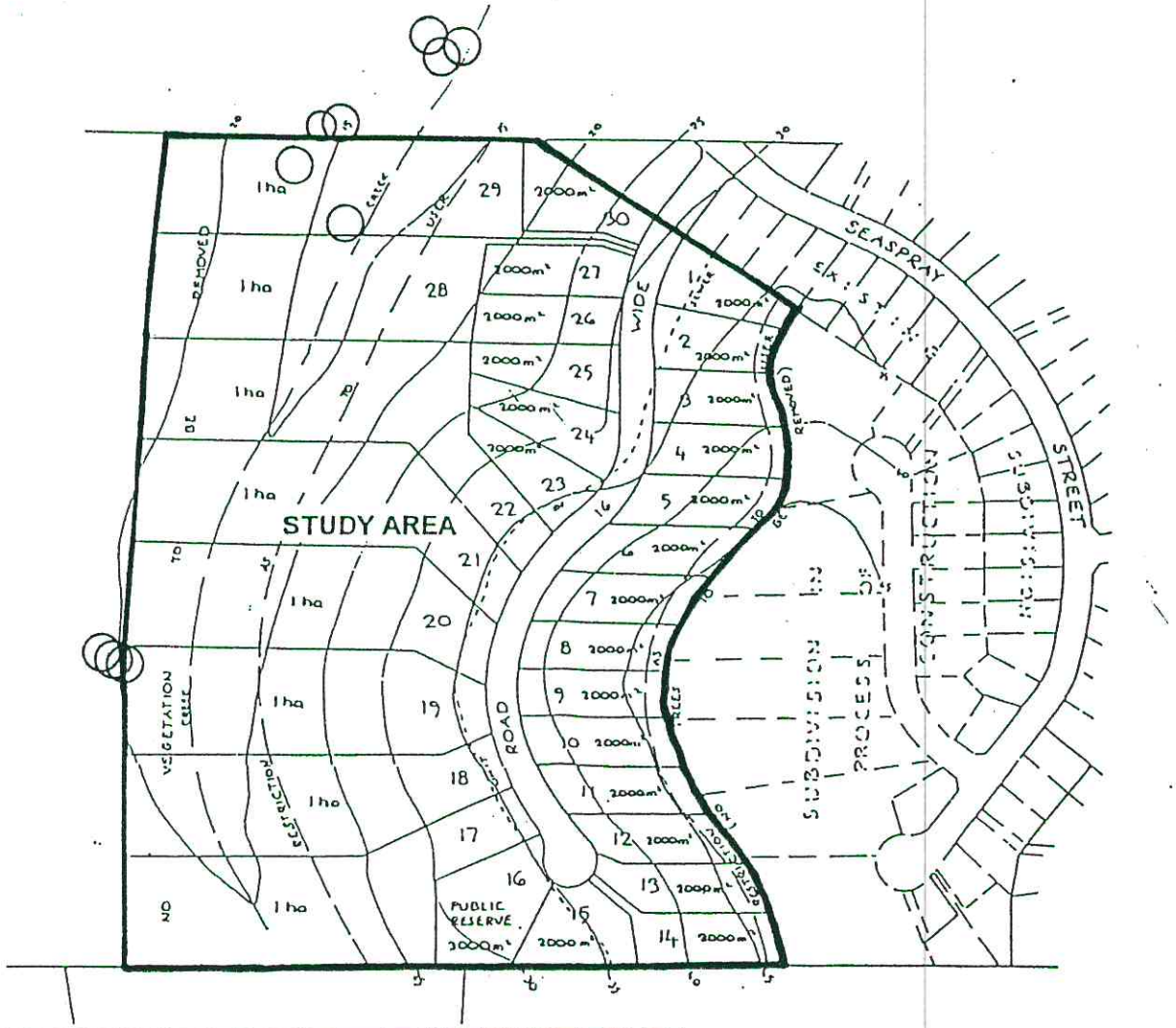
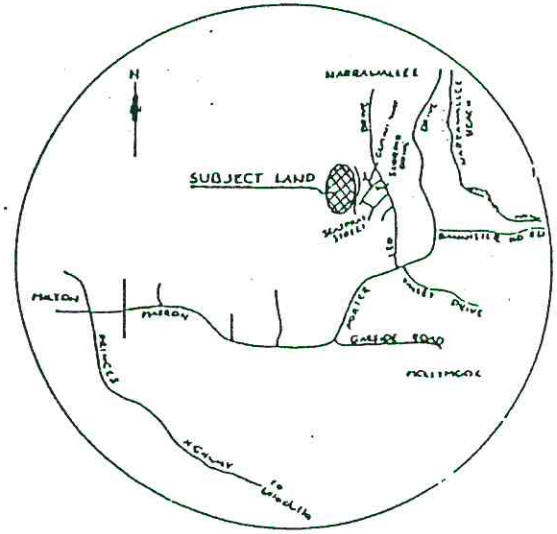
SKETCH PLAN
OF PROPOSED SUBDIVISION OF
PART LOT 10 D.P.
OFF SEASPRAY STREET, NARRAWALLEE
FOR: HANSON SOUTH COAST PTY. LTD.
REDUCTION RATIO 1:2000

N

NOTE LOTS 1 - 15 INCL. TO BE CONNECTED TO SEWER
LOTS K - 30 INCL. SEWER BY INDIVIDUAL PUMPS



LOCALITY SKETCH



Attachment A
Map of study area and Powerful Owl roost sites – ○ (approx.)

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