

Proposed Mosque at Croudace Road Elermore Vale

Ecology Report

A report prepared by Hunter Eco for the Newcastle Muslim Association
with instructions from de Witt Consulting

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1 Introduction

The Newcastle Muslim Association has prepared a proposal to construct a Mosque on land at 158A and 164 Croudace Road Elmore Vale (**Figures 1 & 2**). The land contains a residence and several sheds and the grounds are managed under a generally tall mixed tree species canopy. Newcastle City Council has expressed concern that the trees might provide roosting habitat for threatened fauna, in particular microbats, as well as providing a local movement link for mobile fauna in general.

This is a report of the ecological values of the site and an assessment of its role within the immediate area.

2 Methods

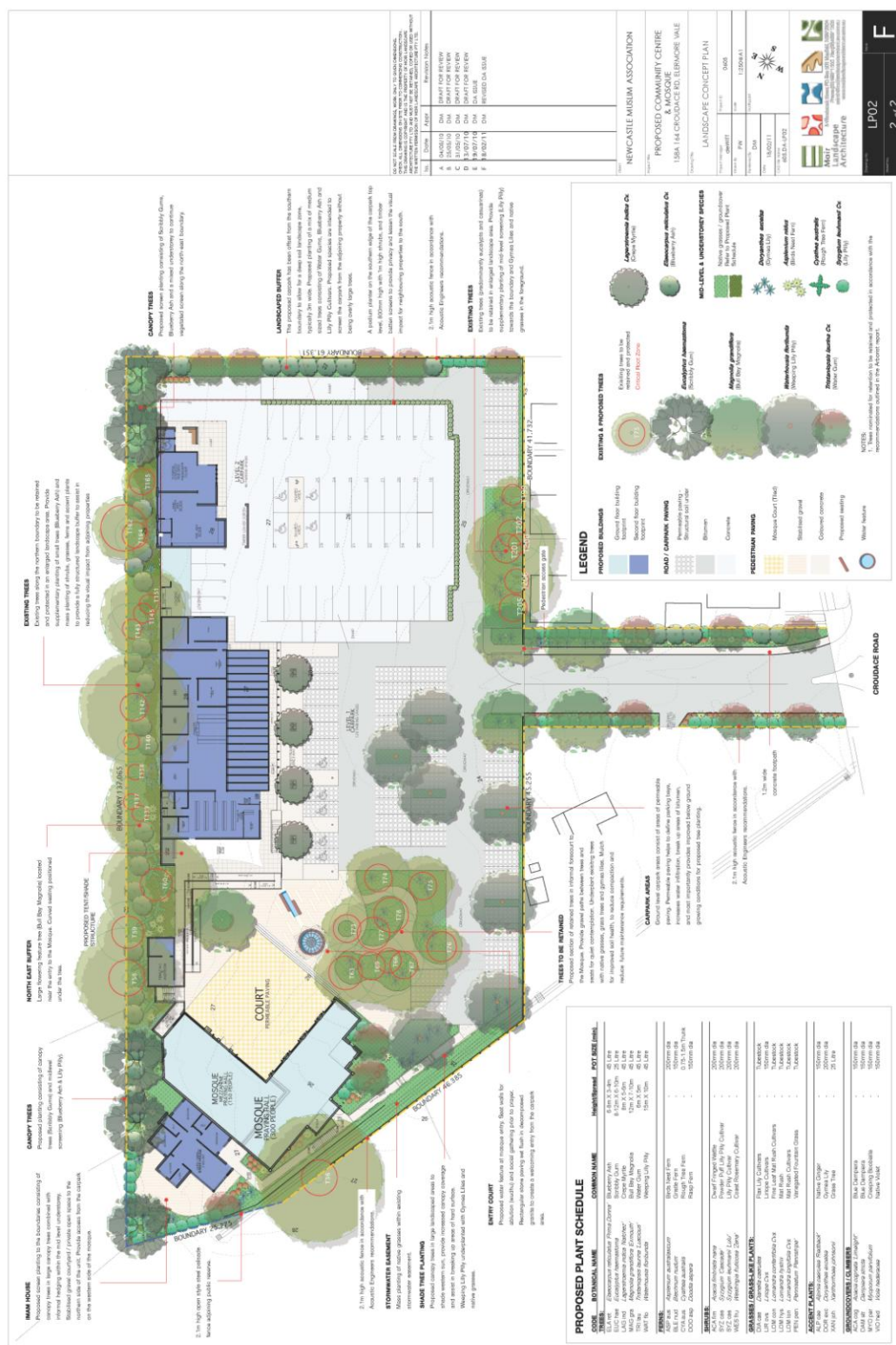
The primary focus of this survey was the possibility of species listed as threatened in the NSW *Threatened Species Conservation Act 1995* being present on the subject site or using it as part of a home range. In order to evaluate this possibility an extract was taken from the NSW Wildlife Atlas of the threatened species that had been reported from within a 5 km radius of the subject site. The habitat requirements of these species were compared with the habitat on the subject site and an assessment made of their likelihood of occurrence.

The site was inspected with particular attention being paid to trees with potential habitat hollows. Tree species were identified and the general history of the site was obtained through discussion with the long-term owner Andrew Ferguson. Mr Ferguson was also able to provide some information regarding the fauna that had been observed over the years. A record was made of all fauna seen on the site.

Trees having potential habitat hollows were watched at dusk until after dark to determine whether any nocturnal fauna were using these hollows for denning.



Figure 1 The subject site



3 Results

3.1 Field inspection results

The site was inspected during the day on 24 January 2011 with stag watching and spotlighting conducted in the evenings of 24th and 31st January 2011. On all occasions the weather was clear, still and warm.

Mr Ferguson advised that the majority of trees had been planted on the site over 30 years ago and were exotic to the area. These were dominated by *Eucalyptus grandis*, *Eucalyptus botryoides*, *Eucalyptus robusta*, *Corymbia citriodora*, *Lophostemon confertus*, *Grevillea robusta*, *Casuarina cunninghamiana* and *Pinus radiata*. The few endemic species present were *Eucalyptus piperita*, *Eucalyptus umbra* and *Eucalyptus acmenoides*. There was a scattered midstorey dominated by *Pittosporum undulatum*, *Glochidion ferdinandi*. As already noted, the ground layer was managed lawn.

There were three trees that had potential habitat hollows (**Figure 3**):

- A *Eucalyptus umbra* with a dead stag at the centre and located near the south eastern boundary. The dead stag had a series of vertical splits forming cavities and had a Ring-tailed Possum drey in one section.
- Two *Eucalyptus piperita* standing a few metres apart, one dead and the other dying, located on the north western side of the residence. There were white ant nests in the dead tree and potential hollows could well be blocked.

During the dusk to dark observation periods, no fauna was observed to leave any of the hollows. One microbat was seen hawking for insects through the site and appeared to be the size of the Little Forest Bat which is known to roost in tree hollows and buildings (Churchill 1998).

Mr Ferguson reported the presence of Ring-tailed and Brush-tailed Possums although none was seen during spotlighting. The Ring-tailed Possum is a favourite prey of the Powerful Owl and its call was demonstrated to Mr Ferguson who confirmed that this owl had not been heard in the years he had been living there.

Birds observed on the site were the Laughing Kookaburra, Noisy Miner, Eastern Rosella, and Tawny Frogmouth. Mr Ferguson stated that he had also observed Crimson Rosella at times.



Figure 3 The location of potential habitat trees

3.2 Threatened species assessment results

Table 1 shows the 5 threatened flora species recorded within 5 km of the subject site. None of these species was present.

Table 2 shows 10 bird, 2 marsupial, 1 megachiropteran bat and 5 microchiropteran bat species recorded within 5 km of the subject site. The reduced and isolated habitat meant that it would be highly unlikely that any of these fauna species could be using the subject site as all or part of a home range.

Appendix 1 provides a 7-part test assessing the impact of the proposed development on threatened species and endangered communities.

Table 1 Flora species recorded with 5 km of the subject site

Family	Scientific Name	Common Name	Status
Elaeocarpaceae	<i>Tetratheca juncea</i>	Black-eyed Susan	V
Myrtaceae	<i>Angophora inopina</i>	Charmhaven Apple	V
Myrtaceae	<i>Callistemon linearifolius</i>	Netted Bottle Brush	V
Myrtaceae	<i>Melaleuca biconvexa</i>	Biconvex Paperbark	V
Myrtaceae	<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	V

Table 2 Fauna species recorded within 5 km of the subject site

Family	Scientific Name	Common Name	Status
Birds			
Columbidae	<i>Ptilinopus magnificus</i>	Wompoo Fruit-Dove	V
Columbidae	<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V
Accipitridae	<i>Hieraaetus morphnoides</i>	Little Eagle	V
Cacatuidae	<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	V
Cacatuidae	<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	V
Psittacidae	<i>Lathamus discolor</i>	Swift Parrot	E1
Strigidae	<i>Ninox strenua</i>	Powerful Owl	V
Meliphagidae	<i>Xanthomyza phrygia</i>	Regent Honeyeater	E1
Neosittidae	<i>Daphoenositta chrysoptera</i>	Varied Sittella	V
Petroicidae	<i>Petroica boodang</i>	Scarlet Robin	V
Marsupials			
Phascolarctidae	<i>Phascolarctos cinereus</i>	Koala	V
Petauridae	<i>Petaurus norfolcensis</i>	Squirrel Glider	V
Megachiropteran Bats			
Pteropodidae	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V
Microchiropteran Bats			
Molossidae	<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	V
Vespertilionidae	<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V
Vespertilionidae	<i>Miniopterus australis</i>	Little Bentwing-bat	V
Vespertilionidae	<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	V
Vespertilionidae	<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V

4 Regional connectivity

Figure 4 shows the subject site in context with other areas of urban bushland in the immediate region. This shows that there are three main movement corridors available that have the potential to connect the largest habitat patches in the Rankin Park/Lambton and Wallsend areas. Most of these corridors consist of a series of habitat islands with the most continuous connection available being along Ironbark Creek.

The subject site would be unlikely to play a significant role in fauna movement in the area when there are easier alternatives. Another important factor restricting small bird movement in particular through urban bushland is the abundance of Noisy Miners and the subject site was no exception. These are aggressively territorial birds which harass any other species, particularly honeyeaters, thornbills and pardalotes, that approach their territory (e.g. Grey et al. 1997; Piper & Catterall 2003). There is a small number of species that are indifferent to the aggression of the Noisy Miners and these are represented in the species recorded on the subject site.

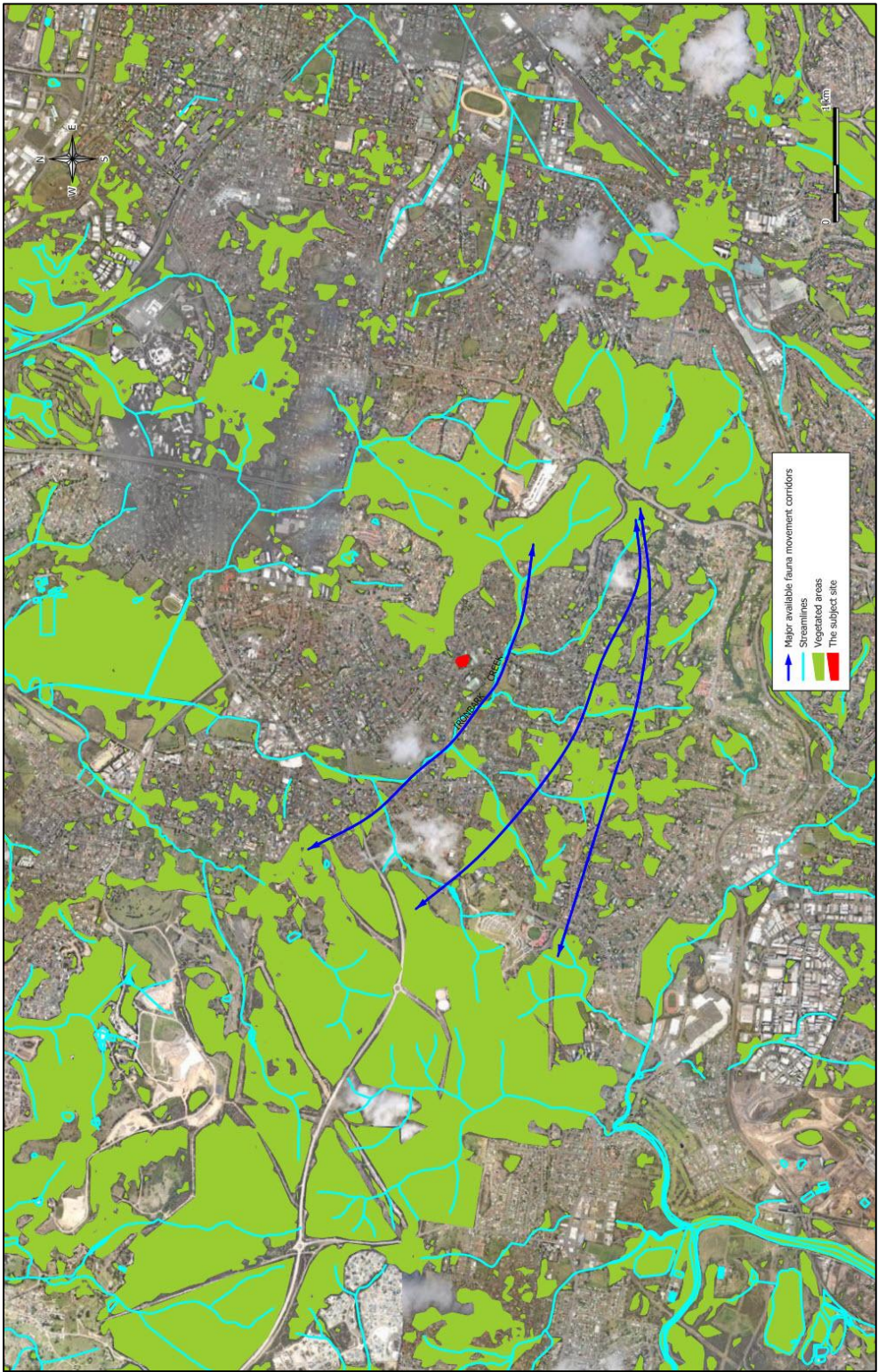


Figure 4 The subject site in relation to regional habitat connectivity

5 Conclusion and recommendations

The subject site did not contain any remnant vegetation other than a few canopy trees. There was no suitable habitat for ground-dwelling threatened fauna or flora species. No nocturnal or diurnal fauna was observed to be using any of the potential habitat hollows.

The subject site would provide a minor role only in the overall regional habitat connectivity given that better corridors can be seen to be available.

Even though no fauna was observed using the potential habitat hollows care should be taken when removing these trees as hollow use can change over time. At the time the trees are to be removed a person suitably experienced in fauna handling should be present; someone from the Native Animal Trust Fund for example.

6 References

Churchill Sue (1998) *Australian Bats*. New Holland.

Grey, M.J., Clarke, M.F., and Loyn, R.H. (1997) Initial Changes in the Avian Communities of Remnant Eucalypt Woodland following a Reduction in the Abundance of Noisy Miners, *Manorina melanocephala*. *Wildlife Research* **24**, 631 – 648.

Piper, S. D. & Catterall, C. P. (2003). A particular case and a general pattern: hyperaggressive behaviour by one species may mediate avifaunal decreases in fragmented Australian forests. *Oikos*, 101(3), 602-614.

7 Appendix 1 the 7- part test

This is a generic application of the 7-part test of significance and impact as provided for in the NSW *Threatened Species Conservation Act 1995*.

(a) in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,

A threatened species assessment of the site concluded that there was negligible possibility of any threatened species using the site as all or part of a home range. No threatened species populations would be placed at risk of extinction as a consequence of the proposed development proceeding.

(b) in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction,

No endangered populations were present.

(c) in the case of an endangered ecological community, whether the action proposed:

(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,

No endangered ecological communities were present.

(d) in relation to the habitat of a threatened species, population or ecological community:

(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and

(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and

The habitat on the subject site is itself an isolated fragment of predominantly planted vegetation and its modification would not result in further fragmentation or isolation.

(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality,

(e) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),

No critical habitat was present.

(f) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,

Because the subject site has been cleared of native vegetation over 30 years ago the proposed development would not result in actions inconsistent with recovery plan principles.

(g) whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

Because the subject site does not consist of remnant native habitat, and is located in an urban area, no key threatening processes would be in operation as a result of the proposed development proceeding.

