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Wednesday, 25 November 2015

Mr Michael Fitzgerald
Project Manager
Commercial Properties Group
PO Box 900
West Perth, Western Australia, 6872

Dear Michael

Re: Muchea – Great Northern Highway Modification for Improved Access

A site assessment of the flora and vegetation values was undertaken by Dr Libby Mattiske on 28th July 2015 within the 8 metres expansion area on the western side of the Great Northern Highway in the areas designated on Figures 1 and 2.

A search of the Department of Parks and Wildlife (Naturemap database 2015a) search was undertaken covering a 5km radius from the site assessed on the Great Northern Highway. This search highlighted a range of significant flora, vegetation and fauna values. Despite searching, no listed threatened or priority flora species were recorded, no listed Threatened (TEC) or Priority Ecological Communities (PEC) were recorded and the only low lying area is associated with an established drain under the highway (not a wetland) (Department of Parks and Wildlife 2015b and Department of the Environment 2015a). The area occurs east of the known occurrence of the Muchea limestone TEC and as indicated from the site assessment the landform, soils and plant species associated with this TEC were not present. In addition, the State and Federally listed Carnaby's Cockatoo has the potential to occur in the area. Consequently, the larger trees were checked for suitable nesting hollows and flora species suitable for foraging.

The road reserve supports open woodlands of *Corymbia calophylla* and *Eucalyptus wandoo* on the western fringes of the Pinjarra Plain. As such the northern section is less disturbed than the southern section near the Parking Bay. Midway along the alignment there is a drain under the road that has channelled the water into a small section and this area supports the shrubs - *Hypocalymma angustifolium* and *Baeckea camphorosmae* which are indicators of local seasonally moister conditions.

The northern area supports a mixture of *Corymbia calophylla* and *Eucalyptus wandoo* over a mixture of the introduced (*) South African Love Grass (**Eragrostis curvula*), **Oxalis pes-caprae* and **Gladiolus caryophyllaceus* and a range of low native shrubs and sedges including *Allocasuarina humilis*, *Hibbertia hypericoides*, *Banksia armata*, *Mesomelaena tetragona*, *Lambertia multiflora* var. *darlingensis*, *Calothamnus sanguineus*, *Acacia pulchella* and *Acacia applanata*.

The southern area supports more open areas of *Corymbia calophylla* and *Eucalyptus wandoo* over the introduced (*) South African Love Grass (**Eragrostis curvula*) and **Oxalis pes-caprae* and a

range of low shrubs including *Hibbertia hypericoides* and *Acacia pulchella*. The most southerly section occurs near the established parking bay off the highway and this lower end only supports younger trees over mainly introduced species.

A few larger Marri (*Corymbia calophylla*) trees were recorded in the proposed expansion area. The stems and branches were checked for hollows which may be used by the listed Carnaby's Cockatoo (*Calyptorhynchus latirostris*). Although several of the trees had stem diameters approximating 50cm, no suitable hollows were recorded. Some of the tree and shrub species recorded may be utilized by the Carnaby's Cockatoo for foraging. One of the trees had fallen fruit that had been eaten; however after discussing this with Dr Sacha Ruoss in our team it appears that the type of chewing was related to the Australian Ringneck Parrot (*Barnardius zonarius semitorquatus*). The close proximity of the Great Northern Highway to these trees would be expected to deter many bird species from nesting in this narrow strip of remnant trees and shrubs within the road reserve.

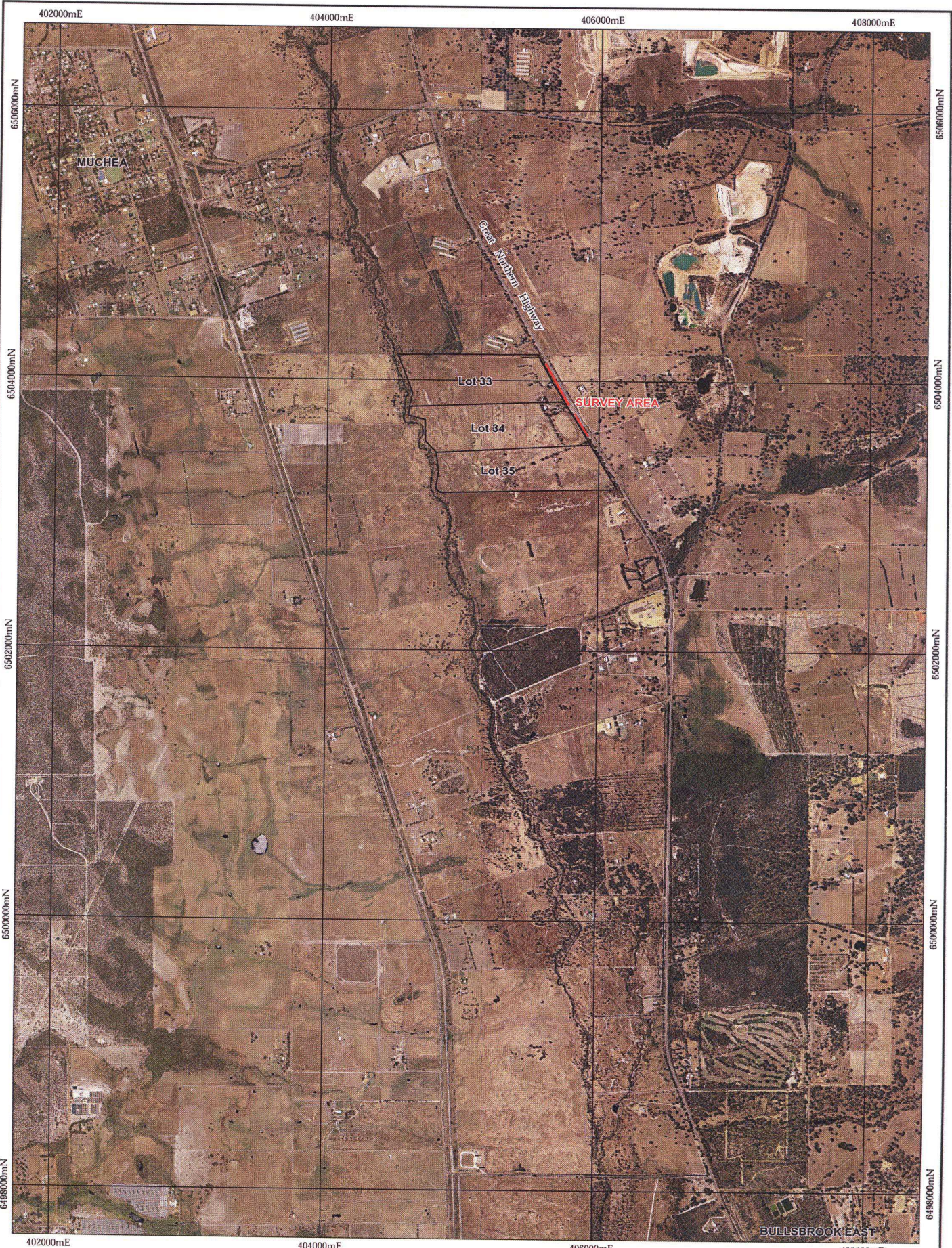
So overall the main issue appears to relate to the few larger trees in the northern section of the proposed expansion area and several of the shrub species that may be suitable foraging for the Carnaby's Cockatoo. The proposed clearing is unlikely to have a significant impact on the local populations of the Carnaby's Cockatoo because it would only constitute a minor part, if any, of their foraging grounds. The conditions as defined by the Shire of Chittering (see letter dated 25th February 2015) of a requirement for a 10m strip for vegetated screening beyond the 6m fire break using vegetation endemic to the area should assist in supporting continued foraging by this species in the local area. To assist in this matter it is recommended that the proponent discuss the presence of these larger trees with the Main Roads Department environmental team and that the proponent arranges for botanists and ecologists familiar with the vegetation in the area to support the landscape architects in the selection of species suitable for this vegetated screening.



Dr E.M. Mattiske
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References:

- Department of Parks and Wildlife 2105a. *NatureMap: Mapping Western Australia's biodiversity*, Government of Western Australia. Available from: <http://naturemap.dpaw.wa.gov.au>.
- Department of Parks and Wildlife 2015b, *FloraBase – the Western Australian Flora*, Western Australian Herbarium, Government of Western Australia. Available from: <http://florabase.dpaw.wa.gov.au>.
- Department of the Environment 2015a, *EPBC Act: Protected matters search tool*, Commonwealth of Australia. Available from: <http://www.environment.gov.au/epbc/pmst/>.
- Department of the Environment (2015b)
Calyptorhynchus latirostris — *Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo*, viewed 9th April 2015. <http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=59523>
- Whitford, K.R. (2002)
Hollows in jarrah (Eucalyptus marginata) and marri (Corymbia calophylla) trees I. Hollow sizes, tree attributes and ages. *Forest Ecology and Management* 160 (1-3): 201-214.



Notes:
Aerial photography: Landgate (Nov 2014)



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Scale: 1:25,000
MGA94 (Zone 50)
CAD Ref: 0221_01.dgn
Date: Jul 2015 Rev: A | AS

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Great Northern Highway Muchea LOCALITY Tree Removal Extent

Figure: **1**