

Annexure D

John Dell's comments on the ATA (2000) Environmental Assessment

Annexure to EPA Assessment No. 1403

Lot 4 Underwood Avenue, Shenton Park Response to
Public Submissions 2007

PB04 2/5

13-02-01

(3)

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**DRAFT SUMMARY OF FAUNA VALUES OF
UNDERWOOD AVENUE BUSHLAND, SHENTON PARK**

AND COMMENT ON:

**THE UNIVERSITY OF WESTERN AUSTRALIA
LOT 4, LOC 2103 UNDERWOOD AVE SHENTON PARK
ENVIRONMENTAL ASSESSMENT (UPDATED) By ATA
ENVIRONMENTAL NOVEMBER 2000**

By JOHN DELL 13 FEBRUARY 2001

**FAUNA VALUES OF UNDERWOOD AVENUE BUSHLAND,
SHENTON PARK**

When draft *Perth's Bushplan* was published in 1998 there was limited information available on the faunal values of Underwood Avenue Bushland, Shenton Park (Bushplan Site 119). Available information was limited to:

"limited survey by J. Dell (pers. comm.) for birds (12) and reptiles (3)"

At the time of the final *Bush Forever* report in December 2000 considerably more fauna data had been acquired by P. F. Berry and this information was summarised in *Bush Forever* as:

"structured survey for birds (37 species), reptiles (16 species) and amphibians (3 species) (P. Berry pers. comm.). Significant bird species: category 1 (1), category 3 (3) and category 4 (3)"

The significant bird species in category 1 was Carnaby's Cockatoo which is listed in Schedule 1 of the Wildlife Conservation Act as "threatened". The three category 3 species were species which were included in *Bush Forever* as "habitat-specialists with a reduced distribution on the Swan Coastal Plain". The three category 4 species were species which were included in *Bush Forever* as "wide-ranging species with reduced populations on the Swan Coastal Plain".

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Both draft *Perth's Bushplan* and the final *Bush Forever* also recognized the role of Underwood Avenue Bushland, Shenton Park (Bush Forever Site 119) as "part of a regionally significant potential bushland/wetland linkage".

Bush Forever (Vol. 2 p. 345-346) summarised the considerable conservation value and significance for vertebrate fauna of Underwood Avenue Bushland, Shenton Park. In particular it presented data on values related to

- the number of species contained within the bushland
- the presence of at least six conservation significant bird species that were recognized in *Bush Forever* as "habitat specialists with a reduced distribution on the Swan Coastal Plain" or "wide-ranging species with reduced populations on the Swan Coastal Plain".
- the role of the bushland in enhancing the conservation values of other reserves in the region because it was "part of a regionally significant potential bushland/wetland linkage".

The fauna values as summarised in *Bush Forever* Vol. 2 p. 345-346 indicated that Underwood Avenue Bushland maintains at least 37 bird species, 16 reptile species, and 3 amphibian species.

- Of particular note is the presence of the threatened Carnaby's Cockatoo and at least six conservation significant bird species that were listed in *Bush Forever* as having special conservation significance on the Swan Coastal Plain as they are either "habitat specialists with a reduced distribution on the Swan Coastal Plain" or they are "wide-ranging species with reduced populations on the Swan Coastal Plain".

It is known (Dell, J., How, R.A. & Burbidge, A.H. Vertebrate Fauna of Tuart Woodlands. *In*: Proceedings of a Workshop on Tuart Woodlands. CALM and Wildflower Society of Western Australia. (in press)) that specialist woodland insectivorous bird species have declined in both Tuart as well as other woodlands on the Coastal Plain and some species, including those referred to above as of conservation significance, are now infrequently recorded in other vegetation associations on the Coastal Plain.

Tuart and other trees in Underwood Avenue Bushland also provide essential hollows for obligate tree hollow breeders as well as tall trees for other species such as diurnal birds of prey.

- The Underwood Avenue Bushland is also part of a significant potential bushland/wetland linkage (*Bush Forever* vol 1 Map 6). This is likely to facilitate movement of birds between other conservation reserves including Kings Park, Shenton Park Bushland and Bold Park.

Fire in urban bushlands is inimical to the survival of many species of vertebrate fauna. This has been documented in Dell J. & How, R. 1995. Faunal Responses to Fire in Urban Bushland. pp 35-41. In: *Burning our Bushland*. Proceedings of a Conference about Fire and Urban Bushland. Urban Bushland Council (W.A.). Replication of conservation reserves will increase the likelihood that species will survive regionally if severe disturbances such as wildfires eliminate species temporarily on one area. If reserves are linked by corridors then species that are eliminated by fire on one site can re-colonise burnt sites thus increasing their regional survival.

With reptiles there is a strong relationship between the number of different species occurring on bushland remnants and the size of the remnant. Smaller remnants have fewer species surviving long-term. This has been demonstrated recently in:

HOW, R.A. and DELL, J. 2000. Ground Vertebrate Fauna of Perth's Vegetation Remnants: Impact of 170 Years of Urbanization. *Pacific Conservation Biology*, Vol. 6: 198-217.

**COMMENT ON SECTION 2.5 VERTEBRATE FAUNA, AND
SECTION 3.3 THE SIGNIFICANCE FOR VERTEBRATE FAUNA
IN:**

**THE UNIVERSITY OF WESTERN AUSTRALIA
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SECTION 1.1 BACKGROUND AND SCOPE OF ASSESSMENT

Note: Comments on this report are made in the context of the contract brief which was "a desktop review of the vertebrate fauna likely to occur in the area and an assessment of the local and regional conservation significance of the site, in accordance with recognized government policy"

SECTION 2.5 VERTEBRATE FAUNA

The assessment of the vertebrate fauna likely to occur on the study site is very limited and only refers to two references (How and Dell 1990 and Berry and Berry 1998) and does not include a number of significant recent references that would have contributed to a better understanding of the vertebrate fauna likely to occur. Relevant references that could have been included are:

HOW, R.A. & DELL, 1993. J. Vertebrate Fauna of the Perth Metropolitan Region: Consequences of a Modified Environment. pp 28-47. In: M.Hipkins. (Ed.) *Urban Bush Management*. Aust. Inst. of Urban Studies, Western Australia.

HOW, R.A. & DELL 1994. J. The Zoogeographic Significance of Urban Bushland Remnants to Reptiles in the Perth Region, Western Australia. *Pacific Conservation Biology* Vol.1: 132 - 140.

DELL J. & HOW, R. 1995 Faunal Responses to Fire in Urban Bushland. pp 35-41. In: *Burning our Bushland*. Proceedings of a Conference about Fire and Urban Bushland. Urban Bushland Council (W.A.).

DELL, J. & HOW, R.A. 1996. Painted Button-quail on the Swan Coastal Plain. *West. Aust. Nat.* 21: 87-88.

HOW, R.A., HARVEY, M.S., DELL, J. & WALDOCK, J.M. 1996. *Ground Fauna of Urban Bushland Remnants in Perth*. Report to the Australian Heritage Commission. NEP Grant N93/04.

HARVEY, M.S., WALDOCK, J.M., HOW, R.A., DELL, J. & KOSTAS, A. 1997. Biodiversity and Biogeographic Relationships of Selected Invertebrates from Urban Bushland Remnants, Perth, Western Australia. Proceedings of Invertebrate Biodiversity and Conservation Symposium. *Memoirs of Museum of Victoria*. 56: 275-280.

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DELL, J., HOW, R.A. & BURBIDGE, A.H. 1998. Vertebrate Fauna of Tuart Woodlands. *In: Proceedings of a Workshop on Tuart Woodlands*. CALM and Wildflower Society of Western Australia. (in press).

As a result of limited reference use the assessment of the vertebrate fauna likely to be present on the site is not comprehensive and the significance of the site to vertebrate fauna is not adequately recognized. This is apparent from the limited list of species (especially birds) in Appendix 2 in the report.

It is not true that "no native mammals are likely to inhabit the ... site". The statement that the Common Brushtail Possum is unlikely to occur in the Underwood Avenue Bushland is based on an inadequate literature search on its known habitats in the region. It is likely to utilize much of the Underwood Avenue Bushland as key elements of the habitat there are similar to other locations where it is known to occur.

The statements about bats are intriguing. Firstly it is stated that "no native mammals are likely to inhabit the ... site" and then it is stated that at least one bat species may occur at Bold Park but is not confirmed. No attempt was made to consult either recent or historic records to elucidate which bat species are likely to inhabit the area. Reference to :

HOW, R.A. & DELL, 1993. J. Vertebrate Fauna of the Perth Metropolitan Region: Consequences of a Modified Environment. pp 28-47. *In: M.Hipkins. (Ed.) Urban Bush Management*. Aust. Inst. of Urban Studies, Western Australia.

would have revealed that several species are known from the Spearwood Landform Unit and could occur in the Underwood Avenue Bushland.

SECTION 3.3 SIGNIFICANCE FOR VERTEBRATE FAUNA

This section provides some general discussion of the role of remnants in preserving sub-populations, when severe disturbances such as fire exterminate populations in other areas as well as the role of corridors in facilitating movement. However it does not make the distinction between those species that require the area to move through as compared to those which do not, e.g. "habitat provided at the site, therefore, is not a crucial

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component for the movement of all fauna species throughout the region".

Other information within this section especially the data on the Little Eagle is generally correct. However the point should have been made that the area has considerable conservation value which is recognized in *Bush Forever* (Vol. 2 p. 345-346) which summarised the considerable conservation value and significance for vertebrate fauna of Underwood Avenue Bushland, Shenton Park.