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**Assessment of proposed landfill site expansion in Shire of Perenjori for the
Western Spiny-tailed Skink *Egernia stokesii badia***

INTRODUCTION

The Shire of Perenjori is proposing to expand its existing landfill site which will involve clearing of up to 3ha of native vegetation within Lot 10591 on Depositional Plan 168362. This is adjacent to the existing West Perenjori Nature Reserve. A native vegetation clearing permit application (CPS7775/1) has been made to the Department of Water and Environmental Regulation (DWER), and a condition of approval was that the site be checked for the Western Spiny-tailed Skink *Egernia stokesii badia*, listed as Endangered under both the Commonwealth *Environment Protection and Biodiversity Conservation Act (1999)* and the *Western Australian Biodiversity Conservation Act (2016)*. The skink occurs in the adjacent Nature Reserve. The shire commissioned Bamford Consulting Ecologists to undertake the inspection of the proposed clearing area for the skink.

METHODS

The project area was visited by Mike Bamford (B.Sc. Hons. Ph.D.) and Mandy Bamford (B.Sc. Hons.) on 5th June 2019. The proposed clearing area was walked, note made on the suitability of vegetation for the Western Spiny-tailed Skink and searching undertaken for evidence of the species.

The skink lives in small colonies often in large eucalypt trees with abundant hollows and crevices for shelter, and the lizards use a communal latrine (How *et al.* 2003). It will also shelter in old buildings, sheds and wood-heaps. Bamford Consulting (unpubl. reports) has studied the species in the Karara Mining project area, east of Perenjori, and found that ideal colony sites are in very large York Gum and occasionally very large melaleuca, have narrow as well as broad hollows, raised branches (for basking) and an abundance of dense shrubs (often *Eremophila* spp.) around the tree (Figure 1). The communal latrine is usually conspicuous (Figure 2). These features of the skink make it fairly easy to identify suitable habitat and to check for the presence of the species.



Figure 1. a typical colony site in the Karara area.



Figure 2. A latrine site in the Karara area.

RESULTS

While vegetation in the adjacent Nature Reserve includes large York Gums, the vegetation in the proposed clearing area consists of heath and sedgeland with scattered mallee eucalypts (Figure 3). These trees are small, with maximum stem diameters in the order of 20-25cm, and occasional small hollows. These mallee eucalypts are close to the Carnamah to Perenjori Road in the north of the area, and along the boundary with the Nature Reserve in the east. The trees were probably too small to provide the range and abundance of hollows favoured by the Spiny-tailed Skink, but they were checked for latrines and hollows were examined to look for skinks; no latrines or skinks were found. *Eremophila* spp. were not noted and may either be absent or only a minor component of the understorey.

While no skinks were found, it was noted that there was abundant Echidna activity (Figure 4).

CONCLUSIONS

The environment in the proposed clearing area appears to be of marginal value as habitat for the Spiny-tailed Skink, lacking large trees with a range of hollow sizes and with an apparent scarcity of some of the understorey plant species that have been found where the skinks are present at nearby sites. There was also no evidence of the skinks. This suggests that the skinks are not present, but as they are known from the adjacent Nature Reserve, it is likely that individuals will occasionally move into the project area. These may take temporary shelter in the small mallee eucalypts, and therefore it is recommended that these trees be retained where possible. This may be possible as most occur along the northern edge of the project area, adjacent to the Carnamah to Perenjori Road. Retaining the mallee along the northern and eastern boundaries of the project area would be consistent with the suggestion from the DWER to provide a vegetated buffer particularly between the landfill site and the Nature Reserve.

The Echidna is not a listed conservation significant species, but it has declined dramatically across the Wheatbelt due to land-clearing, and therefore its presence in the project area is of at least local interest. The level of foraging activity suggests that several individuals could be present, and it is recommended that shire staff watch out for these during operations to avoid mortality. Directional clearing as suggested in advice from the DWER would further reduce the risk of killing Echidnas, providing them with an opportunity to move into the Nature Reserve.



Figure 3. Typical vegetation of the proposed clearing area.



Figure 4. Echidna foraging holes in the project area.

REFERENCE

How, R. A., Dell, J. and Robinson, D. (2003). The Western Spiny-tailed Skink, *Egernia stokesii badia*: declining distributing in a habitat specialist. *Western Australian Naturalist* **24**: 138-146.