

Land and Habitat Condition Assessment of Lot 510

TO: [REDACTED]

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SUBJECT: Determine the suitability of Lot 510 as Typhonium sp. Kununurra habitat.

Introduction

The suitability of Location 510 Mulligans Lagoon Road as a viable habitat for Typhonium sp. Kununurra (TsK) was assessed on 21-10-2021.

Existing semi-detailed and detailed soil / landscape mapping was used to determine the component soils within Lot 510.

On-site remnant vegetation and weed assessment was also conducted on 21-10-2021.

Land use history

Lot 510 was part of DPIRD's annex block King Loc. 318, which contains the now defunct Sugar Refinery and waste composting area. Approximately 55 ha remains uncleared however most of the clay soils, along the northern boundary, were cleared and leased for tea tree and lemon grass cultivation.

Soil assessment

Lot 510 is covered by semi-detailed mapping by Dixon and Petheram in 1979 while the northern boundary was also mapped by Aldrick et al 1990. Site observation density 1:58ha

Detailed mapping was conducted by Smolinski in 2000 (unpublished, see attached). Site observation density 1:7.5ha.

Three major soil/landscape units were recognised, these being:

- CS Cockatoo Sands- Red-brown sands to sandy loams occurring on mid slopes.
- JC Junction Complex- Sandy Duplex soils and deep red to yellow sands moderately well drained to poorly drained. Associated with lower slopes.
- A Aquitaine.-includes grey phase Aquitaine soils, typical brown Cununurra Clay, Complex of non-cracking grey, yellow-brown red clays and shallow loamy duplex soils occurring on foot slopes and flats. Note: Aquitaine was introduced by Smolinski 2000 to better delineate the clays from the sands and sandy duplex soils that are associated with the Junction Complex.

Emergent remnant vegetation on Lot 510 includes Eucalyptus tetradonta, Acacia tumida, Melaleuca viridiflora, Melaleuca leucadendra, Ficus sp. and Grevillea sp. Atalaya hemiglauca.

Note: The remnant vegetation is typical of sands and wet transitional areas. Bauhinia cunninghamii was absent.

Hyptis suaveolens is a common weed species within Lot 510

Conclusion

Lot 510 contains minor areas of clay. The clays are either non-cracking or similar in morphology to the Aquitaine Clays. Areas of Cununurra clay are insignificant.

In the past, most areas of clay had been cleared and developed for tea tree and lemon grass cultivation.

Hyptis is a common invasive weed within the understorey.

On the basis of land use history, weed impact and soil suitability Lot 510 is poor habitat for TsK.