

PAGANONI SWAMP AND ADJACENT BUSHLAND, KARNUP

Boundary Definition: protected area/bushland (part taken to cadastre) boundary (Boundary adjusted after vegetation survey and negotiations with land owner(s) in response to a submission to draft *Perth's Bushplan*.)

SECTION 1: LOCATION INFORMATION

Bush Forever Site no. 395
open water.)

Area (ha): bushland 705.5 (Site also includes

Map no. 79, 80

Map sheet series ref. no. 2033-II SW

Other Names: part of Rockingham Lakes Regional Park, Submission Area 266 and Submission Area 151, Lot 1 cnr Paganoni and Mandurah Rds

Local Authorities (Suburb): City of Rockingham (Karnup)

SECTION 2: REGIONAL INFORMATION

LANDFORMS AND SOILS

Pinjarra Plain

Guildford Formation (Qha: Cp) (associated with Serpentine River)

Bassendean Dunes

Bassendean Sands (Qpb: S8)

Spearwood Dunes

Sands derived from Tamala Limestone (Qts: S7)

Tamala Limestone (Qtl: LS1)

Wetlands (within the Spearwood Dunes)

Holocene Swamp Deposits (Qhw: Scp, Cps)

VEGETATION AND FLORA

Vegetation Complexes

Spearwood Dunes

Karrakatta Complex — Central and South

Cottesloe Complex — Central and South

Wetlands

Herdsman Complex

Floristic Community Types: *not sampled, types inferred

Supergroup 2: Seasonal Wetlands

17 *Melaleuca rhapsiophylla* — *Gahnia trifida* seasonal wetlands

Supergroup 3: Uplands centred on Bassendean Dunes and Dandaragan Plateau

21a Central *Banksia attenuata* — *Eucalyptus marginata* woodlands

Supergroup 4: Uplands centred on Spearwood and Quindalup Dunes

*24 Northern Spearwood shrublands and woodlands

25 Southern *Eucalyptus gomphocephala* — *Agonis flexuosa* woodlands

WETLANDS

Wetland Types: sumpland, dampland

Natural Wetland Groups

Bassendean Dunes

Gnangara (B.2)

Spearwood Dunes

Stakehill (S.4)

Coastal Plain Rivers

Goegrup (R.4)

Wetland Management Objectives: Conservation (107.8ha)

Swan Coastal Plain Lakes EPP: 4.5ha + 9.6ha + 4.1ha + 0.3ha = 18.5ha (total)

THREATENED ECOLOGICAL COMMUNITIES

Not assessed

SECTION 3: SPECIFIC SITE DETAIL

Landscape Features: open water, vegetated uplands, dune crest, limestone ridge

Vegetation and Flora: limited survey (DEP roadside survey 1998, DEP 1999, Gibson *et al.* 1994 (Page 01–08)); detailed survey (Keighery, GJ, 1996, Semeniuk, V&C Research Group 1991d, part Site — Tingay 1999c)

Structural Units: mapping (Semeniuk, V&C Research Group 1991d)

Uplands — Sands derived from Tamala Limestone: *Eucalyptus gomphocephala* Forest to Woodland; Woodlands dominated by *Banksia attenuata* with scattered emergent *Eucalyptus marginata* and *E. gomphocephala* mixed with varying proportions of *Banksia ilicifolia*, *B. grandis*, *B. menziesii*, *Allocasuarina fraseriana* and *Xylomelum occidentale*; *Eucalyptus decipiens* Shrub Mallee; Mixed Low Heaths with a variety of dominants such as *Melaleuca huegelii*, *Grevillea preissii* and *Hakea trifurcata*

Uplands — Tamala Limestone: Low heath dominated by *Olearia axillaris*, *Melaleuca systema*, *Acacia truncata*, *A. cyclops* and *A. saligna*

Wetlands: Woodlands to Forests dominated by *Eucalyptus rudis*, *E. calophylla* or *E. gomphocephala*; *Melaleuca preissiana*, *Banksia littoralis* and *Acacia saligna* Low Woodland; *Melaleuca raphiophylla* Low Forest; Closed Scrub to Open Scrub dominated by *Melaleuca teretifolia* or *M. viminea*; Closed to Open Heath dominated by *Pericalymma ellipticum* alone or in combination with *Hakea varia*, *Calothamnus lateralis* and *Aotus* species; *Astartea* aff. *fascicularis* Heath; Sedgeland dominated by *Lepidosperma longitudinale*, *Baumea articulata*, *B. juncea* or *Gahnia trifida*

Vegetation Condition: >75% Excellent to Very Good, <25% Good to Degraded

Total Flora: 305 native taxa, 45 weed taxa (Keighery, GJ, 1996, Semeniuk, V&C Research Group 1991d) (estimated >80% expected flora)

Significant Flora: *Lasiopetalum membranaceum* (2) (Tingay 1999), *Hibbertia spicata* subsp. *leptotheca* (3), *Acacia benthamii* (3) (Keighery, GJ, 1999), *Dillwynia dillwynioides* (3); *Jacksonia calcicola* (most southern

population), *Trachymene coerulea*, *Mesomelaena tetragona* (most western record, generally associated with eastern side of the Swan Coastal Plain), *Senecio ramosissimus* (one of two populations known in the PMR, Keighery, GJ, 1996), *Pterostylis* sp. cauline leaves (NG & ML 1490), *Pterostylis* sp. crinkled leaf (GJK 13426); typical Tamala Limestone taxa (DEP 1999 and Tingay 1999) — *Melaleuca huegelii* *Grevillea preissii*, *Trymalium ledifolium* subsp. *ledifolium*, *Diplopeltis huegelii* subsp. *huegelii*, *Eucalyptus foecunda*, *Jacksonia calcicola*

Fauna: Significant mammal species: Quenda (Friend 1996 D)

Linkage: adjacent bushland to the north (Site 379, across road), east (to Serpentine River) and west; part of Greenways 89, 123 (Tingay, Alan & Associates 1998a); part of a regionally significant contiguous bushland/wetland linkage (Part A, Map 7)

Other Special Attributes: Paganoni wetland is the largest in the Stakehill Suite; wetland of 'regional to international significance' (Semeniuk, V&C Research Group 1991e); majority of Site included in Port Kennedy and Rockingham Parks proposal (Tingay, Alan & Associates 1997b)

SECTION 4: INTERNATIONAL AND NATIONAL SIGNIFICANCE

Entered in the Interim List of the Register of the National Estate

SECTION 5: SELECTION CRITERIA AND RECOMMENDATIONS

Criteria: Representation of ecological communities, Diversity, Rarity, Maintaining ecological processes or natural systems, Scientific or evolutionary importance, General criteria for the protection of wetland, streamline and estuarine fringing and coastal vegetation

Recommendation: Part A: Site with Some Existing Protection; the care, control and management of this Site for conservation purposes within Rockingham Lakes Regional Park is endorsed. Part B: Urban Negotiated Planning Solution (see Table 3, Volume 1).