

YANCHEP NATIONAL PARK AND ADJACENT BUSHLAND

Boundary Definition: protected area/bushland boundary

SECTION 1: LOCATION INFORMATION

Bush Forever Site no. 288

Area (ha): bushland 2706.7 (Site also includes open water.)

Map no. 7, 8, 13

Map sheet series ref. no. 2034-IV NE

Other Names: Loch McNess System

Local Authorities (Suburb): Shire of Wanneroo (Yanchep, Two Rocks, Carabooda, Eglinton)

CALM Managed Land: Reserve 9868 (National Park), 29246 (Forest Department Headquarters)

System 6 (1983): M3 area of bushland goes beyond System area boundaries, all bushland described

SECTION 2: REGIONAL INFORMATION

LANDFORMS AND SOILS

Spearwood Dunes

Sands derived from Tamala Limestone (Qts: S7)

Tamala Limestone (Qtl: LS1, LS2)

Quindalup Dunes (Holocene Dunes)

Safety Bay Sands (Qhs: LS4)

Wetlands (within the Spearwood Dunes)

Holocene Swamp Deposits (Qhw: Cps)

VEGETATION AND FLORA

Vegetation Complexes

Spearwood Dunes

Cottesloe Complex — North (one of two most northern occurrences)

Cottesloe Complex — Central and South

Quindalup Dunes

Quindalup Complex

Wetlands

Herdsmen Complex (most northern occurrence)

Floristic Community Types: *not sampled, types inferred

Supergroup 2: Seasonal Wetlands

*19b Woodlands over sedgeland in Holocene dune swales

(equivalent to 19 Gibson *et al.* 1994, English and Blyth 1997)

S7 Northern woodlands to forests over tall sedgeland alongside permanent wetlands

Supergroup 3: Uplands centred on Bassendean Dunes and Dandaragan Plateau

23c North-eastern *Banksia attenuata* — *B. menziesii* woodlands

Supergroup 4: Uplands centred on Spearwood and Quindalup Dunes

26a *Melaleuca huegelii* — *M. acerosa* shrublands on limestone ridges

26b Woodlands and mallees on limestone

*27 Species - poor mallees and shrublands on limestone

28 Spearwood *Banksia attenuata* or *B. attenuata* — *Eucalyptus* woodlands

30b Quindalup *Eucalyptus gomphocephala* and/or *Agonis flexuosa* woodlands (outlier, most occurrences

Bunbury and south)

WETLANDS

Wetland Types: lake, sumpland, river, artificial channel

Natural Wetland Groups

Spearwood Dunes

Yanchep (S.1)

Wetland Management Objectives: Conservation (272.8ha, 829.6m), Resource Enhancement

Swan Coastal Plain Lakes EPP: 267.2ha

THREATENED ECOLOGICAL COMMUNITIES

Not assessed, Not determined, Critically Endangered (floristic community type 19, as defined by Gibson *et al.* 1994;

Aquatic root mat community of caves of the Swan Coastal Plain), Endangered (floristic community type 26a)

SECTION 3: SPECIFIC SITE DETAIL

Landscape Features: limestone ridge, tall dune, open water, vegetated wetland, vegetated uplands

Vegetation and Flora: limited survey (part Site — CALM 1989, Ecologia 1997, EPA and WAWA 1990, Gibson *et al.* 1994 (Yan 01–03), Griffin 1994 (Yan 2, 4–6), Keighery, GJ, 1996 D (Pip 01), McComb and McComb 1967, Smith 1989, Weston and Gibson 1997 (R1), WAWA 1995); detailed survey (Keighery, GJ, 1993b)

Structural Units: mapping (CALM 1989, Ecologia 1997, EPA and WAWA 1990, McComb and McComb 1967, Smith 1989)

Spearwood Dunes

Uplands — Sands derived from Tamala Limestone: *Eucalyptus gomphocephala* Open Forest to Woodland; *Eucalyptus marginata* Open Forest to Woodland — both generally over or mixed with *Banksia* Low Open Forest and Low Woodland and often with *Eucalyptus calophylla* or *Allocasuarina fraseriana*; *Banksia attenuata* and

B. menziesii Low Open Forest to Low Woodland, often with *Allocasuarina fraseriana*, *Eucalyptus marginata*, *E. todtiana*, *B. grandis* or *Nuytsia floribunda*

Uplands — Tamala Limestone: *Dryandra sessilis* var. *cygnorum*, *Hakea trifurcata* and *Calothamnus quadrifidus* Closed Tall Scrub to Open Heath; *Melaleuca systema* Closed to Open Heath; *Melaleuca* sp. Yanchep (GJK 11242), *M. huegelii* and *Dodonaea aptera* Closed Tall to Open Heath

Quindalup Dunes

Uplands — Safety Bay Sands (oldest dunes): Mixed Open Low Heath

Wetlands from Quindalup and Spearwood Dunes: *Eucalyptus rudis* Open Forest to Low Woodland; *Banksia littoralis* Low Open Forest to Low Woodland; *Melaleuca raphiophylla* Closed Forest to Low Woodland; *Typha domingensis/orientalis* Closed Sedgeland; mixed Low Shrubland; Closed to Open Sedgeland which is mixed or is dominated by *Schoenoplectus validus*, *Baumea articulata*, *Lepidosperma drummondii*, *L. gladiatum*, *B. laxa* or *B. juncea*; mixed Open Low Heath

Scattered Native Plants: not assessed

Vegetation Condition: >90% Very Good to Excellent, <10% Good to Degraded, with areas of severe localised disturbance

Total Flora: 462 native taxa, 131 weed taxa (more than Site (Site 288 and part Site 381 after area of CALM 1989) — Keighery, GJ, 1993b plus 22 part Site records, including McComb and McComb 1967; estimated <10% not in Site) (estimated >90% expected flora)

Significant Flora: *Melaleuca* sp. Yanchep (GJK 11242) (2), *Stylidium maritimum* (3), *Conostylis pauciflora* subsp. *euryrhipis* (3), *Hibbertia spicata* subsp. *leptothea* (3); *Eucalyptus petrensis*, *Melaleuca cardiophylla*, *Alyogyne huegelii* var. *glabrata*, *Pimelea calcicola*, *Trachymene coerulea*, *Astroloma microcalyx*, *Ricinocarpus glaucus*, *Lechenaultia linarioides*, *Acacia alata* var. *tetrantha*, *Diplopeltis huegelii* var. *huegelii*, *Senecio ramosissimus*, *Veronica* aff. *calycina* (BJK and NG 235), *Conostylis aculeata* subsp. *cygnorum*; rare or uncommon on coastal plain in PMR — *Craspedia arenicola*, *Senecio ramosissimus* (most northern population known), *Actinodium leucocephalus* (particularly rare on western side of Plain), and the ferns *Adiantum aethiopicum*, *Anogramma leptophylla*, *Cheilanthes austrotenuifolia*, *Pteris vittata*; species typical of Tamala Limestone taxa — *Melaleuca* sp. Yanchep (GJK 11242), *Melaleuca huegelii*, *Grevillea preissii*, *Diplopeltis huegelii* var. *huegelii*, *Eucalyptus foecunda*, *Pimelea calcicola*, *Trymalium ledifolium* var. *ledifolium*, *Stylidium junceum* (limestone variant), *Astroloma microcalyx*, *Caladenia longicauda* subsp. *calcigena* ms., *Petrophile serruriae* subsp. nov. (GJK 11421), *Hibbertia spicata* subsp. *leptothea*

Fauna: (area described also includes Site 381) multiple surveys for birds (134 species) (Storr and Johnstone 1988; RAOU 1996 D, 8 visits), structured surveys for native mammals (15 species) (Burbidge *et al.* in prep.), reptiles (47 species) (How and Dell 1994) and fish (2 species) (Sarti and Allen 1978). Significant populations of Splendid Fairy-wren, Southern Emu-wren, Broad-tailed, Western and Yellow-rumped thornbills, Weebill, White-browed Scrubwren, Scarlet Robin, Golden Whistler, Grey Shrike-thrush and several honeyeater species. Significant bird species: category 1 (1), category 3 (13) and category 4 (8). Significant mammal species: Quenda (Friend, 1996 D), Western Brush Wallaby, Ash Grey Mouse and Echidna

Linkage: adjacent bushland to the north (Site 396), south, east (Site 381) and west (through bushland to Site 289); part of Greenways 37, 2, 36 (Tingay, Alan & Associates 1998a); part of a regionally significant contiguous bushland/wetland linkage (Part A, Map 7)

Other Special Attributes: recommended for protection in the study of City of Wanneroo (Trudgen 1996); contains at least eight regional floristic groups; Koala Caves contain an abundance of terrestrial fossils and could provide information for the period between 6,000 and 80,000–1,000,000 years ago from which there are no outcropping marine deposits (Lemmon *et al.* 1979)

SECTION 4: INTERNATIONAL AND NATIONAL SIGNIFICANCE

Directory of Important Wetlands in Australia; Entered in the Register of the National Estate; subject to protection under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

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, Criteria not relevant to determination of regional significance, but which may be applied when evaluating areas having similar values

Recommendation: Site with Some Existing Protection; the existing purpose, care, control and management of Reserves 9868 and 29246 is endorsed (see Table 3, Volume 1).