

BURNS BEACH BUSHLAND

Boundary Definition: protected area/bushland taken to cadastre boundary (Boundary proposed to be adjusted from that in draft *Perth's Bushplan*.)

SECTION 1: LOCATION INFORMATION

Bush Forever Site no. 322

Area (ha): bushland 407.9 (proposed boundary circumscribes 277.1ha bushland)

Map no. 26, 27

Map sheet series ref. no. 2034–IV SE

Other Names: South Mindarie (Semeniuk, V&C Research Group 1991a), Submission Areas 296 and 320

Local Authorities (Suburb): Shire of Wanneroo (Burns, Mindarie), City of Joondalup (Burns)

System 6 (1983): Part M2, part M6 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, LS3)

Quindalup Dunes (Holocene dunes)

Safety Bay Sands (Qhs: S1, S2, LS4)

VEGETATION AND FLORA

Vegetation Complexes

Spearwood Dunes

Cottesloe Complex — Central and South

Quindalup Dunes

Quindalup Complex

Floristic Community Types

Supergroup 4: Uplands centred on Spearwood and Quindalup Dunes

24 Northern Spearwood shrublands and woodlands

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

29a Coastal shrublands on shallow sands

29b *Acacia* shrublands on taller dunes

S11 Northern *Acacia rostellifera* — *Melaleuca systema* shrublands

S13 Northern *Olearia axillaris* — *Scaevola crassifolia* shrublands

S14 *Spinifex longifolius* grassland and low shrubland

WETLANDS

No wetlands mapped

THREATENED ECOLOGICAL COMMUNITIES

Not assessed, Not determined

SECTION 3: SPECIFIC SITE DETAIL

Landscape Features: dune landforms include parabolic dunes, sand blowout and cusped foreland

Vegetation and Flora: limited survey (DEP 1999, DEP 2000, Griffin 1994 (MI 01–23), part Site — Griffin and Trudgen 1994, Keighery, GJ, 1991c, Kinhill Stearns 1983, LeProvost *et al.* 1984)

Structural Units: mapping (part Site — LeProvost *et al.* 1984)

Spearwood Dunes

Uplands — Sands derived from Tamala Limestone: *Banksia attenuata* and *B. menziesii* Low Woodland, occasional *Eucalyptus gomphocephala* trees

Uplands — Tamala Limestone: Closed to Open Heaths dominated by *Dryandra sessilis* var. *cygnorum*, *Calothamnus quadrifidus*, *Hakea trifurcata*, *Hibbertia hypericoides* and *Melaleuca huegelii*

Quindalup Dunes

Uplands — Older dunes and plains: Closed to Open Low Heaths of *Melaleuca systema*, *Acacia lasiocarpa*, *A. rostellifera*, *Scaevola nitens*, *Nemcia reticulata* and *Hibbertia racemosa* over Herblands dominated by *Lomandra maritima*; *Acacia rostellifera* Scrub; *Melaleuca cardiophylla* Low Forest to Closed Tall Scrub (southernmost area of this association)

Uplands — Younger dunes: Heaths dominated by *Olearia axillaris*, *Scaevola nitida* and *S. crassifolia*; low dunes with Heath dominated by *Scaevola crassifolia*, *Spyridium globulosum* and *Myoporum insulare*; deflated surface poorly vegetated with *Calocephalus brownii* and *Pelargonium capitatum*, the former giving way to *Acacia cyclops* as it ages

Uplands — Strand: *Spinifex longifolius* and *S. hirsutus* Grassland

Scattered Native Plants: not assessed

Vegetation Condition: >70% Excellent to Pristine, <30% Very Good to Good (Griffin and Trudgen 1994), with localised disturbance to north of Burns Beach

Total Flora: 168 native taxa, 24 weed taxa (Keighery, GJ, 1991c) (estimated <70% of the expected flora)

Significant Flora: *Conostylis pauciflora* subsp. *euryrhipis* (3), *Hibbertia spicata* subsp. *leptotheca* (3), *Stylidium maritimum* (3); *Sonchus megalocarpa* (most northern record, uncommon species); *Melaleuca cardiophylla*, *Allocasuarina lehmanniana*, *Acacia xanthina* (at southern limit in the PMR), *Lechenaultia linarioides*; *Conospermum triplinervium*, *Petrophile serruriae* subsp. nov. (GJK 11421), *Pimelea villifera* (only known population in PMR, Keighery, GJ, 1991c); typical of Tamala Limestone taxa (Keighery, GJ, 1991c) — *Grevillea preissii*, *Diplopeltis huegelii* subsp. *huegelii*, *Petrophile serruriae* subsp. nov. (GJK 11421), *Pimelea calcicola*, *Leptomeria empetriformis*, *Trymalium ledifolium* subsp. *ledifolium*, *Pimelea villifera*, *Jacksonia calcicola*

Fauna: limited survey for birds (54 species), native mammals (3 species), reptiles (23 species) and amphibians (1 species) (Kinhill Stearns 1983). Significant bird species: Scarlet Robin. Significant mammal species: Western Brush Wallaby and Honey Possum

Linkage: adjacent bushland to the south and east (Site 323, across road, then through Site 323 to Site 383); part of Greenways 1, 3, 4, 34 (Tingay, Alan & Associates 1998a); part of a regionally significant fragmented bushland/wetland linkage (Part A, Map 7)

Other Special Attributes

Meets all six specific coastal reserve criteria

- (i) Quindalup Dune types: 'South Mindarie now represents the most well defined remaining cusped foreland and its associated range of medium to small scale (Quindalup) dune landforms and vegetated habitats in this coastal sector (Whitfords to Lancelin)' (Semenuk, V&C Research Group 1991a); 'small area of old low dunes perched on gently undulating Spearwood (Tamala) Limestone surface; moderate sized Q3 dunes ramped on coast side; small area of Q4 dunes forming steep sided closed vale; a number of small coastal blowouts with small Q4 dunes surrounding these; a major sandsheet with moderate to tall partially stabilised dune margins; bowl of sand sheet completely deflated near coast; foredune redeveloped in throat of sand sheet' and 'small area of old low dunes perched on gently undulating Spearwood (Tamala) Limestone surface with few small plains; large area of old, moderate sized dunes ramped on each other with small (if any) plains between; number of small coastal blowouts with small Q4 dunes surrounding; major sand sheet with partially stabilised dune margins; bowl of sand sheet completely deflated only near coast; foredune redeveloped in throat of sand sheet' (Griffin and Trudgen 1994)
- (ii) Continuing natural processes: 338.5ha (260.8ha bushland) of Quindalup Dunes extending to 1.4kms inland (2.8kms inland in link to Site 323)
- (iii) Shoreline: soft (sandy)
- (iv) Linkage: contains Quindalup/Spearwood Dunes interface; part of semi-contiguous north-south vegetated coastal strip
- (v) Vegetation: 'vegetation is variable and typifies the range of habitat types within a cusp (Semenuk, V&C Research Group 1991a) and interfaces with Tamala Limestone surfaces and Spearwood Dunes
- (vi) Habitats: variable;

Includes core of areas recommended for conservation by Griffin and Trudgen (1994) and Semenuk, V&C Research Group (1991a); Recommended for protection in study of City of Wanneroo bushland (Trudgen 1996)

SECTION 4: INTERNATIONAL AND NATIONAL SIGNIFICANCE

Not listed

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

Recommendation: Part A: Site with Some Existing Protection; parts of this Site already reserved for Parks and Recreation in the MRS be made National Park, Conservation Park, Regional Park or Nature Reserve. Part B: Proposed Parks and Recreation Reservation. Part C: Urban Negotiated Planning Solution. Part D: Urban Negotiated Planning Solution (see Table 3, Volume 1).