

TWIN SWAMPS NATURE RESERVE AND ADJACENT BUSHLAND, BULLSBROOK

Boundary Definition: protected area/bushland (part taken to cadastre) boundary

SECTION 1: CADASTRAL INFORMATION

(Lots, locations and derived information to be updated in the public submission period)

Bushplan Site no. 400 **Map no.** 36 **Map sheet series ref. no.** 2134-IV SW
System 6 (1983): Part M17 area of bushland goes beyond System area boundaries, all bushland described

Other Names

Location 96 (Keighery, BJ, and Trudgen 1992)

Local Authorities (Suburb)

Shire of Swan (Bullsbrook)

Area (ha): total 179.6 (includes open water); bushland 170.7

Zoning

MRS: Rural, Railways, Parks and Recreation

TPS: General Rural, Landscape

Lot/Location/Reserve numbers (Purpose),

Street name

23, 7897 Warbrook Rd; 34, 8307 Ellenbrook Rd

Crown Reserve

Reserve A27621 (Preservation of Fauna Short Necked Tortoise)

Ownership Categories

Private, State Government, Not identified

CALM Managed Land

SECTION 2: REGIONAL INFORMATION

LANDFORMS AND SOILS

Pinjarra Plain

Guildford Formation (Qpa: Mgs1)

Bassendean Dunes

Bassendean Sands (Qpb: S8)

Bassendean Dunes/Pinjarra Plain

Bassendean Sands over Guildford Formation (Qpb/Qpa:S10)

Wetlands (within the Bassendean Dunes/Pinjarra Plain)

Holocene Swamp Deposits (Qhw: Cps)

VEGETATION AND FLORA

Vegetation Complexes

Pinjarra Plain

Yanga Complex (in area of southern limit)

Beermullah Complex

Floristic Community Types

Supergroup 2: Seasonal Wetlands

6 Weed dominated wetlands on heavy soils

11 Wet forests and woodlands

15 Forests and woodlands of deep seasonal wetlands

Supergroup 3: Uplands centred on Bassendean Dunes and Dandaragan Plateau

21c Low lying *Banksia attenuata* woodlands or shrublands

WETLANDS

Wetland Types: sumpland, palusplain

Natural Wetland Groups

Bassendean—Pinjarra transition

Muchea (B/P.3)

Wetland Management Objectives: Conservation (95.9ha), Multiple Use

Swan Coastal Plain Lakes EPP: 3.6ha + 1.8ha =5.4ha (total)

THREATENED ECOLOGICAL COMMUNITIES

Not assessed, Vulnerable (floristic community type 15)

SECTION 3: SPECIFIC SITE DETAIL

Landscape Features: open water, vegetated wetland, vegetated uplands

Vegetation and Flora: limited survey (part Bushplan Site (Twin Swamps Nature Reserve) — Gibson *et al.* 1994 (Twin 01–08, 10–11, 13), Keighery, BJ, and Trudgen 1992); detailed survey (Keighery, GJ, 1996)

Structural Units: mapping (part Bushplan Site (Twin Swamps Nature Reserve) — Keighery, BJ, and Trudgen 1992)

Uplands: Woodland to Open Forest dominated by *Banksia menziesii* and/or *B. attenuata*

Wetlands: *Melaleuca rhapsiophylla* Low Closed to Open Forest; *Acacia saligna* Low Open Woodland; *Melaleuca viminea* Tall Open Scrub; Closed to Open Heath dominated by *Melaleuca lateritia*, *M. teretifolia*, *Regelia ciliata* and *Astartea aff. fascicularis* and combinations of these with scattered emergent *Acacia saligna*; *Regelia ciliata* and *Pericalymma ellipticum* Open Low Heath; Herblands; Sedgeland



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

Total Flora: 201 native taxa (Keighery, GJ, 1996) (estimated >70% expected flora)

Significant Flora: *Stylidium longitubum* (3); *Burchardia bairdiae*, *Kunzea littoricola* ms

Fauna: no systematic survey. Significant reptile species: Western Swamp Tortoise (*Pseudemydura umbrina*) (one of two remaining areas for this threatened species) (Burbidge and Kuchling 1994). Significant mammal species: Quenda (L. Muttter pers. comm. 1998)

Linkage: no adjacent bushland; part of proposed Greenway 41 (Tingay, Alan & Associates 1997a)

Other Special Attributes: see Fauna; contains plant communities representative of the eastern side of the Swan Coastal Plain

SECTION 4: INTERNATIONAL AND NATIONAL SIGNIFICANCE

ANCA Directory of Important Wetlands in Australia; Listed on the Register of the National Estate

SECTION 5: SELECTION CRITERIA AND RECOMMENDATIONS

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

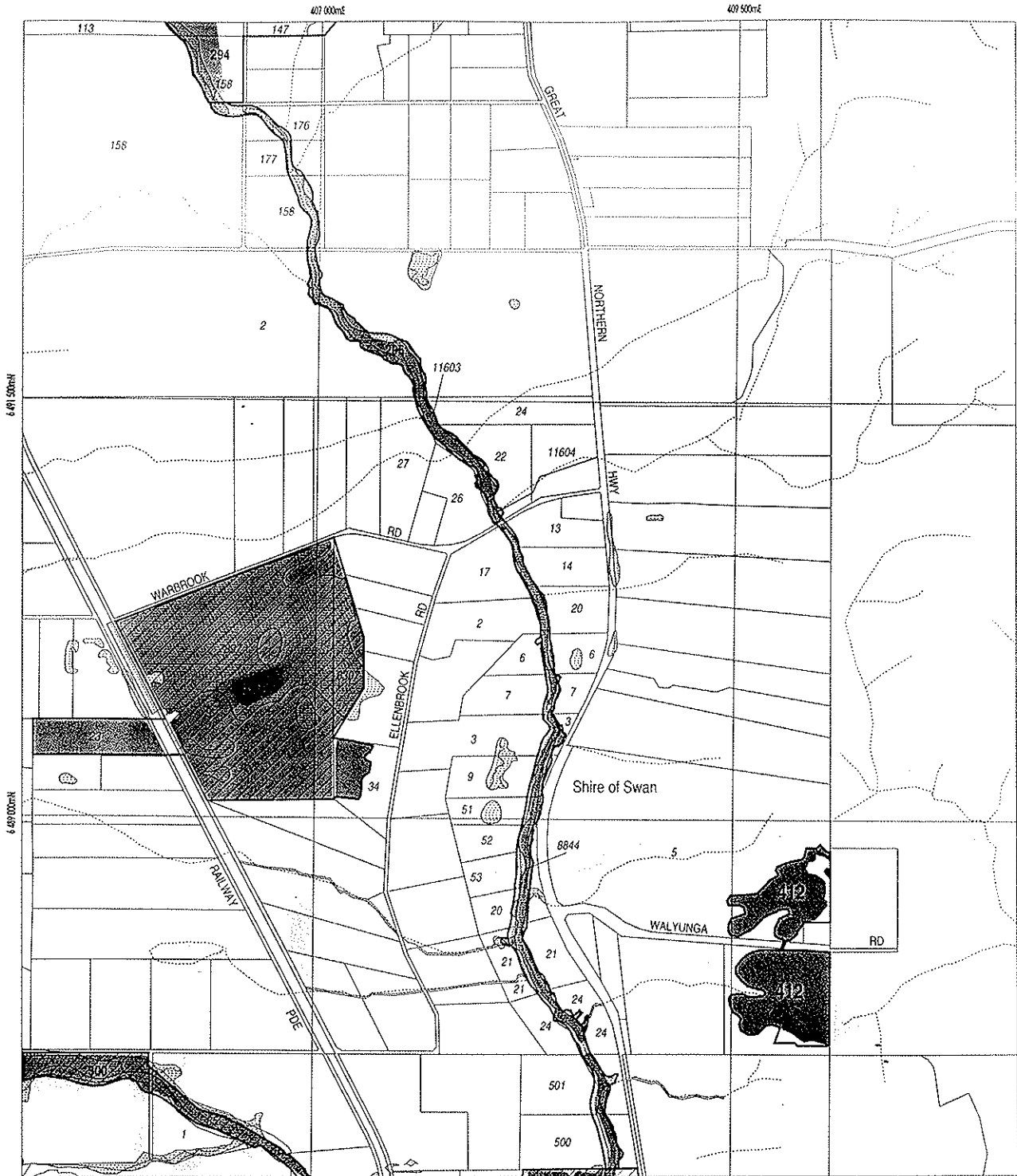
Opportunities and/or Constraints

Opportunities: Bushplan Site/part Bushplan Site subject to Swan and Canning Rivers EPP, Swan Coastal Plain Lakes EPP, Western Swamp Tortoise Draft EPP; location of Scheduled Fauna, conservation category wetlands; under MRS Parks and Recreation Reservation and TPS Landscape Zoning, Crown Reserve

Constraints: private land

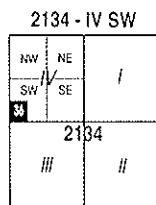
Recommendation: The existing purpose, care, control and management of Reserve (27621) is endorsed. The most appropriate mechanism for the protection of the remainder of this Bushplan Site be considered through the public comment period in consultation with the land owner(s).





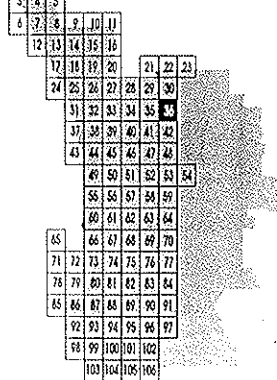
LEGEND

- Bushplan Sites With Regionally Significant Bushland
- Other Native Vegetation
- Conservation Category Wetlands
- Bushplan Sites With Some Existing Protection
- Lot Number, Location Number
- Channel Wetlands
- Local Government Boundary

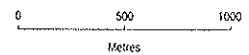


1: 25 000 AMG Reference Grid showing Perth's Bushplan Map Sheet Breakdown

PERTH'S BUSHPLAN MAP INDEX



SCALE



Produced by Project Mapping Section
Land Information Branch, Ministry for
Planning, Perth W.A. November 1998

ntw-map111\environ\bushplan\bushv2_36.dgn

Cadastral Data supplied by Department
of Land Administration, W.A.

Wetlands Data supplied by
Water and Rivers Commission

Native Vegetation Extent for Study Area
supplied by Agriculture Western Australia



M17 Ellen Brook and Twin Swamps Wildlife Sanctuaries, Upper Swan

M17.1 Ways and means of providing a protective buffer around Nature Reserves A27620 and A27621 be sought through the planning procedures.	Unresolved Issues	CALM is liaising with DPUD and the land owners to achieve the intent of this recommendation. Ellen Brook Conservation Group has an interest in this area.
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General

LM • Gerard Kuchling (general Farnes)
• Tortoise Information

GH • Diebach plans at Wanneroo
Hygiene Plans 1989
Sampling/interpretation
Graham Ellis Smith
copies Kelmscott/Wanneroo
most Ellenbrook uninterpretable.

Please circle the appropriate response or respond in the space provided.

57

Area M17 Name	<u>Ellenbrook + Twin Swamps</u>		
Title	<u>Recovery Plan Short-necked Tortoise - AL</u>		
	<u>also data used (?) to prepare E.P.P. - soon to be released.</u>		
Published/Unpublished	Date	<u>? 1992 ish</u>	
Author/s	<u>KUCHLING G.</u>		
Location of Publication	<u>Benth 200(?) CALM / EPA</u>		
Purpose (why was the report prepared?)	<u>Discusses Short-necked Tortoise</u>		
Government	<input checked="" type="checkbox"/>	<u>+ M/ment issues including M17 I think</u>	
Corporate	<input type="checkbox"/>		
Community Group	<input type="checkbox"/>		
Management Plan	<input type="checkbox"/>		

Soils			
Units	mapped	described	referenced

Landscape	
Features	described referenced

Flora			
Vegetation Map			
Units	Site based (no)		
Mapped			
Veg Units	Comparable Heddle <i>et al</i>	Compared Heddle <i>et al</i>	Unit not mapped by Heddle <i>et al</i> .
Flora list			
Timing	%completion		Significant Taxa
	Trees	Shrubs Herbs Sedges	Weeds DRF CALM Priority Other

Fauna			
Timing	%completion		Significant Taxa
	Mammals	Birds	Sched1 Sched2 Other
	Reptiles	Invertebrates	

Vegetation Condition		
Site based	Mapped	Units

Disturbance Factors			
Phytophthora	observed	Other	incidental
	tested		itemised

Notes
<u>I have the Plan but couldn't lay my hands on it quickly!</u>

Please circle the appropriate response or respond in the space provided.

Area M17 Name	<i>Ellen Brook Nature Reserve</i>
Title	

Author: Burbidge A.A.
 Date: 1967
 Title: The biology of south-western Australian tortoises
 Source: PhD thesis, UWA

Author: Burbidge A.A.
 Date: 1981
 Title: The ecology of the Western Swamp Tortoise *Psuedemydura umbrina*
 (Testudines: Chelidae)
 Source: Australian Wildlife Research 8: 203-223

Author: Burbidge A.A.
 Date: 1984
 Title: A very rare Australian : the western swamp tortoise
 Source: In: Vertebrate Zoogeography and Evolution in Australasia. M. Archer G. Clayton (eds) pp. 401 - 405. Hesperian Press, Perth.

Author: Burbidge A.A. Kuchling G. Fuller P.J. et al.
 Date: 1990
 Title: The western swamp tortoise
 Source: Western Australian Wildlife Management Program No. 6

Author: Burbidge A.H. Leicester K. McDavitt S. Majer J.D.
 Date: 1992
 Title: Ants as indicators of disturbance at Yanchep National Park, Western Australia.
 Source: Journal of the Royal Society of Western Australia 75: 89-95

Fauna			
Timing	%completion	Significant Taxa	
	Mammals	Birds	Sched1 Sched2 Other
	Reptiles	Invertebrates	

Vegetation Condition			
Site based	Mapped	Units	
Disturbance Factors			
Phytophthora	observed	Other	incidental
	tested		itemised

Notes

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1

CONTACT DR N. GIBSON CALM WOODVALE for further information.

Flora list for M17 (extracted from CALM Swan Coastal Plain database, ELLEN sites 1 - 7 2/1995).

**Department of Environmental Protection System 6 Update: Site Based Flora
List M17, Ellen Brook Nature Reserve**

(extracted from the Swan Coastal Plain database, Ellen sites 1 - 7, 2/95)

Anthericaceae

- Borya scirpoidea
- Caesia micrantha
- Sowerbaea laxiflora
- Thysanotus manglesianus
- Thysanotus patersonii
- Thysanotus sp. manglesianus/patersonii seps
- Thysanotus thyrsoides

Apiaceae

- Eryngium pinnatifidum subsp. "palustre" seps map
- Eryngium pinnatifidum subsp. pinnatifidum seps
- Homalosciadium homalocarpum
- Hydrocotyle alata
- Hydrocotyle diantha

Asteraceae

- Brachyscome iberidifolia
- * Conyza albida
- Hyalosperma cotula
- * Hypochaeris glabra
- Podolepis gracilis swamp (GJK 13126)
- Quinetia urvillei
- Siloxerus humifusus
- * Sonchus oleraceus
- * Ursinia anthemoides

Caryophyllaceae

- * Silene gallica

Centrolepidaceae

- Aphelia cyperoides
- Centrolepis aristata
- Centrolepis drummondiana
- Centrolepis mutica

Colchicaceae

- Burchardia multiflora
- Burchardia umbellata
- Wurmbea dioica subsp. alba

Cyperaceae

- Chorizandra enodis
- Cyathochaeta avenacea
- * Cyperus tenellus
- Isolepis cernua
- Isolepis marginata
- Isolepis oldfieldiana

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Flora list for M17 (extracted from CALM Swan Coastal Plain database, ELLEN sites 1 - 7 2/1995).

Isolepis sp. scps
Isolepis stellata
Lepidosperma angustatum
Lepidosperma eastern terete scps (BJK&NG 232)
Lepidosperma sp. scps
Schoenus humilis
Schoenus odontocarpus
Schoenus spp. scps
Schoenus tenellus
Schoenus unispiculatus

Dilleniaceae

Hibbertia commutata

Droseraceae

Drosera gigantea
Drosera glanduligera
Drosera heterophylla
Drosera menziesii subsp. menziesii
Drosera paleacea scps subsp. paleacea
Drosera platystigma
Drosera rosulata
Drosera sp. scps
Drosera stolonifera

Euphorbiaceae

Phyllanthus calycinus

Gentianaceae

* Cicendia filiformis

Goodeniaceae

Dampiera linearis
Goodenia micrantha
Goodenia pulchella

Haemodoraceae

Haemodorum laxum
Haemodorum simplex
Tribonanthes australis
Tribonanthes uniflora

Hydatellaceae

Trithuria bibracteata

Hypoxidaceae

Hypoxis glabella
Hypoxis occidentalis

Iridaceae

* Hesperantha falcata
* Homeria flaccida

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Flora list for M17 (extracted from CALM Swan Coastal Plain database, ELLEN sites 1 - 7 2/1995).

- * *Romulea rosea*
- * *Watsonia* sp. scps

Juncaceae

- * *Juncus capitatus*

Juncaginaceae

- Triglochin procerum*

Lentibulariaceae

- Polypompholyx multifida*
- Polypompholyx tenella* scps
- Utricularia dichotoma*

Linaceae

- * *Linum trigynum*

Lobeliaceae

- * *Monopsis debilis*

Menyanthaceae

- Villarsia capitata*

Mimosaceae

- Acacia saligna*

Myrtaceae

- Eucalyptus calophylla*
- Eucalyptus rudis*
- Hypocalymma angustifolium*
- Kunzea recurva*
- Melaleuca lateritia*
- Verticordia densiflora*
- Verticordia huegelii*

Orchidaceae

- Caladenia* sp. scps
- Diuris laxiflora*
- Thelymitra antennifera*

Orobanchaceae

- * *Orobanche minor*

Oxalidaceae

- Oxalis perennans*

Papilionaceae

- Gompholobium marginatum*
- Jacksonia sternbergiana*
- Kennedia prostrata*
- * *Lotus suaveolens*
- * *Trifolium subterraneum*

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Viminaria juncea

Philydraceae

Philydrella pygmaea

Phormiaceae

Stypandra glauca

Poaceae

Agrostis avenacea

* Aira caryophylla

* Aira sp. seps

Aristida contorta

* Avena fatua

* Briza maxima

* Briza minor

* Bromus diandrus

Danthonia setacea

* Ehrharta calycina

* Ehrharta longiflora

Microlaena stipoides

Neurachne alopecuroidea

* Pentaschistis airoides

Polypogon tenellus

Stipa compressa

Stipa elegantissima

Stipa flavescens

Stipa semibarbata group seps

* Vulpia bromoides

* Vulpia myuros

* Vulpia sp. seps

Primulaceae

* Anagallis arvensis

Proteaceae

Dryandra nivea

Hakea erinacea

Proteaceae

Hakea lissocarpha

Hakea varia

Ranunculaceae

Ranunculus sessiliflorus var. sessiliflorus

Restionaceae

Leptocarpus canus

Loxocarya flexuosa

Rhamnaceae

Trymalium floribundum

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Scrophulariaceae

- Gratiola peruviana
- * Parentucellia latifolia
- * Parentucellia viscosa

Selaginellaceae

- Selaginella gracillima

Stylidiaceae

- Stylidium longitubum
- Stylidium mimeticum
- Stylidium petiolare

Thymelaeaceae

- Pimelea imbricata var. major

Xanthorrhoeaceae

- Xanthorrhoea preissii

System 6 Update: Flora List part M17, Ellen Brook Nature Reserve
(extracted from the Swan Coastal Plain database, Ellen sites 1 - 7)

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Xanthorrhoeaceae

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