

## TOODYAY ROAD BUSHLAND, RED HILL

**Boundary Definition:** bushland (part taken to cadastre) boundary (Areas of bushland within the boundaries of the Site have been recently cleared. The boundary has been drawn to include cleared bushland.)

### SECTION 1: LOCATION INFORMATION

**Bush Forever Site no.** 42 **Area (ha):** bushland 3.9

**Map no.** 38

**Map sheet series ref. no.** 2134-III NW

**Other Names:** not known

**Local Authorities (Suburb):** Shire of Swan (Red Hill)

### SECTION 2: REGIONAL INFORMATION

#### LANDFORMS AND SOILS

**Darling Plateau (Darling Range)/Darling Scarp**

Even-grained Granite (Ae, Aes: M3)

#### Foothills

Colluvial Deposits (Qc: Smg)

#### VEGETATION AND FLORA

##### Vegetation Complexes

###### Foothills

Forrestfield Complex (Ridge Hill Shelf, Darling Plateau)

**Floristic Community Types:** \*not sampled, type inferred

##### Supergroup 1: Foothills/Pinjarra Plain

\*3c *Eucalyptus calophylla* — *Xanthorrhoea preissii* woodlands and shrublands

#### WETLANDS

**Wetland Types:** creek

##### Natural Wetland Groups

###### Darling Plateau

Walyunga (D.1)

**Wetland Management Objectives:** Resource Enhancement

**Swan Coastal Plain Lakes EPP:** none identified

#### THREATENED ECOLOGICAL COMMUNITIES

Critically Endangered (floristic community type 3c)

### SECTION 3: SPECIFIC SITE DETAIL

**Landscape Features:** creek, vegetated uplands

**Vegetation and Flora:** limited survey (DEP 1998 (surveyed from roadside), DEP 1999, DEP 2000, Mattiske Consulting Pty Ltd 1997)

##### Structural Units

Uplands: Scattered *Eucalyptus calophylla* and *Eucalyptus wandoo* over Mixed Open Heath

Wetlands: *Eucalyptus wandoo* and *E. rudis* Woodland

**Vegetation Condition:** Very Good to Excellent

**Total Flora:** 62 native taxa (<70% of the expected flora)

**Significant Flora:** *Lambertia multiflora* var. *darlingensis* (3), *Synaphea acutiloba* (3), *Synaphea pinnata* (3); *Grevillea endlicheriana*

**Fauna:** not known

**Linkage:** no adjacent bushland

**Other Special Attributes:** contains plant communities representative of the eastern side of the Swan Coastal Plain; National Trust of Australia (WA) Classification

### SECTION 4: INTERNATIONAL AND NATIONAL SIGNIFICANCE

Subject to protection under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

### SECTION 5: SELECTION CRITERIA AND RECOMMENDATIONS

**Criteria:** Representation of ecological communities, Rarity

**Recommendation:** Proposed Parks and Recreation Reservation (see Table 3, Volume 1).

**TOODYAY ROAD BUSHLAND, RED HILL**

**Boundary Definition:** 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.** 42      **Map no.** 48      **Map sheet series ref. no.** 2134-III NW

**Other Names:** not known

**Area (ha):** total 4.2; bushland 3.9

**Local Authorities (Suburb)**

**Zoning**

Shire of Swan (Red Hill)

**MRS:** Rural

**TPS:** Landscape, No Zone

**Ownership Categories**

**Lot/Location/Reserve numbers (Purpose),**

Private

**Street name**

53 Dalgety Rd

**SECTION 2: REGIONAL INFORMATION**

**LANDFORMS AND SOILS**

**Darling Plateau (Darling Range)/Darling Scarp**

Even-grained Granite (Ae, Aes: M3)

**Foothills**

Colluvial Deposits (Qc: Smg)

**VEGETATION AND FLORA**

**Vegetation Complexes**

**Foothills**

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**WETLANDS**

**Wetland Types:** creek

**Natural Wetland Groups**

**Darling Plateau**

Walyunga (D.1)

**Wetland Management Objectives:** Resource Enhancement

**Swan Coastal Plain Lakes EPP:** none identified

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**SECTION 3: SPECIFIC SITE DETAIL**

**Landscape Features:** creek, vegetated uplands

**Vegetation and Flora** limited survey (DEP 1998 (surveyed from roadside), Matiske Consulting Pty Ltd 1997)

**Structural Units**

Uplands: Scattered *Eucalyptus marginata* over Mixed Open heath

Wetlands: *Eucalyptus wandoo* and *E. rudis* Woodland

**Vegetation Condition:** Very Good to Excellent

**Total Flora:** not known

**Significant Flora:** *Lambertia multiflora* var. *darlingensis* (3)

**Fauna:** no known information

**Linkage:** no adjacent bushland

**Other Special Attributes:** contains plant communities representative of the eastern side of the Swan Coastal Plain; National Trust of Australia (WA) Classification

**SECTION 4: INTERNATIONAL AND NATIONAL SIGNIFICANCE**

Not listed

**SECTION 5: SELECTION CRITERIA AND RECOMMENDATIONS**

**Criteria:** Representation of ecological communities, Rarity

**Opportunities and/or Constraints**

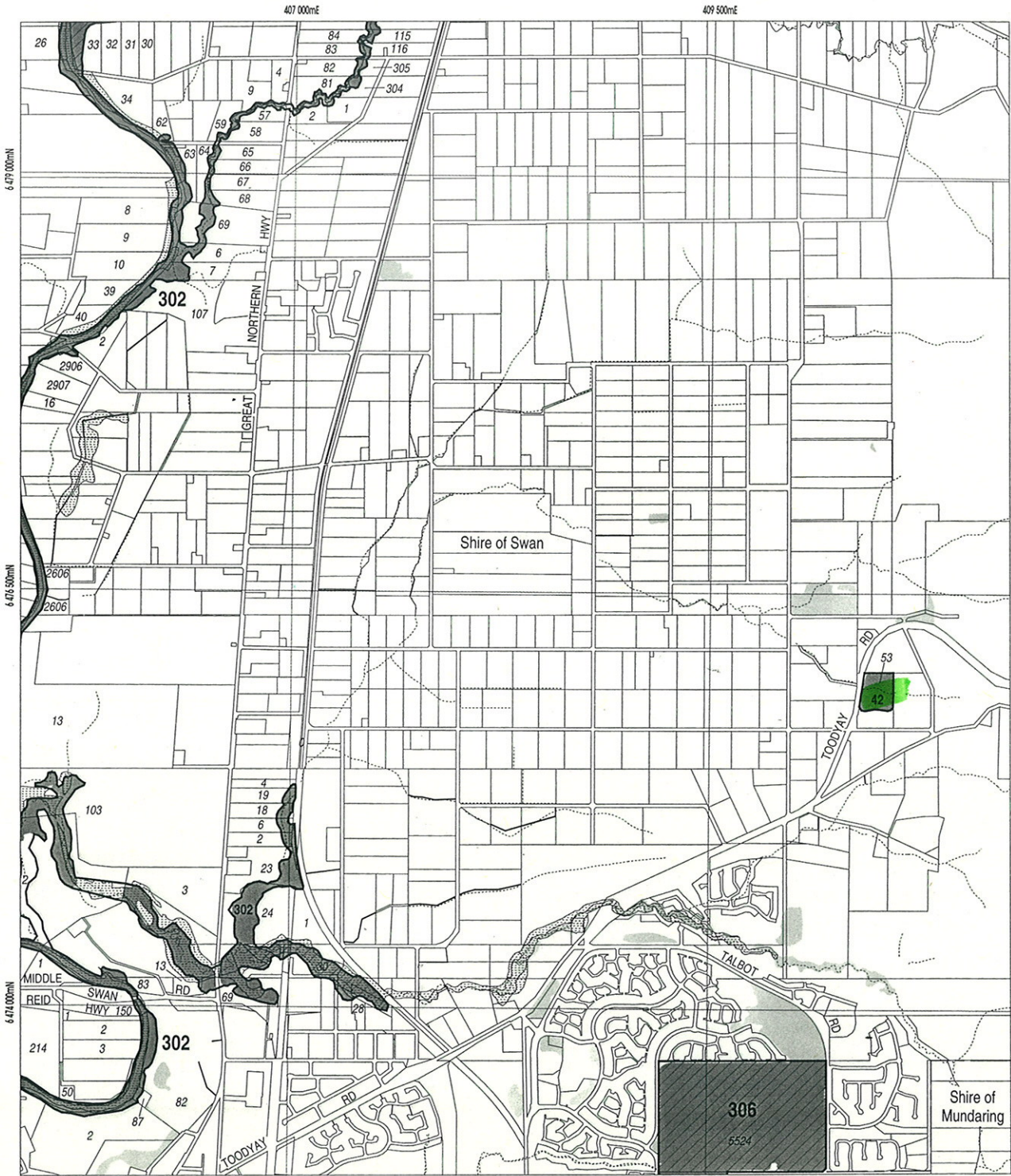
Opportunities: Bushplan Site/part Bushplan Site subject to Swan and Canning Rivers EPP; under TPS

Landscape Zoning








Constraints: private land

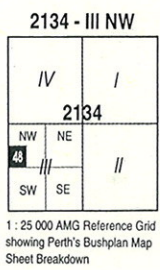
**Recommendation:** The most appropriate mechanism for the protection of this Bushplan Site be considered through the public comment period in consultation with the land owner(s).





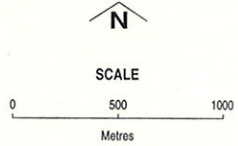
**LEGEND**

-  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



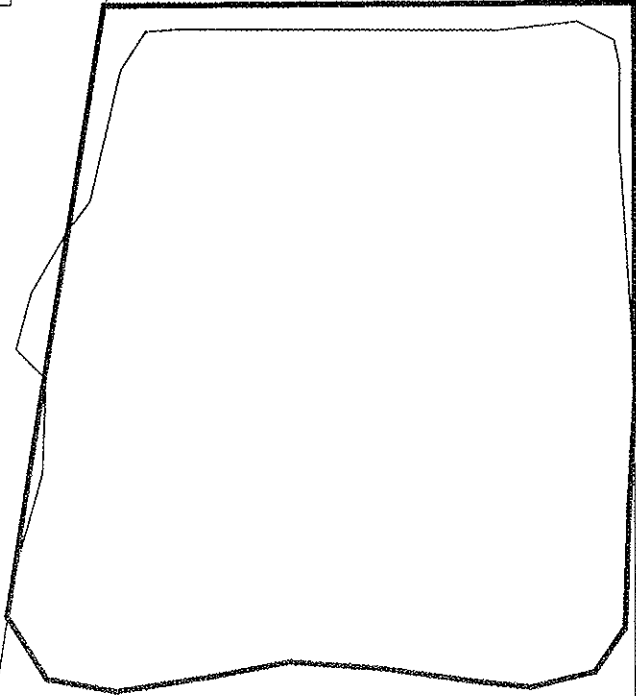
**PERTH'S BUSHPLAN MAP INDEX**

1	2										
3	4	5									
6	7	8	9	10	11						
12	13	14	15	16							
17	18	19	20	21	22	23					
24	25	26	27	28	29	30					
31	32	33	34	35	36						
37	38	39	40	41	42						
43	44	45	46	47	48						
49	50	51	52	53	54						
55	56	57	58	59							
60	61	62	63	64							
65	66	67	68	69	70						
71	72	73	74	75	76	77					
78	79	80	81	82	83	84					
85	86	87	88	89	90	91					
92	93	94	95	96	97						
98	99	100	101	102							
103	104	105	106								



Produced by Project Mapping Section  
 Land Information Branch, Ministry for  
 Planning, Perth W.A. November 1998  
 ntw-map11/enviro/bushplan/bushv2\_48.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

42



**BUSHPLAN SITES CORRECTED**

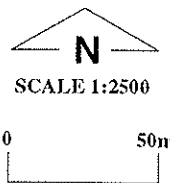


WESTERN  
AUSTRALIAN  
PLANNING  
COMMISSION

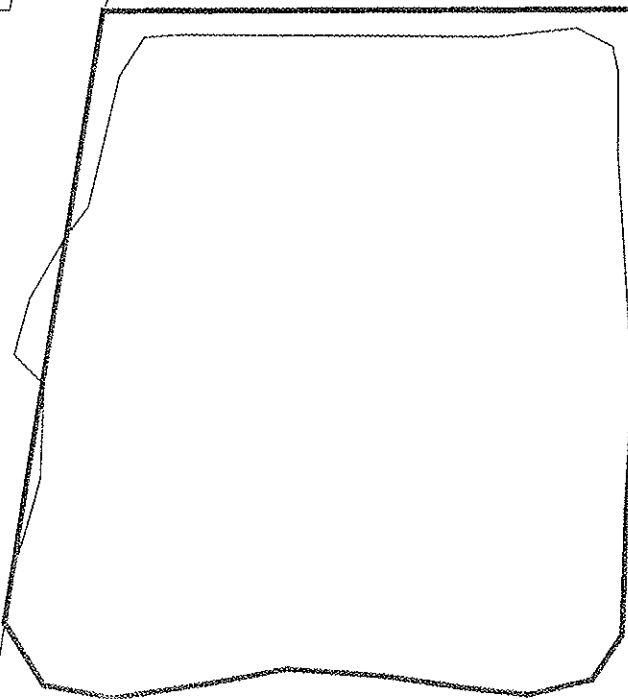


CUSTOMER  
FOCUS  
WESTERN AUSTRALIA

*B. TG/BK 21/10/98*



# 42



**BUSHPLAN SITES CORRECTED**



WESTERN  
AUSTRALIAN  
PLANNING  
COMMISSION

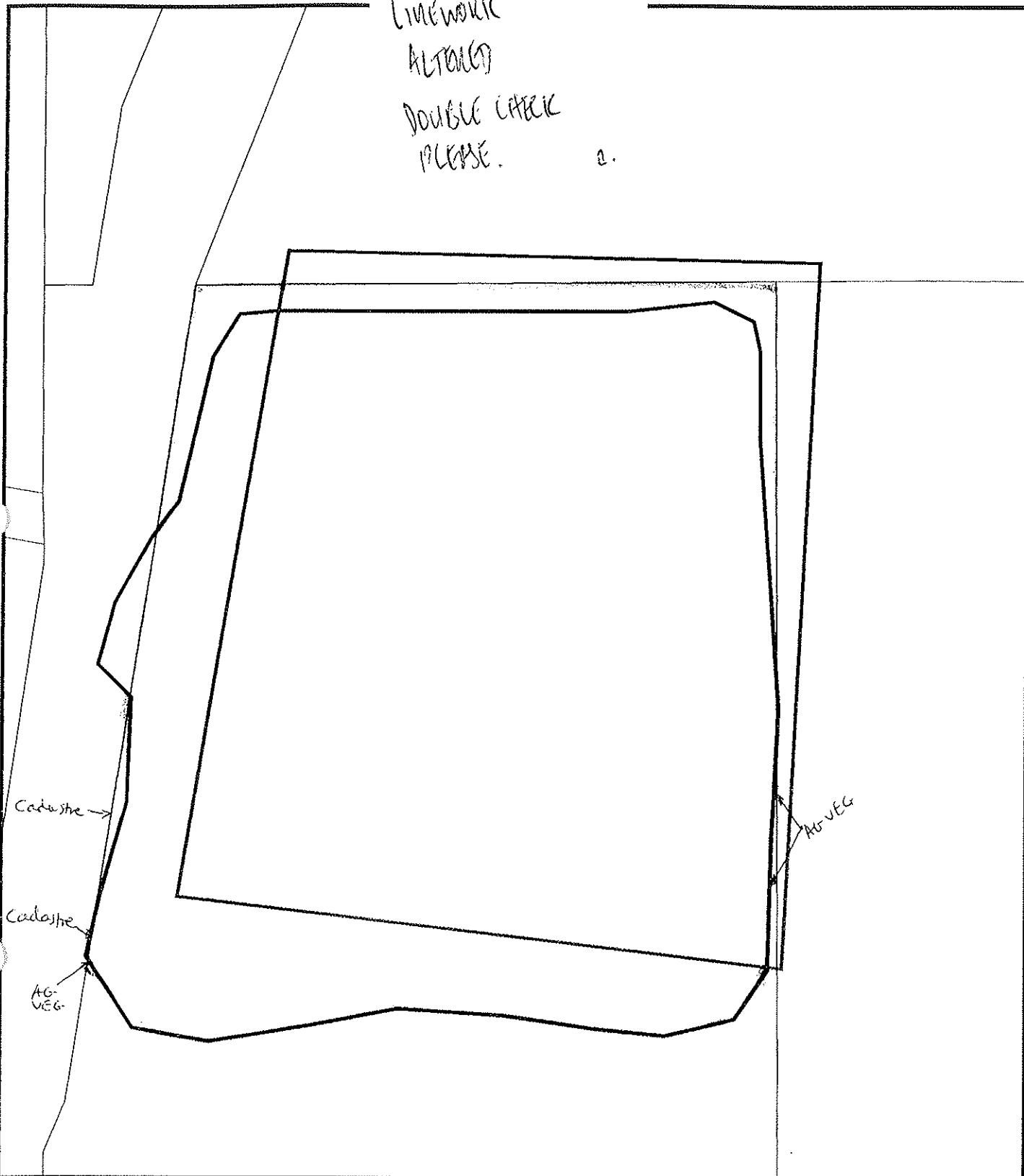


SCALE 1:2500






Metres

PEIS.  
LINEWORK  
ALTERED  
DOUBLE CHECK  
PLEASE. 2.

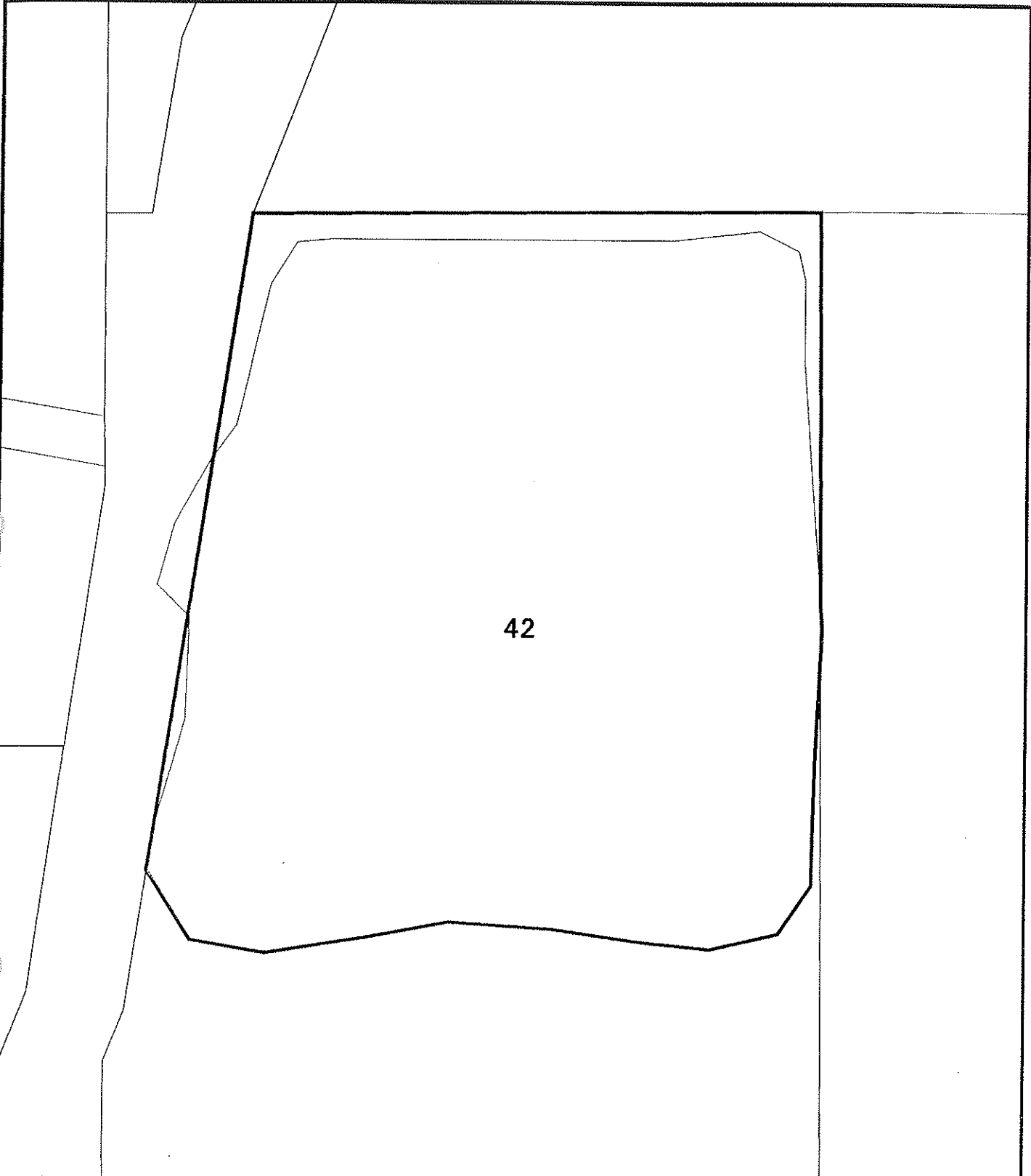


### bp site 42

-  AG VEG 1998 BOUNDARY THEME
-  Bushplan sites refno 1-500 SCP BOUNDARY THEME
-  Cadastre

MFP INTERNAL USE ONLY  
Prepared By: Andrea Zappacosta  
Prepared For:  
Map Ident: plot980615\_1  
Date: 15 May 98  
Scale 1:1641

Cadastre - North, NW, NE  
AG-VEG 1998 - South, SE, SW



42

**bp site 42  
amended**



Bushplan sites refno 1-500 SCP BOUNDARY THEME



Cadastre



AG VEG 1998 BOUNDARY THEME

MFP INTERNAL USE ONLY

Prepared By: Andrea Zappacosta

Prepared For:

Map Ident: plot980518\_1

Date: 18 May 98

Scale 1:1686

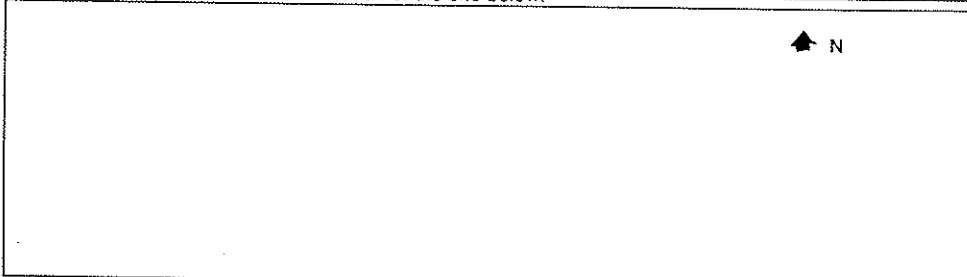
**BUSHLAND PLANT SURVEY RECORDING SHEET 1- use pencil only**

BUSHLAND AREA \_\_\_\_\_ SITE NUMBER \_\_\_\_\_  
 DATE TRIP \_\_\_\_\_ RECORDERS \_\_\_\_\_  
 DATE TRIP \_\_\_\_\_ RECORDERS \_\_\_\_\_  
 DATE TRIP \_\_\_\_\_ RECORDERS \_\_\_\_\_  
 BOTANIST \_\_\_\_\_

**1. LOCATION of the QUADRAT**

From 'Bushland Plant Survey' written  
 B. Keighery (1994) and published by  
 Wildflower Society of WA (Inc.), PO 1  
 64 Nedlands WA 6008

Mud Map Draw a sketch of the location of the site below.

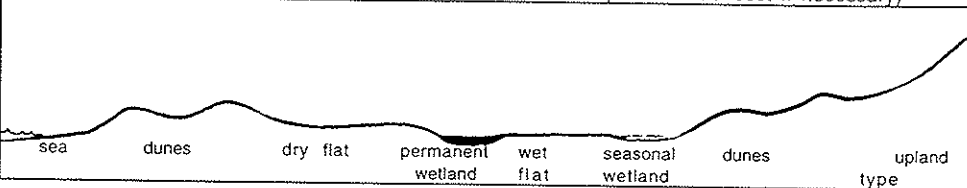


Road Location \_\_\_\_\_

Geographic Location Latitude \_\_\_\_\_ S Longitude \_\_\_\_\_ E Altitude \_\_\_\_\_  
 Reference Map \_\_\_\_\_

Photograph Photographer's Name \_\_\_\_\_ Photo No \_\_\_\_\_

Topographic position Circle position of site on the transect (alter the transect if necessary)



**2. SITE DATA** Circle the correct response.

Slope flat gentle steep Aspect N NE E SE S SW W NW

Surface Soil \_\_\_\_\_ Colour \_\_\_\_\_  
 Exposed rock type \_\_\_\_\_ % surface \_\_\_\_\_

Sub-surface Soil \_\_\_\_\_ Colour \_\_\_\_\_  
 Rock type \_\_\_\_\_ depth to rock \_\_\_\_\_

Drainage well mod poor depth water cm Wet all year winter/spring

Litter \_\_\_\_\_ % cover \_\_\_\_\_  
 Depth cm \_\_\_\_\_  
 Bare Ground \_\_\_\_\_ %cover \_\_\_\_\_

	TREES			MALLEES	
	over 30m	10 - 30m	under 10m	over 8m	under 8m
LIFE FORM					
COVER CLASS (%)					
DOMINANT SPECIES					
					30m
					10m

	SHRUBS		SHRUBS	
	over 2m	2m - 1m	under 1m	
LIFE FORM				
COVER CLASS (%)				
DOMINANT SPECIES				
				2m
				1m

	GRASSES	HERBS	SEDGES	OTHER
	LIFE FORM			
COVER CLASS (%)				
DOMINANT SPECIES				
				1m

**4. VEGETATION CONDITION**

1 'PRISTINE'		COMMENTS
2 EXCELLENT		
3 VERY GOOD		
4 GOOD		
5 DEGRADED		

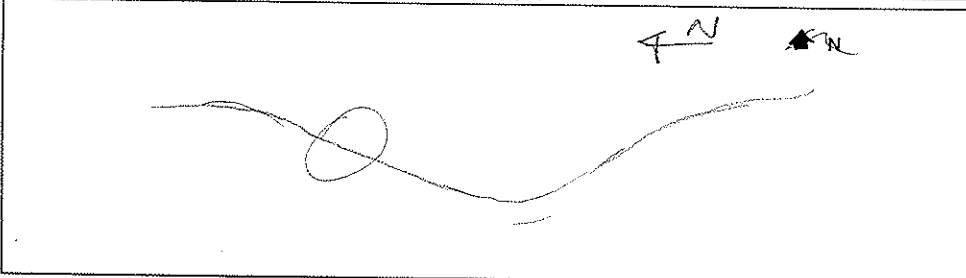
BUSHLAND PLANT SURVEY RECORDING SHEET 1- use pencil only

BUSHLAND AREA BS 42 SITE NUMBER N504pas  
 DATE TRIP 22/9/99 RECORDERS BSK  
 DATE TRIP \_\_\_\_\_ RECORDERS \_\_\_\_\_  
 DATE TRIP \_\_\_\_\_ RECORDERS \_\_\_\_\_  
 BOTANIST \_\_\_\_\_

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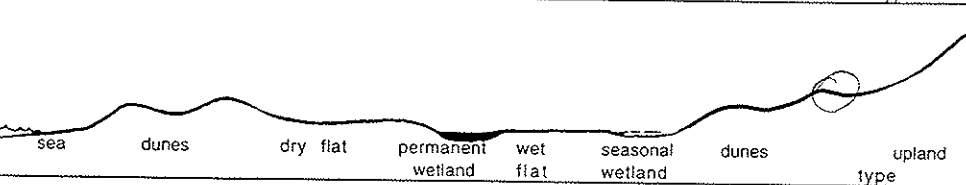


Road Location Toodyay Rd

Geographic Location Latitude \_\_\_\_\_ S Longitude \_\_\_\_\_ E Altitude \_\_\_\_\_  
 Reference Map \_\_\_\_\_

Photograph Photographer's Name \_\_\_\_\_ Photo No \_\_\_\_\_

Topographic position Circle position of site on the transect (alter the transect if necessary)



2. SITE DATA Circle the correct response.

Slope flat gentle steep Aspect N NE E SE S SW W NW

Surface Soil loamy sand Colour brown/grey  
 Exposed rock type NA % surface \_\_\_\_\_

Sub-surface Soil Colour \_\_\_\_\_  
 Rock type \_\_\_\_\_ depth to rock \_\_\_\_\_

Drainage well mod poor depth water \_\_\_\_\_ cm Wet all year winter/spring

Litter Depth \_\_\_\_\_ % cover \_\_\_\_\_ Bare Ground \_\_\_\_\_ % cover \_\_\_\_\_

LIFE FORM	TREES			MALLEES		30m 10m
	over 30m	10 - 30m	under 10m	over 8m	under 8m	
		<u>clumped Wandoo</u> 				
COVER CLASS (%)		<u>to 30-70%</u>				
DOMINANT SPECIES						
LIFE FORM	SHRUBS over 2m		2m - 1m	SHRUBS under 1m		2m 1m
COVER CLASS (%)						
DOMINANT SPECIES						
LIFE FORM	GRASSES	HERBS	SEDGES	OTHER		1m
COVER CLASS (%)						
DOMINANT SPECIES						

4. VEGETATION CONDITION

	COMMENTS
1 'PRISTINE'	
2 EXCELLENT	<u>Unable to assess condition</u>
3 VERY GOOD	<u>as shrubs, herbs, sedges, grasses</u>
4 GOOD	<u>cleared; burnt; grazed</u>
5 DEGRADED	

Wattiana statters - slope damp  
water seeping out of ground  
several excavated holes full  
of water.

FLORA LIST FOR BS 42

BFS 42B

Key

Column 1: Plant families and taxa

- taxa located in a quadrat
- # opportunistic record
- \* non-native taxa

Columns 2 - 3: Plant Communities  
Creekline  
Woodland

Crk    ~~W~~W

Angiosperms				
Amaranthaceae * <i>Phytolus</i> sp				
Anthericaceae				
	Arnocrinum preissii		+	+
	Borya ?scirpoidea			+
	Borya ?sphaerocephala	+		+
	Chamaescilla corymbosa	+	+	+
	Sowerbaea laxiflora	+		
	#Stypandra grandiflora	+		
Apiaceae				
	Hydrocotyle sp.	+		
	Xanthosia candida	+		+
Asteraceae * <i>Siloxerus humifusus</i>				
	*Ursinia anthemoides	+	+	+
Casuarinaceae				
	Allocasuarina humilis	+		+
Centrolepidaceae				
	Aphelia cyperoides		+	
	Centrolepis aristata	+	+	+
Colchicaceae				
	Burchardia umbellata	+	+	+
Cyperaceae				
	Corizandra enodis			
	* Cyathochaeta avenacea	+	+	

Borya sp.

\*Caesia par?

\*Homaloscadium

homalocarpus

\*Centro. sp.

\*Burch multi

\* Lepidosperma sp. (c)

\* Lepidosperma angustatum

\* Mesomel. let.

* Isolepis sp.		+	+	+	+
#Lepidosperma scabrum			+		
Mesomelaena tetragona		+		+	
Tetraria octandra		+	+	+	
Dasypogonaceae					
Calectasia cyanea		+		+	
Dasypogon bromeliifolius		+	+	+	
#Dasypogon obliquifolius	+				
* Kingia australis	+	+		+	
Lomandra caespitosa		+	+	+	
Lomandra hermaphrodita		+	+	+	
Lomandra odora		+		+	
Lomandra preissii		+		+	
Lomandra sericea				+	
#Lomandra spartea		+			
Dilleniaceae					
#Hibbertia acerosa				+	
Hibbertia aurea		+	+		
* #Hibbertia commutata		+			
Hibbertia huegelii		+	+	+	
* Hibbertia hypericoides	+	+	+	+	+
#Hibbertia racemosa					
Hibbertia subvaginata			+		
Droseraceae					
Drosera erythrorhiza		+			+
* Drosera glanduligera		+	+	+	
Drosera macrantha		+		+	+
Drosera menziesii ssp menziesii		+			
Drosera menziesii ssp penicillaris		+	+	+	+
Drosera palacea			+	+	
#Drosera pallida		+			
Drosera platystigma	+				
Drosera pycnoblata			+	+	
Drosera stolonifera		+	+	+	+
Epacridaceae					
Andersonia lehmanniana		+	+		
#Astroloma macrocalyx			+		
#Astroloma pallidum		+			

\* Drosera sp.  
\* Drosera pulchella

Conostephium pendulum		+	+	+
Conostephium preissii			+	+
Leucopogon conostephioides		+	+	+
Leucopogon polymorphus				+
Leucopogon propinquus			+	
Leucopogon sprengelioides		+	+	+
#Leucopogon gracillimus				
#Leucopogon cymbiformis				
Lysinema ciliatum		+	+	+
#Styphelia tenuifolia		+		
+				
Euphorbiaceae				
Monotaxis grandiflora			+	
#Poranthera microphylla		+		
Fabaceae (Papilionaceae)				
Bossiaea eriocarpa		+	+	+
*Chorizema dicksonii		+		+
*Cytissus prolifera				
Daviesia decurrens		+		
Daviesia horrida		+		
Daviesia podophylla		+		+
Daviesia triflora			+	+
#Dillywinia 'cinerascens'		+		+
Gompholobium aristatum		+		+
Gompholobium confertum		+		+
Gompholobium marginatum		+		+
Gompholobium tomentosum			+	+
#Hovea trisperma		+		+
Isotropis cuneifolia			+	+
Jacksonia alata		+		+
Jacksonia condensata		+		+
#Jacksonia decumbens			+	
Jacksonia densiflora			+	+
Jacksonia sternbergiana		+		
+				
#Kennedia prostrata			+	+
Nemcia capitata				+
Nemcia spathulatum		+		
#Pultenaea ericifolia		+	+	+
Templetonia biloba			+	+
*Trifolium campestre		+	+	

\*Choriz  
erodis (c)

\*Mirbelia  
sp.

* <i>Trifolium angustifolium</i>	+	+		
# <i>Viminaria juncea</i>				+
Fumariaceae				
#* <i>Fumaria capreolata</i>				
Gentianaceae				
# <i>Mitrasacme paradoxa</i>			+	+
#* <i>Centaurium erythraea</i>			+	
Goodeniaceae				
<i>Goodenia caerulea</i>			+	+
# <i>Goodenia pulchella</i>	+		+	
<i>Goodenia micrantha</i>			+	
<i>Lechenaultia biloba</i>			+	+
# <i>Lechenaultia expansa</i>				+
<i>Scaevola canescens</i>			+	+
# <i>Scaevola glanduligera</i>			+	
<i>Scaevola repens</i>			+	+
Haemodoraceae				
# <i>Anigozanthos bicolor</i>	+		+	
# <i>Anigozanthos humilis</i>			+	+
<i>Anigozanthos manglesii</i>			+	+
<i>Conostylis aculeata</i>			+	+
ssp <i>aculeata</i>			+	
<i>Conostylis aurea</i>			+	+
<i>Conostylis caricina</i>			+	+
<i>Conostylis setigera</i>			+	
# <i>Haemodorum brevisepalum</i>			+	
<i>Haemodorum laxum</i>			+	+
# <i>Haemodorum paniculatum</i>				
<i>Haemodorum spicatum</i>			+	+
<i>Phlebocarya ciliata</i>			+	+
<i>Phlebocarya filifolia</i>			+	+
<i>Tribonanthes brachypetala</i>	+			
<i>Tribonanthes longipetala</i>			+	
Haloragaceae				
# <i>Glishrocaryon aureum</i>			+	
# <i>Gonocarpus pithyoides</i>			+	
Hypoxidaceae				

Hypoxis occidentalis			+			+
Iridaceae						
#*Hesperantha falcata			+			
*Gladiolus caryophyllaceus		+	+	+	+	+
#Orthrosanthos laxus			+			
#Patersonia juncea		+				+
Patersonia occidentalis			+	+	+	
*Romulea rosea			+			+
*Sparaxis bulbifera			+			
Juncaceae						
#*Juncus bufonius						
Juncaginaceae						
#Triglochin centrocarpa			+			
Lamiaceae						
Hemiandra linearis				+	+	
#Hemiandra ?pungens				+		
Lauraceae						
#Cassytha aurea			+			
#Cassytha pubescens						
Cassytha racemosa			+			+
Lentibulariaceae * Polypompholyx matrifida						
Lobeliaceae						
#Lobelia heterophylla						
Lobelia tenuior				+		
Loranthaceae						
#Ameyema miquelii		+				
Nuytsia floribunda					+	
Loganiaceae						
#Logania campanulata				+		
#Logania vaginalis			+			
Mimosaceae						
Acacia auronitens			+	+	+	
Acacia ericifolia		+				+
#Acacia extensa			+			
Acacia huegelii		+		+	+	

#*Acacia longifolia				+
#Acacia obovata				+
Acacia lasiocarpa		+		
* Acacia pulchella			+	+
Acacia sessilis		+	+	+
#Acacia teretifolia		+		
Acacia willdenowiana			+	+
Myrtaceae				
* Baeckea camphorosmae			+	+
#Baeckea crispiflora			+	
Beaufortia purpurea			+	+
Calothamnus sanguineus			+	+
#Calothamnus hirsutus			+	
#Calothamnus torulosus				
Calytrix angulata			+	+
#Calytrix aurea				+
#Calytrix flavescens			+	+
Eremaea pauciflora			+	+
Eremaea aff brevifolia D.Coates MI175		+	+	
Eucalyptus calophylla		+	+	
#Eucalyptus todtiana				+
Eucalyptus marginata		+		
* Eucalyptus wandoo (C)		+		+
* Hypocalymma angustifolium		+	+	+
Kunzea recurva			+	+
#*Leptospermum laevigatum			+	
#Leptospermum erubescens			+	
#Melaleuca acerosa			+	
* Melaleuca scabra		+	+	+
Melaleuca trichophylla			+	+
#Melaleuca sp				
Scholtzia involucrata 'erect'			+	
Scholtzia involucrata 'prostrate'				+
Verticordia densiflora				+
Verticordia pennigera				+
Orobanchaceae				
#Orobanche minor				
Orchidaceae				
Caladenia deformis			+	
Caladenia discoidea				+

ACACIA(C)

CALQUAD

EUCALYPT(C)

Caladenia filamentosa					+
Caladenia gemmata					+
Caladenia huegelii			+		
Caladenia sericea			+		+
Caladenia longicauda		+			
Diuris longifolia		+			
Eriochilus dilatatus					
Leporella fimbriata			+	+	+
Lyperanthus nigricans			+	+	+
Lyperanthus serratus		+			
*Monadenia bracteata			+	+	+
#Prasophyllum fimbriata		?+			
Pterostylis barbata		+			
Pterostylis recurva			+		+
Pterostylis vittata			+		+
Thelymitra canaliculata			+		+
Thelymitra crinita			+		+
Oxalidaceae					
#*Oxalis pes-caprae					
#Oxalis perennenans		+			
Philydraceae					
#Philydrella pygmaea					+
Phormicaceae					
Agrostocrinum scabrum			+		
<i>Stypandea glauca</i>					
Pittosporaceae					
Pronaya fraseri					+
#Sollya heterophylla			+		
Poaceae					
#Aristida contorta					+
*Aira caryophyllea			+		+
Amphipogon turbinatus			+	+	+
*Avena barbata					
*Briza maxima			+	+	+
*Briza minor			+		
#Bromus diandrus					
Danthonia caespitosa			+	+	+
Danthonia pilosa					
*Ehrharta calycina			+	+	+

*Eragrostis curvula					+
#Eragrostis elongata		+			
#Microlaena stipoides				+	
Neurachne alopecuroidea				+	+
*Pentaschistis airoides					+
Poa drummondiana				+	
*Rhyncheletrum repens					
#Stipa elegantissima				+	
#Stipa campylachne				+	
Stipa compressa					+
Stipa pycnostachya				+	+
#Stipa semibarbata				+	
Polygalaceae					
Comesperma calymega				+	+
Portulacaceae					
#Calandrinia corrigioloides					
#Calandrinia granulifera					
#Calandrinia liniflora					
Proteaceae					
Adenanthos cygnorum				+	+
Banksia attenuata				+	
Banksia grandis				+	+
Banksia menziesii				+	
Conospermum acerosum				+	
#Conospermum huegelii				+	
#Conospermum incurvum					+
Conospermum stoechadis				+	+
#Dryandra armata				+	
Dryandra nivea				+	+
#Dryandra sessilis				+	+
Grevillea bipinnatifida				+	
#Grevillea endlicheriana (C) x (W)				+	
#Grevillea glabrata				+	
#Hakea auriculata				+	
Hakea candolleana					+
Hakea erinacea				+	+
Hakea incrassata				+	+
Hakea lissocarpha				+	
Hakea myrtoides				+	

#Dry  
lind.

\* Hakea  
auriculata

Hakea prostrata +		+	+	+
Hakea ruscifolia	+	+	+	+
#Hakea stenocarpa		+		
Hakea trifurcata		+		+
Hakea undulata		+		+
#Isopogon asper		+		
Isopogon drummondii			+	+
#Isopogon dubius			+	
#Isopogon scabra		+		
Lambertia multiflora	+			+
Persoonia saccata	+		+	+
#Petrophile biloba		+		
Petrophile linearis		+	+	+
#Petrophile striata		+		
Stirlingia latifolia	+		+	+
Synaphea acutiloba		+		+
Synaphea pinnata				
#Xylomelum occidentale	+			
Restionaceae				
Harperia lateriflora +		+		
Hypolaena exsulca		+	+	+
Lepidobolus chaetocephalus		+	+	+
#Lepyrodia macra		+		
Loxocarya cinerea		+	+	+
Loxocarya fasciculata		+	+	+
Loxocarya flexuosa				+
Lyginia barbata		+	+	+
Restio 'sinuosus'				+
Restio sphacelatus				+
Rhamnaceae				
#Cryptandra arbutiflora	+			
#Cryptandra glabriflora	+	+	+	
Cryptandra pungens		+		
#Cryptandra spinescens				
Spyridium tridentatum		+		+
Rubiaceae				
Opercularia vaginata		+		+

Rutaceae				
Boronia ramosa			+	+
Eriostemon spicatus		+	+	+
Stackhousiaceae				
#Stackhousia pubescens			+	
Tripterococcus brunonis				
Sterculiaceae				
#Thomasia foliosa		+		
#Thomasia grandiflora		+		
Stylidiaceae				
#Levenhookia pusilla			+	+
Levenhookia stipitata			+	
Stylidium affine	+			
Stylidium breviscapum			+	+
Stylidium brunonianum	+	+	+	+
Stylidium bulbiferum				+
#Stylidium calcaratum			+	+
Stylidium dichotomum			+	+
#Stylidium maitlandianum		+		
Stylidium petiolare				+
Stylidium piliferum			+	+
Stylidium repens		+	+	+
Thymelaeaceae				
Pimelea imbricata			+	+
Pimelea rosea		+	+	
Tremandraceae				
#Tetratheca nuda			+	
Violaceae				
Hybanthus calycinus		+	+	+
Xanthorrhoeaceae				
Xanthorrhoea preissii				
#Xanthorrhoea acanthostachya				+

\* 8/3  
ecorne

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HS 42 - Species List 22/9/97

Scattered Mori / Woodland

- |                                    |                       |                      |
|------------------------------------|-----------------------|----------------------|
| ✓ Dry arnuta                       | ✓ Mesoleta            | ✓ <u>Caes par</u>    |
| ✓ <del>Arct</del> endlich.         | ✓ Tet oct.            | ✓ Ptho               |
| ✓ Hakea arnuta                     | ✓ Xanth arnuta        | ✓ <u>Amp prei</u>    |
| ✓ Hak liss                         | ✓ Burch mult.         | ✓ Styp glauca        |
| ✓ Hyp angust                       | ✓ Dros gland.         | ✓ Hydrocotyle sp.    |
| ✓ Hak incras                       | ✓ Homa hama           | ✓ Poly multi         |
| ✓ <del>Hak</del> auric. auriculata | ✓ Isolepis sp         | ✓ Pat ocula          |
| ✓ Ac pulchella                     | ✓ <u>Cham sericea</u> | ✓ Ser laxi           |
| ✓ Dry lina                         | ✓ Anig burl.          | ✓ Stylid ecum        |
| ✓ Burch carp                       | ✓ Stylid cile.        | ✓ Stylid pet         |
| ✓ Hobb hyp                         | ✓ Burch unkel         |                      |
| <del>Dav etc</del>                 | ✓ Lev. pas            | <u>Creek</u> Agasul? |
| ✓ Iso asper                        | ✓ Sil humi            | ✓ Ac salig c         |
| ✓ Iso debing                       | <del>Tet oct.</del>   | X Euc wood. c        |
| ✓ Hobb com mkt                     | ✓ Lepid angust        | X Euc redis c        |
| ✓ Xanth puli                       | ✓ Leck blob           | Ac satig c           |
| ✓ Dav. deurnes                     | ✓ Certu arist         | X Choriz. nodis c    |
| ✓ Kingia australis                 | ✓ Centro sp.          | X Cres. andlich c    |
| ✓ Allo trumitis                    | ✓ Dros pulchella      | ✓ Lepid. sp. c       |
| ✓ Mel. scabra.                     | ✓ Shipa. elegant.     |                      |
| ✓ Chori. Dicksonii                 | ✓ Neur atoop          |                      |
| ✓ Syn acutiloba                    | ✓ Dros sp             |                      |
| ✓ Syn pinnata                      | ✓ <u>Lot pub.</u>     |                      |
| ✓ Cal gued.                        | ✓ Borge sp            |                      |
| ✓ Mirb.                            |                       |                      |
| ✓ Hak trif                         |                       |                      |

- |                    |          |  |
|--------------------|----------|--|
| ✓ Xantho. candida. | Woodland | { Cham. sericea<br>Lox pub. (Restionaceae)<br>Caes par (Anthericaceae)<br>Amp prei (Poaceae) |
|                    |          |  |
|                    |          |  |
|                    |          |  |

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From MfP - Keiron Beardmore

**FINAL via E-Mail to DEP 18/10/99**

**Re Lot 53, Dalgety Road**

June

I have undertaken some investigations with Council, DEP and the WRC and can convey the following comments:-

- Lot 53 comprises approximately 6 ha of which 2 ha contains a dwelling and an existing horticultural activity.
- Having liaised with Bronwen Keighery from the Department of Environmental Protection, I can advise that two thirds of the property was recognised in Perth's Bushplan (Bushplan site 42) because it contains vegetation typical of the Forrestfield Vegetation Complex being scattered *Eucalyptus calophylla* and *Eucalyptus wandoo* over a very species rich Mixed Open Heath in Very Good to Excellent condition. This heath contains at least three rare species (*Lambertia multiflora* var. *darlingensis*, *Synaphea acutiloba* and *Synaphea pinnata*). The plant community also rare being classed as a threatened ecological community. Clearing of the Forrestfield Vegetation Complex has been so extensive in the past that only 9% of the original extent of the Complex in the PMR remains and only 5% is in large enough areas to be recognised in Perth's Bushplan. Perth's Bushplan establishes a target of at least 10% for each vegetation complex. In addition, the area has added values as it contains a natural creekline that is a tributary of the Swan River. Most creeklines on the Swan Coastal Plain are cleared. The area also is part of the Swan Valley Landscape Conservation Area classified by the National Trust of Australia (WA).

Of the 4 ha identified in Bushplan, approximately 3 ha has been cleared without approval through the submission of a "Notice of Intent" to the Commissioner for Soil and Land Conservation (see below). The current landowner has removed the Mixed Open Heath from most of the property. The remaining vegetation has been burnt and grazed. One hectare has been ploughed. The sheep were eating all new growth of palatable species preventing regeneration of about 50% of the understorey species. From a site visit, Bronwen Keighery was unable to complete a comprehensive assessment of the vegetation as regeneration was so poor. The sheep were placed on the property contrary to advice from the Soil and Land Conservation Commission Officer but have since been removed after a second visit by this officer.

- Approval to clear more than 1 ha of land zoned Rural in the MRS is required from the Commissioner for Soil and Land Conservation and applications are assessed on land degradation and nature conservation factors. Two site visits, that I know of, to the subject land have been undertaken to date and has included representation from the Council, DEP, MfP and the Office of the Commissioner in regard to clearing activity. I understand a letter was sent from sent from the Officer of the Commissioner requesting an explanation as to the clearing activity and, as indicated above, a verbal request to remove sheep was also made as the grazing of stock is regarded as degradation/clearing under the Act as it constitutes a change in land use. I am not sure whether the Commissioner will be pursuing any further course of action (contact person Ken Angel, Commissioner for Soil and Land Conservation).
- Bushplan wishes to encourage the retention of the vegetation in private ownership with assistance and advice to the owner for private land management. For example, CALM and the National Trust have covenanting scheme. Some forms of development such as bush blocks are compatible with bushland protection and where a lot contains degraded areas or no vegetation, there is scope to accommodate development compatible with the sites current land use zoning.
- The land is currently zoned Rural in the Metropolitan Region Scheme and "Landscape"

in the local Town Planning Scheme (TPS). Bushplan complements the existing "Landscape" zoning provisions (see attachment and 8.2.6.2 (b) re the retention of vegetation). It is adjacent to but not within the Swan Valley Act area. Irrespective of whether Bushplan exists, development will need to comply with the development criteria for the Landscape zone, where possible.

- Development approval is required for a vineyard operation which is an "SA" Use (also see attached) and I understand a development application is with the Shire of Swan and is pending and awaiting payment of application fees. The application will need to be referred to the various State agencies, including the Swan River Trust because the creek on the property is tributary to Jane Brook and the Swan River. I understand from Council that the lot was purchased in mid 1998 (the existing vineyard would appear to have been part of the property before purchase) and Council are checking whether the existing horticultural activity on the 2 ha portion outside the Bushplan site received development approval.
- If the current vineyard application is refused, I have attached the zoning table which specifies land uses which may be acceptable in the "Landscape" zone, including the relevant criteria Council will need to take into consideration. This is a complex issue and may I suggest that Mr Antenucci liaises with Council regarding any specific questions (contact Mr Rob Farley) as the consideration of the development application is Council's responsibility.
- Having liaised with the WRC, the landowner does not appear to have a well licence, but evidence from the landowners, if this is not the case, should be supplied to Council.
- As you can see a number of site visits have been undertaken to date and I understand that an officer of the Ministry has been liaising with your office on this issue. I am happy to arrange another site visit with relevant personnel, if required, but in view of the status of the development application, might I suggest that officers of the Ministry continue to liaise with Council (who are the determining authority with respect to the development application) and Mr Antenucci to clarify the above and discuss options for the land. An officer from the Ministry, who can speak Italian, may be able to assist with translation.
- I hope the above information clarifies the situation to date and the information supplied above is to the best of my knowledge. If you require to discuss the matter further do not hesitate to contact me.

Many Thanks

## TOODYAY ROAD BUSHLAND, RED HILL

**Bushplan Site no. 42**

**Map no. 48**

### **Background**

This Bushplan Site had been subject to no on the ground survey by DEP except for edge survey prior to the realisation of draft Perth's Bushplan.

A field inspection of Bushplan Site 42 was made by Bronwen Keighery (DEP) and Clydie Smith (MfP) on 22/9/99. Mr Antenucci (land owner) was also present for the inspection. Approximately two hours was spent traversing the bushland by foot approximately one hour with the owner and, with permission of the owner, one without. As much of the bushland area had been recently cleared of shrubs, sedges, herbs and grasses there were relatively few plants flowering and annually renewed plants were immature. Vegetation condition assessments are subject to revision on the regrowth of the of shrubs, sedges, herbs and grasses.

### **Site Comments/Adjustment**

Sufficient vegetation was evident on the Bushplan Site (uncleared or regenerating) for the visit to the Bushplan Site generally confirm the values attributed to the vegetation from the previous edge inspection (DEP 1998). Additional information was gathered on the composition of the vegetation resulting in the identification of two additional priority species and a more complete listing of the species present in the bushland (Appendix 1). More than 60 species were identified in the Site illustrating the high diversity of species typical of woodlands on the Foothills and the Forrestfield Vegetation Complex. The diversity of the species and the presence of a series of taxa typical of floristic community type 3c (*Eucalyptus calophylla* — *Xanthorrhoea preissii* woodlands and shrublands) further supported the identification of this threatened ecological community on the Bushplan Site. The Bushplan Site description has been modified to reflect the new information gathered on the Site visit (Appendix 2).

Clearing of the Forrestfield Vegetation Complex has been so extensive in the past that only 9% of the original extent of the Complex in the PMR remains and only 5% is in large enough areas to be recognised in Perth's Bushplan. In addition the area has added values as it contains a natural creekline that is a tributary of the Swan River. Most creeklines on the Swan Coastal Plain are cleared. The area also falls is part of the Swan Valley Landscape Conservation Area classified by the National Trust of Australia (WA).

The current landowner has removed the Mixed Open Heath from most of the property. The remaining vegetation has been burnt and grazed. One hectare has been ploughed but the vegetation was generally still rooted and able to regenerate. The sheep were eating all new growth of palatable species preventing regeneration of about 50% of the understorey species. A more complete assessment of the vegetation could not be done as at the time of inspection regeneration was so sparse. The sheep were placed on the property contrary to advice from the Soil and Land Conservation Commission Officer but have since been removed after a second visit by this officer. It is expected that in the absence of further grazing and burning and good winter rains the heath will regenerate and in time be able to return to its original condition. It appeared possible that significant wind and water erosion could occur on the Bushplan Site in the absence of the vegetation. The Soil and Land Conservation Commission Officer advised that the nature of the soil would prevent this.

**NB: This is informal advice and should not be regarded as formal Section 38 advice under the Environmental Protection Act but represents DEP Bushplan advice subject to ratification through Coordination Group sign off.**

**In conclusion it is considered that the Bushplan Site boundaries should remain as depicted in 1998 as the native vegetation while currently impacted by clearing, grazing and fire will be able to regenerate to a condition suitable for inclusion in a Bushplan Site.**

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**APPENDIX 1: FLORA LIST FOR BS 42**

**Key**

**Column 1: Plant families and taxa**

\* non-native taxa

**Columns 2 - 3: Plant Communities**

Crk Creekline

W Woodland

	Crk	W
Angiosperms		
Amaranthaceae		
Ptilodus sp.		+
Anthericaceae		
Borya sp.		+
Caesia micrantha		+
Chamaescilla corymbosa		
Sowerbaea laxiflora		+
Apiaceae		
Hydrocotyle sp.		+
Xanthosia candida		+
Homalosciadium homalocarpum		+
Asteraceae		
Siloxerus humifusus		+
Casuarinaceae		
Allocasuarina humilis		+
Centrolepidaceae		
Centrolepis sp.		+
Centrolepis aristata		+
Colchicaceae		
Burchardia umbellata		+
Burchardia multiflora		+
Cyperaceae		
Cyathochaeta avenacea		+
Isolepis sp.		+
Lepidosperma angustatum		+

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Lepidosperma sp.	+
Mesomelaena tetragona	+
Tetragonia octandra	+
Dasygongonaceae	
Kingia australis	+
Chamaexeros serra	+
Dilleniaceae	
Hibbertia commutata	+
Hibbertia hypericoides	+
Droseraceae	
Drosera glanduligera	+
Drosera sp.	+
Drosera pulchella	+
Fabaceae (Papilionaceae)	
Chorizema dicksonii	+
Chorizema enodis	+
Daviesia decurrens	+
Miribelia sp.	+
Goodeniaceae	
Lechenaultia biloba	+
Haemodoraceae	
Anigozanthos bicolor	+
Iridaceae	
Patersonia occidentalis	+
Lentibulariaceae	
Polypompholyx multifida	+
Mimosaceae	
Acacia pulchella	+
Acacia saligna	+
Myrtaceae	
Baeckea camphorosmae	+
Calothamnus quadrifidus	+
Eucalyptus wandoo	+

**NB: This is informal advice and should not be regarded as formal Section 38 advice under the Environmental Protection Act but represents DEP Bushplan advice subject to ratification through Coordination Group sign off.**

<i>Eucalyptus rudis</i>	+
<i>Hypocalymma angustifolium</i>	+
Phormicaceae	
<i>Stypandra glauca</i>	+
Poaceae	
<i>Neurachne alopecuroidea</i>	+
<i>Stipa elegantissima</i>	+
Proteaceae	
<i>Dryandra armata</i>	+
<i>Dryandra lindleyi</i>	+
<i>Grevillea endlicheriana</i>	+
<i>Hakea auriculata</i>	+
<i>Hakea erinacea</i>	+
<i>Hakea incrassata</i>	+
<i>Hakea lissocarpa</i>	+
<i>Hakea trifurcata</i>	+
<i>Isopogon asper</i>	+
<i>Isopogon dubius</i>	+
<i>Synaphea acutiloba</i>	+
<i>Synaphea pinnata</i>	+
Restionaceae	
<i>Hypolaena pubescens</i>	+
Stylidiaceae	
<i>Levenhookia pusilla</i>	+
<i>Stylidium calcaratum</i>	+
<i>Stylidium ecorne</i>	+
<i>Stylidium petiolare</i>	+
Xanthorrhoeaceae	
<i>Xanthorrhoea preissii</i>	+

**NB: This is informal advice and should not be regarded as formal Section 38 advice under the Environmental Protection Act but represents DEP Bushplan advice subject to ratification through Coordination Group sign off.**

**APPENDIX 2: Modified Bushplan Site Description** (only modified sections are shown, new sections are underlined)

TOODYAY ROAD BUSHLAND, RED HILL

**Boundary Definition:** bushland (part taken to cadastre) boundary

**Bushplan Site no.** 42      **Map no.** 48

**THREATENED ECOLOGICAL COMMUNITIES**

Critically Endangered (floristic community type 3c)

**SECTION 3: SPECIFIC SITE DETAIL**

**Landscape Features:** creek, vegetated uplands

**Vegetation and Flora** limited survey (DEP 1998 (surveyed from roadside), DEP 1999, Mattiske Consulting Pty Ltd 1997)

**Structural Units**

Uplands: Scattered *Eucalyptus calophylla* and *Eucalyptus wandoo* over Mixed Open heath

Wetlands: *Eucalyptus wandoo* and *E. rudis* Woodland

**Vegetation Condition:** Very Good to Excellent

**Total Flora:** 62 native taxa (<70% of the expected flora)

**Significant Flora:** *Lambertia multiflora* var. *darlingensis* (3), *Synaphea acutiloba* (3), *Synaphea pinnata* (3); *Grevillea endlicheriana*.

**Fauna:** no known information

**Linkage:** no adjacent bushland

**Other Special Attributes:** contains plant communities representative of the eastern side of the Swan Coastal Plain; National Trust of Australia (WA) Classification

**NB:** This is informal advice and should not be regarded as formal Section 38 advice under the Environmental Protection Act but represents DEP Bushplan advice subject to ratification through Coordination Group sign off.

Figures 1-15 taken 22/9/1999



Figure 1: Creek culvert



Figure 2: 'Filled' area, weed free



Figure 3: Creek culvet



Figure 4: South slope along Toodyay Road



Figure 5: Small, uncleared area-grazed *S. acutiloba*, *S. pinnata*



Figure 6: Creekline-east



Figure 7: Creekline-west



Figure 8: creekline-*Chorizandra erodis*



Figure 9: Creekline - north



Figure 10: Creekline - west



Figure 11: South - 1 ha adjacent to cleared land - ploughed



Figure 12: Looking north from edge of cleared land to creek



Figure 13: North side of creek - grazed / burnt regrowth



Figure 14: North side of creek



Figure 15: North side of creek .