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Parks, Recreation, Planning & Tourism



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Postal Address: Locked Bag 104, Bentley Delivery Centre, WA, 6983

To: Angas Hopkins
Woodvale

Your Ref:
Our Ref: 045470F2001
Enquiries: Hayley Valentine
Phone: 9334 0220
Facsimile: 9334 0253
Email: hayleyv@calm.wa.gov.au

Subject: **Vegetation Report – Part Roe Location 2644 (B. Morton)**

CALM is currently in the process of purchasing Part Roe Location 2644, which lies in the Shires of Narembeen and Kondinin. This 495 ha area of land will be a valuable addition to CALM's conservation estate.

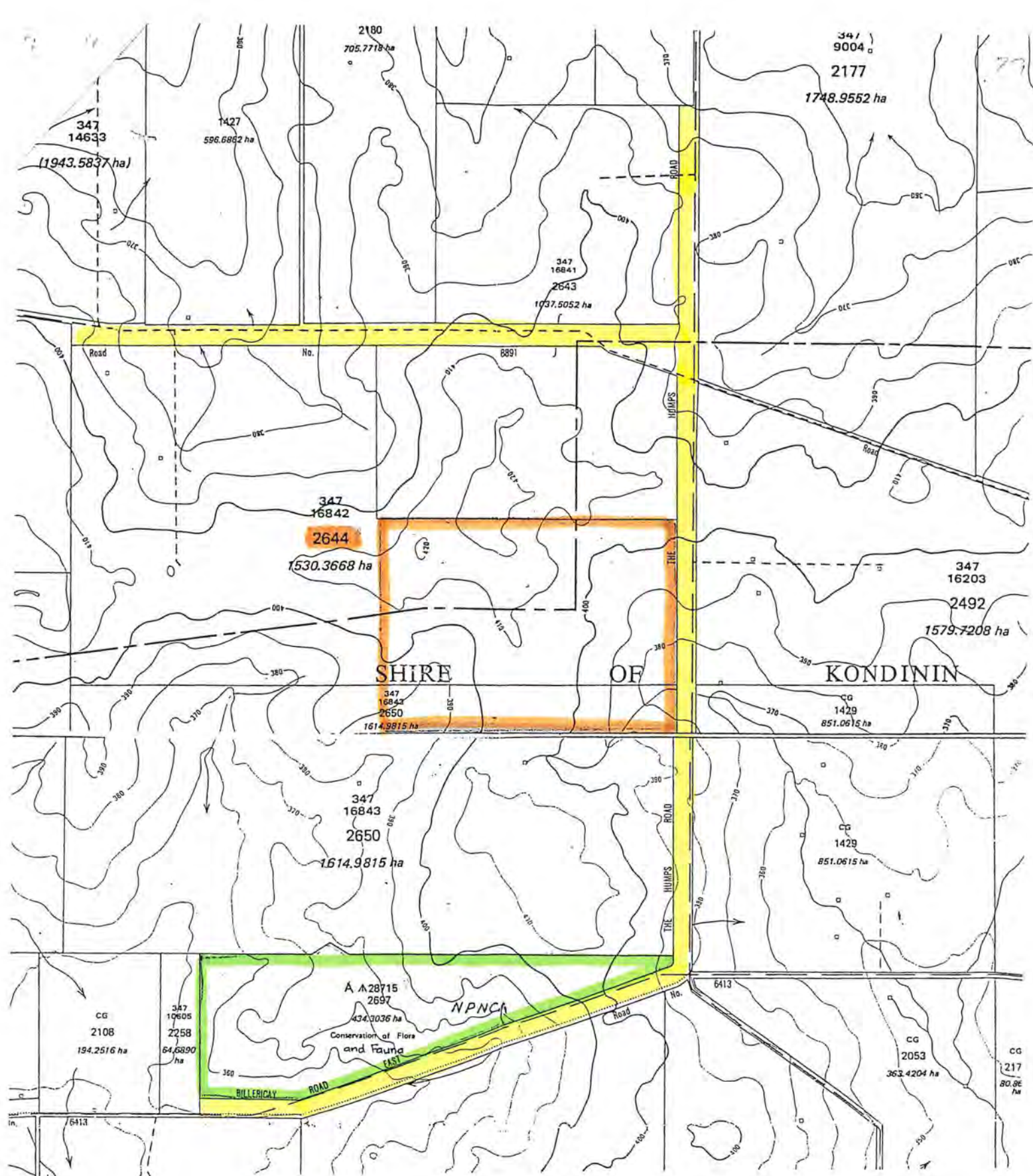
Would you prepare a vegetation report of the subject area, please. This report is required as part of CALM's application to the Commonwealth for funding this purchase, under the National Heritage Trust. For your information, I attach a map of the area, and a copy of the Inspection Report made by Narrogin District office.

Should you have any questions or require any more information, please call me on 9334 0220.

A handwritten signature in black ink, appearing to read "Hayley Valentine". The signature is fluid and cursive.

Hayley Valentine
A/ CONSERVATION ESTATE OFFICER

15 May 2001



Land proposed for purchase



Nearest nature reserve



Broad connecting road reserve



42/41

PRIVATE PROPERTY INSPECTION REPORT

PRIVATE PROPERTY: Pt Roe location 2644/Morton**REASON FOR SURVEY**

Mr. Bob Morton is selling the above cleared portion of this location. The proposed purchaser does not wish to purchase the remnant area. Mr. Morton contacted CALM to ascertain whether CALM is interested in purchasing. Mr. Morton is looking at the options available for sale of the bush area.

Head Office Reference 044204F1999	District File Reference Prop Morton (2)	Date Inspected 24 March & 5 April 2000
Land District Roe	Location Number(s) Pt 2644	Litho Map Mount Walker 1:50000 2633.I
Area 495 ha	Personnel GS Durell, K Keshaw & S White	Inspection Method Foot and vehicle traverse

GENERAL DESCRIPTION

This 495 hectares remnant is rectangular shaped, comprising 98 hectares of uncleared bush and 397 hectares of regrowth in good condition. The location is 28 kilometres north of Hyden within the Shires of Narembeen and Kondinin. The soils are white sand associated with kwongan vegetation, some medium to heavy soils in the southeast corner and a laterite ridge on the western end. A small breakaway exists. Native vegetation is mallee and kwongan with a small pocket of mallet. The remnant is linked to nature reserve number 28715 by a well-vegetated, 100 metre wide road reserve. The remnant contains re-charge type soils. The position is high in the landscape and would assist with local water tables within the local catchment.

A Soil Conservation Notice exists over part of the remnant although approximately 198 hectares is permitted to be cleared under this notice.

ADJOINING PROPERTIES

North: Cleared paddock	Ringlok fence in satisfactory condition. No access inside remnant.
East: Road reserve 100 metres wide	Not fenced. No access inside remnant.
South: Cleared paddock	Ringlok fence in satisfactory condition. No access inside remnant.
West: Cleared paddock except for northwest corner where remnant joins.	Ringlok fence in satisfactory condition Track inside remnant on this boundary

HUMAN USAGE

397 hectares cleared around 1980. This area has significant good quality regrowth. A dam with associated catchment exists.

DAMAGE OR DEGRADATION

The most significant past damage to the remnant is due to clearing. The cleared area has regrown well. Minimal weed invasion has occurred after the clearing and overall the remnant is weed free.

FIREBREAKS AND TRACKS (ACCESS)

Access to the remnant is via Humps Road.

Vehicle access around the remnant is restricted via the private property. Two tracks occur on the remnant, one a dead end track running east-west occurring on the eastern end approximately 300 metres from the northern boundary and a north-south track on the western boundary.

SOILS AND GEOLOGY

The kwongan areas contain light yellow sands, yellow sand, and light yellow brown sand with gravel.

The soils of the mallee vegetation include reddish brown loamy sand with quartz, light brown loamy sand and light brown sandy loam.

A breakaway area contains red-brown sandy clay with quartz.

The geology of the remnant is described as Remnant Sandplain and Laterite

VEGETATION TYPES

- Type 1 *Heath A of Allocasuarina pinaster and Leptospermum erubescens over Banksia sphaerocarpa and Dryandra sp.*
- Type 2 *Open tree mallee of Eucalyptus burracoppinensis over low shrub B of Acacia sp*

- Type 3 Heath A of *Grevillea cagiana*, *Verticodia sp.*, *Daviesia sp.*, and *Acacia sp.*
- Type 4 Heath B of *Acacia arcuartilis*, *Callitris sp.*, and *Melaleuca uncinata* over very open low sedges.
- Type 5 Open scrub of *Callitris sp* and *Allocasuarina sp.*
- Type 6 Tree mallee of *Eucalyptus ? eremophila* over scrub of *Melaleuca sp.*
- Type 7 Open scrub of *Grevillea excelsior* over Heath B.
- Type 8 Tree mallee of *Eucalyptus ? flocktoniae* over low scrub of *Callitris sp.* over low scrub B of *Melaleuca sp.*

PLANT SPECIES LIST (See List at Appendix I)

166 species recorded of which one species is introduced. 8 species recorded are on CALM's Priority Flora List.

NEST HOLLOWES AND BIRD HABITAT

The vegetation types do not provide nesting hollows for birds. The heath areas are likely to be important for nectar and seed feeding birds. Numerous nests were seen in the *Allocasuarina pinaster*.

WEEDS

Low weed occurrence. Only one species recorded at the time of inspection. Soils are generally poor and not conducive to high weed invasion.

FIRE HISTORY

The cleared area is likely to have been burnt in the early 1980's. No other recent fires have occurred. The uncleared vegetation is long term unburnt.

FAUNA

A survey of fauna was not undertaken. However, the following species were recorded:

FAUNA SPECIES LIST

Emu
Australian raven
Tree Martin
Bronzewing Pigeon
Willy Wag tail
Grey Currawong
Port Lincoln Parrot
Echidna
Rabbit
Western Grey Kangaroo.

NEARBY RESERVES

The nearest reserve is Reserve Number 28715 (434 ha), an unnamed nature reserve vested in the NPNCA. This reserve is approximately 3 kilometres south of the remnant and is by a 100-metre well-vegetated road reserve. This linkage improves the viability of both areas. Although no vegetation description is recorded for this reserve it does contain granite rock assemblages. From the species list for the reserve, it contains some similar species and soil types to the remnant.

Reserve No. 36003 (1112 ha), also unnamed nature reserve, lies approximately 6 kilometres to the east of the remnant. This reserve is comprised of heath associated with lateritic gravels and mallee associated with loam and sandy soil.

Anderson Rocks Reserve No. 25469 (340 ha) vested in the Water and Rivers Commission is situated about 10 kilometres to the north of the remnant. This reserve contains heath vegetation types but not associations of *Grevillea excelsior* and *Allocasuarina pinaster*. This reserve is also dominated by vegetation associated with granite and granitic soils.

The Humps Water Reserve No. 4672 (404 ha) is located approximately 10 kilometres southeast and Camel Peaks Reserve No. 23164 (201 ha) is situated approximately 15 kilometres southwest. Like Anderson Rocks Reserve this reserve is dominated by granite rocks with associated vegetation.

Nature Reserve No. 28715 and the remnant are linked by a 100 metre wide vegetated road reserve.

REMNANT VALUES

Intrinsic value for nature conservation	
<i>Species rarity</i>	8 species of flora recorded on CALM's Priority Flora List. No DRF recorded.
<i>Priority associations</i>	<p>Class 1 (400 ha) Shrublands on sandy soils.</p> <p>Class 2 (30 ha) Mallee on loams and clays.</p> <p>Class 2 (65 ha) Shrublands on gravelly soils.</p>
<i>Diversity</i>	<p>166 species recorded of which 165 were native species. List does not include annuals.</p> <p>8 vegetation associations recorded.</p>
<i>Intactness</i>	Weed cover is considered to be low. It is estimated the remnant is greater than 90% intact.
<i>Relationship to other CALM reserves</i>	The remnant significantly adds to the habitat already conserved within nearby conservation estate. The linkage via a 100 metre wide well vegetated road reserve to a existing nature reserves is an important factor for long term viability of both areas.

Viability	The remnant is close and connected to an existing nature reserve by a wide well vegetated road reserve. Viability of both areas is considered improved because of this connectivity.
Recreation:	Value for recreation restricted to nature studies.
Scientific study:	No specific abnormality that would require scientific study.
Other values	Has a significant area of re-charge soils. Assists in the control, within the local catchment, of groundwater and salinity control. Located in the middle of a remnant linkage northwards to another wide undeveloped road reserve . Thus providing a refuge for species moving along this linkage.

IMPLICATIONS FOR MANAGEMENT

<i>Boundaries:</i>	Rectangular. Boundary shape suits effective management of the remnant.
<i>Condition of Reserve:</i>	High quality remnant, no need for weed control. May be some minimal feral animal control (rabbits) required from time to time.
<i>Adjacent Land Use:</i>	Normal farming activities apply, Size of the remnant will reduce impacts from edge effects.
<i>CALM Presence:</i>	Low CALM presence required to maintain reserve. No degraded site requiring repair.
<i>Visitor Usage:</i>	Visitor usage considered low
<i>Community Attitudes:</i>	Community should support purchase of remnant for conservation. Limited other values for recreation or gravel removal.

34
35

OPTIONS FOR FUTURE MANAGEMENT

The options for CALM are:

- 1 Not purchase: Remnant will remain in the name of present landowner or new owner. If privately retained the owner may clear 198.8 hectares of the remnant for agriculture.
- 2 CALM purchase for the creation of a nature reserve for the conservation of flora and fauna.

RECOMMENDATION

I recommend that CALM present an Offer to Mr. Morton to purchase based upon the VGO's Unblighted valuation of \$55 000.00 (\$110.00 hectare).

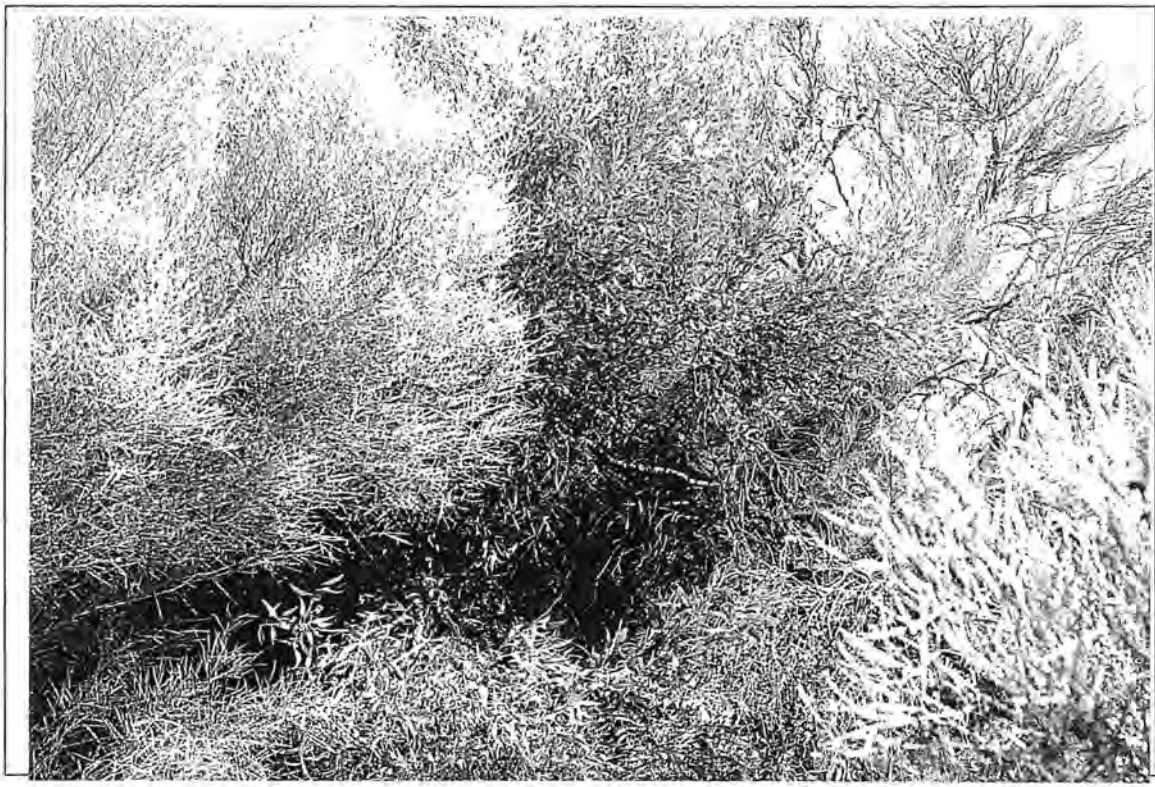


GS DURELL
DISTRICT OPERATIONS OFFICER
30 May 2000

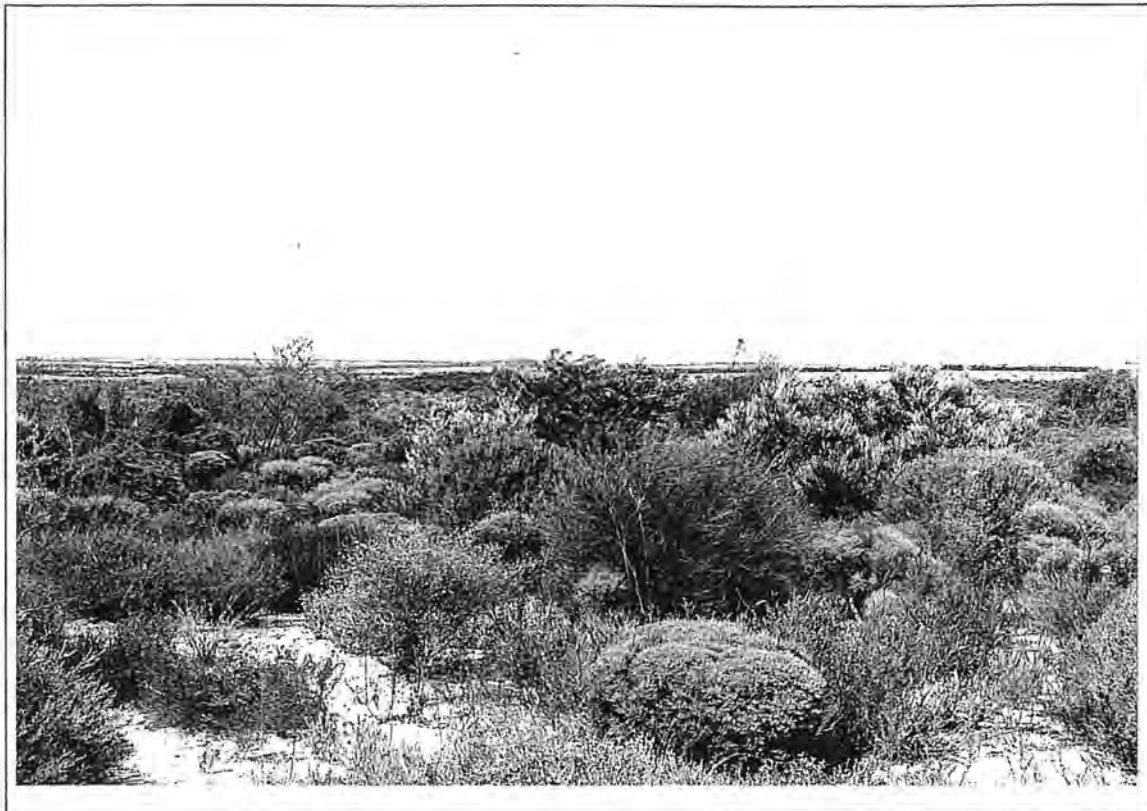
A:\proposed Morton_2



Type 1 Heath A of *Allocasuarina pinaster* and *Leptospermum erubescens* over *Banksia sphaerocarpa* and *Dryandra* sp.



Type 2 Open tree mallee of *Eucalyptus burracoppinensis* over low shrub B of *Acacia* sp



Type 3 Heath A of *Grevillea cagiana*, *Verticodia sp.*, *Daviesia sp.*, and *Acacia sp.*



Type 4 Heath B of *Acacia arcuatifolia*, *Callitris sp.*, and *Melaleuca uncinata* over very open low sedges.



Type 5 Open scrub of *Callitris sp* and *Allocasuarina sp*.



Type 6 Tree mallee of *Eucalyptus ? eremophila* over scrub of *Melaleuca sp*.



Type 7 Open scrub of *Grevillea excelsior* over Heath B.



Type 8 Tree mallee of *Eucalyptus ? flocktoniae* over low scrub of *Callitris sp.*
over low scrub B of *Melaleuca sp.*

27
71

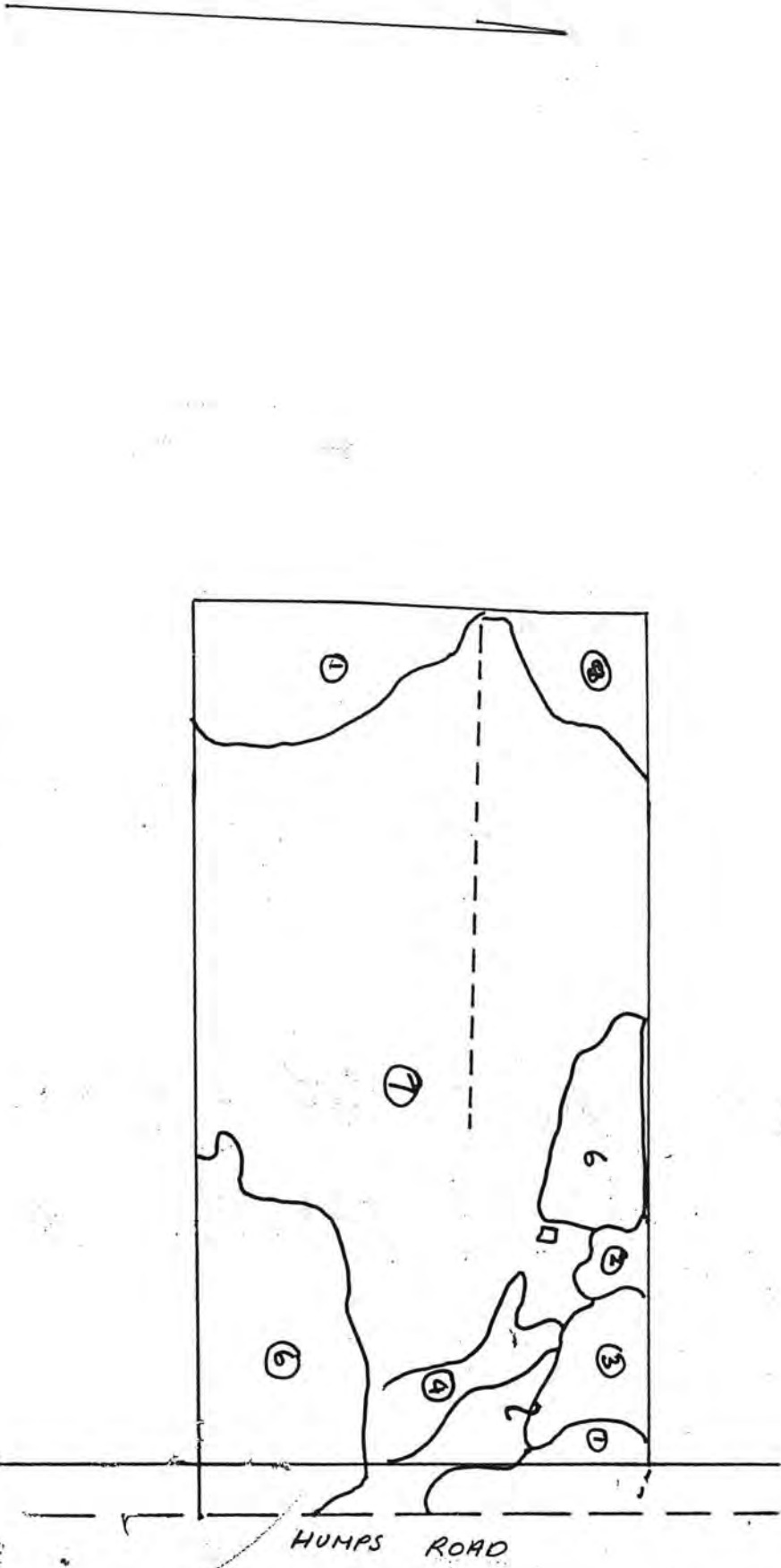


Type 7 Open scrub of *Grevillea excelsior* over Heath B.



Breakaway and associated vegetation.

MORTON'S REMNANT VEGETATION FORMATIONS



Numbers refer to veg types described in report.

SCALE 1:25000

Taxon Name	morton2 TaxonID	SpCode
Family: Amaranthaceae		
<i>Ptilotus polystachyus</i>	2751	PTIPOL
Family: Anthericaceae		
<i>Thysanotus sp</i>	-13	THYSP
Family: Apiaceae		
<i>Platysace effusa</i>	6252	PLAEFF
Family: Apocynaceae		
<i>Alyxia buxifolia</i>	6565	ALYBUX
Family: Asteraceae		
* <i>Hypochaeris glabra</i>	8086	HYPGLA
<i>Olearia muelleri</i>	8140	OLEMUE
<i>Olearia revoluta</i>	8148	OLEREV
<i>Senecio glossanthus</i>	8207	SENGLO
<i>Waitzia acuminata</i>	8275	WAIACU
Family: Boraginaceae		
<i>Halgania integerrima</i>	6691	HALINT
Family: Casuarinaceae		
<i>Allocasuarina acutivalvis</i>	1720	ALLACU
<i>Allocasuarina campestris</i>	1721	ALLCAM
<i>Allocasuarina corniculata</i>	1722	ALLCOR
<i>Allocasuarina huegeliana</i>	1731	ALLHUE
<i>Allocasuarina humilis</i>	1732	ALLHUM
<i>Allocasuarina microstachya</i>	1734	ALLMIC
<i>Allocasuarina pinaster</i>	1735	ALLPIN
<i>Allocasuarina thuyoides</i>	1739	ALLTHU
Family: Chenopodiaceae		
<i>Atriplex paludosa</i> subsp. <i>baudinii</i>	11525	ATRPALB
Family: Chloanthaceae		
<i>Cyanostegia angustifolia</i>	6747	CYAANG
<i>Pityrodia terminalis</i>	6821	PITTER
Family: Cupressaceae		
<i>Callitris canescens</i>	92	CALCAN
<i>Callitris glaucophylla</i>	94	CALGLA
Family: Cyperaceae		
<i>Caustis dioica</i>	760	CAUDIO
<i>Lepidosperma angustatum</i>	925	LEPANG
<i>Lepidosperma brunonianum</i>	928	LEPBRU
<i>Lepidosperma effusum</i>	932	LEPEFF
<i>Lepidosperma gladiatum</i>	933	LEPGLA
<i>Lepidosperma gracile</i>	934	LEPGRA
<i>Lepidosperma pubisquameum</i>	940	LEPPUB
<i>Lepidosperma tenue</i>	947	LEPTEN
<i>Schoenus calcatus</i>	17607	SCHCAL :- Priority 3.
<i>Schoenus pleiostemoneus</i>	1009	SCHPLE
Family: Dasypogonaceae		
<i>Calectasia sp.</i>	-54	CALSP
<i>Lomandra integra</i>	1229	LOMINT
Family: Dilleniaceae		
<i>Hibbertia exasperata</i>	5124	HIBEXA
<i>Hibbertia pungens</i>	5160	HIBPUN
<i>Hibbertia sp</i>	-14	HIBSP
<i>Hibbertia sp</i>	-14	HIBSP
<i>Hibbertia sp</i>	-14	HIBSP

April 2000.

166 species, 1 introduced
Species

8 species on

CALM's priority List.
ONE P2 REST
A# P3's + P4's.

morton2

Taxon Name

TaxonID SpCode

Taxon Name	TaxonID	SpCode
<i>Hibbertia verrucosa</i>	5177	HIBVER
Family: Epacridaceae		
<i>Astroloma epacridis</i>	6326	ASTEPA
<i>Astroloma serratifolium</i>	6336	ASTSER
<i>Leucopogon dielsianus</i>	6386	LEUDIE
<i>Leucopogon sp.</i>	-51	LEUSP
<i>Lysinema ciliatum</i>	6456	LYSCIL
<i>Monotoca leucantha</i>	6461	MONLEU - Priority 3
Family: Frankeniaceae		
<i>Frankenia sp.</i>	-55	FRASP
Family: Fumariaceae		
<i>Fumaria sp</i>	-28	FUMSP
Family: Goodeniaceae		
<i>Dampiera lavandulacea</i>	7451	DAMLAV
<i>Dampiera sp.</i>	-57	DAMSP
<i>Scaevola linearis</i>	7620	SCALIN
<i>Scaevola sp.</i>	-52	SCASP
Family: Haloragaceae		
<i>Glischrocaryon aureum</i>	6143	GLIAUR
Family: Lamiaceae		
<i>Microcorys subcanescens</i>	6902	MICSUB
Family: Mimosaceae		
<i>Acacia acanthoclada</i> subsp. <i>acanthoclada</i>	16159	ACAACAA
<i>Acacia arcuatilis</i> ms	14050	ACAARC :- Priority 2.
<i>Acacia assimilis</i> subsp. <i>assimilis</i>	15467	ACAASSA
<i>Acacia chamaeleon</i>	16116	ACACHA
<i>Acacia erinacea</i>	3324	ACAERI
<i>Acacia hemiteles</i>	3366	ACAHEM
<i>Acacia lasiocalyx</i>	3408	ACALAS
<i>Acacia merinthophora</i>	3439	ACAMER
<i>Acacia mooreana</i>	3448	ACAMOO
<i>Acacia sedifolia</i>	3535	ACASED
<i>Acacia sp</i>	-15	ACASP
Family: Myrtaceae		
<i>Baekea sp</i>	-37	BAESP
<i>Beaufortia micrantha</i>	5388	BEAMIC
<i>Beaufortia squarrosa</i>	5393	BEASQU
<i>Calothamnus brevifolius</i>	5403	CALBRE - Priority 3
<i>Calytrix nematoclada</i>	5467	CALNEM - Priority 3
<i>Eucalyptus (redunca series) phaenophylla</i>	-50	EUCSP
<i>Eucalyptus burracoppinensis</i>	5572	EUCBUR
<i>Eucalyptus eremophila</i>	5637	EUCERE
<i>Eucalyptus flocktoniae</i> subsp. <i>flocktoniae</i>	18521	EUCFLOFL
<i>Eucalyptus hypochlamydea</i>	12699	EUCHYP
<i>Eucalyptus lissophloia</i>	-36	EUCLIS
<i>Eucalyptus olivina</i>	13524	EUCOLI
<i>Eucalyptus ornata</i>	5732	EUCORN
<i>Eucalyptus sheathiana</i>	5772	EUCSHE
<i>Eucalyptus sp</i>	-27	EUCSP
<i>Eucalyptus sp</i>	-27	EUCSP
<i>Leptospermum erubescens</i>	5847	LEPERU
<i>Leptospermum spinescens</i>	5857	LEPSPI
<i>Melaleuca acuminata</i>	5869	MELACU
<i>Melaleuca adnata</i>	5870	MELADN
<i>Melaleuca cordata</i>	5896	MELCOR

morton2

Taxon Name

TaxonID SpCode

<i>Melaleuca cuticularis</i>	5900	MELCUT
<i>Melaleuca fissurata</i>	13269	MELFIS :- Priority 4.
<i>Melaleuca lateriflora</i>	5925	MELLAT
<i>Melaleuca laxiflora</i>	5927	MELLAX
<i>Melaleuca platycalyx</i>	5949	MELPLA
<i>Melaleuca spiciqera</i>	5969	MELSPI
<i>Melaleuca uncinata</i>	5984	MELUNC
<i>Melaleuca urceolaris</i>	5986	MELURC
<i>Regelia inops</i>	6014	REGINO
<i>Scholtzia involucrata</i>	6033	SCHINV
<i>Verticordia brownii</i>	6072	VERBRO
<i>Verticordia chrysantha</i>	6073	VERCHR
<i>Verticordia pennigera</i>	6107	VERPEN
<i>Verticordia picta</i>	6109	VERPIC

Family: Orchidaceae

<i>Caladenia sp</i>	-41	CALSP
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Family: Papilionaceae

<i>Daviesia apiculata</i>	16736	DAVAPI
<i>Daviesia audax</i>	16578	DAVAUD
<i>Daviesia benthamii</i>	3796	DAVBEN
<i>Daviesia purpurascens</i>	3836	DAVPUR - Priority 4
<i>Daviesia rhizomata</i>	12332	DAVRHI - Priority 3
<i>Dillwynia sp</i>	-12	DILSP
<i>Gastrolobium parvifolium</i>	3913	GASPAR
<i>Gastrolobium sp.</i>	-49	GASSP
<i>Gastrolobium spinosum</i>	3924	GASSPI
<i>Gastrolobium trilobum</i>	3930	GASTRI
<i>Mirbelia spinosa</i>	4100	MIRSPI

Family: Phormiaceae

<i>Dianella revoluta</i>	1259	DIAREV
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Family: Poaceae

<i>Austrostipa elegantissima</i>	17237	AUSELE
<i>Neurachne alopecuroidea</i>	492	NEUALO

Family: Polygalaceae

<i>Comesperma volubile</i>	4566	COMVOL
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Family: Proteaceae

<i>Adenanthos argyreus</i>	1770	ADEARG
<i>Banksia audax</i>	1801	BANAUD
<i>Banksia sphaerocarpa</i>	1851	BANSPH
<i>Conospermum brownii</i>	1861	CONBRO
<i>Dryandra cirsioides</i>	1895	DRYCIR
<i>Dryandra conferta</i>	1898	DRYCON
<i>Dryandra ferruginea</i> subsp. <i>obliquiloba</i>	16652	DRYFERO
<i>Grevillea cagiana</i>	1971	GRECAG
<i>Grevillea excelsior</i>	8832	GREEXC
<i>Grevillea huegelii</i>	2018	GREHUE
<i>Grevillea insignis</i> subsp. <i>insignis</i>	14415	GREINSIN
<i>Grevillea integrifolia</i>	2022	GREINT
<i>Grevillea shuttleworthiana</i>	8840	GRESHU
<i>Grevillea teretifolia</i>	2104	GRETER
<i>Hakea adnata</i>	2126	HAKADN
<i>Hakea cygna</i>	2153	HAKCYG
<i>Hakea incrassata</i>	2166	HAKINC
<i>Hakea multilineata</i>	2184	HAKMUL
<i>Hakea scoparia</i>	2204	HAKSCO
<i>Hakea sulcata</i>	2212	HAKSUL

Taxon Name	morton2	
	TaxonID	SpCode
<i>Isopogon buxifolius</i>	2225	ISOBUX
<i>Isopogon scabriusculus</i>	2236	ISOSCA
<i>Isopogon villosus</i>	2243	ISOVIL
<i>Persoonia coriacea</i>	2259	PERCOR
<i>Persoonia quinquenervis</i>	2270	PERQUI
<i>Petrophile circinata</i>	2289	PETCIR
<i>Petrophile ericifolia</i>	2295	PETERI
<i>Petrophile squamata</i>	2311	PETSQU
<i>Petrophile trifida</i>	2314	PETTRI
<i>Synaphea constricta</i>	16868	SYNCON
<i>Synaphea petiolaris</i>	2324	SYNPET
Family: Restionaceae		
<i>Lepidobolus chaetocephalus</i>	1073	LEPCHA
<i>Lepidobolus preissianus</i>	1075	LEPPRE
<i>Loxocarya aspera</i> ms	14914	LOXASP
<i>Loxocarya flexuosa</i>	1094	LOXFLE
<i>Loxocarya sp</i>	-26	LOXSP
Family: Rhamnaceae		
<i>Cryptandra sp</i>	-6	CRYSP
Family: Rutaceae		
<i>Boronia capitata</i>	4407	BORCAP
<i>Boronia ternata</i>	4445	BORTER
<i>Drummondita hassellii</i>	4459	DRUHAS
<i>Phebalium filifolium</i>	4500	PHEFIL
Family: Santalaceae		
<i>Exocarpos aphyllus</i>	10977	EXOAPH
<i>Santalum acuminatum</i>	2356	SANACU
<i>Santalum murrayanum</i>	2358	SANMUR
Family: Sapindaceae		
<i>Dodonaea ceratocarpa</i>	4757	DODCER
Family: Sterculiaceae		
<i>Thomasia angustifolia</i>	5075	THOANG
Family: Thymelaeaceae		
<i>Pimelea suaveolens</i>	5266	PIMSUA
Family: Tremandraceae		
<i>Tetratheca sp.</i>	-59	TETSP
Family: Xanthorrhoeaceae		
<i>Xanthorrhoea nana</i>	1254	XANNAN