

## ENTERED ON GIS

**Name:** Report on the Conservation Values of Sussex Location 2561,  
Payne Road, Jindong  
**Date:** 09/05/2006  
**Capture Author:** Thomas Leong

### **Comments:**

*Polygon*

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DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT  
BLACKWOOD DISTRICT

To **Robert Powell**  
A/Land-Acquisitions Officer  
CALM Kensington

Your Ref:  
Our Ref:  
Enquires: Andrew Webb  
Phone: (097) 521 677

Subject: **Report on the Conservation Values of Sussex Location 2561, Payne Road, Jindong.**

**For consideration for Departmental application through National Heritage Trust funding opportunities to purchase.**

Location 2561 Payne road owned by Keith and Paula Taylor is 52.1058 hectares in size and entirely vegetated except for a small area (approximately 2 hectares) of parkland clearing on the northern boundary. The location has been managed for conservation purposes by private landowners for many years; no indication of past agricultural usage can be observed. At present the location is proposed for subdivision into two lots with a proposed covenant to allow for remnant vegetation protection.

The subdivision proposal is for a 4.14-hectare corner to be excised from the northwest of the location. This would include the area of parkland clearing and part of the below recognised community type 1. It is understood both Lots will be for sale following subdivision.

The Blackwood District believes the acquisition of location 2561 as a whole package for vesting as Nature Reserve would be the best option for ongoing future conservation. This would eliminate the risk of either lot being purchased now or in the future by owners who may not fully appreciate the nature conservation values of the lots, and through inappropriate activities resulting in vegetation degradation.

If subdivision was to occur before this proposed Departmental land purchase was assessed, then the best option for nature conservation would be to purchase the larger (47 hectare) fully vegetated lot.

As shown on the attached aerial photograph, location 2561 is surrounded by cleared agricultural land to the north, east and south. To the west it partially adjoins a shire reserve that has been extensively cleared for gravel, although the section adjoining location 2561 has a remnant area of excellent quality undisturbed seasonal wet scrub community. A fenced and ungrazed extent of the ironstone community recognised as type 3 below extends for approximately 4 hectares into the adjoining property to the east. The Blackwood District would seek to obtain both this ironstone remnant to the east and the shire seasonal wet remnant to the west as part of a Nature reserve if a proposed purchase of location 2561 was to eventuate.

Location 2561 is in an agricultural zoning and does not have requirements for intensive fire management for adjoining asset protection, fences are well maintained, firebreaks are fully trafficable and the location has direct access/frontage onto Payne road. The additional management implications to the District of an acquisition of location 2561 would be :-

- an initial program of woody weed "cut-stump" control with follow-up monitoring to eradicate the wattle species present.
- the area of parkland clearing (if the full location was to be acquired) and the streamline section adjoining the southern boundary would benefit from weedy grass control, the parkland area could be revegetated with native species from the area and potentially used as a translocation site for endangered flora species of the area.



No Declared Rare flora was found by the two brief surveys conducted, but the following Priority listed species were recorded.

- *Hakea oldfieldii* (priority 3)
- *Loxocarya magna* (priority 3)
- *Isopogon formosus* ssp. *dasylepis* (priority 3)
- *Stylidium leeuwinense* (priority 3)
- *Pultenaea pinifolia* (priority 3)
- *Chamelaucium roycei* (DRF)

Potentially of interest is that the ironstone vegetation community as identified within location 2561 has *Melaleuca incana* ssp. *incana* as a dominant overstory species, which all other currently known Busselton ironstone communities do not contain. This species has only been previously recorded as a dominant ironstone community species within the endangered Scott River ironstone communities some 100km south of the Busselton occurrences.

Also of interest is the potential of the broad seasonally wet vegetation communities indicated as 3, 4 and 6 below to contain significant range extensions of species previously only recorded in south coast areas. The potential for this is indicated by the presence of *Stylidium leeuwinense* in this location and the adjoining shire reserve seasonal wet area. This species has only previously been recorded along the south coast.

Brief vegetation community mapping of the location recognised the following eight broad vegetation complexes,

1. Community 1 along the location northern boundary is a sandy brown loam low plain of *Eucalyptus marginata*, *E. calophylla* forest, over *Mirbelia dilatata*, *Dasypogon hookeri*, *Xylomelum occidentale*, *Xanthorrhoea preissii*, *Acacia extensa*, *Persoonia longifolia*, *Hakea amplexicaulis* heath A, over *Grevillea trifida*, *Hibbertia hypericoides*, *Scaveola caliptera*, *Cyathochaete* sp., *Acacia pulchella* low heath D shrubs, over *Mesomelaena tetragona*, *Tetraria capillaris* sedges.  
A majority of this community is of excellent health with disturbances being restricted to adjoining the parkland clearing which has annual grasses and woody wattle weed invasion.
2. Community type 2 is a slightly raised grey sandy loam dune of *Eucalyptus marginata*, *E. calophylla*, *Allocasuarina fraseriana* forest, over *Agonis parviceps*, *Mirbelia dilatata*, *Pericalymma elliptica*, *Dasypogon hookeri*, *Xylomelum occidentale*, *Xanthorrhoea preissii* heath A, over *Stirlingia latifolia*, *Hibbertia hypericoides*, *Melaleuca thymoides*, *Dasypogon bromelifolius*, *Dryandra lindleyana* low heath D, over *Mesomelaena* spp., *Anarthria gracilis*, *Tricostularia* sp., *Hypolaena* sp. sedges. This community becomes an *Allocasuarina fraseriana* dominated forest over open dwarf scrub in the slightly higher areas of this vegetation type.  
This community is of pristine undisturbed vegetation health.
3. Community type 3 is a low seasonal wet orange-brown clay soils over very shallow ironstone sheet rock, dominated by *Melaleuca preissiana*, *Hakea oldfieldii*, *Viminaria juncea* low woodland B, over *Melaleuca incana*, *Astartea* aff. *fascicularis*, *Hakea varia*, *Pericalymma elliptica*, *Kunzea micrantha*, *Melaleuca pauciflora*, *Hemiandra pungens* heath A, over *Cautis dioica*, *Loxocarya magna*, *Lepidosperma* sp., *Tremulina tremula*, *Restionancaea* spp. sedges.  
The species and structure of this ironstone community varies with the depth of soil over rock, towards the edges of the shallow ironstone extent *Eucalyptus calophylla*, *Eucalyptus patens*, *Hakea sulcata*, *Allocasuarina thymoides* and *Calothamnus lateralis* become more common. It appears as though an area near the eastern fence of location 2561 and location 3955 may become a broad seasonally wet clay flat that would be dominated by spring annual species.  
This community is of excellent health with the only damage being caused by heavy kangaroo and rabbit stocking.

4. Community type 4 is the dominant of this location being a seasonally wet grey sand over ironstone sheet rock at varying depths, the dominant species of this community varies but is generally a mixture of scattered *Eucalyptus patens* and *E. calophylla* with *Melaleuca preissiana*, *Nuytsia floribunda*, *Hakea oldfieldii*, *Viminaria juncea* low forest B, over *Kunzea micrantha*, *Pericalymma elliptica*, *Astartea fascicularis*, *Agonis sp.*"course *Agonis*", *Beaufortia sparsa*, *Leucopogon australis*, *Hakea sulcata*, *Hakea varia*, *Dasypogon bromeliodes*, *Melaleuca incana* dense heath B, over numerous Restionaceae sedge species.  
This vegetation type is of pristine to excellent vegetation health, with the only disturbances caused by kangaroo tracks and edge invasion of annual grasses adjoining the parkland cleared area. A shallow drainage line has been cleared through a section of this community a number of years ago, which appears to be having no effect on the locations natural drainage patterns and is naturally regenerating.
5. Community 5 is a low grey sandy dune dominated by *Eucalyptus marginata*, *E. calophylla*, *Allocasuarina fraseriana*, *Banksia attenuata* forest, over *Melaleuca thymoides*, *Jacksonia sp.*, *Kunzea rostrata*, *Pultenaea reticulata*, *Podocarpus drouyiana*, *Dasypogon hookeri*, *D. bromelifolius*, *Adenanthos meisneri*, *Stirlingia latifolia*, *Xanthorrhoea spp.* Low heath C, over *Phlebocarya ciliata*, *Hypolaena exsulca*, *Patersonia occidentalis*, *Lomandra sonderi* sedges.  
This community is of pristine vegetation health.
6. Community 6 is an impenetrable seasonal creek system appearing to be dominated by *Melaleuca preissiana* with scattered *Eucalyptus patens* low forest B, over *Homalospermum firmum*, *Agonis linearifolia*, *Beaufortia sparsa*, *Agonis sp.*"course *Agonis*", *Kunzea rostrata*, *Pericalymma elliptica*, *Xanthorrhoea preissii*, *Dasypogon hookeri*, *Evandra aristata* dense thicket, over *Dasypogon bromelifolius*, *Baxteria australis*, *Johnsonia lupulina*, *Adenanthos obovatus*, *Xanthorrhoea brunonis*, *Juncus pallidus* dense low heath D.  
This creek system appears to be of pristine health.
7. Community 7 is a small lower slope with grey sand soils of *Eucalyptus patens*, *E. calophylla*, *Allocasuarina fraseriana* forest, over *Agonis parviceps*, *Acacia extensa*, *Xanthorrhoea preissii*, *Dasypogon hookeri*, *Melaleuca thymoides*, *M. scabra*, *Pultenaea reticulata*, *Hibbertia hypericoides* heath B, over *Phlebocarya ciliata*, *Conostylis aculeata*, *Hypolaena exsulca* open sedges.  
This community is of a good vegetation health ranking with heavy annual grass invasion and what appears to be a senescing undersory.
8. Community 8 is low plain community of brown sandy clay-loam soils of *Eucalyptus marginata*, *E. calophylla* dense forest, over *Agonis parviceps*, *Agonis linearifolia*, *Kunzea rostrata*, *Dasypogon hookeri*, *Mirbelia dilatata*, *Xanthorrhoea spp.*, *Macrozamia reidlei*, *Podocarpus drouyiana* scrub, over *Mesomelaena tetragona*, *Anarthria prolifera*, *Tetraria capillaris*, *T. octandra*, *Loxocarya cinerea*, *Baumea juncea*, *Agrostocrinum scabrum*, *Cyathochaete sp.*, *Desmocladius fascicularis* dense sedges.  
This community is of pristine vegetation health.

**As a conclusion, Location 2561 is of significant conservation value due to :-**

- its significant size (52.1 hectares) and excellent to pristine vegetation health of two Abba Plain vegetation complexes that are extensively cleared and not in current conservation reservation.
- such large occurrences of relatively unknown vegetation complexes have the potential for species range extensions, and potentially new species and threatened ecological communities to be found.

- the location contains a vegetation community over shallow ironstone soils, which is very reflective of the critically endangered community, 'Shrublands on southern Swan Coastal Plain Ironstones (Busselton area)'.  
The ironstone community within this location appears to be of conservation significance not only because of its ironstone vegetation community, size and health, but also because it has a dominant shrub species (*Melaleuca incana ssp. incana*) unlike any other Busselton ironstone community.
- Other than the above-mentioned ironstone TEC, the location has the potential to contain three other currently recognised Threatened Ecological Communities.
- From two brief summer vegetation surveys the location has been recognised to contain six Priority listed flora species; the potential for the location of other Priority and Declared Rare flora following extensive spring vegetation surveys is high.
- Acquisition of the location by the Department of Conservation and Land Management would ensure ongoing future conservation management of the significant values of the location, which would be of particular value in light of the current trend of intensive agricultural development in the area.

The Blackwood District hopes the Department will consider the merits for conservation of such an important area of remnant vegetation.

Regards,

Greg Mair  
District Manager  
CALM Blackwood

24<sup>th</sup> March 2003

Please find the following information attached

- Initial species list for location 2561 as gained from two brief site visits for the eight broad communities recognised.
- A copy of the reference tables used in the vegetation structure and condition analysis.
- A map of location 2561 indicating the sub-units recognised for the location by the Tilly and Lantzke Land Capability Assessment.
- Small-scale locational map of location 2561, copied from COG 2000/2001 data.
- Large-scale locational map indicating location 2561 regional position.
- An aerial photograph of location 2561 showing the eight broad communities recognised by location field visits.

Location 2561, Species per Community, recorded 12&19th March 2003

Species	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
Acacia baileyana	*							
Acacia decurrens	*							
Acacia divergens				*				*
Acacia extensa	*	*	*		*		*	
Acacia longifolia	*							
Acacia mooreana		*						
Acacia pulchella	*	*						
Acacia stenoptera				*				
Adenanthos barbigera		*						*
Adenanthos meisneri	*	*			*			
Adenanthos obovatus						*	*	
Agonis flexuosa	*							
Agonis linearifolia				*				*
Agonis parviceps		*				*	*	*
Agonis sp. "course Agonis"				*		*		
Agrostocrinum scabrum								*
Allocasuarina fraseriana	*	*			*		*	
Allocasuarina thymoides			*					
Amperea simulans				*				
Amphipogon laguroides ?				*				
Anarthria gracilis		*						
Anarthria prolifera				*				*
Andersonia caerulea						*		
Andersonia involucreta ?						*		
Andersonia sp.(small dense)				*				
Anigozanthus flavidus				*				
Aotus gracillima				*				
Astartea aff. fascicularis			*	*		*		
Astartea sp.2				*				
Astroloma ciliatum	*							
Austrodanthonia sp.(sterile)	*							
Baeckae sp.			*					
Banksia attenuata					*			
Banksia grandis		*			*			
Banksia littoralis				*				
Baumea juncea				*				*
Baxteria australis		*		*		*		
Beaufortia sparsa			*	*		*		
Boronia crenulata		*			*			*
Briza maxima	*							
Burchardia umbellata		*						
Calothamnus lateralis			*					
Cassytha glabella				*				
Cassytha racemosa			*					
Caustis dioica			*					
Centaurium erythraea	*							
Chamelaucium royci			*					
Chordifex amblycoleus ?				*				
Chorizema rhombeum		*						
Comespermum flexuosum			*					
Comespermum paniculatum				*				
Conospermum caeruleum				*				
Conostylis aculeata			*				*	
Cyathochaete avenacea				*				
Cyathochaete equitans	*	*						
Cyathochaete teretifolia/stipoides						*		*

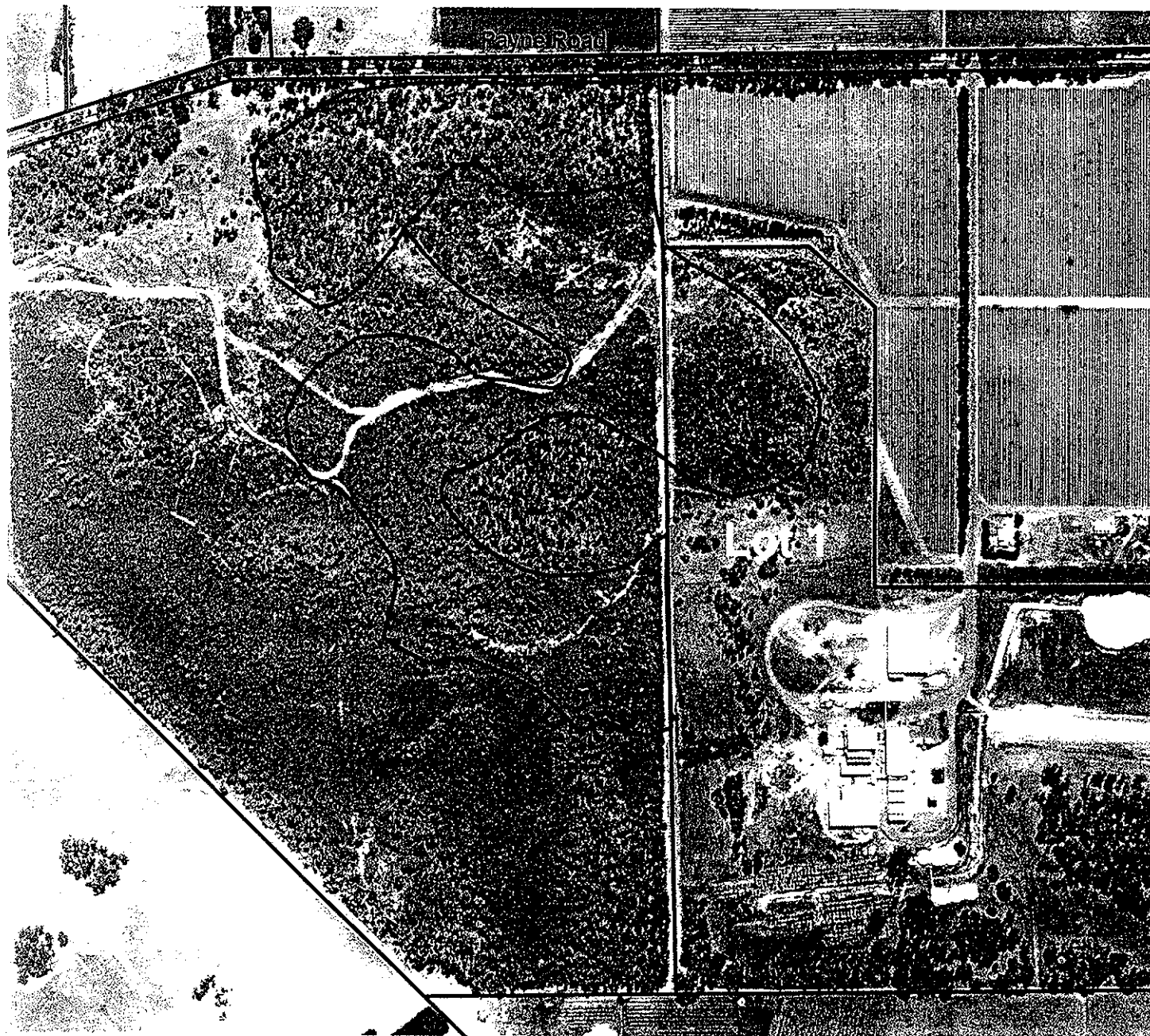
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 Maybe some dodgy  
 Restio idents in  
 this

Dampiera linearis	*						*
Dasypogon bromeliifolius		*		*	*		
Dasypogon hookeri	*	*		*	*	*	*
Daviesia incrassata		*					
Daviesia preissii			*				
Desmocladius fascicularis			*				*
Diaspasis filifolia				*			
Dryandra lindleyana		*					*
Eucalyptus calophylla	*	*	*		*	*	*
Eucalyptus marginata	*	*		*			*
Eucalyptus marginata X (mallee)			*				
Eucalyptus patens			*		*	*	
Eutaxia epacridoides ?			*				
Evandra aristata					*		
Freesia sp.	*						
Gompholobium capitatum		*					
Gompholobium confertum	*						
Gompholobium marginatum		*					
Gompholobium ovatum			*				
Gompholobium polymorphum	*						
Goodenia eatonia				*			
Goodenia filiformis ?			*				
Goodenia micrantha			*				
Goodeniaceae sp.(hairy, stem clasp lf)		*					
Grevillea manglesioides			*				
Grevillea trifida	*				*		
Haemodorum sp.				*			
Hakea amplexicaulis	*						
Hakea oldfieldii (P3)			*	*			
Hakea sulcata			*	*			
Hakea varia			*	*			
Hemiandra pungens (erect form)			*				
Hibbertia aurea			*				
Hibbertia cunninghamii				*			*
Hibbertia hypericoides	*	*			*	*	
Hibbertia quadricolor		*					
Hibbertia rhadinopoda			*				
Homalospermum firmum					*		
Hypocalymma robustum		*			*		
Hypocharis glabra					*		
Hypolaena exsulca		*			*	*	
Hypolaena sp.		*	*				
Isopogon formosus ssp. dasylepis			*				
Jacksonia sp.					*		
Johnsonia inconspicua					*		
Juncus pallidus					*		
Kennedia coccinea ?	*						
Kingia australis		*					
Kunzea micrantha	*		*	*			
Kunzea rostrata		*			*	*	*
Labichea punctata		*					
Lepidosperma sp.	*						
Lepidosperma sp.(ironstone)			*				
Lepidosperma squamata	*	*					
Leptocarpus sp.				*			
Leptomeria scrobiculata			*	*			
Lepyrodia macra			*				
Leucopogon australis	*			*			
Leucopogon verticellatus	*						

Lindsaea linearis		*						*
Logania serpyllifolia		*						
Lomandra pauciflora				*				
Lomandra sericea	*							*
Lomandra sonderi		*			*			
Loxocarya cinerea				*				*
Loxocarya magna (P3)			*					
Loxocarya sp.(large)	*							
Lyginea barbata				*	*			
Macrozamia reidlei								*
Marianthus tenius		*						
Meeboldina coangustata			*	*				
Meeboldina denmarkia				*				
Meeboldina sp.			*					
Melaleuca incana ssp. incana			*	*				
Melaleuca pauciflora/basiccephala			*					
Melaleuca preissiana			*	*		*		
Melaleuca scabra					*		*	
Melaleuca thymoides		*			*		*	
Melanostachya ustulata			*	*				
Mesomelaena gracilipies		*						
Mesomelaena tetragona	*	*	*					*
Mirbellia dilatata	*	*						*
Nuytsia floribunda	*	*	*	*				
Patersonia babianoides		*						
Patersonia occidentalis	*				*			
Patersonia pygmaea			*					
Patersonia umbrosa	*							*
Pennisetum clandestinum						*		
Pericalymma elliptica	*	*	*	*	*	*		
Persoonia elliptica		*						
Persoonia longifolia	*				*			
Petrophile squammata			*					
Phifotheca nodiflorus				*				
Phlebocarya ciliata					*		*	
Pimelea sp.	*							
Podocarpous drouyiana		*			*			*
Podolepis sp.				*				
Pteridium esculentum				*		*		*
Pultenaea pinifolia								*
Pultenaea reticulata					*		*	
Restionaceae spp.			*	*				
Restionaceae sp.(low single head)			*	*				
Scaveola calliptera	*							
Siloxerus humifusus			*					
Sphenotoma sp.				*				
Stirlingia latifolia		*			*			
Stylidium amoenum ?			*					
Stylidium leeuwinense				*				
Stylidium megacarpum		*	*					
Synaphea petiolaris		*	*					
Tetraria capillaris	*							*
Tetraria octandra								*
Thomasia sp.(pauciflora like)				*				
Thysanotus triandrus						*		*
Tremulina tremula			*					
Tricostularia sp. ?		*	*	*				
Tripterococcus brunonis	*							
Velleia trinervis		*						

Viminaria juncea  
 Xanthorrhoea aff. gracilis (almost grassy leaves)  
 Xanthorrhoea brunonis  
 Xanthorrhoea gracilis  
 Xanthorrhoea preissii  
 Xylomelum occidentale  
 Xyris lanata

		*	*				
*							
	*	*		*	*	*	*
*							
*	*	*		*	*	*	*
*	*			*			
			*				



Occurrence of the Threatened  
Ecological Community -  
'Shrublands on southern Swan  
Coastal Plain Ironstones'  
at Lot 1 Payne Road

- Approximate location of community
- Property boundary



1: 6 000  
1cm represents 60m

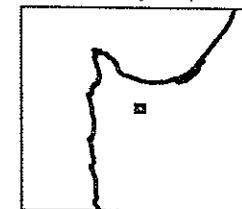
Projection: Universal Transverse Mercator,  
MGA Zone 50, Datum: GDA94

GDA

0 0.2 Kilometres



Locality Map



Produced by Mia Morley  
Under the Direction of  
Keiran McNamara Executive Director  
Department of Conservation & Land Management

The Dept. of Conservation and Land Management does not guarantee the accuracy of this map and disclaims all liability for any errors, loss or other consequences that arise from relying on any information depicted.

Job Ref. 0205, Produced at 10:54 on February 22, 2005

## Description of Threatened Ecological Community

### Shrublands on southern Swan Coastal Plain Ironstones

#### Current Category: Critically Endangered

This species-rich plant community is located on seasonal wetlands on ironstone and heavy clay soils on the Swan Coastal Plain near Busselton. Much of the species diversity comes from annuals and geophytes. Typical and common native species are the shrubs *Kunzea* aff. *micrantha* (B.J.Keighery and N.Gibson 040), *Pericalymma ellipticum*, *Hakea* sp. Williamson (B.J.Keighery and N.Gibson 226), *Hemiandra pungens* and *Viminaria juncea*, and the herbs *Aphelia cyperoides* and *Centrolepis aristata*. Many taxa in the community are highly restricted in distribution, dieback susceptible and/or are obligate seeders.

Taken from: Draft Interim Recovery Plan 2002 by Val English.