



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1531/1

Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Shire of Serpentine - Jarrahdale

### 1.3. Property details

Property: LOT 164 ON PLAN 202726 (House No. 286 YANGEDI HOPELAND 6125)

Local Government Area: Shire Of Serpentine-Jarrahdale

Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.5		Mechanical Removal	Building or Structure

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Hedde Vegetation Complexes: Southern River Complex - Open woodland of <i>C. calophylla</i> - <i>E. marginata</i> - <i>Banksia</i> species with fringing woodland of <i>E. rudis</i> - <i>M. raphiophylla</i> along creek beds.	The proposal includes the clearing of 0.5 hectares of native vegetation for the purpose of constructing buildings associated with the expansion of the aero club.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation clearing description based on a site visit conducted by DEC officers on 18 January 2006 and on 14 December 2006.
Bassendean Complex Central & South - Vegetation ranges from woodland of <i>E. marginata</i> - <i>C. fraseriana</i> - <i>Banksia</i> spp. To low woodland of <i>Melaleuca</i> species, and sedgelands on the moister sites.	The vegetation under application comprises a mixed woodland of <i>Banksia attenuata</i> , <i>B. illicifolia</i> , <i>B. menziesii</i> and <i>Allocasuarina fraseriana</i> over an understorey comprising <i>Xanthorrhoea preissii</i> , <i>Jacksonia</i> spp. and <i>Dasyogon bromeliifolius</i> . The area under application has a high level of weed invasion. The vegetation under application ranges in condition from completely degraded to good, with an overall condition of good.		
Beard Vegetation Association 1000: Mosaic: Medium forest; jarrah-marri/Low woodland; banksia/low forest; tea-tree ( <i>Melaleuca</i> spp.)			

## 3. Assessment of application against clearing principles

### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

**Comments**

**Proposal is not likely to be at variance to this Principle**

The vegetation under application is limited to 0.5 hectares contained within a thin, linear area and is not considered likely to include rare flora or comprise significant habitat for fauna.

Given the limited area, and the thin, linear nature of the applied area, it is not considered likely that the vegetation under application comprises a high level of biodiversity.

**Methodology** DEC site visit 14/12/06

**(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.**

**Comments Proposal is not likely to be at variance to this Principle**

Within a 10km radius of the area under application there are 12 recorded occurrences of the following significant fauna that have the potential to utilise the vegetation under application for habitat:

- Quenda *Isoodon obesulus fusciventer*
- Chuditch *Dasyurus geoffroii*
- Baudin's Black Cockatoo *Calyptorhynchus baudinii*
- Peregrine Falcon *Falco peregrinus*.

The vegetation under application includes some understorey that may provide some habitat for the Quenda, and includes *Banksia* species that may provide some foraging habitat for Black Cockatoos.

Although the vegetation under application may provide some habitat for fauna in the local area, the vegetation is limited to 0.5 hectares contained within a thin, linear area with limited connectivity to larger vegetated remnants. It is therefore not considered likely that the vegetation under application comprises significant habitat for indigenous fauna.

**Methodology** DEC site visit 14/12/06  
GIS Database: SAC Biodatasets accessed 11/10/07

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments Proposal is not likely to be at variance to this Principle**

Within the local area (5km radius) there is one known population of the Declared Rare Flora (DRF) *Drakaea elastica*, and 10 known populations of the Priority flora *Dillwynia dillwynioides* (P3), *Stylidium longitubum* (P3), *Schoenus capillifolius* (P2), and *Acacia lasiocarpa* var. *braceolata* (P1) with the closest located approximately 3.7km to the west of the applied area.

These species are generally associated with seasonal wetlands, claypans and winter-wet depressions (Western Australian Herbarium 1998). The vegetation under application comprises *Banksia* woodland and DEC Wetlands Program (2007) advised that the area under application previously mapped as a Resource Enhancement Wetland does not retain wetland functions or attributes and will therefore be classified as 'no longer a wetland'.

Given that the rare and priority flora in the local area are generally found in wetland habitats, and that the area under application is no longer classified as a wetland, it is therefore not considered likely that the vegetation under application includes, or is necessary for the continued existence of, rare flora.

**Methodology** DEC (2007)  
DEC site visit 14/12/06  
Western Australian Herbarium (1998)  
GIS Database:  
SAC Bio datasets accessed 21/08/07

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.**

**Comments Proposal is not likely to be at variance to this Principle**

Within a 10km radius of the area under application there are five known occurrences of the following Threatened Ecological Communities (TEC):

- SCP 15 (Forests and woodlands of deep seasonal wetlands of the Swan Coastal Plain) located approximately 5.4km to the southeast;
- SCP3a (*Eucalyptus calophylla* - *Kingia australis* woodlands on heavy clay soils),
- SCP10a (Shrublands on dry clay flats) and
- SCP7 (Herb rich saline shrublands in clay pans) all located approximately 7.5km to the northeast.

The vegetation under application is limited to 0.5 hectares located in a thin strip and comprises *Banksia/Allocasuarina* woodland. Given this, and the distance to the nearest known TEC, it is not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

**Methodology** DEC site visit 14/12/06  
GIS Database:  
SAC Bio datasets accessed 21/08/07



**(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.**

**Comments Proposal may be at variance to this Principle**

Vegetation within the north-eastern portion of the area under application is identified by Heddle et al. (1980) as 'Southern River complex' of which there is 19.8% of pre-European vegetation remaining, and which is considered to be of 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

Vegetation within the south-western portion of the area under application is identified by Heddle et al. (1980) as 'Bassendean complex - central and south' of which there is 27.0% of pre-European vegetation remaining, and which is considered to be of 'vulnerable' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The vegetation under application has also been identified as Beard association 1000, of which there is 25.7% of pre-European extent remaining (Shepherd 2006).

Although the area under application is limited to 0.5 hectares, it contains vegetation in good condition, and that is representative of a complex with less than the minimum of 30% of pre-European extent remaining as recommended in the National Objectives Targets for Biodiversity Conservation (Department of Natural Resources and Environment 2002; EPA 2000). In addition the vegetation under application is located in an area that has been historically extensively cleared for agriculture. It is therefore considered that the vegetation under application may be significant as a remnant in an area that has been extensively cleared.

Pre-European (ha)	Current (ha)	Remaining	%Conservation status***	% in reserves
Swan Coastal Plain	1,501,456	571,758	38.1**** Depleted	
Shire of Serpentine Jarrahdale		90,478	53,058 58.6*	Least concern
Local area (~10km radius)	31,400	9,800	~31 Depleted	
Heddle vegetation complex				
Southern River Complex	57,979	11,501	19.8** Vulnerable	1.5
Bassendean Complex - Central & South	87,477	23,624	27.0** Vulnerable	
	0.7			
Beard vegetation associations 1000				
	99,841	25,683	25.7**** Vulnerable	

\* (Shepherd et al. 2001)

\*\* (EPA, 2006)

\*\*\* (Department of Natural Resources and Environment 2002)

\*\*\*\* (Shepherd 2006)

**Methodology** DEC Site visit 14/12/06  
 Department of Natural Resources and Environment (2002)  
 EPA (2000)  
 Shepherd et al. (2001)  
 GIS Databases:  
 Heddle Vegetation Complexes - DEP 21/06/95  
 Pre-European Vegetation - DA 01/01

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments Proposal is not likely to be at variance to this Principle**

A portion of the applied area is contained within a mapped Resource Enhancement Category wetland. Following a wetland reclassification DEC Wetlands Program (2007) advised that the wetland within the area under application does not retain wetland functions or attributes and will therefore be classified as 'no longer a wetland'. In addition, the vegetation under application comprises Banksia/Allocasuarina woodland, which is not generally associated with wetland environments.

Given that the mapped wetland within the area under application has been reclassified as no longer a wetland, and that no wetland dependent vegetation was observed during the site visit, the proposed clearing is not considered likely to be at variance to this Principle.

**Methodology** DEC (2007)  
 DEC site visit 14/12/06  
 GIS Database:  
 Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Comments Proposal is not likely to be at variance to this Principle**

Soils within the area under application are part of the Bassendean B1 phase and comprise deep bleached grey sands sometimes with a pale yellow B horizon. These soils have a moderate to low risk of acid sulphate soils, a very high wind erosion risk, a high phosphorus export risk, and occasionally a moderate to high risk of water logging (State of Western Australia 2005).

The proposed clearing does not involve deep excavation and therefore is not considered likely to cause acid sulphate soils. In addition, given that the proposed clearing is limited to 0.5 hectares, it is not considered likely that it would cause an increase in salinity, phosphorus export or waterlogging.

Given the above, it is not considered likely that the proposed clearing would cause appreciable land degradation.

**Methodology** DEC site visit 14/12/06  
State of Western Australia (2005)

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

**Comments Proposal may be at variance to this Principle**

Approximately 70% of the applied area is located within Bush Forever Site 378 and the proposal includes the removal of 0.5 hectares of vegetation that ranges in condition from good to completely degraded and is isolated from the main vegetation remnant. The Bush Forever office (2005) advised that 'due to the disturbed nature of the bushland, impact will be minimal'.

The proposed clearing has the potential to indirectly impact on the environmental values of the Bush Forever site through the spread or introduction of dieback or weed species by machinery or the importation of fill required for road construction. There are serious consequences associated with the spread of such diseases and exotic species into an area reserved for conservation, including the potential local extinction of species.

Given that the vegetation under application ranges in condition from good to completely degraded, and is isolated from the main vegetation remnant, it is not considered likely that the proposed clearing would have a direct impact on the environmental values of Bush Forever site 378. It is considered however that the proposed clearing may indirectly impact the Bush Forever site through introduction of weeds or dieback.

If granted the permit will include conditions requiring weed and dieback prevention to minimise the risk of introducing weeds or dieback into the Bush Forever site.

**Methodology** DEC site visit 14/12/06  
GIS Database:  
Bushforever - MFP 07/01

**(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.**

**Comments Proposal is not likely to be at variance to this Principle**

The area under application is located approximately 180m northwest of a multiple use wetland and approximately 1.8km to the northwest of Karnet Brook.

The soils mapped within the area under application comprise extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands, which have a moderate to low risk of acid sulphate soils and a high phosphorus export risk (State of Western Australia 2005).

Given that proposed clearing is limited to one tree and 0.5 hectares of vegetation in degraded condition, it is not considered likely that it would result in salinity or acid sulphate soils causing a deterioration in groundwater quality.

In addition, given the high infiltration rates of the soils, and the low relief on site, it is not considered likely that the proposed clearing would result in a deterioration in surface water quality.

**Methodology** State of Western Australia (2005)  
GIS Database:  
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC  
Hydrography, linear (hierarchy) - DOW



**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Comments Proposal is not likely to be at variance to this Principle**

The area under application is located at an elevation of 15m, approximately 90m to the southwest of a multiple use wetland and is associated with well-drained sandy soils (State of Western Australia 2005).

Given the high infiltration rates of the soils on site, and given that the area under application is limited to 0.5 hectares of vegetation, it is not considered likely that the proposed clearing would cause or exacerbate the incidence of flooding.

**Methodology** DEC site visit 14/12/06  
State of Western Australia (2005)  
GIS Databases:  
Topographic Contours, Statewide - DOLA 12/09/02

**Planning instrument, Native Title, Previous EPA decision or other matter.**

**Comments**

The area under application is Crown Reserve that is vested in the Shire of Serpentine Jarrahdale for 'recreation' and is leased by the Sport Aircraft Builders Club. Comments were received from the South West Aboriginal Land and Sea Council with concern that Aboriginal heritage issues may not have been addressed and that a heritage survey should be conducted for their consideration. The Council also advise that Native Title Parties may request that Aboriginal monitors be present during the clearing process. Advice has been provided to the proponent in this regard.

A planning application for clearing has been approved by the Shire following referral to DEC and Bush Forever. Bush Forever did request further documentation prior and a management plan for the remainder of the Bush Forever site.

In correspondence to the Shire of Serpentine Jarrahdale dated 25 November 2005, the Bush Forever Office considered that the impact of the proposal would be minimal due to the disturbed nature of the bushland. The Bush Forever office advised that in 2004 they advised the proponent that for any additional clearing of vegetation with the Bush Forever site they must show they have taken steps to minimise adverse impacts to the bushland. Bush Forever advise that discussions regarding management of the site have been ongoing for a number of years and recommended in the correspondence that the aero club liaise with Bush Forever and the Shire of Serpentine Jarrahdale regarding the development of an environmental master plan and management plan, including vegetation assessment, highlighting areas for protection, management practices and the need for future expansion of the airfield. In this correspondence the Bush Forever Office did not object in-principle to the proposal but did not support the application until such time as the above were considered and an Environmental Management Plan developed.

In a submission to the DEC on 20 October 2006 the Bush Forever Office referred to the previous correspondence with the Shire of Serpentine Jarrahdale and recommended that the applicant should be required to undertake a flora survey, provide information on steps taken to minimise and avoid impact on vegetation, and prepare an Environmental Management Plan.

Submission received advising that the bushland on Lot 164 has been gradually cleared over a number of years and any further clearing that is allowed should be with strict conditions including a flora and fauna study, a management plan including dieback and weed management and fencing of remaining vegetation.

Submission received recommending that clearing should only be permitted conditions relating to fencing, a flora and fauna survey, dieback survey, weed management and a bushland management plan.

Submission received objecting to the further clearing of native vegetation on Lot 164 on the grounds that the bushland is part of a Bush Forever site and is regionally significant; granting a clearing permit will encourage the club to expand; and further expansion of the current use will lead to an acceleration of damage to the bushland.

The issues raised by the submissions received were considered during the assessment of this proposal and have been addressed within the clearing principles. If the permit is granted it will include conditions requiring weed and dieback prevention.

**Methodology** Shire of Serpentine Jarrahdale submission  
Bush Forever submission  
GIS Database: Native Title Claims - DLI

**4. Assessor's comments**

**Comment**

The assessable criteria have been addressed and the proposed clearing may be at variance to Principles e and h.

## 5. References

- DEC Wetlands Program advice for land clearing application. Advice to Assessing officer, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC35600.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- EPA (2006) Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the Environmental Protection Act 1986. No 10 WA.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd (2006) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Site Visit 14/12/06, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC32369.
- State of Western Australia (2005) Agmaps Land Manager CD Rom.
- Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.calm.wa.gov.au/> Accessed on Tuesday, 21 August 2007.

## 6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)