



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1629/1  
 Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Shire of Kalamunda

### 1.3. Property details

Property: LOT 3894 ON PLAN 218532 FORRESTFIELD 6058  
 Local Government Area: Shire Of Kalamunda  
 Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
	2	Cutting	Recreation

## 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
Beard Vegetation Association 1001: Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina. (Shepherd et al 2001, Hopkins et al 2001)	The areas under application (two trees) are located within Lot 3894 or Crown Reserve 17098, a 135ha property (Hartfield Park Reserve). This reserve is zoned Parks and Recreation (under the Metropolitan Regional Scheme), and is a designated Bush Forever Site (Hartfield Park Bushland, 73.6ha). The property is adjacent to road reserves (Hale Road, Hartfield Road, Tonkin Highway and Welshpool Road), and situated within a predominantly urban landscape.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	The condition of the vegetation to be cleared of completely degraded was obtained from the Site Inspection (2006).
Hedde Vegetation Complex: Southern River Complex: Open woodland of E. calophylla - E. marginata - Banksia species with fringing woodland of E. rudis - M. raphiophylla along creek beds. (Hedde et al. 1980)	The area under application consists of two trees, one mature banksia (Banksia menziesii) and one mature jarrah (Eucalyptus marginata) (Site Inspection 2006).		The two trees were mature and considered to be healthy, however the area immediately surrounding the trees is parkland cleared with the understorey observed to consist of weeds (veldt grass and wild oats), leading to its condition rating of completely degraded (Site Inspection 2006).

## 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**  
 A site inspection (2006) of the applied areas identified the vegetation under application to be in a completely degraded condition, comprising of two trees, being one banksia (Banksia menziesii) and one jarrah (Eucalyptus marginata). The immediate area is parkland cleared (devoid of native understorey) with weeds (veldt grass and wild oats) (Site Inspection 2006).

Given the proposed clearing consists of two trees, with the immediate area comprising a limited diversity of species, it is considered unlikely the vegetation under application comprises a high level of biological diversity.

**Methodology** Site Inspection (2006) (TRIM Ref ED1430)  
 GIS Databases:  
 - Swan Coastal Plain North 40cm Orthomosaic - DLI 05

**(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**

The areas applied to be cleared are considered to be in a completely degraded condition, comprising of two trees, *Banksia menziesii* and *Eucalyptus marginata* in an area which has been parkland cleared (devoid of native understorey), and now subject to weed invasion (veldt grass and wild oats) (Site Inspection 2006).

Given the small areas under application, the degraded condition of the vegetation and the sparseness of the understorey, it is unlikely that the vegetation within the area under application comprises significant habitat for fauna indigenous to Western Australia.

**Methodology** Site Inspection (2006) (TRIM Ref ED1430)  
GIS Databases:  
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05

**(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**

There are four known records of Declared Rare Flora *Conospermum undulatum* and one known record of Priority 3 Flora *Isopogon drummondii* recorded within 1km of the areas proposed to be cleared. The vegetation under application consists of one mature *Banksia menziesii* and one mature *Eucalyptus marginata*, with the immediate area being parkland cleared (devoid of native understorey) with weeds (veldt grass and wild oats) (Site Inspection 2006).

Given that *Conospermum undulatum* and *Isopogon drummondii* are both understorey species (FloraBase 2006), it is considered unlikely that the vegetation proposed to be cleared includes or is necessary for the continued existence of rare flora.

**Methodology** FloraBase (2006)  
Site Inspection (2006) (TRIM Ref ED1430)  
GIS DataBase,  
- Declared Rare and Priority Flora List - CALM 01/04/05

**(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**

There are two known occurrences of Threatened Ecological Communities (TECs) in close proximity (within 1km) to the areas under application, 960m and 980m south-east of the areas under application.

Given the vegetation under application comprises two trees and the immediate area is parkland cleared and considered to be in a completely degraded condition (Site Inspection 2006), it is considered unlikely that the vegetation proposed to be cleared comprises the whole or part of or is necessary for the maintenance of such a TEC.

**Methodology** Site Inspection (2006) (TRIM Ref ED1430)  
GIS Database:  
- Threatened Ecological Communities, CALM 12/04/05

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

Vegetation within the area under application is identified as a component of both Beard Vegetation Association (1001) and Heddle Vegetation Complex (Southern River Complex), of which there is 27.6% and 19.8% respectively.

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents the clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Department of Natural Resources and Environment 2002). The Vegetation Complexes in the areas under application are below the recommended minimum of 30% representation.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	Conservation** status	In reserves/CALM managed land
IBRA Bioregion - Swan Coastal Plain*	1,529,235	657,450	43.0	Depleted	
Shire of Kalamunda	No information available				

Vegetation type:						
Beard: Unit 1001*	68,475	18,907	27.6	Vulnerable		4.2%
Hedde:						
Southern River Complex***	57,979	11,501	19.8	Vulnerable		1.5%

\* (Shepherd et al. 2001)

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

\*\*\* (EPA 2003)

While the representation figures are below the recommended 30% target, the small amount of clearing (two trees) is not likely to compromise these vegetation complexes.

To ensure no net loss of vegetation a condition will be imposed on the clearing permit requesting the planting of ten *Banksia menziesii* and ten *Eucalyptus marginata* tube stock within adjacent remnant vegetation.

Further, it is noted the recommended JANIS Forests Criteria (1997) of 15% representation in secure tenure for the Beard Unit 1001 and Hedde Southern River Complex have not been met.

**Methodology** Department of Natural Resources and Environment (2002)  
EPA (2003)  
Shepherd et al. (2001)  
Hedde et al. (1980)  
GIS Databases:  
- Pre-European Vegetation - DA 01/01  
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

**(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 at variance to this Principle**  
There are two Resource Enhancement Wetlands, 300m south and 340m west of the areas under application and one Conservation Category Wetland (also mapped as a EPP wetland) 460m south south-west of the areas under application.

The areas applied to be cleared comprise of one *Banksia menziesii* and one *Eucalyptus marginata* (Site Inspection 2006). There were no wetland dependent species observed in close proximity to the two trees applied to be cleared (Site Inspection 2006).

Given the vegetation under application is not considered to be wetland dependent and does not occur within the buffer of the nearby wetlands, the clearing as proposed is not at variance to this Principle.

**Methodology** Site Inspection (2006) (TRIM Ref ED1430)  
GIS Databases:  
- EPP, Wetlands (draft) - DEP 21/07/04  
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DoE 21/10/04

**(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**  
The Acid Sulphate Soil (ASS) risk mapping indicates the area under application as having a Class 3 risk. This classification is defined as having no known risk of ASS or potential ASS, for depths less than 3 metres from the surface.

The landform of the area under application and its surrounds can be described as sandy dunes with intervening sandy and clayey swamp flats. The chief soils are leached sands, sometimes with a clay D horizon below 5 ft, on the dunes and sandy swamps (DAWA 2004).

Given the small areas (two trees) to be cleared, the clearing as proposed is not likely to cause appreciable land degradation.

**Methodology** DAWA (2004)  
GIS Databases:  
- Acid Sulphate Soil risk map, SCP DOE 01/02/04  
- Soils, Statewide - DA 11/99

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

There are four conservation reserves within 5km of the area under application including an un-named Nature Reserve approximately 1.8km north north-west, an un-named Nature Reserve approximately 3.7km east north-east, Lesmurdie Falls National Park approximately 3.0km east and Pickering Brook National Park 3.4km south-east of the areas under application. Further the areas under application are mapped within Bush forever site 320 (Hartfield Park Bushland).

Given the small size of the areas applied to be cleared and the sparseness of the understorey, the clearing as proposed is unlikely to impact on the environmental values of any adjacent or nearby conservation areas.

To ensure no net loss of vegetation a condition will be imposed on the clearing permit providing for the planting of ten *Banksia menziesii* and ten *Eucalyptus marginata* tube stock within adjacent remnant vegetation.

**Methodology** GIS Databases:  
- Bushforever - MSP 07/01  
- CALM Managed Lands and Waters, CALM 1/07/05

**(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 at variance to this Principle**

Several wetlands occur within close proximity of the areas under application, including wetlands under the Swan Coastal Plain Lakes EPP. It is considered unlikely that the clearing as proposed would have an impact on these wetlands, as the scale of the clearing is relatively small.

Given the vegetation under application comprises of two trees it is considered unlikely that the clearing of the vegetation under application will cause deterioration in the quality of surface or ground water.

**Methodology** GIS Databases:  
- EPP, Wetlands (draft) - DEP 21/07/04  
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DoE 21/10/04

**(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 at variance to this Principle**

Given that the vegetation under application comprises two trees and the immediate area is devoid of native understorey vegetation, it is considered unlikely that the proposed clearing would have an impact on peak flood height or duration. Therefore proposed clearing is considered to be not at variance to this principle.

**Methodology** GIS Databases:  
- Cadastre - DLI 1/12/05  
- Hydrography, linear - DOE 01/02/04

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

**Comments**

Bush Forever (2006, TRIM Ref ED1463) advised that Lot 3894 Hale Road Forrestfield, forms part of Bush Forever Site 320 (Hartfield Park Bushland). The vegetation on lot 3894 is identified as Southern River vegetation complex, which is inadequately represented for conservation on the Swan Coastal Plain (SCP). As the proposed clearing is to remove two native trees, the Bush Forever Office recommends that four native trees be planted as an offset.

The vegetation proposed to be cleared is located within a Bush Forever site, and therefore it is recommended that the proponent undertakes revegetation to mitigate the impacts of the clearing. The Environmental Protection Authority (2006) recommends that environmental offsets be like for like or better. Given, that the two native trees to be cleared are mature the use of a 10:1 offset to clearing ratio is recommended.

The areas under application are within the Proclaimed Groundwater Area of Perth. Therefore any abstraction of groundwater would require a licence. However, this application for recreation is not associated with ground water extraction.

There is no other RIWI Act Licence, Works Approval or EPA Act Licence that affects the area under application.

There is one Aboriginal Site of Significance listed within the areas under application, the applicant will be advised of their obligations under the Aboriginal Heritage Act 1972.

**Methodology** EPA (2006)

GIS databases:

- Aboriginal Sites of Significance - DIA 28/02/03
- Bushforever - MSP 07/01
- Cadastre - DLI 1/12/05
- Native Title Claims - DLI 7/11/05
- RIWI Act, Groundwater Areas - WRC 13/06/00
- RIWI Act, Surface Water Areas - WRC 18/10/02

#### 4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Recreation	Cutting	2	<p>The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986.</p> <p>Following the assessment, the assessing officer deems that the clearing as proposed is not likely to be at variance to any of the clearing principles.</p> <p>In addition, the vegetation proposed to be cleared is located within a Bush Forever site, and therefore it is recommended that the proponent undertakes revegetation to mitigate the impacts of the clearing. The Environmental Protection Authority (2006) recommends that environmental offsets be like for like or better. Given, that the two native trees to be cleared are mature the use of a 10:1 offset to clearing ratio is recommended.</p> <p>Therefore the assessing officer recommends that a clearing permit be granted on the condition that ten <i>Banksia menziesii</i> and ten <i>Eucalyptus marginata</i> be planted within nearby remnant vegetation.</p>

#### 5. References

- DAWA (2004) Soil-landscape mapping, Department of Agriculture Western Australia, Date accessed 01/05/04.
- 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 (2003) 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.
- EPA (2006) Environmental Offsets. Position Statement No.9. Environmental Protection Authority, Western Australia.
- FloraBase (2006) Descriptions by the Western Australian Herbarium, Department of Environment and Conservation. Text used with permission (<http://florabase.calm.wa.gov.au/help/copyright>). Accessed on Friday, 5 January 2007.
- 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.
- Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
- JANIS Forests Criteria (1997) Nationally agreed criteria for the establishment of a comprehensive, Adequate and Representative reserve System for Forests in Australia. A report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee. Regional Forests Agreement process. Commonwealth of Australia, Canberra.
- 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, 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 Inspection (2006) Site Inspection Report, Department of Environment and Conservation (DEC), Western Australia. TRIM Ref ED1430

#### 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)