



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

### PERMIT DETAILS

Area Permit Number: 3180/1

File Number: DEC11694

Duration of Permit: From 20 September 2009 to 20 September 2011

### PERMIT HOLDER

Shire of Dandaragan

### LAND ON WHICH CLEARING IS TO BE DONE

Dambadjie Road Reserve, PIN 11434043 (YATHROO 6507)

### AUTHORISED ACTIVITY

Clearing of up to 0.32 hectares of native vegetation within the area hatched yellow on attached Plan 3180/1.

### CONDITIONS

#### 1. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) shall not move soils in wet conditions;
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

#### 2. Flora management

- (a) Prior to undertaking any clearing authorised under this Permit, the site shall be inspected by a *flora specialist* for the presence of rare flora listed in the *Wildlife Conservation (Rare Flora) Notice 2(2008)* and *priority flora taxa*.
- (b) Where rare flora or *priority flora taxa* are identified in relation to condition 2(a) of this Permit, the Permit Holder shall ensure that:
  - (i) all records of rare flora are submitted to the CEO;
  - (ii) no clearing occurs within 50 metres of identified rare flora, unless approved by the CEO; and
  - (iii) no clearing occurs within 10 metres of identified *priority flora taxa*, unless approved by the CEO.

#### 3. Offsets

Where the clearing of 0.32 ha of native vegetation authorised under this Permit will impact on Beard Vegetation Association 999 being "*Medium woodland; Marri*", then the Permit Holder must implement an *offset* in accordance with conditions 3(a) and 3(b) of this Permit with respect to clearing.

- (a) Determination of *offsets*:
  - (i) in determining the *offset* to be implemented with respect to a particular area of native vegetation proposed to be cleared under this Permit, the Permit Holder must have regard to the *offset* principles contained in condition 3(b) of this Permit;

- (ii) once the Permit Holder has developed an *offset proposal*, the Permit Holder must provide that *offset proposal* to the CEO for the CEO's approval prior to undertaking any clearing to which the *offset* relates, and prior to implementing the *offset*;
  - (iii) clearing shall not commence until and unless the CEO has approved the *offset proposal* to which the clearing relates;
  - (iv) the Permit Holder shall implement the *offset proposal* approved under condition 3(a)(iii); and
  - (v) each *offset proposal* shall include a *direct offset*, timing for implementation of the *offset proposal* and may additionally include *contributing offsets*.
- (b) For the purpose of this condition, the *offset* principles are as follows:
- (i) *direct offsets* should directly counterbalance the loss of the native vegetation;
  - (ii) *contributing offsets* should complement and enhance the *direct offset*;
  - (iii) *offsets* are implemented only once all avenues to avoid, minimise, rectify or reduce environmental impacts have been exhausted;
  - (iv) the environmental values, habitat, species, *ecological community*, physical area, ecosystem, landscape, and hydrology of the *offset* should be the same as, or better than, that of the area of native vegetation being *offset*;
  - (v) a ratio greater than 1:1 should be applied to the size of the area of native vegetation that is *offset* to compensate for the risk that the *offset* may fail;
  - (vi) *offsets* must entail a robust and consistent assessment process;
  - (vii) in determining an appropriate *offset*, consideration should be given to ecosystem function, rarity and type of *ecological community*, *vegetation condition*, habitat quality and area of native vegetation cleared;
  - (viii) the *offset* should either result in no net loss of native vegetation, or lead to a net gain in native vegetation and improve the *condition* of the natural environment;
  - (ix) *offsets* must satisfy all statutory requirements;
  - (x) *offsets* must be clearly defined, documented and audited;
  - (xi) *offsets* must ensure a long-term (10-30 year) benefit; and
  - (vi) an environmental specialist must be involved in the design, assessment and monitoring of *offsets*.

#### 4. Records must be kept

The Permit Holder must maintain the following records for activities done in relation to the clearing of native vegetation authorised under this Permit:

- (a) In relation to flora management pursuant to condition 2 of this Permit:
  - (i) the location of each rare flora and *priority flora taxa* recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; and
  - (ii) the species name of each rare flora or *priority flora taxa* identified.
- (b) In relation to the *offset* of areas pursuant to condition 3:
  - (i) the location of any area of *offsets* recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  - (ii) a description of the *offset* activities undertaken; and
  - (iii) the size of the *offset* area (in hectares).

#### 5. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 4 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 20 June 2011, the permit holder must provide to the CEO a written report of records required under condition 4 of this Permit where these records have not already been provided under condition 5 (a) of this Permit.

## Definitions

The following meanings are given to terms used in this Permit:

**condition** means the rating given to native vegetation using the *Keighery scale* and refers to the degree of change in the structure, density and species present in the particular vegetation in comparison to undisturbed vegetation of the same type;

**contributing offset/s** has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9: Environmental Offsets*, January 2006;

**direct offset/s** has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9: Environmental Offsets*, January 2006;

**ecological community/ies** means a naturally occurring biological assemblage that occurs in a particular type of habitat (English and Blythe, 1997; 1999);

**environmental specialist** means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

**fill** means material used to increase the ground level, or fill a hollow;

**flora specialist** means a person with specific training and/or experience in the ecology and taxonomy of Western Australian flora;


**mulch** means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

**offset/s** means an offset required to be implemented under condition 4 of this Permit;

**offset proposal** means an *offset* determined by the Permit Holder in accordance with condition 4 of this Permit;

**priority flora taxa** means those plant taxa that described as priority flora classes 1, 2, 3 or 4 in the Department's *Declared Rare and Priority Flora List for Western Australia* (as amended);

**weed/s** means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

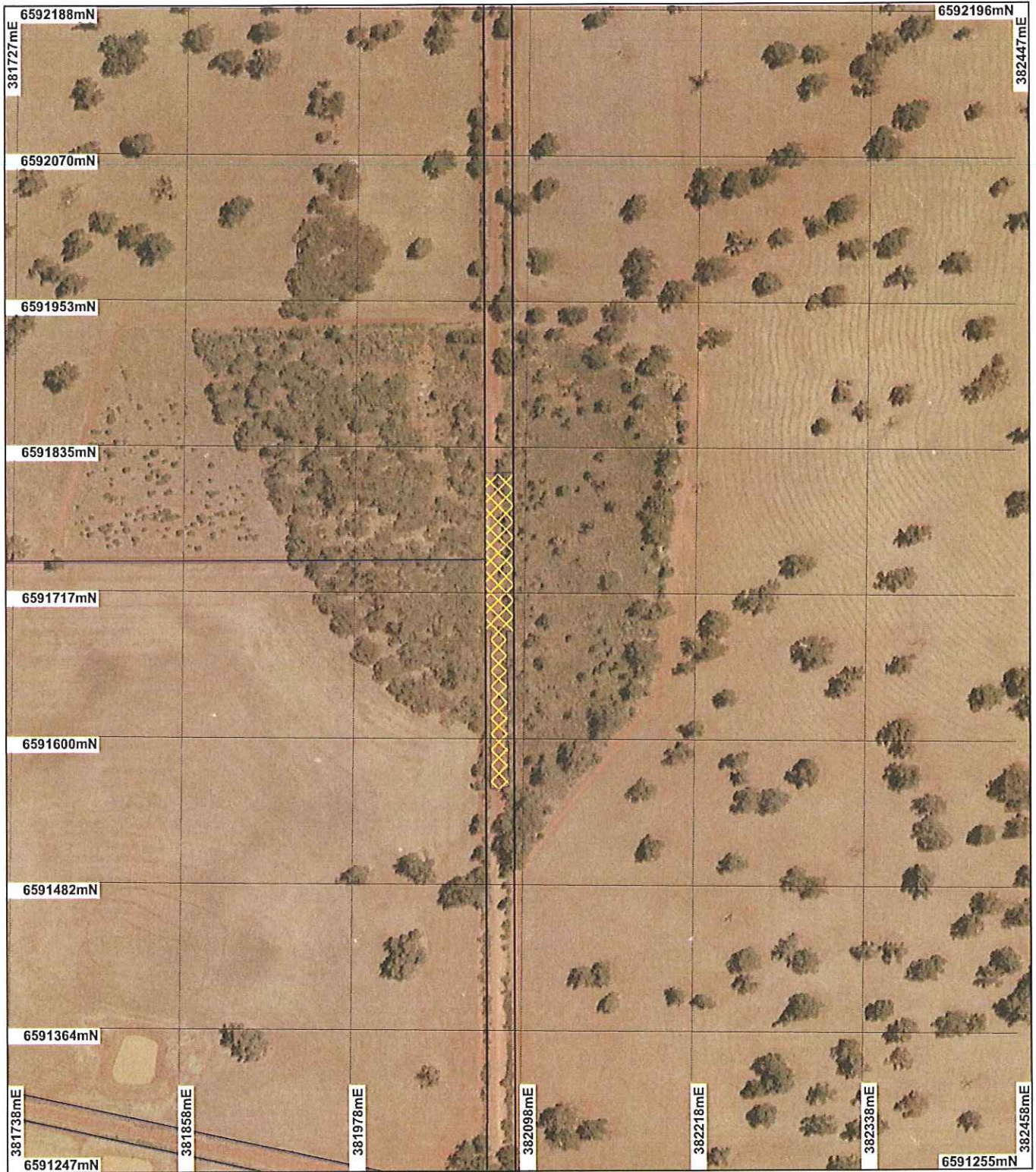


Keith Claymore  
A/ ASSISTANT DIRECTOR  
NATURE CONSERVATION DIVISION

*Officer delegated under Section 20  
of the Environmental Protection Act 1986*

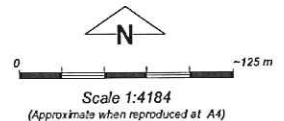
20 August 2009

# Plan 3180/1



## LEGEND

- Clearing Instruments**
-  Areas Approved to Clear
  -  Cadastre
  - Dandaragan 50cm
  - Orthomosaic - Landgate
  - 2004



Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

*Kearney* Date 20/8/09

K Claymore  
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Department of Environment and Conservation

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## 1. Application details

### 1.1. Permit application details

Permit application No.: 3180/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Shire of Dandaragan

### 1.3. Property details

Property: ROAD RESERVE ( YATHROO 6507)  
Local Government Area: Shire Of Dandaragan  
Colloquial name: Dambadjie Road Reserve

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.32		Mechanical Removal	Road construction or maintenance

## 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
The vegetation under application is mapped as consisting of Beard vegetation association 999: Medium woodland; marri	The roadside conservation mapping for the area under application shows the vegetation condition to be medium high (DEC, 2009a). As the vegetation under application is within a road reserve there is likely to be signs of disturbance.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition and description of the vegetation under application was determined via the use of aerial mapping systems.
	The local area (10km radius) is highly cleared (approximately 10 -15% remaining) and the vegetation under application is a part of a larger remnant within this area, of which only a few remain.		

## 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 may be at variance to this Principle

The 0.32 hectares of native vegetation under application is a part of a remnant in an area that has been extensively cleared (approximately 10 - 15% native vegetation remaining in 10km radius). This being considered, the importance of the vegetation is of increased significance.

The vegetation under application is considered to be in very good (Keighery, 1994) condition and may potentially support rare/priority taxa (DEC, 2009b). It is mapped as having of medium high roadside conservation value (DEC, 2009a).

Although a site inspection was not carried out, regional advice has identified the application area as being potential nesting habitat for Carnaby's Black Cockatoo's (*Calyptorhynchus latirostris*) (DEC, 2009c), however the habitat is not likely to be significant habitat for this species (DEC, 2009d).

While the proposed clearing is small (0.32 hectares), the continued clearing of native vegetation in an area that is already highly cleared will incrementally reduce the values offered by the existing/remaining vegetation, thereby reducing the amount of potential habitat and stepping stone vegetation, upon which fauna species rely.

It is recommended that proper hygiene practices be followed to reduce the spread of weeds and pathogens (DEC, 2009c).

Given the extensive clearing that has occurred within the local area, the vegetation under application may be important in maintaining biodiversity. To reduce the impact that clearing may have on the biodiversity of the local area, offset conditions will be imposed on the permit. To reduce the risk of pathogens and weeds invading the area, weed and dieback control conditions will also be imposed on the permit.

**Methodology** DEC (2009a)  
DEC (2009b)  
DEC (2009c)  
DEC (2009d)  
Keighery (1994)  
GIS DataSets:  
- CALM Managed Lands and Waters - CALM 01/06/05  
- Dandaragan 50cm Orthomosaic - 9/10/07  
- SAC Biodatasets - accessed 29 June 09

**(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 may be at variance to this Principle**  
Within the local area (10km radius) there are no known records of rare or priority fauna. The closest recorded fauna species is the Western Rosella (*Platycercus icterotis xanthogenys*), located 14km north west.

The local area is highly cleared (approximately 10 -15% remaining) and the vegetation under application is a part of a larger remnant within this area, of which only a few remain, thereby increasing the importance of remaining vegetation in the local area for fauna species.

The roadside conservation mapping for the area under application shows the vegetation condition to be medium high (DEC, 2009a).

While the proposed clearing is small (0.32 hectares), the continued clearing of native vegetation in an area that is already highly cleared will incrementally reduce the values offered by the existing/remaining vegetation, thereby reducing the amount of potential habitat and stepping stone vegetation within the region. The area has also been identified as possible Carnaby's Black Cockatoo nesting habitat (DEC, 2009c), however the habitat is not likely to be significant habitat for this species (DEC, 2009d).

Due to the local area being extensively cleared (approximately 10-15% remaining), offset conditions will be imposed on the permit in order to reduce the impact clearing will have on fauna species in an already highly cleared landscape.

The proposed clearing may be at variance to this principle.

**Methodology** DEC (2009a)  
DEC (2009c)  
DEC (2009d)  
GIS DataSets:  
- CALM Managed Lands and Waters - CALM 01/06/05  
- Dandaragan 50cm Orthomosaic - 9/10/07  
- SAC Biodatasets - accessed 29 June 09

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

**Comments** **Proposal may be at variance to this Principle**  
There are a number of known rare and priority flora species recorded within the local area (10km radius). The closest, *Gastrolobium callistachys* (P4) was located 1.7km south east of the applied area. *Acacia forrestiana* (R) was recorded 2.8km south east of the application area and *Eucalyptus annaliformis* (P1) was recorded 1.5km east. The vegetation and soils mapped for the applied area are the same, or similar to those described for the rare flora recorded within the local area (DEC, 2009b).

Several other priority listed species were recorded within 5 - 10km of the application area, these include:

- *Grevillea drummondii* (P4)
- *Thysanotus glaucus* (P4)
- *Isopogon drummondii* (P3)
- *Gruichenotia alba* (P3)
- *Banksia platycarpa* (P4)
- *Verticordia insignis* subsp. *eomagis* (P3)

- Grevillea ecalycata subsp. brevis (P3)
- Damperia tephrea (P2)

The local area is highly cleared, with approximately 10-15% of native vegetation remaining. The roadside vegetation has a medium high roadside conservation value (DEC, 2009a) and aerial photography suggests that the applied area could potentially support one or more of the rare and priority flora species listed above (DEC, 2009b). It is recommended that a flora survey be undertaken prior to any clearing (DEC, 2009b).

Given that the local area is highly cleared and that the vegetation under application is a part of only a few remnants within this area, the vegetation under application may be necessary for the continued existence of rare flora, therefore flora management conditions will be imposed on the permit.

**Methodology** DEC (2009a)  
DEC (2009b)  
GIS DataSets:  
- Pre European Vegetation - DA 01/01  
- SAC Biodatasets - accessed 29 June 09  
- Soils, Statewide DA 11/99

**(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 no known Threatened Ecological Communities (TECs) within the local area (10km radius). It is considered unlikely that the clearing as proposed is at variance to this principle.

**Methodology** GIS DataSets:  
- SAC Biodatasets - accessed 29 June 09  
- Soils, Statewide DA 11/99

**(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 at variance to this Principle**

	Pre-European Extent (ha)	Current Extent (ha)	Remaining %
IBRA Bioregion* Swan ^	1,501,208	583,140	38.84
Shire* Dandaragan	670,535	299,219	44.62
Beard 999* Within shire	91,819	10,282	11.20
Within bioregion	102,939	11,099	10.78

\* (Shepherd et al. 2007)  
^ Area within Intensive Land Use Zone

The local area (10km radius) has approximately 10 - 15% of remaining pre- European vegetation.

The vegetation type under application (999) retain less than the EPA supported threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000).

Additionally, the vegetation under application is one of the largest remnants of vegetation that occurs within a 10km radius indicating that the surrounding landscape is predominantly cleared. The proposed clearing of large remnants of vegetation in such a highly cleared landscape will significantly impact on biodiversity and fauna and flora dispersal and habitat as it is one of the last remaining refuges in the area.

While the proposed clearing is small (0.32 hectares) the continued clearing of native vegetation in an area that is already highly cleared will incrementally reduce the values offered by the existing/remaining vegetation.

As the vegetation under application is considered to have a roadside conservation value of medium high (DEC, 2009a) and given that the vegetation under application is poorly represented and is considered to be a critical asset, offset conditions will be placed on the permit.

**Methodology** DEC (2009a)

EPA (2000)  
Shepherd et al (2007)  
GIS DataSets  
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00  
- Pre European Vegetation - DA 01/01  
- SAC Biodatasets - accessed 29 June 09  
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

**(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**

No riparian vegetation occurs within the application area. There are minor non-perennial watercourses located 4km north, 1.8km south and a significant stream of the Yatheroo Brook is located 3.2km north west.

There are four non-perennial lakes located nearby, situated 3.7km NNE, 1.6km south, 1.7km south west and 2.5km west of the applied area.

Three non-perennial swamps are located approximately 1.5km SSE and a fourth is located 2km WSW of the application area.

The proposed clearing of 0.32 hectares of native vegetation within a road reserve is not expected to impact on these systems.

**Methodology GIS DataSets:**

- CALM Managed Lands and Waters - CALM 01/06/05  
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005  
- EPP Lakes Policy Area - DEP 14/05/97  
- EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04  
- Hydrography linear - DOW 13/7/06  
- Hydrography linear (hierarchy) - DoW 13/7/06  
- Hydrography linear (medium scale, 250k GA) - 18/10/99

**(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 proposed cleared area is 0.32 hectares within a road reserve and is for the purpose of road widening and maintenance. It is not anticipated that the removal of a small quantity of native vegetation within a road reserve will cause any appreciable land degradation.

**Methodology GIS DataSets:**

- Hydrogeology, statewide - DOW 13/07/06  
- Hydrographic catchments, catchments - DoW 01/06/07  
- Soils, Statewide DA 11/99  
- Topographic contours statewide - DOLA and ARMY 12/09/02

**(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 no conservation areas within the local area (10km radius). The Jam Hill and the Bundarra Nature Reserve are located 13.4km north west and 14.5km south west respectively. The local area is highly cleared (approximately 10 -15% remaining) and the vegetation under application is a part of a larger remnant within this area, of which only a few remain. The vegetation may be of increased importance within the region, in terms of providing a stepping stone for conservation areas.

The continued clearing of native vegetation in an area that is already highly cleared will incrementally reduce the values offered by the existing/remaining vegetation such as conservation areas.

However, given the small size of the proposed clearing and the distance between the applied area and conservation areas, it is considered unlikely that area to be cleared contributes significantly to any conservation areas.

**Methodology GIS DataSets:**

- CALM Managed Lands and Waters - CALM 01/06/05  
- Dandaragan 50cm Orthomosaic - 9/10/07



**(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 proposed cleared area is 0.32 hectares within a road reserve and is for the purpose of road widening and maintenance. The section of road within the applied area has an elevation of 200 -220 metres along its length. A short term increase in sediment flow may result from the clearing, however the closest watercourse/wetland is located 1.5km from the applied area.

It is not anticipated that the removal of a small quantity of native vegetation within a road reserve will result in the deterioration of surface or groundwater quality.

**Methodology GIS DataSets:**

- Hydrogeology, statewide - DOW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Soils, Statewide DA 11/99
- Topographic contours statewide - DOLA and ARMY 12/09/02

**(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 proposed cleared area is 0.32 hectares within a road reserve and is for the purpose of road widening and maintenance. The section of road within the applied area has an elevation of 200 -220 metres along its length and rainfall is 600mm annually. It is not anticipated that the removal of a small quantity of native vegetation within a road reserve will exacerbate flooding.

**Methodology GIS DataSets:**

- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Soils, Statewide DA 11/99
- Topographic contours statewide - DOLA and ARMY 12/09/02

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

**Comments**

The vegetation is within the agricultural area defined in EPA Position Statement No. 2 (EPA 2000). The Statement does not support clearing within this area for agricultural purposes. The application is for road upgrades and not for agricultural purposes.

**Methodology EPA (2000)**

#### **4. Assessor's comments**

**Comment**

The application has been assessed against the clearing principles, planning instruments and other matter in accordance with s510 of the Environmental Protection Act 1986 has found:

- Principles (d), (f), (g), (h), (i) & (j) are not likely to be at variance
- Principles (a), (b) & (c) may be at variance
- Principle (e) is at variance

#### **5. References**

- DEC (2009a) Roadside Conservation Council Advice. Department of Environment and Conservation Trim Ref DOC91181.  
DEC (2009b) Flora Advice. Department of Environment and Conservation Trim Ref DOC91274  
DEC (2009c) Mid West Region Advice. Department of Environment and Conservation Trim Ref DOC93142  
DEC (2009d) Species and Communities Branch Advice. Department of Environment and Conservation Trim Ref DOC93926  
EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, 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, D.P. (2007). 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.

## 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)