Department of Environment and Conservation

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

**Permit application No.:** 2555/1
**Permit type:** Purpose Permit

### 1.2. Proponent details

**Proponent's name:** **MR Ray Blackburn**

### 1.3. Property details

**Property:** ROAD RESERVE ( YARLOOP 6218)
**Local Government Area:** Shire Of Harvey
**Colloquial name:** Marston Road

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|---|---|---|---|
| | 17 | 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 |
|---|---|---|---|
| Beard Vegetation Association 968: Medium woodland; jarrah, marri & wandoo (Shepherd et al. 2001). | The proposal involves clearing 17 trees to extension of Marston Road. | Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994) | |

## 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 area under applications proposal is to selectively remove 17 trees for the purpose of extending Marston Rd. The area is in a completely degraded (Keighery 1994) condition, consisting of only isolated trees surrounded by pastoral weeds.

There are four records of priority flora species present within a 10km radius of the area under application: Acacia flagelliformis (Priority 4), Acacia semitrullata (Priority 3), Caladenia speciosa (Priority 4) and Synaphea odocoileops (Priority 1). Acacia flagelliformis grows in sand in swampy areas in closed scrub or closed heath, also along creeks in similar situations within Jarrah (Eucalyptus marginata) - Marri (Corymbia calophylla) forest (Orchard A.E. et al, 2001). Acacia semitrullata grows in sand in sand in open heath, frequently fringing seasonally dry swamps, and in sand over laterite in shallow depressions in open jarrah (Eucalyptus marginata) forest (Orchard A.E. et al, 2001). Caladenia speciosa grow in white, grey or black sand (Florabase 2008). Synaphea odocoileops prefer to grow in seasonal wet flats, swamps and creek banks (Florabase 2008).

The soil type is described as - chief soils are sandy acidic yellow mottled soils, some of which contain ironstone gravel, and in some deeper varieties soils are now forming. Associated are acid yellow earths. Other variable soils occur in low dunes; and some swamps(Northcote et al. 1968). The vegetation type can be described as a medium woodland; jarrah, marri & wandoo (Shepherd et al. 2001).

Acacia flagelliformis and Synaphea odocoileops grow in the same mapped soil type and vegetation type as the area under application, however these species do not grow in the preferred soil or vegetation type as the area under application. Acacia flagelliformis prefers a vegetation type described as swampy areas in closed scrub or closed heath, also along creeks in similar situations within Jarrah (Eucalyptus marginata) - Marri (Corymbia calophylla) forest (Orchard A.E. et al, 2001) and Synaphea odocoileops prefers a soil type described as brown - orange loam and sandy clay, granite (Florabase 2008). Acacia semitrullata grow in the same vegetation type but not the same soil type as there are under application and Caladenia speciosa does not grow in the same soil and vegetation type as the area under application.

The area under application has a major drain running through it. The proposed clearing and surrounding areas

are described as palusplain (flat damp land, seasonally wet). Due to this, the area under application may contains suitable habitat for the aforementioned priority species. Therefore the proposed clearing may be at variance to this Principle.

**Methodology**

Florabase (2008)
Keighery (1994)
Northcote et al. (1968)
Orchard A.E. et al (2001)
Shepherd (2001)
GIS Database:
- CALM Managed Lands and Waters - CALM 01/06/05
- DEFL, SAC Biodataset (1/07/08)
- Swan Coastal Plain South 40cm ORTHOMOSAIC - DLI05

**(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 at variance to this Principle**

Within a 10km radius of the proposed clearing there are three records of threatened fauna: Dasyurus geoffroii (Chuditch), Phascogale tapoatafa ssp. (Brush-tailed Phascogale) and Setonix brachyurus (Quokka). The recording of the Quokka is an historical record that was recorded in 1952, 3km north of the area under application.

The Chuditch was last recorded in 1992, 9.8km north east of the area under application, in the Dwellingup State Forest. A historical record of the Chuditch was recorded 160m west of the area under application, although the land and vegetation type has changed since the recording. These recordings indicate the Chuditch species is within the local area (10km radius). The clearing is likely to have no impact on the Chuditch as to the surrounding areas consist of cleared pastoral land. The near by Dwellingup State Forest is likely to be more suitable habitat.

The Brush-tailed Phascogale was last recorded in 2006, 5.7km north of the area under application. The Phascogale was recorded in scattered native vegetation on the foot of the Darling Scarp. The clearing is unlikely to have an impact on the Phascogale as the habitat in which the Phascogale lives in is dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (Rhind S.G. 1996).

The area under application is unlikely to impact on habitat for native fauna species, due to the nature of the surrounding area (pastoral farms), which contains no ecological linkages or habitat for wildlife. In addition to this, Dwellingup State Forest is 5.6km east of the area under application, which provides habitat for wildlife. Therefore is not at variance to this principle.

**Methodology**

Rhind S.G. (1996)
GIS Database:
- CALM Managed Lands and Waters - CALM 01/06/05
- Swan Coastal Plain South 40cm ORTHOMOSIAC - DLI05
- Threatened Fauna, SAC Bio Dataset (1/07/08)

**(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 (10km radius) of the site under application there are three records of rare flora - Drakaea elastica, Synaphea stenoloba and Tetraria australiensis.

Drakaea elastica grows in low-lying areas adjoining winter-wet swamps (Florabase 2008), Synaphea stenoloba grows in sandy soils in winter-wet flats (Florabse 2008) and Tetraria australiensis favours winter-wet, swampy depressions, drainage lines or rises surrounding swamps (Keighery, 1993; Atkins, 1998; Brown et al., 1998; Williams et al.,2001). Tetraria australiensis is found in open forest (Atkins, 1998) or Marri (Corymbia calophylla) woodland (Keighery, 1993; Brown et al., 1998; Williams et al., 2001).

The soil type is described as - chief soils are sandy acidic yellow mottled soils, some of which contain ironstone gravel, and in some deeper varieties soils are now forming. Associated are acid yellow earths. Other variable soils occur in low dunes; and some swamps(Northcote et al. 1968). The vegetation type can be described as a medium woodland; jarrah, marri & wandoo (Shepherd et al. 2001).

Drakaea elastica was recorded 4.7km north of the area under application and grows in the same soil type as the proposed area. Synaphea stenoloba record is 6km north of the area under application and grows in the same soil and vegetation type as the proposed clearing. Tetraria australiensis record is 7 km north east of the area under application and grows in the same vegetation type as the proposed clearing.

The area under application has a major drain running through it, the proposed clearing and surrounding areas is

described as palusplain (flat damp land, seasonally wet). In addition to this the vegetation within the area under application is heavily degraded and consists of sparse trees surrounded by pastoral weeds. Advice from the Roadside Conservation Commission believe there is little value to this vegetation.

Given the degraded nature of the area and absence of suitable winter-wet habitat for the rare flora, the proposal to clear is not likely to be at variance to this principle.

**Methodology**

Atkins (1998)
Brown et al. (1998)
Florabase (2008)
Keighery (1993)
Northcote et al. (1968)
Shepherd et al. (2001)
Williams et al. (2001)
GIS Database:
- DEFL, SAC Bio Dataset (1/07/08)
- Swan Coastal Plain South 40cm ORTHOMOSAIC - DLI05

**(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 at variance to this Principle**

There are four Threatened Ecological Communities (TECs) within a 10km radius of the area under application, two of which have the same vegetation type as the proposed clearing (SCP09 and SCP3c). The communities are SCP20b; Banksia attenuata and/or Eucal, this is located 3.3km north of the area under application, SCP3b; Banksia attenuata and/or Eucal, this is located 3.5km north of the area under application, SCP3c; Banksia attenuata and/or Eucal, this is located 5km North of the area under application and SCP09; Banksia attenuata and/or Eucal, this is located 5km north of the area under application.

As the area under application is heavily degraded and consists of sparse trees surrounded by pastoral weeds, it is unlikely the clearing will be considered a TEC or has any effect on the local TECs. Therefore is not at variance.

**Methodology**

GIS Database:
- TEC SAC Bio Dataset, Accessed (1/07/08)

**(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 at variance to this Principle**

| Pre-European | Current Extent | Remaining | |
|---|---|---|---|
| IBRA Bioregion | | | |
| Swan Coastal Plain | 1501211.005 | 579227.04 | 38.6 |
| Shire | | | |
| Harvey | 170746.163 | 91945.324 | 4.5 |
| Beard Veg | | | |
| 968 | 296877.5 | 97572.9 | 32.9 |

The area under application is located in the Swan Coastal Plain Bioregion and is in the Shire of Harvey. The extent of pre-European vegetation (968) within this Bioregion is 6.4% (Shepherd et al. 2001) and within the Shire of Harvey is 4.5% (Shepherd et al. 2001). Vegetation has been extensively cleared within this region, and is lower than the desirable 30% threshold level target identified by the EPA (2000).

As the area under application is considered to be in a completely degraded (Keighery 1998) condition and the vegetation under application is not considered to be representative of this vegetation type (968), therefore is not at variance to this principle.

**Methodology**

EPA (2000)
Shepherd et al. (2001)
GIS Database:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Pre European Vegetation, SAC Bio Dataset (1/07/08)
- Swan Coastal Plain south 40cm ORTHOMOSAIC - DLI05

**(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**

The area under application is a palusplain wetland and the area is flat and seasonally wet. The palusplain is a multiple use wetland and the local area consists of many drains.

There is one major drain running down the east side of the road reserve, however the drain is not within the road reserve. In addition to this, 350m south of the area under application is a minor water course. The removal of 17 trees will have no impact on the drain or the minor water stream. Therefore is not at variance to this principle.

**Methodology**

GIS Database:
- Geomorphic Wetlands Swan Coastal Plain, SAC Bio Dataset, Accessed (1/07/08)
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

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

**Comments**

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

The topography of the site is 25m AHD (Australian Height Datum) and the land is a flat plane. The soil type is described as - chief soils are sandy acidic yellow mottled soils, some of which contain ironstone gravel, and in some deeper varieties soils are now forming. Associated are acid yellow earths. Other variable soils occur in low dunes; and some swamps(Northcote et al. 1968).

The mean rainfall is 1000mm per annum and the evapotranspiration rate is 800mm. Given the soil type of area (sandy soils) and the size of the clearing (17 trees), water logging is unlikely to occur.

The groundwater salinity is 3000 to 7000mg/L (medium salinity risk). Given the area to be cleared (17 trees) and the mean rainfall, salinity is not considered a risk.

The area under application is not at variance to this principle.

**Methodology**

Northcote et al. (1968)
GIS Database:
- Evapotransporation Isopleths - WRC 29/09/98
- Groundwater Salinity Statewide DoW 13/07/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic Contours, Statewide - DOLA 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 at variance to this Principle**

There are three nature reserves and a state forest within the local area (10km radius).

The Dwellingup State Forest is 5.2km east of the area under application, Harvey Flats Nature Reserve is 6.3km west of the area under application, Riverdale Nature Reserve is 9km west of the area under application and Buller Nature Reserve is 10km north of the proposed clearing area.

The area under application is not part of a corridor or a significant linkage for wildlife, due to the highly cleared surrounding area. As the proposal is to clear 17 trees it is unlikely the clearing will impact on any nearby nature reserves. Therefore is not at variance to this principle.

**Methodology**

GIS Database:
- CALM Managed Lands and Waters - CALM 01/06/05

**(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**

The area under application is a palusplain wetland and the area is flat and seasonally wet. The palusplain is a multiple use wetland and the local area consists of many drains.

There is one major drain running down the east side of the road reserve, however the drain is not within the road reserve. In addition to this, 350m south of the area under application is a minor water course. The removal of 17 trees will have no impact on the drain or the minor water stream.

The groundwater salinity is 3000 to 7000mg/L (medium salinity risk). Given the area to be cleared (17 trees)

and the mean rainfall salinity is not considered a risk.

The area under application is not at variance to this principle.

**Methodology** GIS Database:
- Geomorphic Wetlands Swan Coastal Plain, SAC Bio Datasets, Accessed (1/07/08)
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrography linear - DOW 2/07/08
- Hydrography linear (hierarchy) - DoW 2/07/08
- EvapotransporationIsopleths - WRC 29/09/98
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic Contours, Statewide - DOLA 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 at variance to this Principle**
The area under application is a palusplain wetland and the area is flat and seasonally wet. The palusplain is a multiple use wetland and the local area consists of many drains.

The topography of the site is 25m AHD (Australian Height Datum) and the land is a flat plane. The soil type of the area under application is described essentially as hard sandy acidic yellow mottled soils (Northcote et al. 1960-68).

The mean rainfall is 1000mm per annum and the evapotranspiration rate is 800mm. Given the soil type of area (sandy soils) and the size of the clearing (17 trees), flooding is unlikely to occur. Therefore is not at variance to this principle.

**Methodology** Northcote et al. (1968)
GIS Database:
- Geomorphic Wetlands Swan Coastal Plain, SAC Bio Datasets, Accessed (1/07/08)
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrography linear - DOW 2/07/08
- Hydrography linear (hierarchy) - DoW 2/07/08
- Evapotransporation Isopleths - WRC 29/09/98
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**

There is one Native Title Claim for the Gnaala Karla Booja people over the area under application. The Department of Environment and Conservation's advertising of the application in the West Australian newspaper constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

The Shire of Harvey has given the applicant authority to undertake the proposed clearing, Refer to TRIM REF DOC55478.

**Methodology** GIS Database:
- Native Title Claims - LA 2/5/07

## 4. Assessor's comments

**Comment**
The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing may be at variance to Principle (a) and is not at variance to the remaining Principles.

## 5. References

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EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular

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## 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) |