



## 1. Application details

### 1.1. Permit application details

Permit application No.: 259/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Main Roads WA

### 1.3. Property details

Property: LOT 601 ON DIAGRAM 97196  
LOT 602 ON PLAN 23292  
Local Government Area: City Of Joondalup  
Colloquial name: Mitchell Fwy from just south of Hodges Dve to 500m north of Shenton Ave

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
27		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
Heddl vegetation association - Cottesloe Complex Central and South: mosaic of woodland of Eucalyptus gomphocephala and open forest of E. gomphocephala, E. marginata, E. calophylla, closed heath on limestone outcrops (Government of Western Australia 2000).	The vegetation composition within the area under application has three distinct communities. The Heath Communities consist of Dryandra sessilis closed heath over a low open shrubland of Hibbertia hypericoides and Jacksonia sericea (Priority 3) (BSD Consultants 2002). The Banksia woodlands of the dunal rises consists of Banksia attenuata, B. menziesii with Allocasuarina fraseriana over a tall open woodland and low shrubland (BSD Consultants 2002). The Eucalyptus-Banksia woodlands of the deeper sands between dunal rises and limestone ridges consists of Eucalyptus marginata, B. menziesii, Allocasuarina fraseriana and E. gomphocephala (BSD Consultants 2002).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The project area has been historically used as a stock grazing route as evidenced by the distribution of grass weed species (BSD 2002). There are also a number of garden escapes which led to the 'Very Good' condition class rather than 'Excellent'. There are also large areas that have little to no vegetation within the areas under application.
Beard vegetation association 998: medium woodland, tuart.			
Beard vegetation association 1948: low woodland; Banksia on limestone.			Vegetation description from BSD (2002), Flora Survey submitted by proponent with application.
Beard vegetation association 1026: mosaic, shrublands, Acacia rostellifer, A. cyclops and Melaleuca cardiophylla thicket; shrublands, A. lasiocarpa and Melaleuca acerosa heath (Shepherd et al 2001, Hopkins et al 2001).			

## 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 condition within the area under application has been described as 'Very Good' with pockets of 'Degraded' and 'Completely Degraded' vegetation (BSD 2002). There are a number of key fauna habitat features including tall tuart trees and large areas of good quality Banksia vegetation (Hart, Simpson and Associates 2002). However, given that the area has been used historically as a stock route and is an isolated vegetation remnant surrounded by urban development, it is unlikely that the clearing as proposed is at variance to this Principle.
Methodology	BSD (2002) (DoE Trim No. HD18404) Hart, Simpson and Associates (2002) (DoE Trim No. HD18404)

**(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**

A number of species of gazetted conservation status may occur within the area under application and include: Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) may be present but vegetation within area under application is not prime habitat;

Peregrine falcon (*Falco peregrinus*) may only be present as an occasional visitor;

Barking owl (*Ninox connivens connivens*), this site represents marginal habitat for this species; and

Western False Pipistrelle (*Falsistrellus mckenziei*) is predominantly forest based but may extend its range towards the coast (Hart, Simpson and Associates 2002).

A number of fauna species that are likely to occur within the area under application are common and widespread through the Perth Metropolitan area and include wattlebirds (*Anthochaera* spp.), honeyeaters (*Phylidonyris* spp.) and magpies (*Gymnorhina tibicen*) (Hart, Simpson and Associates 2002). There is potential for local impact but not on a regional scale (Hart, Simpson and Associates 2002).

**Methodology** Hart, Simpson and Associates (2002) (DoE Trim No. HD18404)

**(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**

Two Priority Flora species were found within the area under application. *Jacksonia sericea* (Priority 3) was found in all vegetation communities within the area under application (BSD Consultants Pty Ltd 2002). Only 1 specimen of the Spider Net *Grevillea* (*Grevillea thelemanniana*) (Priority 4 species) was identified during the field survey (BSD Consultants Pty Ltd 2002). These Priority species have been recorded in a number of areas on the Swan Coastal Plain (BSD Consultants Pty Ltd 2002). Between August and September 2002, a CALM officer surveyed the area under application and identified a number of orchid species including *Thelymitra variegata*. This is the last known remaining occurrence of this species in the Metropolitan area, however this species is not afforded any gazetted conservation status (BSD Consultants Pty Ltd 2002).

**Methodology** BSD Consultants Pty Ltd (2002) (DoE Trim No. HD18404)  
GIS Databases:  
- Declared Rare and Priority Flora List - CALM 13/08/03

**(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**

Within the area under application, the floristic community type 26a *Dryandra sessilis* closed heath over a low open shrubland of *Hibbertia hypericoides*, *Jacksonia sericea* (Priority 3 species) and *Dryandra lindleyana* over a very open herbland of *Conostylis candidans* *Dianella revoluta* and *Anigozanthos manglesii* subsp. *manglesii* in sands over limestone was thought to occur (as inferred by Gibson et al 1994) (BSD Pty Ltd 2002). This community forms part of the currently listed State Threatened Ecological Community (TEC) SCP26a which is classified as endangered (BSD Pty Ltd 2002). At an on-site meeting, CALM's Western Australia Threatened Species and Communities Unit confirmed that the community was not SCP26a, as a major element of the TEC was not present. Therefore the area under application does not contain a Threatened Ecological Community and the clearing as proposed is not at variance to this Principle.

**Methodology** BSD Pty Ltd (2002) (DoE Trim No. HD18404)  
GIS Databases:  
- Threatened Ecological Communities - CALM 15/07/03

**(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**

The area under application is comprised of Heddle vegetation complex Cottesloe Complex Central and South of which there is currently 36% of the original extent remaining (Government of Western Australia 2000). The vegetation also consists of Beard vegetation associations 998 (35.9% remaining), 1948 (21.4% remaining) and 1026 (68.1% remaining) (Shepherd et al 2001, Hopkins et al 2001).

The State Government is committed to the National Objectives Target for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000). Vegetation complexes within this application are above this 30% representation except for the Beard vegetation association 1948 (21.4% remaining).

The area subject to the proposal is covered by flora studies conducted by Beard (Shepherd et al 2001) and Heddle (Government of Western Australia 2000). Beard's study is significantly broader and more dated than Heddle's which is primarily confined to the Swan Coastal Plain and more detailed. In this instance, for the same area of

native vegetation, they provide a disparity in pre-European vegetation representation (32.9%, 21.4% and 68.1% for Beard and 36.0% for Heddle). If the more comprehensive Heddle Vegetation Complexes were used to the exclusion of Beard's Vegetation Associations, the proposal would not be at variance to this Principle.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation Status**	% in reserves/CALM-managed land
IBRA Bioregion - Swan Coastal Plain		1,529,235	657,450	43	Depleted
LGA - City of Joondalup	No information available				
Heddle vegetation complex		Cottesloe Central and South	34,439	12,362	36
		Depleted	18		
Beard vegetation associations					
998	51,094	18,320	35.9	Depleted	32.9
1948	81,022	17,315	21.4	Vulnerable	15.6
1026	124,905	85,076	68.1	Least concern	46.3

\* Shepherd et al. (2001)

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

**Methodology** Government of Western Australia (2000)  
Shepherd et al (2001)  
Hopkins et al (2001)  
Department of Natural Resources and Environment (2002)  
EPA (2000)

**(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 no wetlands or watercourses within or associated with the area under application. The nearest wetland is Lake Joondalup, which is 2km to the east. It is unlikely that the proposed clearing would have a significant impact on this wetland.

**Methodology** GIS Databases:  
- Geomorphic wetlands (Mgmt Categories) SCP - DOE 15/09/04  
- EPP, Lakes - DEP 28/07/03

**(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 area under assessment has a Class 3 Acid Sulphate Soil risk (no known risk). DAWA (2005) advises that the proposed clearing is unlikely to cause appreciable on-site or off-site land degradation. As such the clearing as proposed is unlikely to be at variance to this Principle.

**Methodology** DAWA (2005) (DoE Trim No. CEO132/05)  
GIS Databases:  
- Acid Sulphate Soil risk map, SCP - DOE 01/02/04

**(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**

The area under application is situated in proximity to a number of conservation reserves. These include the Marmion Marine Park (approx 3km to the west), Neerabup National Park (approx 1.5km to the north), Lake Joondalup Nature Reserve (approx 2km to the east) and two miscellaneous nature reserves including the CALM Woodvale Research Centre. As such, the area under application may form part of a corridor linking fragmented vegetation through the urban area, allowing for the possible movement of migratory or nomadic species (Hart, Simpson and Associates 2002). However as an isolated, somewhat degraded remnant surrounded by urban development, it may not contribute significantly to this ecological function.

**Methodology** Hart, Simpson and Associates (2002) (DoE Trim No. HD18404)  
GIS Databases:  
- CALM Managed Lands and Waters - CALM 01/08/04

**(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 situated in a Priority 3 (P3) Public Drinking Water Source Area. These P3 areas

allow for the co-existence of water quality protection and other land-uses including residential, commercial and light industrial (Department of Environment 2004). Management of these areas is via guidelines rather than restrictions on landuse (Department of Environment 2004). According to these guidelines, the proposed clearing is unlikely to have a significant impact on the groundwater or surface water quality.

**Methodology** Department of Environment (2004)  
GIS Databases:  
- Public Drinking Water Source Areas (PDWSA) - 29/11/04

**(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 likely to be at variance to this Principle**  
Flooding impacts are unlikely to occur as a result of the proposed clearing due to its location. The area under application is approximately 2km west of Lake Joondalup with residential areas in between. Therefore it is considered that the removal of vegetation from the site would have little to no impact on peak flood height or duration.

**Methodology** GIS Databases:  
- Geomorphic Wetlands - Swan Coastal Plain - DOE 15/09/04  
- Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**  
The City of Joondalup has no objections to the proposed clearing.  
  
The Freeway Extension has also undergone Environmental Impact Assessment with the Environmental Protection Authority. The Level of Assessment was set at 'Not Assessed, Managed Under Part 5, Public Advice Given'.

**Methodology** Submission from City of Joondalup (EI822)  
Hans Jacob, EPASU, Department of Environment (pers coms 14 August 2004)  
Hans Jacob, EPASU, Department of Environment (pers coms 26 July 2005)

**4. Assessor's recommendations**

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road construction or Removal maintenance	Mechanical	27	Grant	<p>The assessable criteria have been addressed and the clearing as proposed may be at variance to Principle b and c.</p> <p>To mitigate the potential impacts on flora and fauna as indicated in Principles b and c, the proponent has agreed to the following condition and commitment:</p> <p>The permit holder shall revegetate the area cross-hatched red. The revegetation shall be established and maintained to an average planting density of 10,000 plants per hectare. The species shall consist of overstorey, midstorey and understorey species that are native to the area. Seed shall be sourced from within a 50km radius of the property.</p> <p>In addition, the proponent has committed to revegetate paths and tracks with the Road Reserve (totally approximately 1ha). These areas will be planted with species that provide feeding and habitat values for the Carnaby's Black Cockatoo. Information supplied by the proponent also outlines their intent to involve the local primary school in some of the aspects of the revegetation process, which may also identify additional revegetation sites (DoE Trim Ref EI2282).</p> <p>Given the above, the assessing officer recommends that this permit be granted.</p>

**5. References**

BSD Consultants Pty Ltd (2002) Mitchell Freeway Flora and Vegetation Survey Hodges Drive to Shenton Avenue. Prepared for Main Roads WA. DoE Trim No. HD18404  
 DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref CEO132/05.  
 Department of Environment (2004) Water Quality Protection Notices: Land use compatibility in PDWSAs.  
 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 (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. Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA. Hart, Simpson and Associates Pty Ltd (2002) Mitchell Freeway, Hodges Drive to Shenton Avenue. Vertebrate Fauna. Prepared for Main Roads WA. DoE Trim No. HD18404

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.

Keighery, BJ (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.

## 6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
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 DoE)