



## 1. Application details

### 1.1. Permit application details

Permit application No.: 476/1

Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Shire of Denmark

### 1.3. Property details

Property:

Local Government Area: Shire Of Denmark

Colloquial name: Shire of Denmark

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.01		Mechanical Removal	Road construction or maintenance
0.01		Mechanical Removal	Road construction or maintenance
0.01		Mechanical Removal	Road construction or maintenance
0.09		Mechanical Removal	Road construction or maintenance
0.3		Mechanical Removal	Road construction or maintenance
1		Mechanical Removal	Road construction or maintenance
2		Mechanical Removal	Road construction or maintenance
0.1		Mechanical Removal	Road construction or maintenance
0.5		Mechanical Removal	Road construction or maintenance
0.1		Mechanical Removal	Road construction or maintenance
0.5		Mechanical Removal	Road construction or maintenance
0.5		Mechanical Removal	Road construction or maintenance
0.5		Mechanical Removal	Road construction or maintenance
0.3		Mechanical Removal	Road construction or maintenance
		Mechanical Removal	Road construction or maintenance
0.3		Mechanical Removal	Road construction or maintenance
0.3		Mechanical Removal	Road construction or maintenance
0.3		Mechanical Removal	Road construction or maintenance
0.1		Mechanical Removal	Road construction or maintenance
2		Mechanical Removal	Road construction or maintenance
2		Mechanical Removal	Road construction or maintenance
0.3		Mechanical Removal	Road construction or maintenance
1.2		Mechanical Removal	Road construction or maintenance
1.9		Mechanical Removal	Road construction or maintenance
0.01		Mechanical Removal	Road construction or maintenance
0.01		Mechanical Removal	Road construction or maintenance
0.3		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 1: Tall forest; karri (Eucalyptus diversicolor)	A site visit determined the vegetation under application ranges from good to very good condition (Keighery 1994).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	
Beard Vegetation Association 3: Medium forest; jarrah-marri			
Beard Vegetation Association 14: Low forest;			

jarrah

Beard Vegetation  
Association 27: Low  
woodland; paperbark  
(*Melaleuca* sp.)

Beard Vegetation  
Association 125: Bare  
areas; salt lakes

Beard Vegetation  
Association 423:  
Shrublands; *Acacia* scrub-  
heath unknown

Beard Vegetation  
Association 969: Mosaic;  
Medium forest; jarrah-marri  
/ Low forest; jarrah

Beard Vegetation  
Association 977: Low  
forest; tea-tree & casuarina

Beard Vegetation  
Association 1150: Tall  
forest; karri, red tingle &  
yellow tingle

Beard Vegetation  
Association 1153: Medium  
forest; jarrah & Rates  
tingle

Mattiske Vegetation  
Complex (DS) Darling  
Scarp: Mosaic of open  
forest of *Eucalyptus*  
*marginata* subsp.  
*marginata*-*Corymbia*  
*calophylla*, with some  
admixture with  
*Eucalyptus laeliae* in the  
north (subhumid zone),  
with occasional *Eucalyptus*  
*marginata* subsp.  
*elegantella* (mainly in  
subhumid zone) and  
*Corymbia haematoxylon* in  
the south (humid zone) on  
deeper soils adjacent to  
outcrops, woodland of  
*Eucalyptus wandoo*  
(subhumid and semiarid  
zones), low woodland of  
*Allocasuarina huegeliana*  
on shallow soils over  
granite outcrops, closed  
heath of *Myrtaceae*-  
*Proteaceae* species and  
lithic complex on or near  
granite outcrops in all  
climate zones.

Very Good: Vegetation  
structure altered;  
obvious signs of  
disturbance (Keighery  
1994)

Mattiske Vegetation  
Complex (Dc2) Dempster  
2: Open forest of  
*Eucalyptus marginata*  
subsp. *marginata*, *Banksia*  
*attenuata*, *Allocasuarina*  
*fraseriana* with *Eucalyptus*  
*staeri* on low hills formed  
by dissection of siltstone  
plateau in perhumid and  
humid zones.

Mattiske Vegetation  
Complex (Dc1) Dempster  
1: Woodland of *Eucalyptus*  
*marginata* subsp.  
*marginata*-*Corymbia*  
*calophylla*-*Allocasuarina*  
*fraseriana* with *Eucalyptus*  
*staeri* on low hills formed  
by dissection of siltstone  
plateau in the perhumid  
zone.

Mattiske Vegetation  
Complex (Coy1) Collis 1:  
Tall open forest to  
woodland of *Eucalyptus*  
*marginata* subsp.  
*marginata*-*Corymbia*  
*calophylla*-*Banksia*  
*grandis*-*Allocasuarina*  
*fraseriana* on low hills and  
with *Allocasuarina*  
*decussata* on slopes in  
perhumid and humid  
zones.

Mattiske Vegetation  
Complex (Cob) Collis: Tall  
open forest of *Eucalyptus*  
*diversicolor*-*Corymbia*  
*calophylla* on crests of hills  
arising above the southern  
coastal plain in the  
hyperhumid zone.

Mattiske Vegetation  
Complex (BWp)  
Blackwater: Mosaic of low  
open woodland of  
*Melaleuca preissiana*, low  
open woodland of  
*Melaleuca cuticularis*, open  
heath of Myrtaceae-  
Proteaceae spp. and  
sedgeland of  
Restionaceae spp. on low  
lying flats in hyperhumid  
and perhumid zones.

Mattiske Vegetation  
Complex (A) Angove:  
Open forest of *Eucalyptus*  
*marginata* subsp.  
*marginata*-*Banksia*  
*ilicifolia*-*Nuytsia floribunda*  
with some *Eucalyptus*  
*diversicolor* on gently  
sloping sandy terrain in  
hyperhumid and perhumid  
zones.

Mattiske Vegetation  
Complex (F) Fernley:  
Mixture of woodland of  
*Eucalyptus megacarpa*,  
woodland of *Eucalyptus*  
*patens*, tall shrubland of  
Myrtaceae spp. with some  
sedgeland of *Anarthria*  
spp. on broad plains in  
hyperhumid and perhumid  
zones.

Mattiske Vegetation  
Complex (HA) Hazelvale:  
Mosaic of a low woodland  
to woodland of *Eucalyptus*

marginata subsp.  
marginata-Eucalyptus  
patens, low forest of  
Agonis juniperina-  
Callistachys lanceolata  
with closed heath of  
Myrtaceae spp. on sandy  
plains in the hyperhumid  
zone.

Mattiske Vegetation  
Complex (KO) Kordabup:  
Mosaic of low forest of  
Agonis juniperina, closed  
heath of Myrtaceae-  
Proteaceae-Papilionaceae  
spp. with occasional  
emergent Melaleuca  
preissiana and Banksia  
littoralis on broad swampy  
plains in hyperhumid and  
perhumid zones.

Very Good: Vegetation  
structure altered;  
obvious signs of  
disturbance (Keighery  
1994)

Mattiske Vegetation  
Complex (Kb) Kilcarnup:  
Mosaic of coastal complex  
on exposed dunes on  
seaward slopes in  
hyperhumid to humid  
zones.

Mattiske Vegetation  
Complex (Ks) Keystone:  
Woodland of Eucalyptus  
marginata subsp.  
Marginate & Allocasuarina  
fraseriana on lower slopes  
in hyperhumid and  
perhumid zones.

Mattiske Vegetation  
Complex (Ky) Keystone:  
Open forest of Eucalyptus  
marginata subsp.  
marginata-Corymbia  
calophylla-Banksia grandis  
on mild slopes of hills in  
perhumid zone and open  
forest to tall open forest of  
Eucalyptus brevistylis on  
slopes below outcrops in  
hyperhumid and perhumid  
zones.

Mattiske Vegetation  
Complex (MI) Mitchell:  
Open forest of Eucalyptus  
marginata subsp.  
marginata, Corymbia  
calophylla, Allocasuarina  
fraseriana on broad  
undulating uplands in  
perhumid and humid  
zones.

Mattiske Vegetation  
Complex (MTb)  
Mattaband: Mixture of tall  
open forest of Eucalyptus  
diversicolor-Corymbia  
calophylla and woodland of  
Eucalyptus marginata  
subsp. marginata-  
Corymbia calophylla-  
Agonis flexuosa on small  
hills arising above the  
coastal plain with some  
outcrops in hyperhumid

and perhumid zones.

Mattiske Vegetation  
Complex (MTy1)

Mattaband 1: Mixture of tall open forest of *Eucalyptus diversicolor*-*Eucalyptus guilfoylei*, tall open forest of *Eucalyptus jacksonii*-*Eucalyptus diversicolor* and an open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* y *Banksia grandis* on hills rising above the coastal plain in hyperhumid and perhumid zones.

Mattiske Vegetation

Complex (OW) Owingup:

Mosaic of open woodland of *Allocasuarina fraseriana*-*Banksia attenuata*-*Banksia ilicifolia*, low open woodland of *Melaleuca raphiophylla*-*Agonis juniperina*, low open woodland of *Melaleuca cuticularis* and tall shrubland of *Melaleuca densa* on broad swamps and plains in the hyperhumid zone.

Mattiske Vegetation

Complex (S1) Granite

Valleys: Tall open forest of *Eucalyptus diversicolor*-*Corymbia calophylla* on slopes with some *Eucalyptus patens* and *Eucalyptus megacarpa* on valley floors in hyperhumid and perhumid zones.

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)

Mattiske Vegetation

Complex (S6) Narrow

Valleys: Low open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* with some *Allocasuarina fraseriana* on slopes, mosaic of sedgeland and low woodland of *Melaleuca preissiana* on lower slopes in the perhumid zone.

Mattiske Vegetation

Complex (S7) Broad

Valleys: Woodland of *Banksia attenuata*-*Banksia grandis*-*Allocasuarina fraseriana* on mild slopes with some *Eucalyptus staeri*, mixture of low woodland of *Melaleuca preissiana* and open heath of *Myrtaceae*-*Proteaceae* spp. on valley floors in perhumid and humid zones.

Mattiske Vegetation

Complex (S8) Broad

Valleys: Woodland of *Eucalyptus marginata* subsp. *marginata*-*Banksia*

attenuata-Banksia ilicifolia  
on mild slopes in perhumid  
and humid zones.

Mattiske Vegetation  
Complex (TR1) Trent:  
Woodland of Allocasuarina  
fraseriana-Eucalyptus  
marginata subsp.  
marginata-Banksia grandis  
with some Corymbia  
calophylla on low rises of  
sedimentary rocks in the  
perhumid zone.

Mattiske Vegetation  
Complex (Vh3) Granite  
Valleys: Tall open forest of  
Eucalyptus diversicolor-  
Eucalyptus guilfoylei on  
slopes and woodland of  
Eucalyptus rudis -Banksia  
littoralis on lower slopes in  
hyperhumid and perhumid  
zones.

### 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 vegetation under application is described as being in a good to very good condition (Keighery 1994), and is within a 3 m road verge. Some roads have been identified as containing Declared Rare Flora, priority listed fauna, and therefore having significant habitat values for both. Based on these factors, it is considered that the vegetation within the Shire of Denmark represents a high level of biological diversity. The proposed clearing is to upgrade existing roads.

A member of the public has made a submission raising issues regarding environmental weeds.

Conditions have been imposed to minimise the impact on flora and fauna where clearing is to occur and a condition in respect to weeds have also been imposed.

**Methodology**      DEC Biodiversity Coordination Section Report (2006).

#### (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**

The proposal includes clearing of up to 1.5m on each side of roadways for widening of the roads.

The Biodiversity Coordination Section of DEC (2006) advises that a range of fauna species of conservation significance have been recorded from a variety of habitats within the areas proposed to be cleared. The roads that are at variance to this Principle are as follows:

Valley Of The Giants RD:

Biodiversity Coordination Section (BCS) have advised the proposed area provides habitat for Moggridgea Trapdoor Spider, Sunset Frog, Walpole Burrowing Crayfish, Quokka and Southern Brush Tailed Phascogale. BCS recommend to avoid taking mature Eucalypt trees with hollows, and that no vegetation associated with peat swamps or watercourses and drainage lines is to be disturbed or taken.

Normalup-Tindale RD:

BCS have advised the proposed area provides habitat for the Sunset Frog, and advise that disturbance to vegetation where drainage lines intersect the road must be avoided, especially when found in association with peat swamps.

Scotsdale RD:

BCS have advised the proposed area provides habitat for the Chuditch, Red Tailed Black Cockatoo, Carnaby's Black Cockatoo, Pouched Lamprey and the Southern Brush Tailed Phascogale. BCS recommend to avoid taking mature Eucalypts with hollows, to not impact any riparian vegetation in the vicinity of the junction with Mt Lindesay RD, and to minimise impact to understorey by securing road plant on cleared private property during downtimes, as per code of practice submitted with application.

Harewood RD:

BCS have advised the proposed area provides habitat for the Pouched Lamprey. BCS recommend to not impact any vegetation within the riparian system at the junction of Scotsdale Rd.

**Board RD:**

BCS have advised the proposed area will impact habitat for the Trout Minnow, and recommend to not impact any riparian vegetation in the vicinity of Saggars Rd.

**Kordabup RD:**

BCS have advised the proposed area will impact habitat for the Quenda, associated with the Kordabup River riparian system. BCS recommend to avoid clearing understory wherever possible.

**Turner RD:**

BCS have advised the proposed area will impact habitat for the Red Tailed Black Cockatoo, Pouched Lamprey and Chuditch, however comparable habitat is plentiful in the immediate area. BCS recommends to avoid mature Eucalypts with hollows, and any riparian vegetation.

**Fernley RD:**

BCS have advised the proposed area will impact habitat for the Sunset Frog and Pouched Lamprey. BCS recommend to avoiding the clearing of vegetation where the road intercepts drainage lines.

**Kernutts RD:**

BCS have advised the proposed area will impact habitat for the Western Mud Minnow, which has been recorded near the area. BCS recommend that the preference should be to take vegetation from the south side of the road to reduce any potential impacts.

The remainder of roads noted on the application are not located in an area containing any Specially Protected and priority Fauna and the vegetation is unlikely to provide habitat for these.

Specific conditions have been imposed to minimise the impact on habitat for fauna.

**Methodology** DEC Biodiversity Coordination Section (2006).

**(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**

Biodiversity Coordination Section (BCS) has identified a total of 2 Declared Rare Flora (DRF) taxa and 6 Priority Flora that maybe impacted by the proposed clearing. However, there are no known records of these species occurring in the road reserves under application. Roads with possible impacts are listed as follows:

Valley of the Giants Rd: *Drakaea micrantha* (DRF).

Scotsdale Rd: *Marianthus sylvaticus* (P3), *Boronia virgata* (P3), *Chorizema reticulatum* (P3)

Harewood Rd: *Kennedia glabrata* (DRF) nearby but unlikely to be encountered due to different soil types/hydrology, *Drakea micrantha* (DRF) 2.5km north, *Borya longiscapa* (P2) 2.5km north

Mt Lindsay Rd: *Boronia virgata* (P3) associated with the riparian system at the junction with the Scotsdale Rd.

Lights Rd: *Kennedia glabrata* (DRF) nearby but unlikely to be encountered due to different soil types/hydrology)

Parker Rd: *Meebolina crassipes* (P3) found near junction with SC Hwy in inundated areas and unlikely to impacted unless dainage is changed.

Mt Shadforth Road: *Eucalyptus virginia* (P2) recorded nearby.

The Shire of Denmark are advised that they should liaise with the DEC's Regional Leader, Nature Conservation prior to clearing.

**Methodology** Biodiversity Conservation Section, DEC 2006  
Declared Rare and Priority Flora List - CALM 01/07/05

**(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**

The Biodiversity Coordination Section (BCS) has advised that there are no known Threatened Ecological Communities (TECs) within the road reserves and that no TECs are likely to be significantly impacted under this application.

**(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 National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS 2001) recognises that the retention of 30% or more of the pre-clearing extent of each ecological community is the target. EPA's Position Statement No. 2 (EPA 2000) also identified a 30% threshold level for vegetation types, beyond which species extinction is believed to occur at an exponential rate. Any further clearing may have irreversible consequences for the conservation of biodiversity and is, therefore, not supported.

% in reserves status		Pre-European	Current	Remaining	Conservation
		area (ha)	extent (ha)		%
IBRA Bioregion- Warren	851,529	739,273	86.8	Least concern	
IBRA Bioregion- Jarrah Forest	4,544,335	2,665,480	58.7	Least concern	
Shire of Denmark	191,156	159,071	83.2	Least concern	
Beard Veg Association 1	87,394	57,843	66.2	Least Concern	52.6
Beard Veg Association 3	3,046,385	2,197,837	72.1	Least Concern	67.9
Beard Veg Association 14	115,161	87,643	76.1	Least Concern	33.5
Beard Veg Association 27	161,222	106,631	66.1	Least Concern	29.9
Beard Veg Association 125	3,940,746	3,536,992	89.8	Least Concern	1.2
Beard Veg Association 423	32,108	20,155	62.6	Least Concern	45.2
Beard Veg Association 969	33,806	9,983	29.5	Vulnerable	7.2
Beard Veg Association 977	28,765	21,033	73.1	Least Concern	64.2
Beard Veg Association 1150	6,658	5,244	78.8	Least Concern	42.6
Beard Veg Association 1153	1,441	1,096	76.1	Least Concern	26.2
Mattiske Complex (DS)	291,043	126,045	43.3	Vulnerable	37.7
Mattiske Complex (Dc2)	41,444	26,998	65.1	Least Concern	7.4
Mattiske Complex (Dc1)	16,374	13,409	81.9	Least Concern	52.6
Mattiske Complex (COy1)	228,751	192,244	84	Least Concern	71.4
Mattiske Complex (COb)	218,419	187,148	85.7	Least Concern	75.3
Mattiske Complex (BWp)	325,413	287,703	88.4	Least Concern	80.9
Mattiske Complex (A)	397,028	355,374	89.5	Least Concern	74.8
Mattiske Complex (F)	216,582	154,024	71.1	Least Concern	55
Mattiske Complex (HA)	56,632	26,346	46.5	Depleted	18.1
Mattiske Complex (KO)	27,207	12,859	47.3	Depleted	38.4
Mattiske Complex (Kb)	283,460	231,926	81.8	Least Concern	64.4
Mattiske Complex (Ks)	15,189	10,824	71.3	Least Concern	41.9
Mattiske Complex (Ky)	147,441	136,307	92.4	Least Concern	84.5
Mattiske Complex (MI)	148,168	115,224	77.8	Least Concern	61.9
Mattiske Complex (MTb)	118,149	105,589	89.4	Least Concern	80.8
Mattiske Complex (MTy1)	204,273	190,809	93.4	Least Concern	90.9
Mattiske Complex (OW)	11,291	9,274	82.1	Least Concern	73.1
Mattiske Complex (S1)	255,050	215,886	84.6	Least Concern	53.4
Mattiske Complex (S6)	12,468	6,338	50.8	Least Concern	21.7
Mattiske Complex (S7)	46,876	32,556	69.5	Least Concern	12.2
Mattiske Complex (S8)	77,328	64,054	82.8	Least Concern	71.6
Mattiske Complex (TR1)	63,041	52,406	83.1	Least Concern	69
Mattiske Complex (Vh3)	124,009	108,802	87.7	Least Concern	66.3

Beard Vegetation Association 969 is the only vegetation type with less than 30% remaining ie 29.5%. As the representation in the Bioregion, Shire and all other vegetation associations are well above 30% and the area has not been extensively cleared this proposal is not considered to significant.



**(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**

Some of the works proposed by the Shire of Denmark are adjacent to watercourses. However, all the areas are within road reserves with existing roads. All watercourses have previously been diverted through culverts or under bridges.

None of the proposed clearing is in the immediate vicinity of any mapped wetlands (>500m).

The road locations associated with watercourses that have been highlighted by Biodiversity Coordination Section (BCS) to be of concern are:

Valley of the Giants Rd - BSC recommends that no vegetation associated with peat swamps or watercourses and drainage lines to be disturbed or taken.

Nornalup-Tindale Rd - Disturbance to vegetation where drainage lines intersect the road must be avoided, especially when found in association with peat swamps.

Mt Lindsay Rd - Do no impact vegetation in the vicinity of the junction with Mt Lindsay Rd.

Board Rd - Do not impact any riparian vegetation in the vicinity of the junction of Saggars Rd.

Turner Rd - avoid riparian vegetation

Parker Rd - avoid riparian vegetation.

Fernley Rd - minimise clearing where road intercepts drainage lines

Kernutts Rd - preference should be to take vegetation on Sth side of road.

Conditions have been imposed to minimise the possible impacts of clearing on these peat swamps and watercourses.

**Methodology** Site visit (AD153)

**(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 purpose of the clearing is for road upgrades, on roads that are already established. It is unlikely that the proposed clearings would cause any further appreciable land degradation.

The proposal may cause some short term land degradation issues in terms of flooding and soil erosion during works. However these issues should be minimal as the existing roads already have road side infrastructure in place to prevent land degradation associated with roads, ie; table drains and culverts.

It is noted that the Shire of Denmark complies with a 'Code of Practice for Roadside Conservation in Road Construction and Road Maintenance'.

**Methodology** Shire of Denmark Code of Practice (Trim Ref IN12044).

**(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**

DEC Biodiversity Coordination Section have advised that some of the proposed roads are on, or adjacent to National Parks.

Valley of the Giants RD is located within the Walpole Nornalup National Park.

Nornalup-Tindale RD (northern end) is located within Mt Roe National Park.

Harewood RD abuts State Forest 64.

Mt Lindesay RD abuts State Forest 64 and Timber Reserve 181/25 & 56/25.

Korbadup RD is located on Korbadup Nature Reserve.

Kernutts RD (western end) is located within State Forest 64.

Scotsdale RD is located within Timber Reserve 180/25 and Scotsdale Nature Reserve 23325.

Glenrowan RD is located within Timber Reserve 211/25.

Sunnyglen Rd is located within Timber Reserve 202/25.

The proposed clearings are unlikely to significantly impact these conservation areas as the majority of clearing will be selected trees and some understorey within 1.5m either side of the existing roads, however BCS have recommended that heightened dieback and weed precautions are taken.

Condition for dieback and weed management have been imposed.

**Methodology** DEC Biodiversity Coordination Section (2006).  
GIS Database:

**(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 road side vegetations under application are not considered to be in areas associated with high salinity risk. Clearing of the small areas within these road reserves is unlikely to impact surface water or ground water quality.

Denmark River, Scotsdale Brook and Kent River are all Public Drinking Water Source Areas (PDWSA) and flow through various roads under application. As these are existing roads, with bridges in place to avoid contact with these PDWSAs, the proposal is not likely to impact on these areas.

As each of the proposed areas are small, with respect to the Shire as a whole (less than 1%), the proposed clearing is not likely to be at variance to this Principle.

**Methodology** GIS Databases:  
Public Drinking Water Source Areas - DOE - 07/02/06.

**(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 purpose of clearing is for road upgrades. As this will occur on roads already established, the existing road drains will prevent flooding that may occur from any high rainfall events.

Some of the roads under application cross over waterways such as Scotsdale Brook and Denmark River, and these watercourses have previously been diverted through culverts or under bridges. The proposed clearing will not impact upon these watercourses, therefore the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

**Methodology** GIS Databases:  
Rivers 250k - GA

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

**Comments** The proposal is not at variance with any planning instruments and no further licences or approvals are required.

There is a Native Title Claim 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.

There are Aboriginal Sites of Significance in the Shire of Denmark. The DEC recommends consulting with local indigenous groups about the impact of the proposed clearing on these registered sites. Aboriginal Sites of Significance will need to be managed in accordance with requirements under the Aboriginal Heritage Act (1972) and with the Department of Indigenous Affairs (this was also provided as advice in the cover letter to the proponent).

DEC have also received a submission from a member of the public, who has raised concerns in regards to weed management. A condition has been imposed to address this.

**Methodology**

**4. Assessor's recommendations**

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road construction or maintenance	Mechanical Removal	0.01	Grant	Adams Road-Minimal clearing is proposed. Urban. Proponent should be advised that this Rd is located on an aboriginal site of significance (Wilson's Inlet).
Road	Mechanical	0.01	Grant	Flay Street- Minimal clearing required. Urban.

construction oRemoval maintenance					
Road	Mechanical	0.01	Grant	Morgan Rd- Minimal clearing required. Urban.	
construction oRemoval maintenance					
Road	Mechanical	0.09	Grant	Poddysht Place- Claring of approximately 1.5m strip of vegetation to accommodate widening of road formation. That is, 1.5m x 600m=900 square m. Proponent should be advised that the road is located on an aboriginal site of significance (Poddy Point burial ground).	
construction oRemoval maintenance					
Road	Mechanical	0.3	Grant	Valley of the Giants Road- 2007-2009-MRWA- Widen and seal to 7.0m-Clearing of approximately 1.5m on each side to accommodate drainage and widened road formation. Conditions are to be imposed relating to the removal of Tingle trees, logs, eucalyptus trees with hollows and peat swamp degradation.	
construction oRemoval maintenance					
Road	Mechanical	1	Grant	Nornalup-Tindale Rd- Gravel resheet and improve-2007 to 2010- Clearing in certain sections of 1.5m each side to accommodate widened road formation. Conditions to be imposed relating the removal of vegetation associated with peat swamp degradation and drainage lines.	
construction oRemoval maintenance					
Road	Mechanical	2	Grant	Scotsdale Road- Main Road WA- Widen and seal to 7.0m between 2007 and 2010- Clearing of 1.5m each side of existing road (partially in maintenance zone) to accommodate road formation and improve safety on curves. Conditions are to be imposed relating to the removal of eucalyptus trees with hollows and hightened dieback precautions are recommended. Proponent should be advised that a portion of the road is located over the Denmark River which is an aboriginal site of significance.	
construction oRemoval maintenance					
Road	Mechanical	0.1	Grant	Harewood Road (r2r)- Gravel resheet and improve. Clearing intermittently 1.5m each side of road to accommodate widened formation. Heightened dieback precautions recommended.	
construction oRemoval maintenance					
Road	Mechanical	0.5	Grant	Mt Lindsay Rd (r2r)- Gravel resheet and improve- 2008 -Clearing intermittently 1.5m on each side of road to accommodate widened formation. Conditions are to be imposed relating to the removal of riparian vegetation ain the vicinity of Scotsdale Rd. Heightened dieback precautions advised.	
construction oRemoval maintenance					
Road	Mechanical	0.1	Grant	Lights Road (r2r)- Construct and seal to Burke Place- 2007 to 2009- Clearing intermittently 1.5m each side to accommodate widened formation.	
construction oRemoval maintenance					
Road	Mechanical	0.5	Grant	Kordabup Rd- Gravel resheet and improve-2008- Clearing intermittently 1.5m each side of road to accommodate widened formation. Avoid impacting understorey and riparian vegetation near the Korbakup River.	
construction oRemoval maintenance					
Road	Mechanical	0.5	Grant	Turner Rd- Gravel resheet and improve- 2008- Clearing intermittantly 1.5m each side of road to accommodate widened formation. Conditions are to be imposed relating to the removal of eucalyptus trees with hollows and riparian vegetation.	
construction oRemoval maintenance					
Road	Mechanical	0.5	Grant	Walter Road- Gravel resheet and improve- 2008- Clearing intermittently 1.5m on each side of road to accommodate widening of formation. Conditions are to be imposed relating to the removal of eucalyptus trees with hollows.	
construction oRemoval maintenance					
Road	Mechanical	0.3	Grant	Glenrowan Road- Gravel resheet and improve- 2008- Clearing intermittently 1.5m on either side of road to accommodate widened formation.	
construction oRemoval maintenance					
Road	Mechanical		Grant	Glenrowan Road- Gravel resheet and improve- 2008- Clearing intermittently 1.5 m on either side of road to accommodate widened formation.	
construction oRemoval maintenance					
Road	Mechanical	0.3	Grant	Roberts Road- Gravel resheet and improve- 2007- Clearing intermittently 1.5m either side of road to accommodate widened road formation.	
construction oRemoval maintenance					
Road	Mechanical	0.3	Grant	Nekel Road- Gravel resheet and improve- 2008- Clearing intermittently 1.5m either side of road to accommodate widened road formation.	
construction oRemoval maintenance					
Road	Mechanical	0.3	Grant	Osborne Road- Gravel resheet and improve- 2008- Clearing intermittently 1.5m either side of road to accommodate widened road formation.	
construction oRemoval maintenance					
Road	Mechanical	0.1	Grant	Sunnyglen Road- Gravel resheet and improve- 2009- Minimal clearing required on inside of curves.	
construction oRemoval maintenance					
Road	Mechanical	2	Grant	Parker Road- Gravel resheet and improve- 2010- Clearing intermittently 1.5m either side of road to accommodate widened road formation. Conditions are to be imposed relating to riparian vegetation.	
construction oRemoval maintenance					
Road	Mechanical	2	Grant	Fernley Road- Gravel resheet and improve- 2007- Clearing intermittently 1.5m either side of road to accommodate widened road formation.	
construction oRemoval maintenance					
Road	Mechanical	0.3	Grant	Kernutts Road- Gravel resheet and improve- 2008- Clearing intermittently 1.5m either side of road to accommodate widened road formation.	
construction oRemoval maintenance					
Road	Mechanical	1.2	Grant	2007-2010 Mt McLeodRoad -(full length) Clearing intermittently 1.5m either side of road to accommodate widened road formation. That is, 1.5m x 8km= 1.2ha.	
construction oRemoval maintenance					
Road	Mechanical	1.9	Grant	2007-2010 Mt Shadforth Road between Mt McLeod and Turner roads -Clearing intermittently 1.5m either side of road to accommodate widened road formation. That is, 1.5m x 7.5km= 1.9ha.	
construction oRemoval maintenance					
Road	Mechanical	0.01	Grant	Bambrey St - Minimal clearing required. Urban.	

Road construction or maintenance	Mechanical Removal	0.01	Grant	Grant St- Minimal clearing required. Urban.
Road construction or maintenance	Mechanical Removal	0.3	Grant	Board Rd - Gravel resheet and improve 2008. Clearing intermittently 1.5m each side of road to accomodate widened formation. That is, 1.5m times 2.2km = 0.3ha. Conditions are to be imposed relating to the removal of riparian vegetation.
Road construction or maintenance	Mechanical Removal		Grant	The proposal maybe at variance with principles, a, b and c and not likely to be at variance to the other 7 clearing principles. Conditions have been imposed to minimise the impacts of clearing for these road upgrades. It is recommended that this proposal be granted subject to these conditions being imposed.

## 5. References

AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.

## 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)