



1. Application details

1.1. Permit application details

Permit application No.: 1305/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Augusta Margaret River

1.3. Property details

Property: STATE FOREST 33 (JALBARRAGUP 6275)
 Local Government Area: Shire Of Augusta-Margaret River & Shire Of Nannup
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
96.2		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
Mowen Rd East: Beard Vegetation Associations - 3. Medium forest; jarrah - marri 27. Low woodland; paperbark (Melaleuca sp.) 975. Low woodland; jarrah 1183. Medium woodland; Eucalyptus rudis and blackbutt with some bullich, jarrah and marri (fringing Blackwood River) Mattiske Vegetation Complexes - Telerah (TL). Low open woodland of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Allocasuarina fraseriana-Xylomelum occidentale-Banksia ilicifolia on slopes in perhumid and humid zones. Jalbaragup (JL). Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Eucalyptus patens on slopes with some Eucalyptus rudis on broad terraces in perhumid and humid zones. Kingia (KI). Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Allocasuarina fraseriana-Banksia grandis-Xylomelum occidentale on lateritic uplands in	Mowen Road is bounded either side by State Forest. A dieback interpretation by a qualified CALM disease interpreter found the Mowen Rd project area predominantly infested with Phytophthora. The vegetation within the application area varies between good to very good to excellent in some places, but overall is considered to be in very good condition (Keighery, 1994).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Vegetation condition was taken from the DEC Site Visit Report (October, 2006) and 'Shire of Augusta/Margaret River Mowen Road Upgrade Project: Environmental Impact Assessment and Environmental Management Plan' (GHD, May 2006).

perhumid and humid zones.

Blackwood (BK). Open forest of *Corymbia calophylla*-*Eucalyptus marginata* subsp. *marginata* on the variable slopes in perhumid and humid zones.

Bidella (BD). Low woodland of *Melaleuca preissiana*-*Banksia littoralis*-*Hakea lasianthoides* on valley floors and open forest to woodland of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Eucalyptus patens* on slopes in perhumid and humid zones.

Coate (CE). Low open woodland of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Allocasuarina fraseriana*-*Banksia ilicifolia* and low open woodland of *Melaleuca preissiana*-*Banksia littoralis* on broad depressions in upper gullies in perhumid and humid zones.

Darradup (DP). Open forest to woodland of *Corymbia calophylla* with some *Eucalyptus marginata* subsp. *marginata* on slopes, woodland of *Eucalyptus rudis*4 -*Banksia seminuda*-*Melaleuca preissiana*-*Agonis flexuosa* and tall shrubland of *Agonis linearifolia*-*Callistachys lanceolata* on fringes of streams in perhumid and humid ones.

Layman (LY). Woodland to open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Eucalyptus patens* on slopes and woodland of *Melaleuca preissiana*-*Banksia littoralis* on valley floors in perhumid and humid zones.

Hedde Vegetation Types -
Jarrahwood Complex.
Open forest and woodland
Mungardup Complex.
Open forest and open woodland
Darradup Complex.
Fringing woodland
Kingia Complex. Open forest

Gemini Rd Sand Pit:
Beard Vegetation
Associations -

Vegetation within this area
is comprised of open
Eucalyptus marginata

Excellent: Vegetation
structure intact;
disturbance affecting

Vegetation condition was taken from the DEC Site Visit
Report (October, 2006).

<p>3. Medium forest; jarrah - marri</p> <p>975. Low woodland; jarrah Mattiske Vegetation Complexes - Blackwood (BK). Open forest of <i>Corymbia calophylla</i>-<i>Eucalyptus marginata</i> subsp. <i>marginata</i> on the variable slopes in perhumid and humid zones.</p> <p>Hedde Vegetation Types - Jarrahwood Complex. Open forest and woodland</p>	<p>(Jarrah) - <i>Corymbia calophylla</i> (Marri) woodland with the occasional <i>Eucalyptus patens</i> (Swan River Blackbutt), <i>Allocasuarina fraseriana</i> (Sheok) over <i>Xanthorrhoea preissii</i> (Grass Tree), <i>Hibbertia hypericoides</i> (Yellow buttercups), <i>Hakea amplexicaulis</i> (Prickly Hakea), <i>Leucopogon propinquus</i>, <i>Taxandria linearifolia</i> (Swamp Peppermint), <i>Taxandria parviceps</i> and <i>Gompholobium tomentosum</i> (Hairy Yellow Pea) over a herb layer of <i>Desmodium flexuosus</i>, <i>Ptilotus manglesii</i> (Pom Poms) and <i>Stylidium</i> species. DEC Site Visit photos (2006) indicate that a proportion of the vegetation within the Gemini Road sand pit is in excellent condition with intact upper, middle and under storeys.</p>	<p>individual species, weeds non-aggressive (Keighery 1994)</p>	
<p>Baker Rd Gravel Pit - Beard Vegetation Associations - 3. Medium forest; jarrah - marri</p> <p>Mattiske Vegetation Complexes - Kingia (KI). Open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i>-<i>Corymbia calophylla</i>-<i>Allocasuarina fraseriana</i>-<i>Banksia grandis</i>-<i>Xylomelum occidentale</i> on lateritic uplands in perhumid and humid zones.</p> <p>Hedde Vegetation Types - Jarrahwood Complex. Open forest and woodland</p>	<p>The vegetation in this area has been recently burnt (Figures 9 - 10 of the DEC Site Visit Report, 2006), however most of the species observed were similar to those found at the Gemini Rd sand pit. The rock-cap had been broken, indicating this area had been previously extracted for gravel. Vegetation within this application area is considered to be in good condition.</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)</p>	<p>Vegetation condition taken from DEC Site Visit Report (October, 2006).</p>
<p>Gemini Rd Sand Pit: Beard Vegetation Associations - 3. Medium forest; jarrah - marri</p> <p>975. Low woodland; jarrah Mattiske Vegetation Complexes - Blackwood (BK). Open forest of <i>Corymbia calophylla</i>-<i>Eucalyptus marginata</i> subsp. <i>marginata</i> on the variable slopes in perhumid and humid zones.</p> <p>Hedde Vegetation Types - Jarrahwood Complex. Open forest and woodland</p>	<p>Vegetation within this area is comprised of open <i>Eucalyptus marginata</i> (Jarrah) - <i>Corymbia calophylla</i> (Marri) woodland with the occasional <i>Eucalyptus patens</i> (Swan River Blackbutt), <i>Allocasuarina fraseriana</i> (Sheok) over <i>Xanthorrhoea preissii</i> (Grass Tree), <i>Hibbertia hypericoides</i> (Yellow buttercups), <i>Hakea amplexicaulis</i> (Prickly Hakea), <i>Leucopogon propinquus</i>, <i>Taxandria linearifolia</i> (Swamp Peppermint), <i>Taxandria parviceps</i> and <i>Gompholobium tomentosum</i> (Hairy Yellow Pea) over a herb layer of <i>Desmodium flexuosus</i>, <i>Ptilotus manglesii</i> (Pom Poms) and <i>Stylidium</i> species. DEC Site Visit Report (2006) found vegetation within this</p>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)</p>	<p>Vegetation condition taken from DEC Site Visit Report (October, 2006).</p>

	application area to be very good, with some signs of previous thinning/logging or disturbance.		
Baker Rd Gravel Pit - Beard Vegetation Associations - 3. Medium forest; jarrah - marri Mattiske Vegetation Complexes - Kingia (KI). Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Allocasuarina fraseriana-Banksia grandis-Xylomelum occidentale on lateritic uplands in perhumid and humid zones. Hedde Vegetation Types - Jarrahwood Complex. Open forest and woodland	Most of the species observed within this application area were similar to those found at the Gemini Rd sand pit, although site photos (DEC, 2006) indicate the density of the vegetation at the Gemini Rd sand pit to be greater than vegetation within the application area at Baker Rd Gravel Pit site. DEC Site Visit Report (2006) found the vegetation to be in very good condition, with distinct upper, middle and under storeys, and evidence of some disturbance.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Vegetation condition taken from DEC Site Visit Report (October, 2006).
Stoate Rd Gravel Pit: Beard Vegetation Association - 3. Medium forest; jarrah - marri Mattiske Vegetation Complex - Telerah (TL). Low open woodland of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Allocasuarina fraseriana-Xylomelum occidentale-Banksia ilicifolia on slopes in perhumid and humid zones. Hedde Vegetation Types - Jarrahwood Complex. Open forest and woodland Mungardup Complex. Open forest and open woodland	Vegetation within the Stoate Rd gravel pit application site was found to be in similar condition to the vegetation within the Gemini Rd sand pit and the Baker Rd Gravel Pit sites. The Stoate Rd gravel pit is the only dieback free gravel resource identified in the Mowen Rd upgrade.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	Vegetation condition taken from 'Main Roads WA Stoate Rd Gravel Pit: Pit Management Plan' (GHD, 2006), and DEC Site Visit Report (2006).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal is not likely to be at variance to this Principle

The 96.2ha application is a State Government initiative involving the upgrading of Mowen Road within the Shires of Nannup and Augusta-Margaret River. The areas under application traverse the Blackwood, Millbrook, Cambray and Jarrahwood State Forests, and a System 6 Conservation Reserve recognised for riparian habitats, seasonal and permanently inundated wetlands, and for the protection of threatened and priority flora and fauna (GHD, 2006).

DEC Site Visit Report (2007) rated the vegetation condition of the proposed clearing as varying between good and excellent (Keighery, 1994).

Much of the area under application is affected by dieback and the vegetation types proposed to be cleared are well represented both locally and regionally, all having a conservation status of 'Least Concern' (Department of Natural Resources and Environment, 2002).

Given the regional and local extent of vegetation under application, and based on the information provided and available, it is unlikely the application areas represent an ecosystem or genetic diversity of higher ecological value than the other remnant native vegetation in the local area (DEC, 2007).

Conditions have been placed on the permit to ensure that clearing of vegetation be avoided, and where this is

not possible, minimised; that gravel and sand extraction sites are revegetated once extraction ceases; and that Dieback hygiene practices are implemented to minimise further spread of the pathogen to uninfected areas.

Methodology DEC Site Visit Report (2007)
DEC Biodiversity Advice (2007)
GHD (2006). Shire of Augusta/Margaret River Mowen Road Upgrade Project: Environmental Impact Assessment and Environmental Management Plan
Keighery (1994)
Department of Natural Resources and Environment (2002)

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments **Proposal is not likely to be at variance to this Principle**
DEC Biodiversity Advice (2007) found that the areas proposed to be cleared may provide habitat for four threatened and three priority fauna species identified within a 10km radius of the application area. However, given that the surrounding area is heavily vegetated, and that the vegetation under application is well represented both regionally and locally, marsupial and avian fauna species are likely to find habitat equal to, or in better condition, (with fewer disturbances from road activities) within the surrounding state forest and reserves (DEC, 2007).
The fauna habitat that is likely to occur within the application area is unlikely to constitute significant habitat for indigenous fauna when considered in a local context.
The Management Plan for the Shire of Augusta-Margaret River's Mowen Road Upgrade Project prepared by GHD (2006) states that clearing of vegetation within the application area will be avoided where possible, and that rehabilitation works will include fauna refuges to facilitate the return of fauna to the area.
It should be noted that quokka activity has been recorded within the vicinity of two creek systems located between Stoate Road and St Johns Brook Road (DEC, Blackwood District 2007). While quokka activity has been recorded as low, the construction and/or maintenance to culverts and roading need to consider the possibility of quokka presence.

Methodology DEC (2007) Biodiversity Advice
GHD (2006). Shire of Augusta/Margaret River Mowen Road Upgrade Project: Environmental Impact Assessment and Environmental Management Plan
GIS Database:
- Matiske Vegetation - CALM 24/3/98

(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**
The closest mapped records of Declared Rare Flora (DRF) to the Mowen Rd application areas are *Drakaea micrantha* (approximately 0.1km south), *Dryandra squarrosa* subsp. *argillacea* (approximately 1.0km south east), *Caladenia harringtoniae* (approximately 2.4km south east), and *Daviesia elongata* subsp. *elongata* (approximately 9.9km south) (DEC, 2007). All of the species except *Caladenia harringtoniae* are associated with the same vegetation complexes as those proposed to be cleared.

Three Priority 3 species and two Priority 4 species occur within a 10km radius of the application area. Of these, *Acacia semitrullata* (P3) falls within the proposed clearing area on Mowen Rd (DEC, 2007). With the exception of one P4 species, *Pultenaea skinneri*, the Priority flora identified are associated with the same vegetation types as those proposed to be cleared.

A survey undertaken by GHD over two days in January and February 2006 identified two Priority flora species within the Mowen Rd application area: *Grevillea manglesioides* subsp. *ferricola* (P2) and *Acacia tayloriana* (P4). Individuals of these species were scattered within the understorey of Jarrah-Marri woodland along the alignment. GHD (2006) have recognised that the survey was completed outside of spring flowering times and there is a possibility that species such as orchids were no longer visible or identifiable. Two orchids, *Drakaea micrantha* (R) and *Caladenia plicata* (P4), listed as likely to occur in the local area according to CALM and WAHERB records, are not identifiable without flowers (GHD, 2006). *Drakaea micrantha* was recorded 2km west along Mowen Rd from the junction of Sues Rd by CALM in 1998.

DRF found in the local area (10km radius) are associated with the same vegetation complex as those proposed to be cleared. Given the location of known DRF records within and surrounding the application area, there is a possibility of DRF species occurring within the proposed clearing.

A condition has been placed on the permit requiring that a flora survey be carried out to target the DRF species *Drakeae micrantha* during its flowering time, September to October. *Drakeae micrantha* occurs in deep grey sand and is often associated with open patches in Banksia and sheok woodlands (Blackwood District, DEC 2007). Natural populations do not occur in lateritic soils.

Methodology DEC (2007) Biodiversity Advice

(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**
 DEC Biodiversity Advice (2007):
 Based on the information provided and otherwise available there is no evidence to suggest that any EPBC Act listed Threatened Ecological Community (TEC) or State listed TECs are present on the site of the proposed clearing. The closest TEC on DEC's Threatened Ecological Community Database is approximately 18km north-west of the application area.
 During a survey by GHD in 2006, no TECs were identified within the application areas.
 Given the above, it is unlikely that the proposed clearing will impact on any TECs.

Methodology DEC (2007) Biodiversity Advice
 GHD (2006). Shire of Augusta/Margaret River Mowen Road Upgrade Project: Environmental Impact Assessment and Environmental Management Plan
 GIS Database:
 - Threatened Ecological communities - CALM 12/04/05
 - Threatened Plant Communities - DEP 06/95

(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 (ha)*	Current Extent Remaining (ha)*	(%)*	Conservation Status**	% in Secure Tenure
IBRA					
Bioregion:					
Jarrah Forest	4,503,156	2,624,301	58.3	Least concern	
Shire:					
Augusta - Margaret River	222,718	159,679	71.7	Least concern	
Nannup	293,198	275,524	94.0	Least concern	
Beard Unit:					
3.	3,046,385	2,197,837	72.1	Least concern	10.1
27.	161,222	106,631	66.1	Least concern	39.9
975.	20,924	15,971	76.3	Least concern	83.5
1183.	10,959	9,643	88.0	Least concern	0
Mattiske Veg:					
Bidella (BD)	477,894	460,703	96.4	Least concern	
Blackwood (BK)	213,625	199,647	93.5	Least concern	
Coate (CE)	242,947	237,288	97.7	Least concern	
Darradup (DP)	40,888	30,107	73.6	Least concern	
Jalbaragup (JL)	162,475	154,379	95	Least concern	
Kingia (KI)	1,022,353	995,087	97.3	Least concern	
Layman (LY)	14,290	11,198	78.4	Least concern	
Telerah (TL)	279,021	274,302	98.3	Least concern	

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

*** Within the Intensive Landuse Zone

The area under application is located in the Shires of Augusta-Margaret River and Nannup, and within the Jarrah Forest Bioregion. The extent of pre-European vegetation within these areas is 71.7%, 94% and 58.3% respectively (Shepherd et al., 2001).

The vegetation proposed to be cleared is a component of Beard Vegetation Associations 3, 27, 975 and 1183 (Hopkins et al., 2001) of which there is 72.1%, 66.1%, 76.3% and 88.0% respectively of the pre-European vegetation extent remaining (Shepherd et al., 2001).

The eight Mattiske vegetation complexes identified within the proposed clearing area retain between 73.6% and 98.3% of pre-European vegetation (Mattiske, 1998).

The vegetation under application is regionally and locally extensive, all having a conservation status of 'Least Concern' (Department of Natural Resources and Environment, 2002). The proposal is not at variance to this principle.

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

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments Proposal may be at variance to this Principle

There are no wetlands or watercourses associated with the proposed clearing within the Gemini Rd Sand Pit, Baker Rd gravel pit or Stoates Rd gravel pit.

There are a number of watercourses that cross the proposed clearing along Mowen Rd. Impacts to these watercourses are unlikely as existing surface water flows will be maintained by replacing and/or extending existing crossroad culverts (GHD, 2006).

The road embankment at Rosa Brook is to be widened by approximately 15m on both sides, and impacts on the associated wetland vegetation are anticipated (GHD, 2006). In the Environmental Management Plan prepared by GHD (2006) any disturbance to Rosa Brook is to be minimised by avoiding and minimising vegetation clearing, and through the installation of temporary erosion control measures.

All of the areas under application along Mowen Rd are within road reserves that already exist. All water courses have previously been diverted through culverts or under bridges, and in some cases upgrades of these diversions are planned as part of the road widening.

Given the above, the proposal may be at variance to this principle. Conditions have been placed on the permit to ensure that clearing of vegetation be avoided, and where this is not possible, minimised.

Methodology GHD (2006). Shire of Augusta/Margaret River Mowen Road Upgrade Project: Environmental Impact Assessment and Environmental Management Plan
GHD (2006). Main Roads WA: Stoate Road Gravel Pit: Pit Management Plan
GHD (2006). Main Roads WA: Gemini Road Sand Pit: Pit Management Plan
GHD (2006). Main Roads WA: Baker Road Gravel Pit: Pit Management Plan

GIS Database:
- Hydrography, Linear - DOE 1/2/04

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

Comments Proposal is not likely to be at variance to this Principle

In the Environmental Management Plan prepared by GHD (2006) topsoil will be removed after clearing and stockpiled for use in revegetation. This material will be respread to assist in the rehabilitation of the site. Therefore, the risk of soil erosion and nutrient export is low.

The local area (10 km radius) is State Forest and well vegetated, therefore the risk of salinity within the proposed clearing site is low.

The topographic relief of the region is undulating with shallow gradients. The risk of waterlogging is considered to be low.

Due to the low risk of land degradation the proposed clearing is not likely to be at variance to this Principle.

Methodology GHD (2006). Shire of Augusta/Margaret River Mowen Road Upgrade Project: Environmental Impact Assessment and Environmental Management Plan
GIS Database:
- 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 at variance to this Principle

The areas proposed to be cleared lie within Blackwood State Forest, Cambray State Forest, Jarrahwood State Forest and Millbrook State Forest. A section of Mowen Rd traverses a System 6 Conservation Reserve.

The Environmental Management Plan prepared by GHD (2006) includes rehabilitation and revegetation of Gemini Rd, Baker Rd and Stoate Rd pits, and redundant sections of Mowen Rd, using local provenance.

Given part of the proposed clearing falls within an area set aside for conservation, the proposal is at variance to this principle.

To mitigate the impacts of clearing, conditions have been placed on the permit to ensure that clearing of vegetation be avoided, and where this is not possible, minimised; that gravel and sand extraction sites are revegetated once extraction ceases; and that Dieback hygiene practices are implemented to minimise further spread of the pathogen to uninfected areas of surrounding conservation areas

Methodology GHD (2006). Shire of Augusta/Margaret River Mowen Road Upgrade Project: Environmental Impact Assessment and Environmental Management Plan
GHD (2006). Main Roads WA: Stoate Road Gravel Pit: Pit Management Plan
GHD (2006). Main Roads WA: Gemini Road Sand Pit: Pit Management Plan
GHD (2006). Main Roads WA: Baker Road Gravel Pit: Pit Management Plan
GIS Database:
- CALM Managed Lands and Waters - CALM 1/07/05
- System 6 Conservation Reserves - DEP 06/95

(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 clearing site lies within the Hardy Estuary, Blackwood River Catchment. The region has an annual rainfall of 1000mm. Groundwater depth on the Cowaramup Borehole Line, within 10kms north of the proposed clearing, ranged from 9.33m AHD to 117.46m AHD from TOC (top of casing) on 7/09/2006.

There are a number of watercourses that cross the proposed clearing along Mowen Rd. The Environmental Management Plan prepared by GHD (2006) includes measures to minimise the disturbance to existing surface water flows through the installation of temporary erosion control measures to prevent sedimentation and/or turbidity during works; replacing and/or extending existing crossroad culverts (no new offshoot drains are to be developed); and designing roadside drainage to ensure that road run-off drains directly into dieback infected areas (GHD, 2006).

Given the above, the proposed clearing is unlikely to cause deterioration in the quality of surface or underground water.

Methodology GHD (2006). Shire of Augusta/Margaret River Mowen Road Upgrade Project: Environmental Impact Assessment and Environmental Management Plan
GIS Database:
- Hydrographic Catchments - Catchments - DOE 23/03/05
- Rainfall, Mean Annual - BOM 30/09/01
- WIN Groundwater Sites, Monitoring - DEWCP (Current)

(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

Due to the scale and nature of the proposed clearing, and given that the surrounding area is heavily vegetated, the proposed clearing is unlikely to cause or exacerbate flooding within the local area.

Methodology GIS Database:
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

No submissions from the public have been received.

The Mowen Road project was referred to the Environmental Protection Authority (EPA) in September 1998 by Main Roads. The project was 'not assessed'.

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.

A recent search of Aboriginal Sites of Significance by GHD (2006) identified the Blackwood River and its tributaries as a registered mythological site occurring within the Mowen Road East project area. It is the responsibility of the proponent to ensure that no Aboriginal Sites of Significance are damaged through the clearing process. The permit holder will be notified of their obligations under the Aboriginal Heritage Act 1972 in the cover letter to this permit. The Shire of Augusta-Margaret River is currently preparing an application for Ministerial consent under Section 18 of the Aboriginal Heritage Act (1972) to develop the road on land identified within the registered site (GHD, 2006).

It should be noted that quokka activity has been recorded within the vicinity of two creek systems located between Stoate Road and St Johns Brook Road (DEC, Blackwood District 2007). The permit holder will be notified of the need to consider the presence of quokka during the construction and/or maintenance to culverts and roading in the cover letter attached to this permit.

Methodology DEC Site Visit Report (2007)
 GHD (2006). Shire of Augusta/Margaret River Mowen Road Upgrade Project: Environmental Impact Assessment and Environmental Management Plan
 GIS Database:
 - Native Title Claims - DLI 07/11/05

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Road construction or maintenance	Mechanical Removal	96.2	<p>The assessable criteria have been addressed, and the proposal not at variance to Principle (e); is not likely to be at variance to Principles (a), (b), (d), (g), (i) and (j); may be at variance to Principles (c) and (f); and is at variance to Principle (h).</p> <p>Principle (c): DRF found in the local area (10km radius) are associated with the same vegetation complexes as those proposed to be cleared. A flora survey undertaken by GHD in summer 2006 identified two Priority flora species within the Mowen Rd application area, but failed to locate DRF species <i>Drakeaea micrantha</i>, which was recorded 2km west along Mowen Rd from the junction of Sues Rd by CALM in 1998.</p> <p>Given the location of known DRF records within and surrounding the application area, the proposal may be at variance to this principle. A condition has been placed on the permit requiring a flora survey be carried out to target the DRF species <i>Drakeaea micrantha</i> during its flowering time, September to October.</p> <p>Principle (f): The road embankment at Rosa Brook is to be widened by approximately 15m on both sides, consequently impacts on the associated wetland vegetation is anticipated (GHD, 2006). In the Environmental Management Plan prepared by GHD (2006) any disturbance to Rosa Brook is to be minimised by avoiding and minimising vegetation clearing, and through the installation of temporary erosion control measures. Furthermore, all of the areas under application along Mowen Rd are within road reserves that already exist. All water courses have previously been diverted through culverts or under bridges, and in some cases upgrades of these diversions are planned as part of the road widening. Conditions have been placed on the permit to ensure that clearing of vegetation be avoided, and where this is not possible, minimised.</p> <p>Principle (h): The proposed clearing falls within an area set aside for conservation. To mitigate the impacts of clearing, conditions have been placed on the permit to ensure that clearing of vegetation be avoided, and where this is not possible, minimised; that gravel and sand extraction sites are revegetated once extraction ceases; and that Dieback hygiene practices are implemented to minimise further spread of the pathogen to uninfected areas of surrounding conservation areas.</p> <p>Given that the clearing application is a State Government initiative for the upgrading of Mowen Rd, it is recommended that a permit be granted to clear 96.2 hectares of native vegetation with conditions to protect the biodiversity values of the area under application.</p>

5. References

- Clearing Assessment Unit's biodiversity advice for land clearing application. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC 19836
- Department of Environment and Conservation (2007). Site Visit Report. TRIM ref DOC7097
- 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.
- GHD (2006). Main Roads WA: Baker Road Gravel Pit: Pit Management Plan.
- GHD (2006). Main Roads WA: Gemini Road Sand Pit: Pit Management Plan.
- GHD (2006). Main Roads WA: Stoate Road Gravel Pit: Pit Management Plan.